PROJECT REPORT

TO: ENVIRONMENTAL EVALUATION COMMITTEE **AGENDA DATE: March 23, 2023**

FROM: PLANNING & DEVELOPMENT SERVICES **AGENDA TIME 1:30 PM/ No. 1**

True North Organics Renewable Energy Facility
SP21-0002, ZC21-0007, CUP21-0019,
PROJECT TYPE: MERG00150, V21-0003, IS21-0035 SUPERVISORY DISTRICT #5

LOCATION: 194 E. Harris Road, APN: 040-360-036, -037-, 038 & -039

Brawley, CA 92227 PARCEL SIZE: +/- 75 Acres

GENERAL PLAN (existing) Mesquite Lake Specific Plan GENERAL PLAN (proposed) NA

ZONE (existing) ML-I-3-RE/ML-I-2-RE (Mesquite Lake Heavy & Medium Industrial w/Renewable Energy Overlay ZONE (proposed) ML-I-3-RE

GENERAL PLAN FINDINGS ☒ CONSISTENT ☐ INCONSISTENT ☐ MAY BE/FINDINGS

PLANNING COMMISSION DECISION: HEARING DATE: _____

☐ APPROVED ☐ DENIED ☐ OTHER

PLANNING DIRECTORS DECISION: HEARING DATE: _____

☐ APPROVED ☐ DENIED ☐ OTHER

ENVIROMENTAL EVALUATION COMMITTEE DECISION: HEARING DATE: 03/23/2023

INITIAL STUDY: #22-0035

☐ NEGATIVE DECLARATION ☐ MITIGATED NEG. DECLARATION ☐ EIR

DEPARTMENTAL REPORTS / APPROVALS:

PUBLIC WORKS	☐ NONE	☐ ATTACHED
AG	☐ NONE	☐ ATTACHED
APCD	☐ NONE	☐ ATTACHED
E.H.S.	☐ NONE	☐ ATTACHED
FIRE / OES	☐ NONE	☐ ATTACHED
SHERIFF.	☐ NONE	☐ ATTACHED
OTHER		

REQUESTED ACTION:

(See Attached)

Initial Study & Environmental Analysis
For:

True North Organics Renewable Energy Facility

SP21-0002, ZC21-0007, CUP21-0019, MERG00150, V21-0003, and IS21-00035

Prepared By:

COUNTY OF IMPERIAL
Planning & Development Services Department
801 Main Street
El Centro, CA 92243
(442) 265-1736
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March 2023

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SECTION 1
INTRODUCTION

A. PURPOSE

This document is a ☐ policy-level, ☐ project level Initial Study for evaluation of potential environmental impacts resulting from the proposed True North Organics Renewable Energy Facility Project .

B. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) REQUIREMENTS AND THE IMPERIAL COUNTY'S GUIDELINES FOR IMPLEMENTING CEQA

As defined by Section 15063 of the State California Environmental Quality Act (CEQA) Guidelines and Section 7 of the County's "CEQA Regulations Guidelines for the Implementation of CEQA, as amended," an **Initial Study** is prepared primarily to provide the Lead Agency with information to use as the basis for determining whether an Environmental Impact Report (EIR), Negative Declaration, or Mitigated Negative Declaration would be appropriate for providing the necessary environmental documentation and clearance for any proposed project.

☐ According to Section 15065, an **EIR** is deemed appropriate for a particular proposal if the following conditions occur:

- The proposal has the potential to substantially degrade quality of the environment.
- The proposal has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.
- The proposal has possible environmental effects that are individually limited but cumulatively considerable.
- The proposal could cause direct or indirect adverse effects on human beings.

☐ According to Section 15070(a), a **Negative Declaration** is deemed appropriate if the proposal would not result in any significant effect on the environment.

☐ According to Section 15070(b), a **Mitigated Negative Declaration** is deemed appropriate if it is determined that though a proposal could result in a significant effect, mitigation measures are available to reduce these significant effects to insignificant levels.

This Initial Study (IS) is prepared in conformance with the California Environmental Quality Act of 1970, as amended (Public Resources Code, Section 21000 et. seq.); Section 15070 of the State & County of Imperial's Guidelines for Implementation of the California Environmental Quality Act of 1970, as amended (California Code of Regulations, Title 14, Chapter 3, Section 15000, et. seq.); applicable requirements of the County of Imperial; and the regulations, requirements, and procedures of any other responsible public agency or an agency with jurisdiction by law.

Pursuant to the County of Imperial *Guidelines for Implementing CEQA*, depending on the project scope, the County of Imperial Board of Supervisors, Planning Commission and/or Planning Director is designated the Lead Agency, in accordance with Section 15050 of the CEQA Guidelines. The Lead Agency is the public agency that has the principal responsibility for approving the necessary environmental clearances and analyses for any project in the County.

C. INTENDED USES OF INITIAL STUDY AND NEGATIVE DECLARATION

1) This IS and Notice of Preparation (NOP) are informational documents that are intended to inform County of Imperial decision-makers, other responsible or interested agencies, and the general public of potential environmental effects of the proposed applications. The environmental review process has been established to enable public agencies to evaluate environmental consequences and to examine and implement methods of eliminating or reducing any potentially adverse impacts. While CEQA requires that consideration be given to avoiding environmental damage, the Lead Agency and other responsible public agencies must balance adverse environmental effects against other public objectives, including economic and social goals. The IS and NOP prepared for the Project would be circulated for a period of 35 days for public and agency review and comments.

D. CONTENTS OF INITIAL STUDY

This IS is organized to facilitate a basic understanding of the existing setting and environmental implications of the proposed applications.

SECTION 1

I. INTRODUCTION presents an introduction to the entire report. This section discusses the environmental process, scope of environmental review, and incorporation by reference documents.

SECTION 2

II. ENVIRONMENTAL CHECKLIST FORM contains the County's Environmental Checklist Form. The checklist form presents results of the environmental evaluation for the proposed applications and those issue areas that would have either a significant impact, a potentially significant impact, or no impact.

PROJECT SUMMARY, LOCATION, AND EVIRONMENTAL SETTING describe the proposed project entitlements and required applications. A description of discretionary approvals and permits required for project implementation is also included. It also identifies the location of the project and a general description of the surrounding environmental settings.

ENVIRONMENTAL ANALYSIS evaluates each response provided in the environmental checklist form. Each response checked in the checklist form is discussed and supported with sufficient data and analysis as necessary. As appropriate, each response discussion describes and identifies specific impacts anticipated with project implementation.

SECTION 3

III. MANDATORY FINDINGS presents Mandatory Findings of Significance in accordance with Section 15065 of the CEQA Guidelines.

IV. SUMMARY OF MITGATION MEASURES summarizes all of the mitigation measures for the Proposed Project.

V. PERSONS AND ORGANIZATIONS CONSULTED identifies those persons consulted and involved in preparation of this IS.

VI. REFERENCES lists bibliographical materials used in preparation of this document.

E. SCOPE OF ENVIRONMENTAL ANALYSIS

For evaluation of environmental impacts, each question from the Environmental Checklist Form is summarized

and responses are provided according to the analysis undertaken as part of the Initial Study. Impacts and effects will be evaluated and quantified when appropriate. Each question has are four possible responses:

1. **No Impact:** A "No Impact" response is adequately supported if the impact simply does not apply to the proposed applications.

2. **Less Than Significant Impact:** The proposed applications will have the potential to impact the environment. These impacts, however, will be less than significant; no additional analysis is required.

3. **Less Than Significant with Mitigation Incorporated:** This applies where incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact."

4. **Potentially Significant Impact:** The proposed applications could have impacts that are considered significant. Additional analyses and possibly an EIR could be required to identify mitigation measures that could reduce these impacts to less than significant levels.

F. POLICY-LEVEL or PROJECT-LEVEL ENVIRONMENTAL ANALYSIS

This Initial Study will be conducted under a ☐ policy-level, ☐ project level analysis. Regarding mitigation measures, it is not the intent of this document to overlap or restate conditions of approval that are commonly established for future known projects or the proposed applications. Additionally, those other standard requirements and regulations that any development must comply with that are outside the County's jurisdiction are also not considered mitigation measures and, therefore, will not be identified in this document.

G. TIERED DOCUMENTS AND INCORPORATION BY REFERENCE

Information, findings, and conclusions contained in this document are based on incorporation by reference of tiered documentation, which is discussed in the following section.

1. Tiered Documents

As permitted in Section 15152(a) of the CEQA Guidelines, information and discussions from other documents can be included into this document. Tiering is defined as follows:

> Tiering refers to using the analysis of general matters contained in a broader EIR (such as the one prepared for a general plan or policy statement) with later EIRs and negative declarations on narrower projects; incorporating by reference the general discussions from the broader EIR; and concentrating the later EIR or negative declaration solely on the issues specific to the later project.

Tiering also allows this document to comply with Section 15152(b) of the CEQA Guidelines, which discourages redundant analyses, as follows:

> Agencies are encouraged to tier the environmental analyses which they prepare for separate but related projects including the general plans, zoning changes, and development projects. This approach can eliminate repetitive discussion of the same issues and focus the later EIR or negative declaration on the actual issues ripe for decision at each level of environmental review. Tiering is appropriate when the sequence of analysis is from an EIR prepared for a general plan, policy or program to an EIR or negative declaration for another plan, policy, or program of lesser scope, or to a site-specific EIR or negative declaration.

Further, Section 15152(d) of the CEQA Guidelines states:

Where an EIR has been prepared and certified for a program, plan, policy, or ordinance consistent with the requirements of this section, any lead agency for a later project pursuant to or consistent with the program, plan, policy, or ordinance should limit the EIR or negative declaration on the later project to effects which:

(1) Were not examined as significant effects on the environment in the prior EIR; or

(2) Are susceptible to substantial reduction or avoidance by the choice of specific revisions in the project, by the imposition of conditions, or other means.

2. Incorporation By Reference

Incorporation by reference is a procedure for reducing the size of EIRs/MND and is most appropriate for including long, descriptive, or technical materials that provide general background information, but do not contribute directly to the specific analysis of the project itself. This procedure is particularly useful when an EIR or Negative Declaration relies on a broadly-drafted EIR for its evaluation of cumulative impacts of related projects (*Las Virgenes Homeowners Federation v. County of Los Angeles* [1986, 177 Ca.3d 300]). If an EIR or Negative Declaration relies on information from a supporting study that is available to the public, the EIR or Negative Declaration cannot be deemed unsupported by evidence or analysis (*San Francisco Ecology Center v. City and County of San Francisco* [1975, 48 Ca.3d 584, 595]). This document incorporates by reference appropriate information from the Final Environmental Impact Report and Environmental Assessment for the County of Imperial General Plan EIR prepared by Brian F. Mooney Associates in 1993 and updates.

When an EIR or ND incorporates a document by reference, the incorporation must comply with Section 15150 of the CEQA Guidelines as follows:

- The incorporated document must be available to the public or be a matter of public record (CEQA Guidelines Section 15150[a]). The General Plan EIR and updates are available, along with this document, at the County of Imperial Planning & Development Services Department, 801 Main Street, El Centro, CA 92243 Ph. (442) 265-1736.

- This document must be available for inspection by the public at an office of the lead agency (CEQA Guidelines Section 15150[b]). These documents are available at the County of Imperial Planning & Development Services Department, 801 Main Street, El Centro, CA 92243 Ph. (442) 265-1736.

- These documents must summarize the portion of the document being incorporated by reference or briefly describe information that cannot be summarized. Furthermore, these documents must describe the relationship between the incorporated information and the analysis in the tiered documents (CEQA Guidelines Section 15150[c]). As discussed above, the tiered EIRs address the entire project site and provide background and inventory information and data that apply to the project site. Incorporated information and/or data will be cited in the appropriate sections.

- These documents must include the State identification number of the incorporated documents (CEQA Guidelines Section 15150[d]). The State Clearinghouse Number for the County of Imperial General Plan EIR is SCH #93011023.

- The material to be incorporated in this document will include general background information (CEQA Guidelines Section 15150[f]). This has been previously discussed in this document.

This document incorporates by reference the Mesquite Lake Specific Plan and Mesquite Lake Specific Plan

EIR (SCH# 2005021116), both prepared by the County of Imperial in 2006. The Mesquite Lake Specific Plan consists of approximately 5,100 acres located in central Imperial County, between State Route (SR) 86 on the west and SR 111 plus one-quarter mile on the east and is bordered by Harris Road on the south and Keystone Road on the north. Imperial County designated the Mesquite Lake Specific Plan Area (SPA) on the 1993 General Plan to provide an opportunity to develop new job-producing light, medium, and heavy industrial uses.

The overall goal of the Mesquite Lake Specific Plan is to support economic development within Imperial County and allow for heavy industrial development in an area that is away from urban conflicts and its cities through job creation in the employment sectors of manufacturing, fabrication, processing, wholesaling, transportation, and energy resource development; and create and preserve an area where a full range of industrial uses with moderate to high nuisance characteristics may locate. The Mesquite Lake Specific Plan EIR (MEIR) previously analyzed and approved development on the Proposed Project site of the Palo Verde Valley Disposal Facility; however, the facility was never constructed. Where appropriate, mitigation has been utilized from that specific development for the Proposed Project.

II. Environmental Checklist

1. **Project Title**: True North Organics Renewable Energy Facility
2. **Lead Agency**: Imperial County Planning & Development Services Department
3. **Contact person and phone number:**

   Diana Robinson
   Planning Division Manager
   (442) 265-1736, ext. 1751
4. **Address**: 801 Main Street, El Centro CA, 92243
5. **E-mail**: DianaRobinson@co.imperial.ca.us
6. **Project location**: The Proposed Project site comprises approximately 75.21 acres within Imperial County (County), California, approximately 3 miles north of the City of Imperial. The Project is north of Harris Road, west of Old State Highway 111, and east of Rose Drain, within the Mesquite Lake Specific Plan on land owned by True North Renewable Energy, LLC. The Project would be within Section 34 of Tract 43, Township 14 South, Range 14 East, San Bernardino Base Meridian, and Assessor Parcel Numbers (APNs) 040-360-036, 040-360-037, 040-360-038, and 040-360-039.
7. **Project sponsor's name and address**:

   True North Renewable Energy, LLC
   2390 East Camelback Road, Suite 203
   Phoenix, AZ 85016
8. **General Plan designation**: Mesquite Lake Specific Plan
9. **Zoning:** ML-I-2-RE & ML-I-3-RE (Medium & Heavy Industrial/Renewable Energy)
10. **Description of project**: True North Renewable Energy, LLC (Applicant) is proposing the True North Organics Renewable Energy Facility (Project or Proposed Project), a high solids anaerobic digestion (HSAD) facility with incidental advanced composting for the management and processing of residential, commercial, and industrial organic waste and green material. The Proposed Project would be located on approximately 75 acres of vacant land in unincorporated Imperial County (County), California. The Proposed Project would provide organics processing infrastructure and organic materials diversion from regional landfills. The Proposed Project would also generate renewable energy through the HSAD process and may incorporate behind the meter on-site solar and battery storage as an accessory use for the Project. Renewable energy generated through the HSAD process would be in the form of renewable natural gas, which could be directly injected into the pipeline system. The Project consists of four parcels, of which three are proposed to undergo a Zone Change from ML-I-2-RE to ML-I-3-RE to accommodate the Proposed Project's activities under a proposed Conditional Use Permit (CUP). Parcels would be merged by way of a Lot Merger to meet the Project's acreage requirements; in addition, a Variance would be requested to accommodate the height of a digester necessary for the Project's activity. Lastly, the applicant is seeking an amendment to the Mesquite Lake Specific Plan to alter the land use designation from Medium Industrial to Heavy Industrial to allow for the anaerobic digester, as well as a text amendment to further clarify the anaerobic and composting processes.
11. **Surrounding land uses and setting**: Mesquite Lake Specific Plan covers the area north, east, and west of the Project site. The surrounding properties are currently used for agricultural and industrial purposes. North of the Project site is a nonoperational industrial power generation plant. Existing land use to the east of the Project site is agricultural. West of the Project site is a commercial fish farm, including retention ponds for commercial fish habitat. Land south of the Project site is outside of the Mesquite Lake Specific Plan and includes agricultural uses. The nearest single-family home is located approximately one mile south of the Project site.
12. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):** U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), State Water Resources Control Board (SWRCB), Regional Water Quality Control Board (RWQCB), California Integrated

Waste Management Board (CIWMB), California Department of Toxic Substances, California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA), National Pollutant Discharge Elimination System (NPDES), and Imperial County Air Pollution Control District (ICAPCD).

13. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?** In accordance with Senate Bill (SB) 18 and Assembly Bill (AB) 52, Native American tribes with potential resources in the area were notified of the Project on November 23, 2022. Responses for SB 18 were due by December 23, 2022 and AB 52 responses were due by February 21, 2023. The Quechan Tribe responded on December 19, 2022, noting that they had no further comments, and the Manzanita Tribe responded on January 31, 2023 requesting further information via email.

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code, Section 21083.3.2). Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code, Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code, Section 21082.3 (c) contains provisions specific to confidentiality.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Agriculture and Forestry Resources	☒	Air Quality
☒	Biological Resources	☒	Cultural Resources	☐	Energy
☒	Geology /Soils	☐	Greenhouse Gas Emissions	☒	Hazards & Hazardous Materials
☒	Hydrology / Water Quality	☐	Land Use / Planning	☐	Mineral Resources
☐	Noise	☐	Population / Housing	☒	Public Services
☐	Recreation	☒	Transportation	☒	Tribal Cultural Resources
☒	Utilities/Service Systems	☒	Wildfire	☒	Mandatory Findings of Significance

ENVIRONMENTAL EVALUATION COMMITTEE (EEC) DETERMINATION

After Review of the Initial Study, the Environmental Evaluation Committee has:

☐ Found that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ Found that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ Found that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ Found that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ Found that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE DE MINIMIS IMPACT FINDING: ☐ Yes ☐ No

EEC VOTES	YES	NO	ABSENT
PUBLIC WORKS	☐	☐	☐
ENVIRONMENTAL HEALTH SVCS	☐	☐	☐
OFFICE EMERGENCY SERVICES	☐	☐	☐
APCD	☐	☐	☐
AG	☐	☐	☐
SHERIFF DEPARTMENT	☐	☐	☐
ICPDS	☐	☐	☐

Jim Minnick, Director of Planning/EEC Chairman Date:

PROJECT SUMMARY

True North Renewable Energy, LLC (Applicant) is proposing to construct, operate, and maintain the True North Organics Renewable Energy Facility (Project or Proposed Project), a High Solids Anaerobic Digestion (HSAD) facility with incidental advanced composting for the management and processing of residential, commercial, and industrial organic waste and green material. The Proposed Project would be located on approximately 75 acres of vacant land in unincorporated Imperial County (County), California. The Proposed Project would provide organics processing infrastructure and organic materials diversion from regional landfills (Imperial and neighboring counties). The Proposed Project would also generate renewable energy through the HSAD process and may incorporate on-site solar and battery storage as an accessory use for the Project. Renewable energy generated through the HSAD process would be in the form of renewable natural gas, which could be directly injected into the pipeline system. The Project consists of four parcels, of which three are proposed to undergo a Zone Change from ML-I-2-RE to ML-I-3-RE to accommodate the Proposed Project's activities under a proposed Conditional Use Permit (CUP). Parcels would be merged by way of a Lot Merger to meet the Project's acreage requirements; in addition, a variance would be requested to accommodate the height of a digester necessary for the Project's activity. Last, the applicant is seeking an amendment to the Mesquite Lake Specific Plan to alter the land use designation from Medium Industrial to Heavy Industrial to allow the anaerobic digester, as well as a text amendment to further clarify the anaerobic and composting processes.

A. PROJECT LOCATION

The Project would be located on approximately 75 acres within Imperial County, California, approximately 3 miles north of the City of Imperial (Figure 1, Project Site Location). The Project site is north of Harris Road, west of Old State Highway 111, and east of Rose Drain, and is within the Mesquite Lake Specific Plan. The Project would be within Section 34 of Tract 43, Township 14 South, Range 14 East, San Bernardino Base Meridian, and comprise Assessor Parcel Numbers (APNs) 040-360-036, 040-360-037, 040-360-038, and 040-360-039.

The Project area is zoned Mesquite Lake Specific Plan, including ML-I-2 (Mesquite Lake Medium Industrial) and ML-I-3 (Mesquite Lake Heavy Industrial), with a Renewable Energy (RE) Overlay Zone (Figure 2, Zoning Map). The General Plan Land Use designation for the entire Project is Mesquite Lake Specific Plan with both Medium and Heavy Industrial Uses (Figure 3, Land Use Designation Map).

B. CURRENT USE OF THE PROJECT SITE, SURROUNDING AREAS, AND EXISTING CONDITIONS

The Proposed Project site has previously been utilized for agricultural purposes; however, the site is currently vacant. The surrounding properties are currently used for agricultural and industrial use purposes. The Project is located within the Mesquite Lake Specific Plan, which also surrounds the site to the north, east, and west. North of the Project site is a nonoperational industrial power generation plant. Existing land use to the east of the Project site is agricultural. West of the Project site is a commercial fish farm, including retention ponds for commercial fish habitat. South of the Project site is land outside of the Mesquite Lake Specific Plan that includes agricultural uses, has an agricultural land use designation, and is zoned A3G (Heavy Agriculture/Geothermal Overlay).

As previously mentioned, this document incorporates by reference the Mesquite Lake Specific Plan and MEIR (SCH# 2005021116), both prepared by the County of Imperial in 2006. The Mesquite Lake Specific Plan consists of approximately 5,100 acres located in central Imperial County between State Route (SR) 86 on the west and SR 111 plus ¼ mile on the east and is bordered by Harris Road on the south and Keystone Road on the north. Imperial County designated the Mesquite Lake SPA on the 1993 General Plan to provide an opportunity to develop new job-producing light, medium, and heavy industrial uses. The following specific environmental issues were identified by the County for evaluation in the Mesquite Lake Specific Plan Master Environmental Impact Report (MEIR):

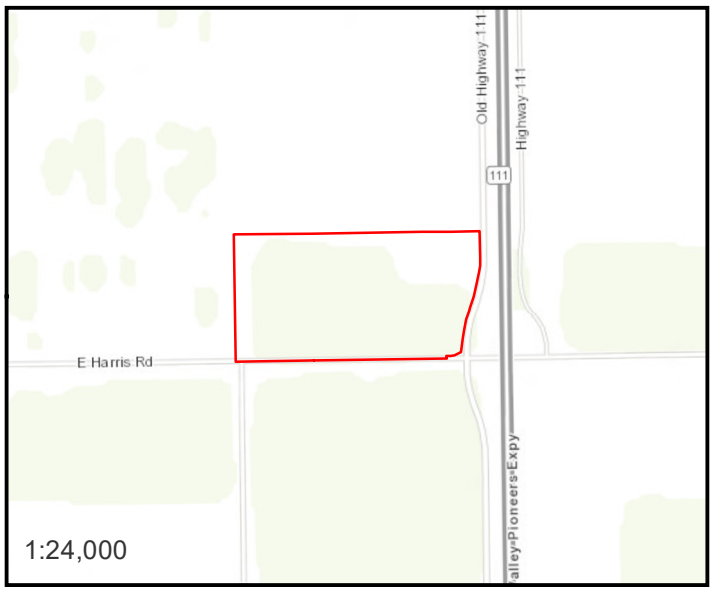
- Agricultural Resources
- Hydrology and Water Quality
- Air Quality and Odor
- Land Use and Planning
- Biological Resources

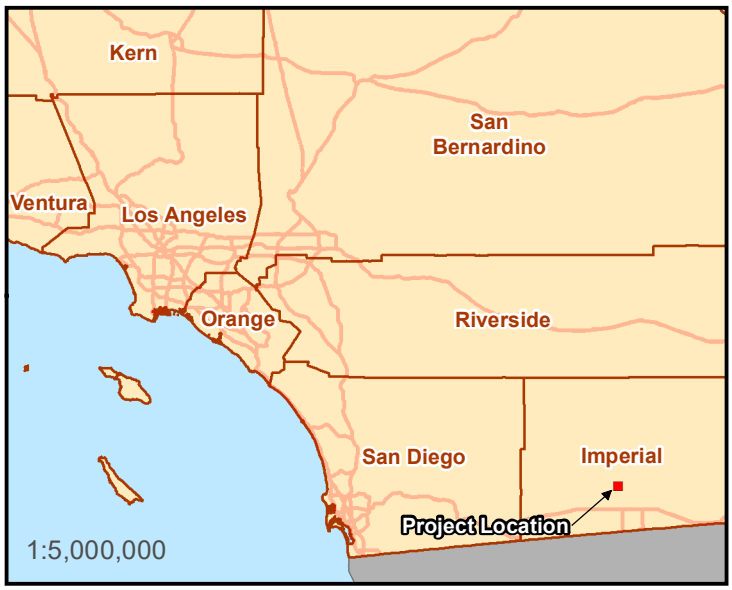
- Archaeological Resources
- Hazards and Hazardous Materials
- Aesthetics and Visual Resources
- Public Services and Utilities
- Traffic/Circulation

Impacts to Mineral Resources, Noise, Population and Housing, and Recreation were evaluated under the effects found not to be significant section of the MEIR. All other resource areas that are evaluated per the 2022 Appendix G CEQA Guidelines, were not required to be evaluated at the time 2006.

The overall goals of the Mesquite Lake Specific Plan are to (1) support economic development through job creation in the employment sectors of manufacturing, fabrication, processing, wholesaling, transportation, and energy resource development within Imperial County and allow for heavy industrial development in an area that is away from urban conflicts and its cities; and (2) create and preserve an area where a full range of industrial uses with moderate to high nuisance characteristics may be located.

The MEIR previously evaluated and approved the development and operation of the Palo Verde Valley Disposal Service for the Proposed Project site. However, the facility was never constructed. Where appropriate, mitigation from that specific development has been incorporated into the Proposed Project.





Project Location

Figure 1
True North Organics Renewable Energy Facility
Project Location and Vicinity

N

0 150 300 600

Feet

Name: 21377 PLAN Fig 1 Project Site Location.Mxd
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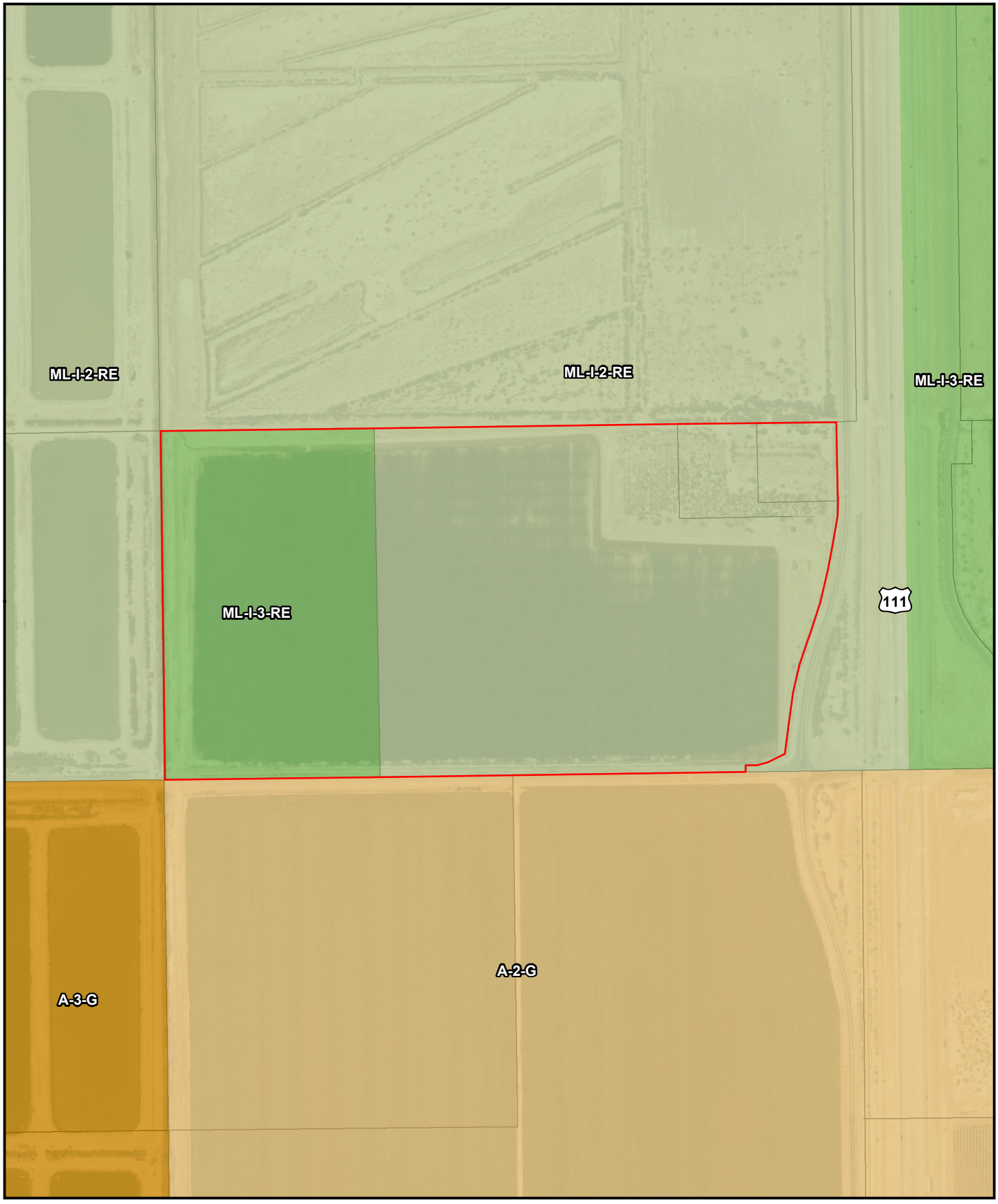
CHAMBERS GROUP



Project Location

Zoning

A-2-G
A-3-G
ML-I-2-RE
ML-I-3-RE

N

0 200 400 800

Feet

Figure 2

True North Organics Renewable Energy Facility

Zoning

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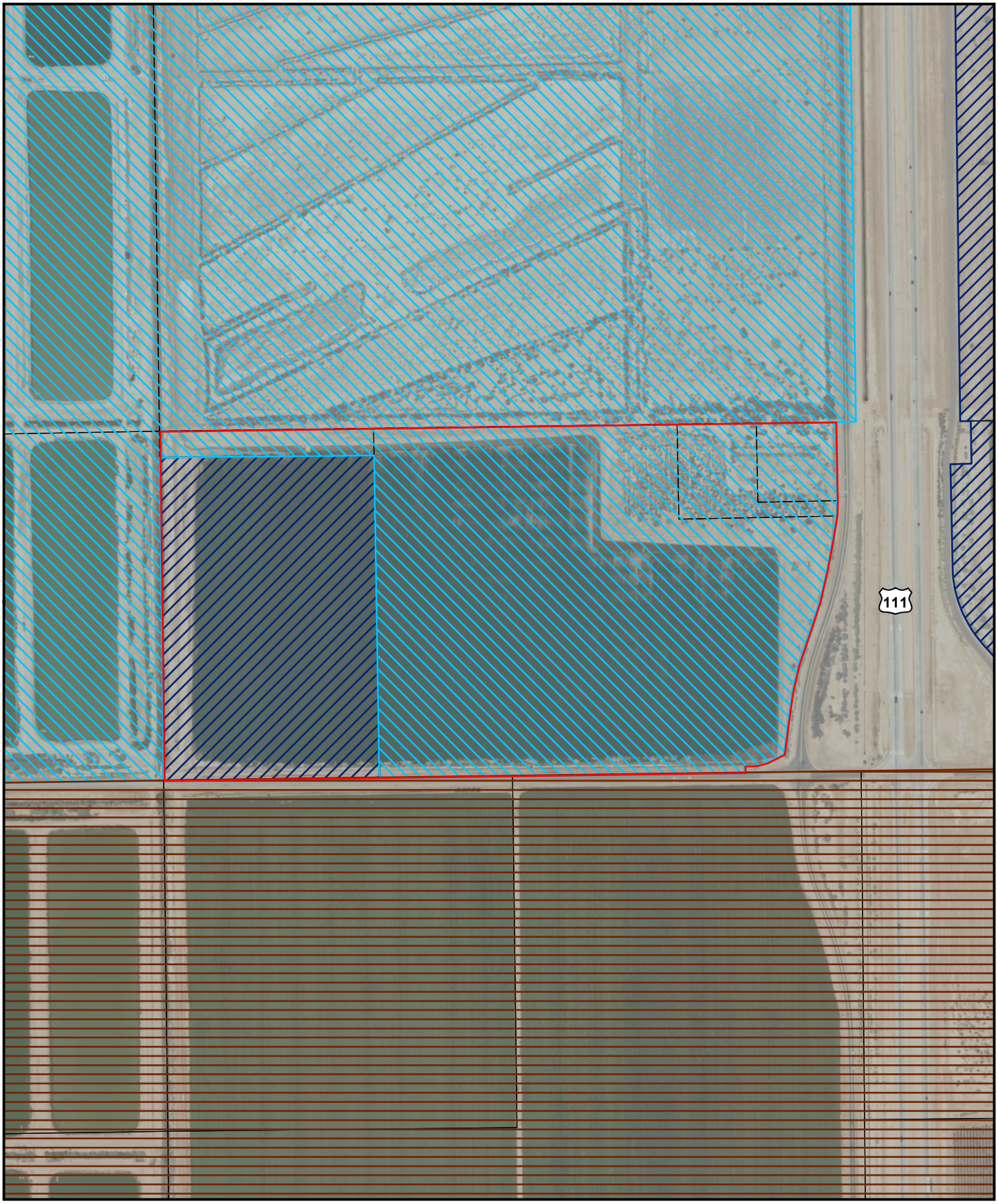


Project Location

Land Use Designation

Heavy Industrial

Medium Industrial

Agriculture – Outside Mesquite Lake Specific Plan

N

0 200 400 800

Feet

Figure 3
True North Organics Renewable Energy Facility
Land Use Designation

Name: 21377 PLAN Fig 3 Land Use Designation.Mxd
Print Date: 10/17/2022 12:39:10 PM Author: pcarlos

CHAMBERS GROUP

C. PROJECT SUMMARY

Anaerobic digestion is the controlled decomposition of organic material in an oxygen-free environment. The Proposed Project would add organics processing infrastructures to the County to conform to California's waste diversion regulations including Senate Bill (SB) 1383. Starting in 2022, the California Department of Resources Recycling and Recovery (CalRecycle) would enforce local jurisdiction responsibilities under SB 1383, including providing organic material collection to residents and business, this enforcement would also result in the way the Project would be phased as the Project would need to meet market demand and would be dependent on the enforcement of the policy under SB 1383.

The Proposed Project would provide organics processing infrastructure and organic materials diversion from regional landfills. Organics constitutes the largest component of municipal solid waste and, when deposited into a landfill, results in the emission of methane, a source of greenhouse gas emissions. The Project is focused on eliminating these current practices with efficient and effective solutions, using naturally occurring bacteria to produce biogas (a renewable fuel) and natural fertilizers that can be sold locally to enrich or amend soils.

Initially, the composting would be done on aerated pads when the organic material mix is mainly green with small amounts of food. Once the amount of food in the feedstock becomes significant, the full aeration buildings would be added as the primary composting stage.

The Proposed Project would also generate renewable energy through the HSAD process and may incorporate behind-the-meter, on-site solar and battery storage (up to 11 megawatts [MW]) as an accessory use of the Project for on-site consumption only. The Proposed Project is anticipated to generate up to 3,240 million standard cubic feet per day (Mscf/d) of natural gas. The produced gas would be injected into an existing Southern California Gas (SoCalGas) pipeline located just east of the Project along Old Highway 111.

Transfer trucks or local collection trucks would deliver to the Proposed Project organic material that would be tipped inside the receiving building. Incoming material would be sorted and blended using automated equipment. The organic material would be conveyed to an anaerobic digester vessel where microorganism would breakdown the material in an oxygen-free environment to generate biogas, which then would be cleaned up to renewable natural gas. The digestate from the anaerobic digestion process would transported to the aeration pads and/or building to create a pathogen-free soil amendment and organic compost product. Two separate access points to the site would be provided, one along Harris Road and one along Old Highway 111.

The Proposed Project would include the full build-out of a 2,500-ton-per-day (TPD) (600,000-ton-per-year) HSAD and aerated static pile (ASP) compost facility on approximately 75 acres of vacant land. The Project would use either horizontal or vertical digesters. The Proposed Project would be developed in two phases as follows:

- Phase 1 of the Project would be designed to process 300,000 tons per year (TPY) and would consist of the following components:
    - Daily feedstock (up to a maximum of 1,150 TPY)
    - Receiving building (101,000 square feet [sf])
    - Anaerobic digesters (horizontal;150 feet [ft] long by 45 ft high *or* vertical;120 ft high)
    - Flares (40 ft high)
    - Four aeration pads for composting (180,400 sf total)
    - Two aeration buildings for composting (each 82,560 sf)
    - Office (6,000 sf)
    - Employees (20 to 25)
    - Building height (60 ft maximum)
    - Solar arrays (the electricity generated by the array would be used to operate the AD facility [behind the meter]). Battery storage, as an accessory use, might be utilized.

- Phase 2 of the Project would be designed to process an additional 300,000 tons per year (TPY) and would consist of the following additional components:
    - Daily feedstock (up to a maximum of 1,150 TPY)
    - Receiving building (44,543 sf)
    - Anaerobic digesters (horizontal [150 ft long by 45 ft high] *or* vertical [120 ft high])
    - Flares (40 feet high)
    - Four aeration pads for composting (180,400 sf total)
    - Two aeration buildings for composting (each 82,560 sf)
    - Employees (20 to 25)
    - Building height (60 ft maximum)
    - Rooftop solar (the electricity generated by the rooftop solar array would be used to operate the AD facility [behind the meter]). Battery storage, as an accessory use, might be utilized.

All buildings would be pre-engineered steel buildings. The Project site layout is illustrated in Figure 4, Project Site Plan. As mentioned, the Project also includes a lot merger to merge all four parcels to one parcel to meet acreage requirements; a Specific Plan amendment from Medium Industrial to Heavy Industrial; and a zone change from ML-I-2-RE to ML-I-3-RE, as shown in Figure 5, Proposed Land Use and Zoning Changes. The ML-I-3-RE designation would allow for greater flexibility in terms of industrial uses. The allowed uses for each zone are described below and in Table 1: Allowed Uses. The Project also proposes a text amendment to the Specific Plan to further clarify the anaerobic and composting processes. This text amendment is shown below.

ML-I-2: Medium Industrial

The ML-I-2 (Mesquite Lake Medium Industrial) zoning designation is intended to provide areas to accommodate light (MLI-1) and medium intensity industrial type uses such as wholesale distribution centers, warehousing, storage, trucking, assembly type manufacturing, general manufacturing, research and development, medium intensity fabrication, and other similar medium intensity processing facilities, industrial/business parks, industrial plants, power plants (generation and transmission of electrical energy), truck and rail container storage, and research and development facilities. The processing or fabrication within any of these facilities is to be limited to activities conducted either entirely within a building or within securely fenced (obscured fencing) areas. Provided further that such facilities do not omit fumes, odor, dust, smoke, or gas beyond the confines of the property line within which their activity occurs or produces significant levels of noise or vibration beyond the perimeter of the site. Certain specified agricultural and agricultural processing uses would also be permitted.

ML-I-3: Heavy Industrial

The ML-I-3 zoning designation is for most intense, heaviest type of manufacturing processing, or fabrication facilities. It would, however, also allow "permitted" uses from the MLI-1 and MLI-2 type of uses, provided they are compatible and meet the standards of the plan. Processing or fabrication in these areas is allowed to be conducted entirely within a building or outside of a building, provided however the facility does not omit fumes, odors, dust, smoke, or gas beyond the confines of the property upon which the activity occurs, nor produces significant levels of noise or vibrations beyond the perimeter of the site. Certain specified agricultural uses would also be permitted.

Table 1. Allowed Uses

Use	Zoning	
	ML-I-2	ML-I-3
Caretaker or Security Residence	A	A
Retail Trade	A	A
Agricultural/Nursery Supplies and Services	A	A
Automotive and Light Truck Repair	A	A
Building Contractor's Offices and Yards	A	A

Use	Zoning	
	ML-I-2	ML-I-3
Services and Related Support Facilities	A	A
Administrative and Professional Offices	A	A
Conference/Convention/Meeting Facilities	A	A
Repair and Rental Services	A	A
Manufacturing and Assembly	A	A
Light Manufacturing	A	A
Medium Manufacturing	A	A
Heavy Manufacturing	–	A
Wholesale, Storage, and Distribution	A	A
Light/Medium Wholesale, Storage, and Distribution Activities	A	A
Heavy Wholesale, Storage and Distribution	CUP	A
Agricultural Crops and Processing (growing and harvesting agricultural crops)	A	A
Agricultural Processing (packing and processing excluding animal products or byproducts)	CUP	A
Agricultural Crops and Processing (growing and harvesting including fish and frog farms or other agricultural packing and processing for products sold for human consumption)	–	A
Agricultural Processing (packing and processing including products or byproducts)	–	CUP
Public, Semi-Public, and Institutional Uses	A	A
(i) Post Office	A	A
(ii) Law Enforcement/Life Safety Facilities	A	A
(iii) Water treatment plants	A	A
(iv) Sewage treatment plants	A	A
(v) Flood Control Facilities (other than on-site detention)	A	A
Similar Uses Permitted by Planning Commission Determination	A	A
Generation and Transmission of Electrical Power	CUP	A
Manufacturing and Assembly	CUP	A
Minimum Impact Heavy Manufacturing	CUP	A
Wholesale, Storage and Distribution	CUP	A
Transportation Facilities	CUP	A
(a) Heliports/Helistops	CUP	A
(b) Railroads Spurs and Yards	CUP	A
Communication and Public Utilities	CUP	A
Recycling Facilities	CUP	CUP
Alternative Fuel Power Generating Facilities	–	CUP
Tire/Rubber Rendering Plan	–	CUP

Notes:
A = Allowed
CUP = Allowed with Conditional Use Permit
– = Not Allowed Use

Specific Allowed Uses:

Medium Manufacturing: Activities typically include but are not limited to manufacturing; compounding of materials; processing; assembly; packaging; treatment or fabrication of materials and products that require frequent large container truck traffic or rail traffic; or the transport of heavy, bulky items. The new products are semifinished to be a component for further manufacturing, fabrication, and assembly. These types of business establishments are customarily directed to interplant transfer, or to order from industrial uses, rather than for direct sale to the domestic consumer. Such uses may include but are not limited to activities involving the following products: frozen foods; canned food; fresh agricultural products; textile products; furniture and fixtures; converted paper and paper board products; plastic products made from purchased rubber, plastic, or resin; graphite, gypsum, and fabricated metal products made from sheet metals; electrical and electronic machinery, equipment and supplies; and office, computing, and accounting machines. Activities may produce noise, odors, vibrations, illumination, or particulates that may affect the persons residing or conducting business in the vicinity. Where 24-hour, on-site surveillance is necessary, a caretaker's

Use	Zoning	
	ML-I-2	ML-I-3
residence may be permitted when approved by a CUP. *Heavy Manufacturing:* Activities typically include but are not limited to manufacturing; compounding of material; processing; assembly; packaging; treatment or fabrication of material; and activities that may result in frequent rail or truck traffic or the transportation of heavy, large-scale products. Activities in this area may generate noise, odor, vibration, illumination, or particulates that may be obnoxious or offensive to persons residing or conducting business in the vicinity. Uses typically use raw materials such as wood, metal, glass, composites, plastic, rubber, gelatin, or aggregate materials (e.g., gypsum, sand, rock, granite, concrete) to fabricate semifinished products that include but are not limited to forge shops; metal fabricating facilities; open welding shops; lumber woodworking facilities; heavy machine shops; chemical storage and distribution; plastics plants; and light or vacuum casting facilities. Manufacturing uses allowed in the MLI-3 Land Use Designation include the following: (i) All manufacturing uses allowed in the MLI-2 Land Use Designation. (ii) Acid manufacturing, ammunition manufacturing, asbestos manufacturing plant, creosote manufacturing, curing, tanning and storage of raw hides or skins, distillation of bones, distillation of coal, wood or tar, drop forge industries, explosive manufacturing and storage, fat rendering, gas manufacturing, graphite manufacturing, iron, steel, brass or copper foundries or fabrication plants, rubber and rubber products manufacturing, automobile assembly plants (body and fender works). (iii) Smelting of tin, copper, zinc or iron ore, ore reduction plants, quarry, or stone mills, rolling mills, lumber mills. (iv) Petroleum refineries, incinerators, coke ovens.		

Development Standards
All new construction and future use of land within the Mesquite Lake Specific Plan must be in accordance with the Development Standards specified in Section IV of the Specific Plan. Where the provisions of Section IV differ from specified development standards or regulations in the County Land Use Ordinance, the provisions in the Specific Plan take precedence. Where Section IV of the Specific Plan does not address a particular use, standard, or regulation specified in the County Land Use Ordinance, the provisions of the Land Use Ordinance apply.

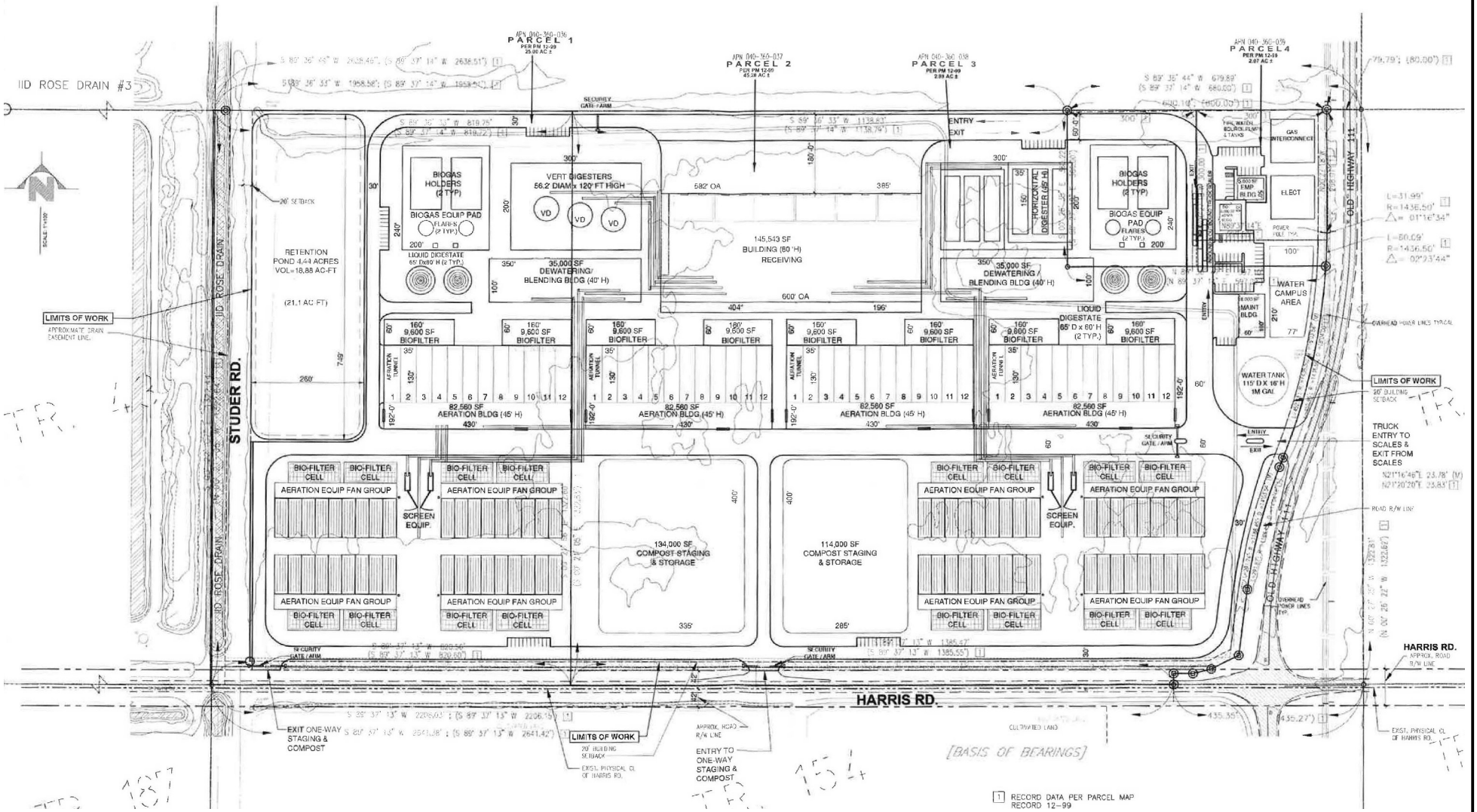
Specific Plan Text Amendments
The Project would require the following proposed text amendments to further clarify the anaerobic and composting processes.

Pages 50 and 51 of the Specific Plan would include a description of alternative fuel production using anaerobic digesters under "Uses Permitted with a Conditional Use Permit Only" and the addition of a composting facility to "Agricultural Processing permitted under a CUP." The proposed changes are shown below with ~~strikethrough~~ text to note deletions and <u>underlined</u> text to note additions.

b. Uses Permitted With a Conditional Use Permit Only

(1) Alternative Fuel Power-Generating Facilities
Activities typically include but are not limited to, anaerobic digesters, biomass, biosolid, and solar conversions and/or transformation.
<u>(2) Alternative fuel production using anaerobic digesters.</u>
<u>(3) Anaerobic digestion—the controlled biological decomposition of organic material in the absence of oxygen or in an oxygen-starved environment. Anaerobic digestion produces biogas and a residual digestate.</u>

~~(3)~~(5) Agricultural Processing <u>and Composting</u>
Activities are limited to packing and processing of agricultural crops, including animal products or byproducts such as an animal rendering plant. This would also include uses such as cotton gins, seed mills, and animal feed production; and may also allow expansion of existing fish or frog farming in the MLAA Zone onto adjacent property in the MLI-3 Zone.
<u>(6) Composting Facility</u>

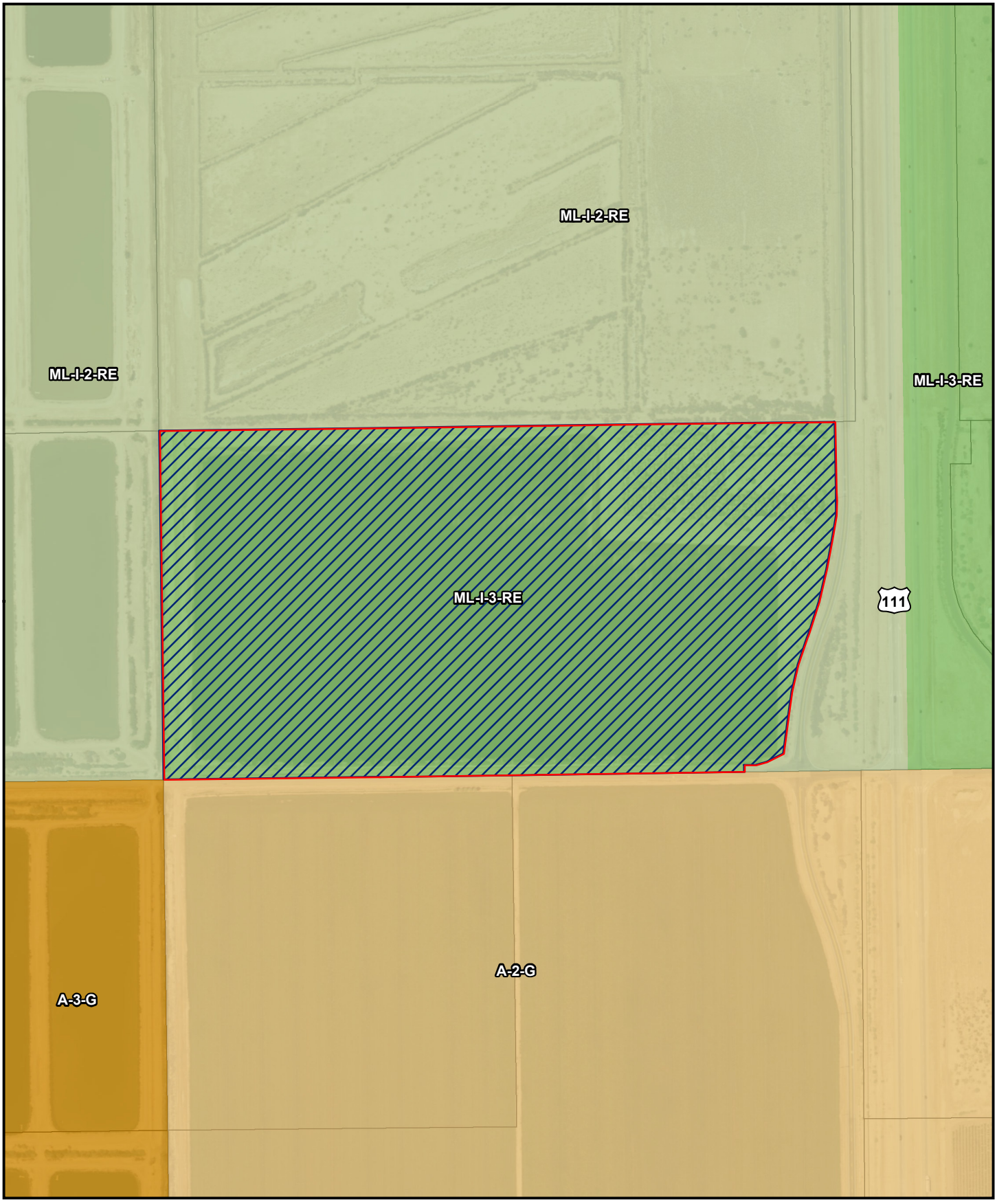


NOT TO SCALE

Figure 4
True North Organics Renewable Energy Facility
Project Site Plan

Name: 21377 PLAN Fig 4 Project Site Plan.Mxd
Print Date: 9/8/2022 1:19:12 PM Author: pcarlos

CHAMBERS GROUP



Project Location

Land Use Designation

Heavy Industrial

Zoning

A-2-G
A-3-G
ML-I-2-RE
ML-I-3-RE

N

0 200 400 800

Feet

Figure 5

True North Organics Renewable Energy Facility

Proposed Land Use and Zoning Changes

Name: 21377 PLAN Fig 5 Proposed Land Use and Zoning Changes.Mxd
Print Date: 9/20/2022 10:55:25 AM Author: pcarlos

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D. PROJECT CONSTRUCTION:

Schedule and Workforce

The construction activities for the Proposed Project fall into site grading and earthwork. The entire process is estimated to take approximately 18 to 24 months. Site grading and earthwork is anticipated to begin during the first quarter of 2023, with operations beginning in 2024. Construction would primarily occur during daylight hours, Monday through Friday. Additional hours/days may be necessary to facilitate the schedule.

The construction workforce would consist of laborers, craftsmen, supervisory personnel, support personnel, and construction management personnel. The on-site workforce has been conservatively estimated to peak at approximately 300 individuals for short periods of time, which is typically a few weeks. It is anticipated that the construction workforce would commute to the site each day from local communities. Construction staff not drawn from the local labor pool would stay in nearby hotels, thereby supporting the local economy.

During construction, dusk-to-dawn security lighting would be required for the construction staging areas, parking area, construction office trailer entries, and site access points. Lighting is not planned for typical construction activities because construction activities would occur primarily during daylight; however, if required, any lighting would be temporary and be limited to that needed to ensure safety and security.

Multiple portable toilets would be used during construction, and wastewater would be trucked off-site for disposal by a licensed sewage disposal company for treatment at a licensed or government wastewater treatment facility.

Site Grading and Earthwork

Initial work on the Project site would involve preparing the land for installation of related infrastructure, access driveways, and temporary construction staging areas. Prior to initial construction mobilization, preconstruction surveys would be performed, and sediment and erosion controls would be installed in accordance with an approved Storm Water Pollution Prevention Plan (SWPPP). Stabilized construction entrance and exits would be installed at driveways to reduce tracking of sediment onto adjacent public roadways.

Site preparation would involve the removal and proper disposal of existing vegetation and debris that would unduly interfere with Project construction or the health and safety of on-site personnel. The site preparation includes plans to balance soils on-site but, worst case, would include minimal amounts of cut or fill. Dust-minimizing techniques would be employed, such as maintaining natural vegetation where possible, utilizing a mow-and-roll vegetation clearance strategy, placement of wind-control fencing, application of water, and application of dust suppressants. Conventional grading would be minimized to the maximum extent possible to reduce unnecessary soil movement that may result in dust. Earthworks scrapers, excavators, dozers, water trucks, paddlewheels, haul vehicles and graders may all be used to perform grading. Land-leveling equipment, such as a smooth steel drum roller, would be used to even the surface of the ground and to compact the upper layer of soil to a value recommended by a geotechnical engineer for structural support. Access roads may be additionally compacted to 90 percent or greater, as required, to support construction and emergency vehicles. Certain access roads may also require the use of aggregate to meet emergency access requirements. Soil movement from grading would be balanced on the site, and it is anticipated that no import or export of soils would occur.

Trenching would be required for placement of underground electrical and communications lines, and may include the use of trenchers, backhoes, excavators, haul vehicles, compaction equipment, and water trucks. After preparation of the site, structure pads, equipment enclosures, and equipment vaults would be prepared per geotechnical engineer recommendations.

Construction Water Use

Water needed for construction is expected to be trucked from the Imperial Irrigation District (IID) water system. The Project construction is estimated to occur over 18 to 24 months. Construction water demands for each phase are

estimated to be approximately 33.7 acre-feet (AF), or approximately 67.4 AF total, for the following uses:

- Dust control
    - Approximately 9.2 AF per phase (10,000 gallons/day × approximately 200 days = 3 million gallons)
- Site preparation and miscellaneous construction:
    - Approximately 24.5 AF per phase (40,000 gallons/day × 200 days = 5 million gallons)

Initial construction water usage would support site preparation and grading activities. During earthwork for grading of access road foundations, equipment pads, and Project components, the main use of water would be for compaction and dust control. Smaller quantities would be required for preparation of the concrete needed for foundations and other minor uses. Subsequent to the earthwork activities, water usage would be used for dust suppression and normal construction water requirements that would be associated with construction of the building and internal access roads.

E. PROJECT OPERATIONS

The staffed operating hours of the Project are expected to be Monday through Friday from 5:00 AM to 7:00 PM, aligned to the delivery of organic material arriving to the facility. Assuming a total processing capacity of 600,000 tons per year (for 15 years, with an option to extend), the Proposed Project is expected to receive up to 100 truck trips per day for feedstock delivery and could dispatch up to 37 trucks daily for compost delivery, although it is anticipated that the same trucks for delivering feedstock would be used for dispatching compost.

Odors and Emissions

To mitigate and minimize potential odors, the facility would be fully enclosed for organic material reception, pretreatment, continuous thermophilic anaerobic digestion, and subsequent enclosed composting. Primary and secondary composting would occur on the aeration pads when the material is mainly green with small amounts of food. When the amount of food in the material stream increases, primary composting would occur in a fully enclosed building. The facility would operate with a constant negative air ventilation system with source aspiration and air cleaning systems, consisting of a biofilter and with an acid scrubber (if required). Further, the Project would develop an Odor Control Plan as required by the Solid Waste Facility Permit, which would be issued by CalRecycle and administered the by Imperial County Air Pollution Control District.

Operational Water Use

Water needed for ongoing operation of the facility is expected to be supplied by the IID. The Project's operational water demands are estimated to be approximately 15.6 acre-feet/year (AFY).

Hydrology and Water Quality

The majority of the process water would be recycled in the anaerobic digestion and composting process. However, a small amount of effluent would be generated from the acid washer and runoff from the facility, which would be managed in accordance with State and local water quality regulations. The entire Project site would drain into a stormwater retention basin at the northwestern portion of the Project site that is approximately 4.44, acres, with a volume of 18.99 AF. A lined pond would be constructed to hold and treat the effluent generated during the composting process. Water from the lined pond would be recycled back into the process. Based on final design of the pond and if required by Environmental Health and Safety (EHS), a vector control plan would be submitted. Storm water will be retained in a pond prior to discharging into surface waters.

Utilities: Sewer and Water

The Project is adjacent to an IID water supply canal that the Project anticipates using for its' water needs. It is anticipated that this water would be treated for domestic uses. The closest sewer line is located several miles away from the Project, but the Project anticipates treating on-site wastewater with a package treatment plant designed to

meet the requirements of the RWQCB and using that water for dust control, irrigation, or other similar uses.

Utilities: Electric and Natural Gas

Electrical service would be provided by IID and/or self-generated solar panels. A Facility Study Report was prepared by IID on April, 28, 2022, that indicated that IID requires the design and construction of the new 34.5 kV Harris Switching Station to allow the Project to feed from the 34.5 kV LB line. The existing 34.5 kV transmission line would be looped into and out of the new switching station to safely and reliably allow the addition of the 11 MW Project. The switching station would be located in the electrical area in the northeast corner as shown on the site plan in Figure 4. If solar panels are used, they would be installed on the roofs of buildings and would interconnect by way of a bidirectional meter that would also serve as the metering element for power purchased from IID. The solar panels would be used solely for Project operations. The solar panels could utilize a battery energy storage element that would require approval from the County Planning Department, prior to installation. The Project would require approximately 331,526 kilowatt hours per year (kWh/year).

The Proposed Project would require minimal gas for heating, including boilers for the anaerobic digester in the cooler months. Gas usage is estimated to be 1,080,470 thousand British thermal units per year (kBTU/yr) or approximately 1,059 million standard cubic feet per year (Mscf/year) and would be provided by SoCalGas. The Proposed Project is anticipated to generate up to 3,240 Mscf/d or 1,182,600 Mscf/year of natural gas. The produced gas would be injected into an existing SoCalGas pipeline located just east of the Project along Old Highway 111.

Project Features and Best Management Practices

The following sections describe standard Project features and best management practices that would be applied during construction and long-term operation of the Project to maintain safety and minimize or avoid environmental impacts.

Waste and Hazardous Materials Management

The Proposed Project would have minimal levels of materials on-site that have been defined as hazardous under 40 CFR, Part 261. The following materials are expected to be used during the construction, operation, and long-term maintenance of the Proposed Project:

- Diesel fuel, gasoline and motor oil- used in vehicles
- Mineral oil- sealed within the transformers of the solar array
- Various solvents/detergents - equipment cleaning

Hazardous materials and wastes would be managed, used, handled, stored, and transported in accordance with applicable local and State regulations. All hazardous wastes would be maintained at quantities below the threshold requiring a Hazardous Material Management Program (HMMP) also referred to as a Hazardous Materials Business Plan (HMBP) (one 55-gallon drum). Although not expected, should any on-site storage of hazardous materials exceed one 55-gallon drum, a HMMP / HMBP would be prepared and implemented.

Chemical storage tanks (if any) would be designed and installed to meet applicable local and State regulations. Any wastes classified as hazardous, such as solvents, degreasing agents, concrete-curing compounds, paints, adhesives, chemicals, or chemical containers would be stored (in an approved storage facility /shed/structure) and disposed of as required by local and State regulations. Material quantities of hazardous wastes are not expected

Spill Prevention and Containment

Spill prevention and containment for construction and operation of the Proposed Project would adhere to the U. S. Environmental Protection Agency's (EPA) guidance on Spill Prevention Control and Countermeasures (SPCC).

Health and Safety Plan

Safety precautions and emergency systems would be implemented as part of the design and construction of the Proposed Project to ensure safe and reliable operation. Administrative controls would include classroom and hands-on training in operating and maintenance procedures, general safety items, and a planned maintenance program. These would work with the system design and monitoring features to enhance safety and reliability.

The Proposed Project would have an Emergency Response Plan (ERP). The ERP would address potential emergencies, including chemical releases, fires, and injuries. All employees would be provided with communication devices, cell phones, or walkie-talkies, to provide aid in the event of an emergency.

Solid Waste

Inert solid wastes resulting from construction activities may include recyclable items such as paper, cardboard, solid concrete and block, metals, wire, glass, types 1–4 plastics, drywall, wood, and lubricating oils. Nonrecyclable items include insulation, other plastics, food waste, vinyl flooring and base, carpeting, paint containers, packing materials, and other construction wastes. A Construction Waste Management Plan would be prepared for review by the County. Consistent with local regulations and the California Green Building Code, the plan would provide for diversion of a minimum of 50 percent of construction waste from landfills.

Operation of the Proposed Project would ultimately result in a net decrease in solid waste because the Project would divert solid waste to be decomposed and converted to energy.

Fire Protection and Safety

Water for fire protection would be purchased from IID and stored in an aboveground storage tank in accordance with County Fire Department standards. The system would be designed in accordance with federal, State, and local fire codes; occupational health and safety regulations; and other jurisdictional codes, requirements, and standard practices.

F. PROJECT DECOMMISSIONING AND ABANDONMENT

The projected life of the Project is approximately 15 years, with an option to extend every 3 years. At the end of operations, a Site Abandonment Plan would be prepared and implemented in conformance with the County and CUPA requirements for consideration by the Planning Commission prior to Project approval. The plan would describe the proposed equipment dismantling and site restoration program in conformance with the wishes of the respective landowners/lessors and requirements in effect at the time of abandonment and would be implemented at the end of Project operations.

G. REQUIRED PERMITS AND APPROVALS

Construction and operation of the Proposed Project may include but not be limited to the following regulatory reviews and approvals:

Federal

- U.S. Fish and Wildlife Service (USFWS)

State

- California Department of Fish and Wildlife (CDFW)
- State Water Resources Control Board (SWRCB)
- Regional Water Quality Control Board (RWQCB)
- California Integrated Waste Management Board (CIWMB)
    - Odor Impact Minimization Plan

    - Solid Waste Facility Permit
- California Department of Toxic Substances
- California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA)

Imperial County Planning Department

- Approval of Zone Change
- Approval of Variance
- Approval of Conditional Use Permit
- Lot Merger
- Mesquite Lake Specific Plan Amendment

Imperial County Building Department

- Building Permits
- Construction Waste Management Plan

Imperial County Environmental Health and Safety (EHS)

- Vector Control Plan for Retention Pond

Other Responsible Agencies

- Imperial County Air Pollution Control District (ICAPCD)
    - Fugitive Dust Control Plan
    - Authority to Construct
    - Permit to Operate
    - Odor Control Plan
    - Any other permits as required
- National Pollutant Discharge Elimination System (NPDES)
    - Stormwater Pollution Prevention Plan (SWPPP)

Other additional permits or approvals from responsible agencies may be required for the Proposed Project.

H. OBJECTIVES

The purpose of the Project is to develop, build and operate an anaerobic digestion facility with incidental advanced composting for the management and processing of residential, commercial and industrial food and green waste throughout the State of California. The objectives of the Project are interrelated and are as follows:

- Assist Imperial County to conform to California's waste diversion regulations, including SB1383.
- Assist the State of California in reducing 75% of organic waste reduction from landfills by 2025 and enforcing implementation of a diversion program staring in 2022.
- Generate substantial direct and indirect economic activity in Imperial County during construction and operation.
- Increase local short- and long-term employment opportunities in Imperial County.
- Assist the State of California in achieving or exceeding its Renewable Portfolio Standard (RPS), SB 350, SB 100, Assembly Bill (AB) 32 (California Global Warming Solutions Act), and greenhouse gas emissions reduction objectives.

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.
   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and
   b) the mitigation measure identified, if any, to reduce the impact to less than significance

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	No Impact **(NI)**

I. *AESTHETICS*

Except as provided in Public Resources Code Section 21099, would the project:

a)	Have a substantial adverse effect on a scenic vista or scenic highway?	☐	☐	☒	☐
b)	Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c)	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surrounding? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Summary of Impacts Identified in the MEIR

The MEIR included an analysis of the aesthetic and visual resources within the SPA. Among other development standards, the MEIR evaluated a maximum height of six stories or 80 feet. The Specific Plan also notes, "Additional building height or for ancillary facilities may be permitted by variance or conditional use permit pursuant to Division 2 of the County Land Use Ordinance." At the time the MEIR was approved, most of the SPA was covered with farmland or farm-related auxiliary structures with minimal ornamental vegetation. Most of the trees were associated with the cemetery. Given the flat topography of the SPA, no surrounding elevated views are possible. The viewshed included surrounding farmlands and segments of State Route (SR) 86, SR 111, Keystone Road, Dogwood Road, and Harris Road.

The MEIR found that the Mesquite Lake SPA was not located within a scenic vista or near a scenic highway. It thus determined that due to the aesthetics of the area, no sensitive viewers would be impacted by development occurring within the SPA. Given that the area was on a former flat lake bed with little topographic relief, any grading required during development would not result in significant landform alteration. Construction at the undeveloped areas (or proposed redevelopment) would be introducing utilitarian structures that would be comparable to the existing facilities, in addition to complying with the development standards within the SPA. While future development within the SPA would intensify the number of structures and scale of the built environment, the majority of the viewers (which would be motorists and workers) would have low visual quality expectations.

Construction-related effects with the presence of equipment and stockpiles would have short-term, negative visual impacts. However, it was determined that these would be less than significant due to it being temporary, and no sensitive vistas or viewers would demand high visual quality in the area.

Impacts Related to the Proposed Project

a)	Have a substantial adverse effect on a scenic vista or scenic highway?	☐	☐	☒	☐

a) Consistent with the MEIR; Less than Significant Impact. The MEIR identified the Specific Plan as not being located on or within a scenic vista. According to the County's Conservation and Open Space Element, the Proposed Project and its immediate surroundings are not located within areas designated to have significant visual quality or scenic potential (County 2016a).

The General Plan EIR (County 1993a), notes that there were highways within the County that had potential to be considered as State-designated or eligible scenic highways. These included Interstate (I) 8 (I-8), SR 78, SR 111 and the Borrego-Salton Seaway, also known as S-22. According to the California Department of Transportation (Caltrans) State Scenic Highway System Map (Caltrans 2018), these highways are part of the eligible and State-designated highways listings. However, these designated/potentially eligible routes are not located within the Proposed Project. The closest portion of Highway 111 eligible for listing is almost 34 miles north of the Project site.

Additionally, If the vertical option for the anaerobic digester is chosen, the structure height may be up to 120 feet, and the Project would require a variance request. The Proposed Project would introduce new structures to an area of the site that contains no existing vertical elements and would change the existing visual character of the area. While the Proposed Project is located adjacent to Highway 111, this portion of Highway 111 is not within the eligible section as noted in Caltrans (Caltrans 2023). Furthermore, given the low visual quality of the area, no scenic vistas, parks or residences would have sensitive viewers.

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	No Impact **(NI)**

While the Proposed Project may be viewed from various roadways by motorists, such as those traveling along East Harris Road and Highway 111, these areas are not designated as scenic, and views would be consistent with and typical of industrial uses that are permitted land uses at the Project site. Furthermore, the Proposed Project would be required to comply with the Development Standards of the Mesquite Lake Specific Plan to ensure the design would be consistent with existing and future development.

Since the Specific Plan allows additional building height with a variance, implementation of the Project would be consistent with the MEIR, and would not result in any new impacts that were not previously analyzed, and impacts would be less than significant.

b) Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway? ☐ ☐ ☒ ☐

b) Consistent with the MEIR; Less than Significant Impact. As discussed in part a), the Proposed Project is not located within a State or eligible scenic highway, nor is the Proposed Project near or within scenic vistas or areas that may provide users with visual quality. The Project site is undeveloped and zoned for medium to heavy industrial, with a land use of medium to heavy industrial. The Project site remains largely unchanged from the conditions described in the MEIR. Additionally, no rock outcroppings, or current historic buildings are found within the Proposed Project site. No trees are visible at the Project site outside of natural vegetation. The vegetation present does not define the visual characteristics of the site, and removal of these as proposed would not substantially change or damage the visual character. Therefore, implementation of the Project would be consistent with the MEIR, and impacts would be less than significant.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surrounding? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? ☐ ☐ ☒ ☐

c) Consistent with the MEIR; Less than Significant Impact. The MEIR conducted a Visual Resources Analysis discussing the potential visual impacts of development within the SPA. As discussed in threshold a) above, the MEIR and the County's General Plan Conservation Element identified that the Project site area does not have significant visual quality or scenic potential. The Project site would be defined as a mostly nonurbanized area. As discussed further in threshold a), even with the potential increase in height, the Proposed Project would not substantially degrade the existing visual character or quality of public views. As discussed in the MEIR, the SPA has been designated to be used for industrial and agricultural uses. The Proposed Project would be consistent with the uses as defined in the Specific Plan. Furthermore, the Proposed Project would be required to comply with the Development Standards of the Mesquite Lake Specific Plan to ensure the design would be consistent with existing and future development. Therefore, implementation of the Project would be consistent with the MEIR, and impacts would be less than significant.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? ☐ ☐ ☒ ☐

d) Consistent with the MEIR; Less than Significant Impact. Existing light and glare sources at the Proposed Project are from vehicles commuting along the roadways from Harris Road and Highway 111. During construction, sources of light and glare would come from the construction equipment being used and stored at the Project site. Once operational, new light sources would come from the newly constructed buildings and from the presence of vehicles. Glare sources would come from any areas with reflective surfaces, such as building facades and windows. As discussed in the MEIR, construction effects would be temporary and short-term and would be limited during the hours of 7:00 AM to 7:00 PM Monday through Friday, and 9:00 AM to 5:00 PM on Saturdays, per the County's General Plan Noise Element (County 2015a).

Project operations would occur Monday through Friday from 5:00 AM to 7:00 PM, aligned to the delivery of organic material arriving to the facility. Depending on the time of year, minimal lighting would be required during these hours; moreover, little to no lighting would be required when the Project is not operating. Glare during operations could be seen from buildings and vehicles; however, the Proposed Project would be designed per the Development Standards of the Mesquite Lake Specific Plan, which notes, "Exterior wall finishes should generally be concrete, masonry, or stucco, though metal or synthetic wall panels with a similar appearance to these materials may also be acceptable as determined by the Planning & Development Services Department." Additionally, potential glare impacts could occur from solar panels, if utilized. However, if solar panels are used, they would be installed on the roofs of buildings and would only be visible from above by sources such as aircraft. However, as discussed in Section IX: Hazards and Hazardous Materials, the nearest airport is over 6 miles southwest from the Project Site.

As described in the MEIR, the area does not propose development of residential spaces, and the area is not compatible for residential uses. Furthermore, as mentioned, the Proposed Project would be designed per the Development Standards of the Mesquite Lake Specific Plan so that it would be consistent and compatible with existing and future development. Therefore, implementation of the Project would be consistent with the MEIR, and impacts would be less than significant.

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	No Impact **(NI)**

II. *AGRICULTURE AND FOREST RESOURCES*

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:

a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐
b)	Conflict with existing zoning for agricultural use, or a Williamson Act Contract?	☐	☐	☐	☒
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d)	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Summary of Impacts Identified in the MEIR

The MEIR noted that the EIR prepared for the 1993 general plan update addressed the agricultural impacts that would result from designation of non-agricultural uses in areas of existing farmland. This included areas designated for urban uses, including designated SPAs. The proposed Mesquite Lake SPA designation was specifically addressed in the Agriculture section of the EIR, which stated that this was an area of poor agricultural land, in spite of its Important Farmland designation. The evaluation of agricultural impacts included the following statement:

> The direct loss of 4,260 acres of Important Farmland in the Mesquite Lake SPA would be justified if a major portion of this proposed industrial park is devoted to agricultural-related operations. In particular, as detailed in the Agricultural Element, the County requires and would benefit from additional agricultural processing and packaging facilities. The development of packaging and processing facilities in the Mesquite Lake SPA would stabilize and increase the value of farm products; increase local employment; diversify the overall agricultural industry and thereby stabilize the local economy; and lower the prices of many locally produced commodities for local consumption.

The MEIR noted that approval of the Specific Plan would commit nearly the entire property, some 4,780 acres (of which approximately 1,420 acres is currently under cultivation), to nonagricultural use and would include all Project lands designated as Prime Farmland and Farmland of Statewide Importance. It is important to note, however, that due to poor soil conditions, farmlands within the Project that are designated as Prime or of Statewide Importance are less productive than these designations would imply. The Mesquite Lake Specific Plan, including the general plan amendment to change approximately 570 acres from the Agriculture designation to SPA, would not significantly impact the County's agricultural resources and no mitigation would be required.

Additionally, no portion of the Project is subject to a California Land Conservation Act (Williamson Act) contract for agricultural preservation.

Impacts Related to the Proposed Project:

a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	No Impact **(NI)**

a) Consistent with the MEIR; Less than Significant. The majority of the Proposed Project is located on land classified as Farmland of Statewide Importance, with portions of the outer boundary of the site being classified as "Other Land," which is land not included in any other category, such as low density rural development, riparian areas not suitable for grazing, strip mines, or aquaculture facilities, among others (DOC 2023a). Currently, agricultural activities exist on site. However, impacts associated with conversion of this land from agricultural to nonagricultural uses were evaluated in the MEIR, and it was concluded that no impacts to agricultural land would occur due to poor soil conditions and given that farmlands within this area are less productive than their designation would imply. Implementation of the Project would be consistent with the MEIR, would not result in any new impacts that were not previously analyzed, and impacts would be less than significant.

b)	Conflict with existing zoning for agricultural use, or a Williamson Act Contract?	☐	☐	☐	☒

b) Consistent with the MEIR; No Impact. As previously mentioned, the MEIR noted that no portion of the Mesquite Lake Specific Plan was identified in containing any land subject to the Williamson Act. Additionally, since 2006, no new lands have been subject to the provisions of a Williamson Act contract (DOC 2023b). Imperial County currently does not participate in Williamson Act contracts and there are currently no active contracts within the County. On February 23, 2010 the Board of Supervisors approved Minute Order #10a which forced all existing Williamson Act contracts into non-renewal and denied any new contracts. The last Williamson Act contracts expired in 2020. No land within the Project site is zoned for agricultural use; the current zoning for the site is Mesquite Lake Specific Plan consisting of Medium and Heavy Industrial (County 2006). Implementation of the Project would be consistent with the MEIR and would not result in any new impacts to a Williamson Act Contract or existing agricultural zoning and no impacts would occur.

c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d)	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

c) and d) Consistent with the MEIR; No Impact. Currently no land within the Mesquite Lake Specific Plan is zoned for forest land or timberland (County 2006). As discussed in threshold b), the Project site is zoned Medium and Heavy Industrial. (County 2006). Additionally, no forests or tree production occurs on the site. Therefore no impacts to forest land or timberland would occur.

e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

e) Consistent with the MEIR; Less than Significant. As mentioned in threshold a) above, impacts associated with conversion of this land from agricultural to nonagricultural uses were evaluated in the MEIR, and it was concluded that no impacts to agricultural land would occur due to poor soil conditions and given that farmlands within this area are less productive than their designation would imply. Implementation of the Project would not result in any new impacts that were not previously analyzed and would be consistent with the MEIR. Impacts would be less than significant.

III. *AIR QUALITY*

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to the following determinations. Would the Project:

a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐
b)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c)	Expose sensitive receptors to substantial pollutants concentrations?	☐	☐	☒	☐
d)	Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?	☐	☒	☐	☐

Summary of Impacts Identified in the MEIR:

The MEIR included an analysis of the existing air quality conditions at the time of preparation of the MEIR and an impact analysis for construction and operation based on full buildout of the Specific Plan.

The MEIR noted that at the time of preparation, neither Imperial County nor the Imperial County Air Pollution Control District (ICAPCD) had quantitative thresholds for determining significance of impact under CEQA. For federal projects in a marginal ozone (O3) (8-hour) nonattainment area, thresholds for the presumption that a project would conform to the State Implementation Plan (SIP) were 100 tons per year for both nitrous oxides (NOx) and reactive organic gases (ROCs). In recognition of the State "nonattainment" designation for O3 and to be conservative, thresholds of 50 tons per year for NOX and ROC were used. The federal SIP conformity threshold for PM10 in a federal "nonattainment-serious" area is 70 tons per year. Because the Salton Sea Air Basin (SSAB) was in compliance with both State and federal standards, the conformity threshold for CO of 100 tons per year was used as a significance guideline.

Construction
The MEIR noted that the principal concern for potential impacts during construction would be the generation of fugitive dust and particulates, including particulate matter less than 10 microns (PM10) and 2.5 microns (PM2.5). Grading, earthmoving, driving on unpaved haul roads, and exposure of graded surfaces and stockpiles to the wind would be the major sources of fugitive dust. Windblown dust and dust from unpaved roads are the predominant sources of particulates in Imperial County. Construction equipment operations would result in emissions of O3 precursors NOx and ROC. The quantity of emissions would depend on the level of activity and number of concurrent projects, in addition to other parameters. The MEIR concluded that to avoid a significant air quality impact, the anticipated quantity of emissions should be calculated and compared with the guidelines for significant impact.

Operation
The MEIR noted that the operation of many industrial facilities has the potential to emit non-negligible amounts of regulated air pollutants. To protect the public and maintain air quality, the APCD has a process for the permitting of all sources with the potential to emit such pollutants. In addition, vehicle operations would result in the regional emissions of O3 precursors NOx and ROC. The quantity of emissions would be dependent on the types of vehicles, number of trips, and average trip distance, as well as other parameters. The MEIR concluded that for all proposed developments within the Specific Plan, the anticipated quantity of emissions should be calculated and compared with the guidelines for significant impact specified above.

Odors
The MEIR noted that there are few residences within 1 mile of the Specific Plan and, therefore, it is unlikely that odors emitted from project facilities would result in a significant impact. However, projects within the Specific Plan that include composting, sorting of recyclables, or transforming of biosolids would require that an Odor Impact Minimization Plan (OIMP) be prepared to obtain a Solid Waste Facilities Permit (SWFP). To avoid the potential for significant impact to workers at these and other on-site properties, as well as off-site populations, a mitigation measure for potential odor impact is included below.

The MEIR concluded that with implementation of the following mitigation measures, future projects would avoid conflict with local air quality plans, prevent violation or a substantial contribution to an existing or projected air quality violation, protect sensitive receptors from substantial air pollutant concentrations, and minimize objectionable odors. However, the MEIR also concluded that individual air quality analyses would be required for each project within the Specific Plan and additional mitigation measures may be required.

Mitigation Measure 4.3.1: Prior to issuance of any grading permit or building permit, the applicant shall provide evidence that construction specifications incorporate the requirement to comply with Imperial County Air Pollution Control District (ICAPCD) Regulation VIII, Fugitive Dust Rules, and the standard and discretionary mitigation measures for construction equipment and fugitive PM10 control for construction activities in Section 7.1 of the Imperial County APCD CEQA Air Quality Handbook.

Mitigation Measure 4.3.2: Prior to issuance of any grading permit or building permit, the applicant shall provide evidence that construction plans and specifications incorporate elements that ensure the paving, planting, or equivalent long-term dust stabilization of all surfaces that would be disturbed during construction.

Mitigation Measure 4.3.3: Prior to issuance of any grading permit or building permit, the applicant shall provide an analysis to APCD of forecast construction equipment emissions attributable to the Project as well as all foreseeable concurrent construction within 1 mile of the Project. If forecast direct or cumulative NOX or ROC emissions would exceed 50 tons per year, the applicant shall incorporate feasible emission reduction measures to reduce emissions to less than 50 tons per year to the satisfaction of the Air Pollution Control Officer. If emission reduction measures do not provide adequate reduction, applicant shall conduct further project-specific environmental review pursuant to CEQA or provide evidence from APCD that forecast emissions from construction activities would not cause a significant air quality impact.

Mitigation Measure 4.3.4: Prior to issuance of any building permit, the applicant shall provide evidence from APCD that the project is in compliance with APCD rules for permitting of new or modified stationary sources, or is exempt from permitting requirements.

Mitigation Measure 4.3.5: Prior to issuance of any discretionary approval or building permit, the applicant shall provide information to the Planning and Development Services Director on average daily truck and employees trips and one-way average miles traveled. Based on this information, the Planning and Development Services Director, in consultation with the Air Pollution Control Officer, may require an analysis of potential long-term vehicle emissions attributable to the Project. If forecast NOX or ROC emissions would exceed 55 pound per day, the applicant shall be required to incorporate feasible emission reduction measures to reduce emissions to a less than significant level. If emission reduction

measures do not provide adequate reduction, applicant shall conduct further project-specific environmental review pursuant to CEQA or provide evidence from APCD that forecast long-term vehicle emissions from the Project would not cause a significant air quality impact.

Mitigation Measure 4.3.6: Prior to issuance of any building permit, the permit applicant shall provide, for approval by the County Planning/Building Department, a description of the odor-producing potential of the facility and the controls that would be incorporated into the Project to avoid an impact to on-site or off-site receptors. Uses proposing composting, sorting of recyclables, or biosolids transformation, shall be required to obtain approval by the Local Enforcement Agency (LEA) at the County Environmental Health Services Division (EHS), which may require preparation of an Odor Impact Minimization Plan (OIMP) and approval of a Solid Waste Facilities Permit (SWFP).

Impacts Related to the Proposed Project:
An Air Quality and Greenhouse Gas Analysis was prepared by UltraSystems, as provided in Appendix A. Regional emissions of criteria air pollutants and precursors, and toxic air contaminants during Project construction and operations were assessed in accordance with the methodologies as described in Section 4.4 of Appendix A. ICAPCD suggests that the "approach of the CEQA analyses for construction PM10 impacts should be qualitative as opposed to quantitative, but that any projects which are greater than the level of significance for construction may have a significant impact on local and, under certain circumstances, regional air quality. For full disclosure purposes, construction emissions were quantified. In order for the Air Quality and Greenhouse Gas Analysis to evaluate impacts from the Project, the report evaluated the Project in the following phases:

- Phase 0-IC (Initial Composting): Outdoor primary and secondary composting of 150,000 tons per year (tpy) greenwaste (>90%) and food waste (<10%) in aerated static piles; no anaerobic digestion.
- Phase1-A: Anaerobic digestion of 300,000 tpy greenwaste (>75%) and food waste (<25%) and outdoor composting of digestate in aerated static piles.
- Phase1-B: Anaerobic digestion of 300,000 tpy greenwaste (<75%) and food waste (>25%) and in-vessel, indoor composting of digestate with biofilters for emissions control, followed by outdoor secondary composting in aerated static piles.
- Phase 2-A: Anaerobic digestion of 300,000 tpy greenwaste (>75%) and food waste (<25%) and composting of digestate in outdoor aerated static piles.
- Phase 2-B: Anaerobic digestion of 300,000 tpy greenwaste (>75%) and food waste (>25%) and in-vessel, indoor composting of digestate with biofilters for emissions control, followed by outdoor secondary composting in aerated static piles.

Construction will begin with clearing and grading, along with excavations for trenching. Building of structures is summarized in Table 2: Construction Phases.

Table 2: Construction Characteristics

Site Element	Phase 0-IC	Phase 1-A	Phase 1-B	Phase 2-A	Phase 2-B
Clearing and Grading	3,179,880 ft^2				
Buildings	33, 420 ft^2	145,000 ft^2	165,121 ft^2	79,543 ft^2	165,121 ft^2
Concrete Pads	191,630 ft^2	146,400 ft^2	None	303,380 ft^2	None
Demolition	None	27,420 ft^2	None	None	None
Asphalt Paving	472,881 ft^2				

Short Term Impacts

Project construction activities will generate short-term air quality impacts. Construction emissions can be distinguished as either onsite or offsite. Onsite air pollutant emissions would consist principally of exhaust emissions from off-road heavy-duty construction equipment, as well as fugitive particulate matter from earthwork. Offsite emissions would result from workers commuting to and from the job site, as well as from trucks hauling building materials and taking away debris. For calculations, each of the five main phases was divided into the following subphases, which do not overlap in time:

- Demolition (for Phase 1-A only)
- Site preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

Table 3: Maximum Daily Unmitigated Construction Emissions, shows the results of the CalEEMod analysis and compares them with the ICAPCD significance criteria.

Table 3: Maximum Daily Unmitigated Construction Emissions

Project Phase Construction	Maximum Emissions (lbs/day)			
	ROG	CO	NO_x	PM_{10}
Phase 0-1c	13.1	9.2	0.8	3.4

		Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
Phase 1-A	13.9	23.8	3.2	16.3	
Phase 1-B	56.7	21.2	3.3	18.3	
Phase 2-A	27.3	13.2	12.4	9.2	
Phase 2-B	27.2	21.1	3.2	18.3	
ICAPCD Significance Thresholds	75	550	100	150	
Significant (Yes or No)	**No**	**No**	**No**	**No**	

Long Term Impacts

To properly characterize air pollution impacts under CEQA, operational impacts for two period of maximum emissions were calculated: Phase 0-IC, the only phase in which there is direct composting of feedstock and no anaerobic digestion; and the combination of Phases 1-B and 2-B, when the facility is fully operational. Both phases are discussed below.

Phase 0-IC Operational Emissions

During the months in which the facility will only perform composting of green waste and food waste, the main emissions sources will be the aerated static piles, on road trucks delivering feedstock to the facility and distributing compost to customers, and employee commuting. Table 4 summarizes the daily operating emissions for this phase.

Table 4: Daily Project Operational Emissions in Phase 0-IC

Emissions Source	Pollutant (maximum lbs/day)					
	ROG	CO	NO_X	PM_{10}	$PM_{2.5}$	NH_3
Composting	10.8	-	-	-	-	0.66
Incoming Feedstock Trucks	0.08	0.63	8.41	0.68	0.31	-
Outgoing Compost Trucks	0.01	0.04	0.58	0.05	0.02	-
Employee Commuting	0.01	0.68	0.05	0.04	0.02	-
Road Dust	-	-	-	8.8	1.2	
Total Operational Emissions	**10.9**	**1.3**	**9.0**	**9.6**	**1.6**	**0.7**
Thresholds for Tier II	137	550	137	150	550	N/A
Tier	**I**	**I**	**I**	**I**	**I**	**N/A**

Note: Tier I level of significance is less than significant.

Phase 1-B and Phase 2-B Operational Emissions

The Phase 1-B and 2-B evaluates the Project at full buildout, after equipment no longer needed has been demolished or otherwise removed, and all the equipment needed for processing the maximum expected rate of feedstock has been built. Table 5 summarizes maximum daily emissions under full operation.

Table 5: Daily Project Operational Emissions in Phase 1-B Plus 2-B

Emissions Source	Pollutant (maximum lbs/day)						
	ROG	CO	NO_X	PM_{10}	$PM_{2.5}$	NH_3	SO_x
Anaerobic Digestion	-	-	-	-	-	-	-
In-Vessel Composting	43.4	-	-	-	-	2.6	-
Mobile Diesel Equipment	9.0	51.1	54.7	1.8	1.7	-	-
Boilers	1.5	23.0	13.7	2.1	2.1[a]	-	0.2
Flares	1.0	7.7	9.4	2.0	2.0[a]	-	6.6
Incoming Feedstock Trucks	0.3	2.7	35.5	2.8	1.3	-	-

Incoming Feedstock (Road Dust)	-	-	-	6.9	1.7	-	-
Outgoing Compost Trucks	0.0	0.2	2.5	0.2	0.1	-	-
Outgoing Compost (Road Dust)	-	-	-	27.4	2.8	-	-
Employee Commuting	0.0	1.1	0.1	0.1	0.0	-	-
Employee Commuting (Road Dust)	-	-	-	0.2	0.1	-	-
Total Operational Emissions	**55.2**	**44.7**	**115.9**	**41.9**	**11.8**	**2.6**	**6.8**
Thresholds for Tier II	*137*	*550*	*137*	*150*	*550*	*N/A*	*N/A*
Tier	**I**	**I**	**I**	**I**	**I**	*N/A*	*N/A*

Note: Tier I level of significance is less than significant.

The Air Quality and Greenhouse Gas Analysis also evaluated impacts to sensitive receptors, objectionable odors, and conformity with the air quality management plan (AQMP) which are discussed below.

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to the following determinations. Would the Project:

a) Conflict with or obstruct implementation of the applicable air quality plan? ☐ ☒ ☐ ☐

a) Consistent with the MEIR; Less than Significant Impact with Mitigation. The ICAPCD CEQA Air Quality Handbook calls for a consistency analysis with the regional clean air plans, namely ozone and PM_{10} attainment demonstration plans, for large residential and commercial developments that are required to develop an EIR. Projects that are projected to exceed ICAPCD thresholds of significance for its operations are considered large developments and are required to demonstrate consistency with regional air quality plans. Because the proposed Projects emissions will not exceed the District's significance thresholds, analysis for conformity with regional air quality plans is not required for the Project. Nonetheless, the MEIR concluded that development of the Mesquite Lake SPA has the potential to emit significant quantities of fugitive dust and particulates during construction activities. Similarly, development of industries within the Mesquite Lake SPA would generate vehicle trips within the County, including many heavy truck trips. These vehicles would emit significant quantities of NOX and lesser quantities of VOC, which contribute to the formation of O_3, a nonattainment pollutant. However, the MEIR noted that the principal source of PM_{10} in Imperial County is wind-blown dust. While the proposed Project would lead to the increase of truck trips per day during construction and operational use, the development of the Project would lead to a reduction in bare land and therefore a reduction in PM_{10}.

Additionally, as previously mentioned, the MEIR concluded that with implementation of Mitigation Measures 4.3.1 through 4.3.5, future projects would avoid conflict with local air quality plans and prevent violation or a substantial contribution to an existing or projected air quality violation. In summary, these mitigation measures request that the Project provide evidence that both construction and operational impacts related to air quality, would be below ICAPCD thresholds. With preparation of the Air Quality and Greenhouse Gas Analysis, and as shown in Tables 3, 4, and 5 above, construction and operation of the proposed Project would not exceed any significance thresholds. The Project will still be required to implement Mitigation Measures 4.3.1 through 4.3.5, to provide the Air Quality and Greenhouse Gas Analysis to the APCD and the Planning and Development Services Director, as appropriate. Therefore, with implementation of the aforementioned mitigation, impacts would remain less than significant.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? ☐ ☐ ☒ ☐

b) Consistent with the MEIR; Less than Significant Impact. In general, individual projects that exceed recommended daily thresholds for project-specific impacts would be considered to cause a cumulatively considerable increase in emissions for those pollutants for which the SSAB is in nonattainment. As shown in Tables 3, 4, and 5 above, the Project would not result in exceedance of regional thresholds during construction or operation, and would therefore not result in a cumulatively considerable impact. As such, the proposed Project's cumulative construction and operation related impacts would be less than significant.

c) Expose sensitive receptors to substantial pollutants concentrations? ☐ ☐ ☒ ☐

c) Consistent with the MEIR; Less than Significant Impact. Sensitive receptors are people who would be more susceptible to air pollution than the general population, such as children, athletes, the elderly, and the chronically ill. Examples of land uses where

	Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)

substantial numbers of sensitive receptors are often found are schools, daycare centers, parks, recreational areas, medical facilities, nursing homes, and convalescent care facilities. Residential areas are also considered to be sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to pollutants. The closest sensitive receptor is a rural residence near the intersection of Studer Road and East Ralph Road, about 6,000 feet south-southwest of the center of activity of the Project Site. This residence is too far away to be affected by emissions from the proposed Project, and therefore impacts would be less than significant. .

d)	Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?	☐	☒	☐	☐

d) Consistent with the MEIR; Less than Significant Impact with Mitigation The MEIR notes that there are very few residences within 1 mile of the Specific Plan and, therefore, it is unlikely that odors emitted from project facilities would result in a significant impact. However, projects within the Specific Plan that include composting, sorting of recyclables, or biosolids transformation would be required to adhere to Mitigation Measure 4.3.6, which requires that an OIMP be prepared in order to obtain a SWFP. Consistent with the MEIR, the Project would implement Mitigation Measure 4.3.6 and would prepare an OIMP to minimize odor impacts during operation.

In addition, construction activities for the Project would generate airborne odors associated with the operation of construction vehicles (i.e., diesel exhaust) and asphalt paving operations. These emissions would occur during daytime hours only and would be isolated to the immediate vicinity of the construction site and activity. Therefore, they would not affect a substantial number of people. Consistent with the MEIR, impacts would be less than significant with mitigation incorporated.

IV. *BIOLOGICAL RESOURCES*

Would the project:

a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c)	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d)	Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e)	Conflict with any local policies or ordinance protecting biological resource, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

Summary of Impacts Identified in the MEIR:
At the time the MEIR was prepared, the existing conditions described were based on the results of the site assessment prepared in 2004. Observations were made for sensitive species, though no focused surveys pursuant to the U.S. Fish and Wildlife (USFWS) protocols were conducted.

Three vegetation communities were found to occur within the SPA: bush seepweed–iodine bush scrub (total of 729.7 acres, with 562.2 acres disturbed), tamarisk scrub (total of 287.5 acres, with 64.5 acres as disturbed and 161.2 classified as tamarisk scrub/ponds), and disturbed wetlands (total of 6.6 acres of disturbed wetlands). The remaining lands were occupied by agriculture (2,244.3 acres, with 1,336.2 under active agriculture, 268.10 as fallow agriculture, and 640 acres of aquaculture facility and developed and disturbed areas (1,831.9 acres).

Wildlife
A total of 26 wildlife species were observed or detected within the SPA in the bush seepweed-iodine bush scrub habitat, tamarisk scrub communities, disturbed wetland area, and within the agricultural fields. While the developed and disturbed areas do not support native vegetation, these areas provide access to perches, roosts or covers for various disturbance-adapted animal species. These species are detailed within the MEIR.

Sensitive Habitats
Sensitive habitats within the MEIR were identified to be areas that were regulated by the U.S. Army Corps of Engineers (ACOE) as federal wetlands or waters under Section 404 of the Clean Water Act (CWA), regulated by the California Department of Fish and Wildlife (formerly known as the California Department of Fish and Game[CDFG]) as State wetlands or waters under Section 1600 of the CDFG code, and/or were areas worthy of consideration by the California Natural Diversity Database (CNDDB). While some portions of the SPA were found to possibly fall under ACOE and CDFG jurisdiction, none of the habitats were found to be rarer or worthy of consideration. Implementation of SPA would result in disturbance to bush seepweed-iodine bush scrub, tamarisk scrub, and disturbed wetlands. However, these impacts to the vegetation communities (or portions thereof) would be significant if they were qualified as federal and/or State jurisdictional waters or wetlands. Agricultural lands within the SPA would be impacted by future development; however, impacts would not be significant because these lands were not considered as sensitive. However, there would indirect and temporary impacts during development. Therefore, the following mitigation measures provided in the MEIR, would address these impacts to vegetation, including wetland habitats, that could arise during construction generated erosion, sedimentation, and fugitive dust.

Mitigation Measure 4.5.1: Prior to approval of any discretionary permit, final map, grading plan, or building permit for any phase or unit of development within the Specific Plan, the Planning and Development Services Director shall determine whether the Project could potentially impact wetlands or waters of the U.S. Where the Planning and Development Services Director determines that a potential impact could occur, the applicant shall provide evidence to the Planning and Development Services Director that a qualified biologist has inspected the site and made a determination regarding the presence of wetlands or waters of the U.S. If determined to be present, the following actions shall be taken: (1) a formal wetland and waters of the U.S. determination and delineation shall be conducted by trained personnel to determine the extent of these resources on the Project site; (2) any required ACOE permit pursuant to Section 404 of the CWA and certification from the RWQCB pursuant to Section 401 of the CWA shall have been issued; and (3) any required Streambed Alteration Agreement from the CDFG pursuant to Section 1600 of the California Fish and Game Code and either a Statewide General Order (2004-0004-DWQ) or Form 200-Report of Waste Discharge (ROWD) from the RWQCB under Section 13260 of the California Water Code has been issued.

As part of the permitting process for impacts to either federal or State wetlands or waters, mitigation in the form of habitat compensation (either creation, restoration, or enhancement) would be required. Because of the federal and State policy of a no net loss of wetland functions and values, habitat creation at least equal to the amount of jurisdictional habitat impacted, shall be included with the habitat compensation program. The ultimate mitigation replacement ratios would be determined through consultation with the appropriate resource agencies during the permitting process.

Mitigation Measure 4.5.2: Prior to approval of any discretionary permit, final map, grading plan, or building permit for any phase or unit of development within the Specific Plan, the Planning and Development Services Director shall determine whether the Project could potentially impact rare plants. Where the Planning and Development Services Director determines that a potential impact could occur, the applicant shall provide evidence to the Planning and Development Services Director that focused rare plant surveys by a qualified biologist were conducted during the appropriate season. If these surveys detect sensitive plant species and determine that significant impacts would occur, mitigation in the form of habitat compensation would be required as determined appropriate by the County.

Mitigation Measure 4.5.3: Prior to construction within the Specific Plan, the applicant shall provide evidence to the Planning and Development Services Director that standard best management practices (BMPs) have been installed to avoid erosion and sedimentation into federal and/or State jurisdictional waters and wetlands. It is anticipated that such BMPs would be components of a Stormwater Prevention Pollution Plan required as a component of the State Water Resources Control Board's NPDES General Permit, which prevents construction pollutants from contacting storm water and with the intent of keeping all products of erosion from moving off-site into receiving waters. A National Pollutant Discharge Elimination System General Permit is required for construction projects that encompass more than 5 acres of soil disturbance that would discharge stormwater into waters of the U.S.

Sensitive Plant Species
Sensitive plants were listed to be as endangered, threatened, or proposed for listing as endangered or threatened by the USFWS, CDFW, and California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants in California. Based on a CNDDB search at the time of the preparation of the MEIR, no federally or State listed or proposed for listing plant species were found to be within the SPA. Two species, Abrams's spurge (*Chamaesyce abramsiana*) and Sand food (*Pholisma sonorae*) were found near the Project site; however, the potential for them to occur, was considered low . Sensitive plant species present within the SPA would be impacted, but its intensity would be based on current status and population size of the population. However, as noted in the MEIR, the potential for such species to be present is low.

Sensitive Wildlife
Sensitive wildlife was listed to be as endangered, threatened, proposed for listing, or candidates for listing by the USFWS and CDFW. The three

sensitive wildlife species detected within the SPA were the burrowing owl (*Athene cunicularia*), prairie falcon (*Falco mexicanus*), and black-tailed jackrabbit (*Lepus californicus*). Six other sensitive species known from the region with a low to moderate potential to occur within the SPA are the federally endangered and State-threatened Yuma clapper rail (*Rallus longirostris yumanensis*), as well as the Colorado River toad (*Bufo alvarius*), flat-tailed horned lizard (*Phrynosma mcalli*), ferruginous hawk (*Buteo regalis*), Crissal thrasher (*Toxostoma crissale*), and mountain plover (*Charadrius montanus*), which are State species of special concern.

The MEIR concluded that implementation of the Specific Plan would directly impact wildlife such as the burrowing owl if proposed activities occur within 50 meters (160 feet) of occupied burrows, burrows and entrances are destroyed, or foraging habitat adjacent to burrows is degraded. Depending on the timing of development within the SPA, other bird species covered by the Migratory Bird Treaty Act MBTA) may be impacted during the breeding season. Therefore, direct impacts would be significant if development were to occur during the nesting season (February 1 through September 30). While burrowing owl was not present at the time of the reconnaissance during the preparation of the MEIR within the Proposed Project site (or known as the Palo Verde Valley Disposal Service site in the MEIR), there is potential for them to colonize the site and therefore, impacts would be addressed with implementation of the following mitigation measure.

Mitigation Measure 4.5.4: Prior to grading or construction within the Specific Plan, the Planning and Development Services Director shall determine whether the Project could potentially impact burrowing owl. Where the Planning and Development Services Director determines that a potential impact could occur, the applicant shall engage the services of a biologist that has been determined by the USFWS as qualified to conduct burrowing owl surveys. An initial survey to determine the presence of burrowing owls shall be conducted between February and September. Prior to conduct of any burrowing owl survey, CDFG and the USFWS Office of Law Enforcement shall be contacted regarding use of the CBOC Guidelines for the survey and for relocation requirements. Information received from these agencies shall be provided in writing to the Development Services Director prior to commencement of any survey. The survey shall be conducted in accordance with the latest USFWS-approved guidelines for conducting borrowing owl surveys and the requirements of CDFG. A report on the results of the survey and recommended avoidance or mitigation measures shall be provided by the applicant to the USFWS, CDFG, and Imperial County Planning and Development Services Department. No clearing or ground-disturbing activities may be taken until the report and recommendations have been accepted by the USFWS, CDFG, and Imperial County Planning and Development Services Department. Relocation of found burrowing owls may be required. All burrowing owls found on the Project site shall be tagged by a USFWS-qualified burrowing owl biologist. If burrowing owl burrows are found present within construction areas and a 50-meter (165-foot) boundary of construction limits, avoidance is the preferred level of mitigation. Avoidance requires no disturbance within 50 meters (165 feet) of occupied burrows during the nonbreeding season (September 1 through January 31), no disturbance within 75 meters (250 feet) of occupied burrows during the breeding season (February 1 through August 31), and a minimum of 6.5 acres of foraging habitat preserved contiguous with occupied burrow sites for each pair of breeding burrowing owls.

If avoidance cannot be met, or no burrowing owls were detected during the first survey, a second survey shall be conducted no less than 30 days prior to any clearing, ground disturbance, or demolition of existing structures. If no burrowing owls are present, a third survey shall be conducted no less than five days prior to the commencement of construction and, if no burrowing owls are present, clearing, grading, demolition, or construction may commence. If burrowing owls are present at the time of the second survey and CDFG and USFWS Office of Law Enforcement concur, on-site passive relocation can be implemented wherein owls are encouraged to move from occupied burrows to alternate natural or artificial burrows beyond 50 meters from the impact zone, within a minimum of 6.5 acres of foraging habitat for each pair of relocated owls. The project biologist shall evaluate the suitability of nearby habitat, the availability of an existing or constructed alternate burrow for each burrow excavated, and the opportunity for preservation of the site, such as through a conservation easement that would be managed to promote burrowing owl use of the site. Relocation requires that owls should be excluded from burrows in the immediate impact zone and 50-meter buffer zone by installing one-way doors in burrow entrances, left in place for 48 hours before excavation. Relocation of owls should only be implemented during the nonbreeding season. Passive relocation may occur only if there is at least 6.5 acres of suitable nearby habitat for each relocated pair, and an alternate burrow for each burrow excavated.

Mitigation Measure 4.5.5: Prior to finalization of construction plans, timing of construction within the Specific Plan shall be scheduled, if feasible, to avoid the migratory bird nesting season in the Project area (February 1 through September 30). One week prior to commencement of construction activities outside of the nesting season, a focused bird nest survey shall be conducted within the plan area by a qualified biologist. Should any inactive or active bird nests be noted, the CDFG will be notified pursuant to CDFG Code 3503 and appropriate actions shall be taken per CDFG recommendations.

However, if construction is necessary before close of the nesting season, the applicant could elect to have a qualified biologist conduct focused surveys for migratory bird nests throughout the individual project site in the season of planned construction. If this measure were selected, surveys shall be completed 1 week prior to commencement of construction. If surveys noted no sensitive wildlife species or migratory bird nests within the area of potential construction impact, construction could occur during the nesting season. If the biologist determines that habitat slated for removal/disturbance is being used for nesting at the time of the focused survey, disturbance shall be avoided until after the young have fledged from the nest and achieved independence. Results of focused bird nest surveys shall be submitted to the CDFG via a letter report. Should construction halt for any reason for longer than 1 week after initial commencement of activities, an additional focused survey for migratory bird nests would be required 1 week prior to recommencement of construction activities. If the surveys were completed and no sensitive wildlife species or nests were observed, construction could recommence during the nesting season.

Because construction equipment could have temporary impacts, such as construction noise above ambient levels in locations within 500 feet of

an active nest covered by the MBTA, during the nesting season construction, activities are required to limit noise levels. The County precedent for construction noise is that projects shall not exceed a 60-decibel level at a nesting site of designated habitat.

Wildlife Corridors
Wildlife migration corridors are linear landscape features with sufficient width and buffer to allow the movement of animals between patches of similar undisturbed habitat or between habitats and vital resources. Regional corridors links two or more large areas of natural open space, while local corridors allow resident animals to access critical resources such as food, cover and water in smaller areas that may be isolated by urban development. The MEIR notes that the SPA is part of a major contiguous wildlife corridor in the County, situated between the New River and Alamo River, and south of the Salton Sea. Areas within the SPA provide bush seepweed-iodine bush and tamarisk scrub habitats that support wildlife movement and are part of an important avian and wildlife corridor to the Salton Sea. However, no direct impacts were found to occur within because the SPA is surrounded by large amounts of similar habitat and linkages that would be available for wildlife movement.

Impacts Related to the Proposed Project:

Chambers Group conducted a literature review and biological reconnaissance-level survey on November 1, 2022, for the Project (Appendix B). The purpose of this survey was to determine if any changes had occurred since the 2004 survey, document existing vegetation communities, identify whether the site may support special status species with a potential for occurrence, map habitats that could support special status wildlife species, and delineate jurisdictional water features. The report also evaluates potential impacts of the Project to these resources. By conducting the survey and preparing the report, MEIR Mitigation Measures 4.5.1 and 4.5.2 were satisfied.

The area surveyed by the biologists (Survey Area) is located in the Brawley United States Geological Survey (USGS) 7.5-min quadrangle. The Survey Area is primarily an old agricultural field with topographical variation and is surrounded by active and inactive agricultural fields. The elevation at the Survey Area ranges from approximately 70 to 90 feet below mean sea level (bmsl). The Survey Area lies outside the scope of the Imperial Irrigation District (IID) Habitat Conservation Plan (HCP), according to communication with the County of Imperial.

Special Status Plant Species
Following the literature review and after the assessment of the habitat type in the Survey Area, it was determined that of the four special status plant species known to historically occur within the Survey Area and surrounding quads, three species were considered absent within the Survey Area due to lack suitable habitat. One special status plant species, Abram's spurge, which is known to occur within the Brawley quad, is considered unlikely to occur within the Survey Area as the site was highly disturbed with evidence of past human use and agricultural activity (e.g., disking, irrigation ditches) which is not conducive to the long-term survival for Abram's spurge. No special status species were observed during the biological reconnaissance survey. Therefore, no impacts to special status plants are anticipated to occur as a result of Project activities.

Special Status Wildlife Species
Following the literature review and the assessment of the habitat type in the Survey Area, it was determined that of the 19 special status wildlife species known to occur within the Survey Area and surrounding quads, 18 species are considered absent from the Survey Area and one species, burrowing owl, has a high potential to occur within the site. No special status wildlife species were observed during the survey.
In order to minimize potential impacts to sensitive species with the potential to occur within the Survey Area, the following mitigation measures should be implemented prior to and during construction activities:

Mitigation Measure BIO-1 Worker Awareness Education Program: Prior to the start of construction activities, an environmental education program shall be provided for all project personnel. The education program shall include the following: (1) the potential presence of covered species and their habitats, (2) the requirements and boundaries of the Project, (3) the importance of complying with avoidance and minimization measures, (4) environmentally responsible construction practices, (5) identification of sensitive resource areas in the field, and (6) problem reporting and resolution methods. The construction footprint shall be clearly defined with flagging and/or fencing and shall be removed upon completion.

The following two mitigation measures would replace MEIR Mitigation Measure 4.5.4:

Mitigation Measure BIO-2 Burrowing Owl Preconstruction Surveys: Preconstruction surveys shall be conducted for the burrowing owl within 30 days of construction in all suitable habitat within the Proposed Project Impact Areas.

Mitigation Measure BIO-3 Burrowing Owl Avoidance Measures: If any ground-disturbing activities are planned during the burrowing owl nesting season (approximately February 1 through August 31), avoidance measures shall include a no construction buffer zone of a minimum distance of 250 feet, consistent with the Staff Report on Burrowing Owl Mitigation (CDFG, 2012). Compliance shall be maintained with CDFW burrowing owl mitigation guidelines as detailed in the Staff Report on Burrowing Owl Mitigation (CDFG, 2012) or more recent updates, if available.

The following two mitigation measures would replace MEIR Mitigation Measure 4.5.5.

Mitigation Measure BIO-4 Nesting Bird Surveys for Clearing: If vegetation clearing or project construction activities must occur during the bird breeding season (February 15–August 31), a qualified biologist shall conduct a preconstruction nesting survey to ensure that no active nests

are present within or adjacent to the Project areas. If an active nest is observed that may be impacted by project-related activities, avoidance measures shall be implemented to avoid impacting the nest. Avoidance measures include delaying construction within the immediate vicinity of the active nest until the young have fledged or naturally failed, or instituting a buffer around the nest that prohibits construction activities to occur, but allows construction to continue outside the buffer. The appropriate avoidance buffer is to be determined by the qualified biologist based on vegetative cover, topography, stage of nest or young development, and species type.

Jurisdictional Waters and Wetlands
Two NWI mapped agricultural canals are shown to occur along the northern and western portions of the Survey Area, just outside the Project impact area. In addition, one man-made agricultural ditch occurs along the southern boundary of the site. However, all of these features are outside of the proposed impact area and any impacts from Project activities can be avoided with the use of best management practices including straw waddles. Therefore, no impacts to jurisdictional waters are anticipated to occur as a result of Project activities. Soil pits taken in potential wetland areas did not show evidence of hydric soils; therefore, no impacts to wetlands are anticipated to occur as a result of Project activities.

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? ☐ ☒ ☐ ☐

a) Consistent with the MEIR; Less than Significant Impact with Mitigation. As discussed in the MEIR, there is a potential for sensitive species to occur on and the MEIR required Mitigation Measure 4.5.2, to evaluate rare plant species within areas of specific development prior to construction. As mentioned above, Chambers Group surveyed the Proposed Project to evaluate the potential for sensitive species on site, and thus meet the requirements of Mitigation Measure 4.5.2. As mentioned above, while there is a potential for sensitive plant species to exist on site, none were observed during the survey. Similarly, no special status species were observed during the survey.

Nonetheless, a potential for special status species to occur on site, particularly with regards to the burrowing owl and other flighted species, still exists. The Project would be required to implement Mitigation Measure BIO-1, which would require worker awareness training prior to construction so sensitive species can be spotted by on-site employees.

Additionally, the MEIR included mitigation measures to protect these species; however, since protocols and requirements have changed since the time of adoption of the MEIR, those mitigation measures have been replaced with similar, new mitigation measures. In lieu of MEIR Mitigation Measure 4.5.4, the Project would be required to implement Mitigation Measures BIO-2 and BIO-3 which would require protection for Burrowing Owls. In lieu of MEIR Mitigation Measure 4.5.5, the Project would be required to implement Mitigation Measure BIO-4, which would protect migratory birds during nesting and breeding seasons.

Similar to the MEIR, with implementation of Mitigation Measures BIO-1 through BIO-4, impacts would be less than significant.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? ☐ ☐ ☒ ☐

b) Consistent with the MEIR; Less than Significant Impact. As discussed in the MEIR, portions of the SPA were found to be considered jurisdictional waters and the MEIR required Mitigation Measure 4.5.1 to evaluate if wetlands or waters would be impacted with implementation of projects in the SPA. As mentioned above, Chambers Group surveyed the Proposed Project to confirm the hydrology and hydrologic connectivity of the area, and thus meet the requirements of Mitigation Measure 4.5.1. Chambers Group found that several man-made agricultural ditches occur along the borders of the Project. Two historically National Wetlands Inventory (NWI)–mapped agricultural canals are shown to occur along the northern and western boundaries of the site; however, no water was observed during the survey. Another man-made agricultural ditch occurs along the southern boundary of the Survey Area. Water was observed within the ditch, and some riparian species, including cattails, were observed along the banks of the ditch. However, these are located outside of the impact areas and can be avoided with construction BMPs. Therefore, implementation of the Project would not result in any new impacts that were not previously analyzed and would be consistent with the MEIR. Impacts would be less than significant.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? ☐ ☒ ☐ ☐

c) Consistent with the MEIR; Less than Significant with Mitigation. As discussed in threshold b), two NWI-mapped agricultural canals occur along the northern and western portions of the Project. However, both of these canals are located outside of the impact area. Additionally, soil pits were taken in potential wetland areas, which did not show evidence of hydric soils; therefore, impacts to wetlands are not anticipated to occur. Nonetheless, the Project would be required to implement Mitigation Measure 4.5.3 to ensure

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	No Impact **(NI)**

that standard BMPs have been installed to avoid erosion and sedimentation into federal and/or State jurisdictional waters and wetlands. Therefore, with implementation of mitigation, the Project would not result in any new impacts that were not previously analyzed and would be consistent with the MEIR. Impacts would be less than significant.

d) Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? ☐ ☒ ☐ ☐

d) Consistent with the MEIR; Less than Significant with Mitigation. As discussed in the MEIR, the SPA is part of a major contiguous wildlife corridor in the County. Development within the SPA was found to have no indirect or direct impacts because the SPA is surrounded by large amounts of similar habitat and linkages that would be available for wildlife movement; thus, development of the SPA would not result in removing significant acres of migration corridors. However, the potential for migratory birds to utilize the site still exists. As mentioned above, the Project would be required to implement Mitigation Measure BIO-1 which would require worker awareness training prior to construction so sensitive species can be spotted by on-site employees. In addition, the Project would be required to implement Mitigation Measure BIO-4, which would protect migratory birds during nesting and breeding seasons. Similar to the MEIR, with implementation of Mitigation Measures BIO-1 and BIO-4, impacts would be less than significant.

e) Conflict with any local policies or ordinance protecting biological resource, such as a tree preservation policy or ordinance? ☐ ☐ ☒ ☐

e) Consistent with the MEIR; Less than Significant. The County's Land Use Ordinance Section 90302.03, outlines the requirements for landscaping withing industrial uses. The Proposed Project's grading activities would remove the existing vegetation. However, as discussed in the Biological Reconnaissance Assessment, the Project would not result in significant impacts to sensitive habitats, and would be required to follow the requirements in the County's Land Use Ordinance. Implementation of the Project would not result in any new impacts that were not previously analyzed and would be consistent with the MEIR. Impacts would be less than significant.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? ☐ ☐ ☒ ☐

f) Consistent with the MEIR; Less than Significant. As discussed in the Biological Reconnaissance Assessment, the Project lies outside the scope of the IID Habitat Conservation Plan. Based on the results of the survey, it was found that the Proposed Project would not result in significant impacts to habitats and would have no impacts to wetlands based on the vegetation present at the Project site. Furthermore, the area is zoned for industrial use and is not designated to be part of any local, regional or State conservation plan. Implementation of the Project would not result in any new impacts that were not previously analyzed and would be consistent with the MEI. Impacts would be less than significant.

V. *CULTURAL RESOURCES*

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5? ☐ ☒ ☐ ☐

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? ☐ ☒ ☐ ☐

c) Disturb any human remains, including those interred outside of dedicated cemeteries? ☐ ☐ ☒ ☐

Summary of Impacts Identified in the MEIR:
The existing MEIR evaluated historical and archaeological impacts associated with development of the Mesquite Specific Plan. The MEIR noted that the beginning of Imperial Valley's agricultural and water resource development in the late 1800s also represents important historic elements. However, within the study area, surviving structures or sites reflecting Imperial County historical development are not likely to be found. The nearest documented historic resource is the Imperial Cemetery located south of the study area approximately three-quarters of a mile. There are also roads, canals, drains, powerlines, and the Niland–Calexico rail line that are old enough (50 years or older) and perhaps important enough in the development of Imperial County to be considered significant historic resources for planning purposes. Most of these appear to have been constantly modified, maintained, and improved over the years so that little of the original historic fabric is left. The significance of these potential historic features would have to be evaluated on a case-by-case basis.

Further, the MEIR noted that Development within the Mesquite Lake Specific Plan would have the potential to impact Late Prehistoric archaeological materials in areas associated with lower elevation recessional shorelines of Lake Cahuilla. These potential resources sites are

most likely to occur in the southwestern portion of the study area between elevation -75 feet at the corner of Harris Road and SR 86 and elevation -100 feet just west of the Rose Canal in the western part of the study area. Areas where intensive cultivation for agriculture use has occurred would have a low probability for the presence of significant cultural resource due to deep excavation for drainage tiles and recurring surface disturbance. Pre-construction surveys of existing cultivated areas would also have a low probability of discovery of cultural resources. However, cultural resources could be uncovered during site clearing, grading, or construction, in which case site development should be halted and a qualified archaeologist should be consulted.

As previously mentioned, the Proposed Project is located in the area where the previously approved Palo Verde Valley Disposal Service Project was approved. The MEIR concluded that the Palo Verde Valley Disposal Service Project site, and therefore the current Project site, is "within an area of very low probability for presence of archaeological materials and no significant project impacts are anticipated." Further, the MEIR concluded, "No archaeological mitigation measures are required for the Liberty X Biofuels Power, Palo Verde Valley Disposal, or NEAC Compressed Hay Facility." Nonetheless the MEIR concluded that with implementation of Mitigation Measure 4.6.1 and 4.6.2, impacts would be less than significant.

Mitigation Measure 4.6.1 No preconstruction archaeological surveys shall be required in areas previously developed. However, if during grading or construction, evidence of potential archaeological resources is encountered, grading and construction shall be halted, the SCIC [South Coastal Information Center (located at California State University, San Diego)] and the County Planning and Development Services Director shall be notified, and a qualified archaeologist shall be contracted by the developer to inspect the site. Resumption of grading or construction shall not be commenced until the archaeologist has advised the Planning and Development Services Director regarding the potential for cultural resources at the site, and the Planning and Development Services Director notifies the developer that grading or construction may proceed. If further archaeological investigation is required by the Planning and Development Services Director, the procedures in Mitigation Measure 4.6.2 shall be followed.

Mitigation Measure 4.6.2 Prior to approval of a CUP, tentative map, site plan, grading plan, or building permit for any phase or unit of development on lands not previously disturbed by agricultural use that are within the portion of the Specific Plan shown as the Cultural Resource Survey Area in Figure 4-5, field surveys shall be conducted to determine the presence/absence of archaeological resources and a report of the surveys provided to the Planning and Development Services Director. A testing program shall be approved by the Planning and Development Services Director for any identified resources to determine their significance and proper mitigation. Mitigation may include preservation in place, documentation, including recordation of findings at the Southeastern Information Center (located at the Imperial Valley College Desert Museum), and curation of materials at an appropriate local facility for long-term preservation and study. If a testing and/or excavation program is required, local Native American groups shall be notified, and a Native American monitor shall be present during excavation.

Impacts Related to the Proposed Project:

a)	Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐

a) and b) Consistent with the MEIR; Less than Significant with Mitigation. As noted in the summary of impacts above, the current Project site was found to be "within an area of very low probability for presence of archaeological materials, and no significant project impacts are anticipated"; therefore, no mitigation measures were required. Nonetheless, Chambers Group conducted a site visit on October 26, 2022, in accordance with the MEIR Mitigation Measures 4.6.1 and 4.6.2 (Appendix C). Additionally, Chambers Group requested a Sacred Lands File (SLF) records search from the Native American Heritage Commission (NAHC). The purpose of the request is to determine if any sacred lands or other resources have been recorded within the Project site or adjacent areas. The results of the SLF search, provided by the NAHC on November 4, 2022, were positive.

MEIR Mitigation Measure 4.6.1 stipulates, "No preconstruction archaeological surveys shall be required in areas of existing agricultural or other substantial development." Based on historic aerials and as observed during the site visit, the Project site contains land previously utilized for agriculture, with some evidence associated of a built environment. Chambers Group observed evidence of previous agricultural land use in aerial photographs dating to 1953 through 2020. Additionally, 1953 aerial imagery displays two parallel rectangular structures in the northeastern corner of the Project site. These structures are no longer visible in aerial imagery by 1984. Based on the structures' overall footprint and orientation observed in aerial imagery, it is interpreted that they were likely temporary storage in the form of pole barns or similar structures that were used to store material harvested from the adjacent agricultural activity. Additionally, no supporting evidence exists of any residential buildings or other historic period development in this area. The site visit observed that the overall condition of the Project site was largely unchanged from the conditions cited in the MEIR.

Chambers Group concluded that while surface manifestations of cultural resources were not observed during either the previous cultural resources study in support of the MEIR or the current site visit, it should be noted that the landscape has been under historic-period use and settlement. This historic utilization may have resulted in unrecognized buried features, such as footings and foundations, or refuse areas, such as trash pits or outhouses. Similarly, ethnographic data and historic-period maps indicate that Native American groups such as the Kamia occupied and utilized major and minor drainages within the Salton Basin, as is documented on the 1856

	Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)

General Land Office map, which depicted an "Indian Village" in the northeast quarter of Section 36 (Township 14S, Range 14E). The understanding that the area is important to Native American groups is further supported by the positive NAHC SLF records search results. However, the Project would implement MEIR Mitigation Measures 4.6.1 and 4.6.2, the former of which notes that if any unanticipated discovery of potential cultural resources were to be encountered during the Project, then proper protocols would be implemented.

Additionally, as previously mentioned, the MEIR noted that there are roads, canals, drains, powerlines, and the Niland–Calexico rail line old enough (50 years or older) and perhaps important enough in the development of Imperial County to be considered significant historic resources for planning purposes that would need to be evaluated on a case-by-case basis. While the Rose Canal is adjacent to the Project site, the canal itself would not be significantly impacted by the Proposed Project. Therefore, with implementation of MEIR Mitigation Measures 4.6.1 and 4.6.2, impacts to cultural resources would be consistent with the MEIR. Impacts would be less than significant.

c) Disturb any human remains, including those interred outside of dedicated cemeteries? ☐ ☐ ☒ ☐

c) Consistent with the MEIR; Less than Significant. As discussed in Thresholds a) and b) above, it is unlikely that any resources would be found on-site. However, in the unlikely event that human remains are discovered during ground-disturbing activities, then the Proposed Project would be subject to California State law (California Health and Safety Code 7050.5) and federal law and regulations (Archaeological Resources Protection Act [ARPA], 16 United States Code [U.S.C.] 470 and 43 Code of Federal Regulations, [CFR] 7, Native American Graves Protection and Repatriation Act [NAGPRA] 25 U.S.C. 3001 and 43 CFR 10, and Public Lands, Interior 43 CFR 8365.1-7), which require a defined protocol if human remains are discovered in the state of California regardless if the remains are modern or archaeological. Upon discovery of human remains, all work within a minimum of 200 feet of the remains must cease immediately, and the County Coroner must be notified. The appropriate land manager/owner or the site shall also be notified of the discovery. If the remains are located on federal lands, the federal land manager(s), federal law enforcement, and/or federal archaeologist should also be notified. If the human remains are determined by the Coroner to be prehistoric, the appropriate federal archaeologist must be called. The archaeologist will initiate the proper procedures under ARPA and/or NAGPRA. If the remains can be determined to be Native American, the steps as outlined in NAGPRA 43 CFR 10.6 Inadvertent Discoveries must be followed. Therefore, consistent with the MEIR, a less than significant impact would occur.

VI. *ENERGY*

Would the project:

a)	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

Summary of Impacts Identified in the MEIR:

In 2018, the Office of Planning and Research updated the CEQA Guidelines to include Energy as a resource area of the Appendix G checklist. The section aimed to evaluate the energy usage of a project during both construction and operation to ensure wasteful or inefficient energy usage was being properly evaluated. During the preparation of the MEIR, energy impacts were not part of the analysis because at that time, Energy was not a resource area required for discussion. The only mention of energy usage was in regard to building standards, which are in the Specific Plan and include recommendations for sustainable building design efficient in its use of natural resources for building construction and maintenance. These building standards also promotes use of the LEED (Leadership in Energy and Environmental Design) Green Building Rating System™, developed by the U.S. Green Building Council.

Impacts Related to the Proposed Project:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? ☐ ☐ ☒ ☐

a) Less than Significant Impact. The Proposed Project would provide organics processing infrastructure and organic materials diversion from regional landfills (Imperial and neighboring counties). As shown in the CalEEMod results prepared for the Project (Appendix A), the Project would require approximately 1,080,470 thousand British thermal units per year (kBTU/yr) or approximately 1,059 Mscf/year of natural gas. The Project would also require approximately 331,526 kWh/year of electrcity.

The Project would generate renewable energy through the HSAD process and may incorporate behind the meter on-site solar and

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	No Impact **(NI)**

battery storage (up to 11 MW) as an accessory use of the Project for on-site consumption only. The Proposed Project is anticipated to generate up to 3,240 Mscf/d or 1,182,600 Mscf/year of natural gas, which would result in a net increase in natural gas production. The produced gas will be injected into an existing SoCal Gas pipeline located just east of the Project along Old Highway 111. The Project may also offset the electrical usage with incorporation of behind the meter on-site solar and battery store. Therefore, the Project would not result in a significant impact to energy resources and impacts would be less than significant.

b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

b) No Impact. The purpose of the proposed Project is the construction and operation of an anaerobic digester facility that will assist the State of California in achieving or exceeding its Renewable Portfolio Standard (RPS), Senate Bill 350, Senate Bill 100, and the California Global Warming Solutions Act (Assembly Bill 32) and greenhouse gas emissions reduction objectives in Imperial County. Once in operation, it will decrease the need for energy from fossil fuel–based power plants in the state and would offset GHG emissions as discussed in Section VIII, Threshold a. The result would be a net increase in natural gas resources available to the regional area, generated from a renewable source. Additionally, the Project would also be consistent with the County's General Plan Conservation and Open Space Element, Objective 9.2 which encourages renewable energy developments. Therefore, the Project would directly support state and local plans for renewable energy development. The proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency; therefore, no impact would occur.

VII. *GEOLOGY AND SOILS*

Would the project:

a)	Directly or indirectly cause potential substantial adverse effects, including risk of loss, injury, or death involving:				
	1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☒	☐	☐
	2) Strong Seismic ground shaking?	☐	☒	☐	☐
	3) Seismic-related ground failure, including liquefaction and seiche/tsunami?	☐	☐	☒	☐
	4) Landslides?	☐	☐	☐	☒
b)	Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c)	Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslides, lateral spreading, subsidence, liquefaction or collapse?	☐	☒	☐	☐
d)	Be located on expansive soil, as defined in the latest Uniform Building Code, creating substantial direct or indirect risk to life or property?	☐	☒	☐	☐
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Summary of Impacts Identified in the MEIR:

While Geology and Soils was not a separate environmental category under CEQA in 2006, potential impacts due to geological hazards were evaluated under the Hazards and Hazardous Materials section of the MEIR. The MEIR notes that the Specific Plan area contains geologic features that must be considered during site planning and development. The Imperial Fault passes through Mesquite Lake, generally on a north–south alignment. In accordance with the Alquist-Priolo Earthquake Fault Zoning Act (Chapter 7.5 of Division 2, P.R.C.), the Office of the State Geologist has delineated "Special Study Zones," which encompass potentially and recently active traces of major faults. MEIR Figure 2-2 shows the location of the Special Study Zone within Mesquite Lake. Division 15 of the County Land Use Ordinance includes procedures for review of structures intended for human occupancy that are located within a Special Study Zone. These procedures require preparation of a geologic report

by a State-registered geologist. In most cases, a minimum setback of 50 feet from the trace of a fault would be required. Additionally, in all cases of a proposed human-occupied structure to be located within a special study zone, a determination must be made and supported by the geologic report that no undue hazard would be created by the proposed structure.

Compliance with Division 15 of the County Land Use Ordinance would ensure that all Project structures intended for human occupancy that are proposed to be located within the special studies zone shown in MEIR Figure 2-2 would require preparation of a geologic report and a determination that no undue hazard would be created by the proposed structure.

Mitigation Measure 4.7.1: Prior to approval of a final map, grading plan, or building permit for any phase or unit of development within the Specific Plan in the vicinity of the Imperial Fault near the Rose Canal, fault investigations shall be performed for human occupancy structures (structures designed for 2,000 or more person-hours per year) to be located in the State of California Special Studies Zone for Earthquake Faults in accordance with the County's Geologic Hazards Ordinance. The fault investigations shall include, but shall not be limited to, the following: (1) excavation of an exploratory fault trench; (2) logging of the trench by a California-registered engineering geologist; (3) evaluation of liquefaction potential of the subsurface data; and (4) report on the results of the fault investigations, to be approved by the Planning and Development Services Director. Should an active fault be found, a minimum 50-foot building setback from the fault shall be required and shown on the face of all applicable final maps, plot plans, and grading plans. If liquefiable soils are present, special building foundations (e.g., driven piles, cast-in-drilled-hole piers, stone columns) and/or ground modification (e.g., dynamic compaction) shall be incorporated into the design of all applicable human-occupancy structures.

Liquefaction, seiches, tsunamis, and landslides were not previously discussed in the MEIR. However, all other impacts related to geology and soils were considered to be less than significant with compliance to existing regulations.

Regarding paleontological resources, as previously discussed in Section V, Cultural Resources, the MEIR concluded that with implementation of Mitigation Measures 4.6.1 and 4.6.2, impacts to paleontological resources would be less than significant.

Impacts Related to the Proposed Project:

A Preliminary Geotechnical Report was prepared for a portion of the Proposed Project Site in May 2021 (Appendix D). The report covered approximately 23 acres of the 75-acre site. The Preliminary Geotechnical Report evaluated potential geotechnical hazards for the Project; however as part of the final engineering design, the Proposed Project would be required to prepare a Final Geotechnical Report for the entire site and to adhere to all the recommendations in that report, as detailed further in Mitigation Measure GEO-1 below. Nonetheless, the Preliminary Geotechnical Report had the following conclusions:

Soils
Soils on site were found to be clay soils (CL) with a medium expansion potential (shrink/swell). The CL soils have very slow infiltration rates, and the civil engineer would need to determine means to satisfy Imperial County stormwater requirements for the on-site retention pond.

Groundwater
Groundwater levels were found at 7 feet below the surface level.

Ground Shaking
The primary seismic hazard at the Project site is the potential for strong ground shaking during earthquakes along the Imperial, Brawley, and Superstition Hills faults. The nearest constrained location fault is the Imperial Fault located just over a mile west of the Project Site. However, there is an inferred location of the Brawley Fault that could run through the Project Site.

Surface Rupture
The California Geological Survey has established Earthquake Fault Zones in accordance with the 1972 Alquist-Priolo Earthquake Fault Zone Act. The Earthquake Fault Zones consists of boundary zones surrounding well defined, active faults or fault segments. The project site does not lie within an Alquist-Priolo Earthquake Fault Zone; therefore, surface fault rupture is considered to be low at the Project site. The nearest fault is the Imperial Fault located just over a mile west of the Project site.

Liquefaction and Lateral Spreading
Liquefaction is a potential design consideration because of underlying saturated sandy substrata. Although the Imperial Valley has not yet been evaluated for seismic hazards by the California Geological Survey seismic hazards zonation program, liquefaction is well documented in the Imperial Valley after strong seismic events. The risk of liquefaction-induced settlement is low. Liquefaction-induced lateral spreading is not expected to occur at this site due to the planar topography.

Landsliding
The hazard of landsliding is unlikely due to the regional planar topography. No ancient landslides are shown on geologic maps, aerial photographs, or topographic maps of the region, and no indications of landslides were observed during our site investigation.

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	No Impact **(NI)**

Volcanic Hazards
The site is not located proximal to any known volcanically active area, and the risk of volcanic hazards is considered low. Obsidian Butte and Red Hill, located at the south end of the Salton Sea approximately 21 miles north of the Project site, are small remnants of volcanic domes. The domes erupted about 1,800 to 2,500 years ago. The subsurface brine fluids around the domes have a high heat flow and are currently being utilized to produce geothermal energy.

Tsunamis and Seiches
Tsunamis are giant ocean waves created by strong underwater seismic events, asteroid impact, or large landslides. Seiches are large waves generated in enclosed bodies of water in response to strong ground shaking. The Project site is not located near any large bodies of water; therefore, the threat of tsunamis, seiches, or other seismically induced flooding is considered unlikely.

Flooding
Based on FEMA (2008) FIRM Panel 06025C1375C, which encompasses the Project site, the Project site is located in Flood Zone X, an area determined to be outside the 0.2% annual chance (500-year) floodplain.

Mitigation Measure GEO-1 Prepare Final Geotechnical Report and Implement Required Measures: Facility design for all project components shall comply with the site-specific design recommendations as provided by a licensed geotechnical or civil engineer to be retained by the Project applicant. The final geotechnical and/or civil engineering report shall address and make recommendations on the following:

- Site preparation
- Soil-bearing capacity
- Appropriate sources and types of fill
- Potential need for soil amendments
- Structural foundations
- Grading practices
- Soil corrosion of concrete and steel
- Erosion/Winterization
- Seismic ground shaking
- Liquefaction
- Expansive/Unstable soils

In addition to the recommendations for the conditions listed above, the geotechnical investigation shall include subsurface testing of soil and groundwater conditions, and shall determine appropriate foundation designs that are consistent with the version of the CBC that is applicable at the time building and grading permits are applied for. All recommendations contained in the final geotechnical engineering report shall be implemented by the Project applicant. The final geotechnical and/or civil engineering report shall be submitted to Imperial County Public Works Department, Engineering Division for review and approval prior to issuance of building permits.

a) Directly or indirectly cause potential substantial adverse effects, including risk of loss, injury, or death involving:

1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☒	☐	☐
2) Strong Seismic ground shaking?	☐	☒	☐	☐

1) and 2) Consistent with the MEIR; Less than Significant with Mitigation. The Imperial Fault, which is an Alquist-Priolo–designated fault, is located just over a mile from the Project site. Additionally, there is an inferred location of the Brawley Fault that could run through the Project site. The Proposed Project is not located on or near the fault zone as shown in the MEIR Figure 2-2. Nonetheless, similar to all of California, Imperial County is a seismically active area that could result in strong seismic ground shaking. To lessen potential hazards related to seismic ground shaking, Project structures would be analyzed for earthquake loading during design and would be designed in accordance with the 2022 seismic requirements provided in the California Building Code (CBC). Additionally, if the Project meets the occupancy requirements of Mitigation Measure 4.7.1, the Project would be required to conduct a fault investigation, prior to approval of a final map, grading plan, or building permit. Compliance with the 2022 CBC and implementation of Mitigation Measure 4.7.1, would ensure that impacts due to seismic hazards would remain less than significant.

3) Seismic-related ground failure, including liquefaction and seiche/tsunami?	☐	☐	☒	☐

3) Less than Significant. The Proposed Project is not located near an ocean or large body of water and would not result in any

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	No Impact **(NI)**

seiche or tsunami. Additionally, the Project site is not located in a liquefaction zone. Nonetheless, the Project would be designed in accordance with the 2022 CBC, which would ensure that impacts associated with seismic-related ground failures would be less than significant.

4) Landslides? ☐ ☐ ☐ ☒

4) No Impact. The Proposed Project is in the Imperial Valley, and the area surrounding the site is relatively flat, with no chance for seismic induced landslides. According to the County General Plan, the closest area of landslide activity is on the border of San Diego and Imperial Counties approximately 30 miles west of the Project site (County 1993b). The Project would not exacerbate the risk of loss, injury, or death involving landslides. No impacts would occur and no further analysis is required.

b) Result in substantial soil erosion or the loss of topsoil? ☐ ☒ ☐ ☐

b) Consistent with the MEIR; Less Than Significant with Mitigation. Project construction and operations have the potential to result in soil erosion and loss of topsoil, mainly through grading. The site preparation plans to balance soils on site, but worst case, would include minimal amounts of cut or fill. Compliance with Specific Plan Mitigation Measure 4.2.3, Construction Stormwater Pollution Prevention Plan, as described in Section X, Hydrology and Water Quality, would require that a Stormwater Pollution Prevention Plan (SWPPP) be prepared for the Project. The SWPPP would include erosion and sediment control measures and BMPs; in addition, the SWPPP would require that all erosion and sediment control measures be inspected and maintained for proper integrity. Compliance with the MEIR mitigation, would ensure impacts would remain less than significant.

c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslides, lateral spreading, subsidence, liquefaction or collapse? ☐ ☒ ☐ ☐

d) Be located on expansive soil, as defined in the latest Uniform Building Code, creating substantial direct or indirect risk to life or property? ☐ ☒ ☐ ☐

c) and d) Consistent with the MEIR; Less than Significant with Mitigation. As previously discussed, the Project site is flat and is not located within a liquefaction or landslide zone. However, the County General Plan identifies that liquefaction is a common hazard in the County (County 1993b). Additionally, soils on the Project site are also majority clay soils, which may be susceptible to soil instabilities, including expansion or shrink-swell. However, the Project would be required to adhere to the 2022 CBC. Additionally, the Project would implement Mitigation Measure GEO-1, which would require preparation of a Final Geotechnical Report, and require that the Project implement all the recommendations in the report during construction. Implementation of the mitigation and adherence to the 2022 CBC would ensure that impacts due to unstable or expansive soil would remain less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? ☐ ☐ ☐ ☒

e) Consistent with the MEIR; No Impact. The Project does not include any septic systems. The Project would treat on-site wastewater with a package treatment plant designed to meet the requirements of RWQCB. Therefore, no impacts would occur.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? ☐ ☒ ☐ ☐

f) Consistent with the MEIR; Less than Significant with Mitigation. As previously mentioned under Section V, Cultural Resources, Chambers Group conducted a site visit of the Project site and concluded that while surface manifestations of cultural resources, including paleontological resources, were not observed during either the previous cultural resources study in support of the MEIR or the current site visit, it should be noted that the landscape has been under historic-period use and settlement. This historic utilization may have resulted in unrecognized buried features such as footings and foundations or refuse area such as trash pits or outhouses. Similarly, ethnographic data and historic-period maps indicate that Native American groups such as the Kamia occupied and utilized major and minor drainages within the Salton Basin, as is documented on the 1856 General Land Office map, which depicted an "Indian Village" in the northeast quarter of Section 36 (Township 14S, Range 14E). The understanding that the area is important to Native American groups is further supported by the positive NAHC SLF records search results. However, the Project would implement MEIR Mitigation Measures 4.6.1 and 4.6.2, the former of which notes that if any unanticipated discovery of potential cultural resources are encountered during the Project, that proper protocols would be implemented. Therefore, consistent with the MEIR, with implementation of Mitigation Measures 4.6.1 and 4.6.2, impacts would be less than significant.

VIII. *GREENHOUSE GAS EMISSIONS*

Would the project:

		Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b)	Conflict with an applicable plan or policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Summary of Impacts Identified in the MEIR:

In 2010, the Office of Planning and Research updated the CEQA Guidelines to include Greenhouse Gas Emissions (GHGs) as a resource area to the Appendix G checklist. The section aimed to evaluate project GHG generation during both construction and operation. In 2018, the guidelines were updated again to include further provisions on how to evaluate GHG impacts. These provisions touched on both climate change mitigation and adaptation, providing more detailed guidance on topics such as assessing the significance of GHG emissions; analyzing energy impacts and efficiency; estimating vehicle emissions; and evaluating environmental risks in light of a changing and uncertain baseline. During the preparation of the MEIR, GHG impacts were not part of the analysis because it was not a resource area required for discussion.

Impacts Related to the Proposed Project:

An Air Quality and Greenhouse Gas Analysis was prepared by UltraSystems, as provided in Appendix A. The Project will cause both direct and indirect source emissions of GHG. Direct emission sources are those which produce onsite emissions through the combustion of fossil fuels or oxidation or fermentation of feedstock. Typically, the two main direct emission sources will be in the use of internal combustion (IC) engines and space heating. Indirect GHG source emissions are those for which the Project is responsible, but that occur offsite. For example, the solid waste that is distributed to landfills will decay and emit the GHGs CO2 and CH4. GHG's are also emitted by combustion of fossil fuels to generate electricity used by the project. Production of the electricity used to convey water to the Project and to treat wastewater generated by the Project is also an indirect source.

Due to the persistence of GHG in the atmosphere, all the impacts addressed in the analysis prepared for the Project, are defined as long-term. Greenhouse gas emissions from construction are amortized over the next 30 years and added to operational emissions for the purpose of estimating annual emissions. Impacts are analyzed for both direct (construction and operation), indirect, and unmitigated emissions, utilizing the phases indicated in Table 2 above.

Direct Source Emissions

Construction Emissions

Table 6 shows the estimated annual construction-related GHG emissions, by construction year. The total of these values would be 1,716 tonnes of CO2e. The annual average over 30 years would be 57.2 tonnes per year.

Table 6: Annual GHG Emissions from Construction, 2024-2032

Phase	CO_2e Emissions (metric tons) (All fossil-fuel related)									
	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
0-IC	90.3	14.8								105
1-A		368	192.7							561
1-B				173.6	22.1					196
2-A						286	128			414
2-B								225	215.4	440
Total	**90**	**383**	**193**	**174**	**22**	**286**	**128**	**225**	**215**	**1,716**

Operational Emissions

Tables 7 and 8 show direct annual GHG emissions during Phases 0-IC and Phase 2, respectively.

Table 7: Annual Direct GHG Emissions in Phase 0-IC

Emissions Source	Emissions (metric tons/year)			
	Fossil-Fuel CO2	CH_4	N_2O	CO_2e
Composting		381	5	11,015
Incoming Feedstock Trucks	1,459	0.0007	0.23	1,528

Outgoing Compost Trucks	63	0	0.01	66
Employee Commuting	27	0.0003	0.0005	27
Amortized Construction	4			
Total Operational Emissions	**12,640**			

Table 8: Annual Direct GHG Emissions in Phase 2

Emissions Source	Emissions (metric tons/year)			
	Fossil-Fuel CO_2	CH_4	N_2O	CO_2e
Anaerobic Digestion	-	-	-	-
In-Vessel Composting		1,524	22	44,656
Mobile Diesel Equipment	2,728	0.45		2,739
Boilers	5,442	0.10	0.03	5,453
Flares		1.9	0.07	67
Incoming Feedstock Trucks	5,594	0.003	0.88	5,856
Outgoing Compost Trucks	242	0.0001	0.038	253
Employee Commuting	50	0.0004	0.0008	50
Amortized Construction	57			
Total Operational Emissions	**59,131**			

Indirect Source Emissions
Table 9 shows indirect source GHG emissions during Phases 0-IC and Phase 2.

Table 9
Annual Indirect GHG Emissions in Phases 0-IC and 2

Phase	CO_2e Emissions (metric tons/yr)	
	Electricity	Water
0-IC	915	1.4
2	3,658	5.8

Total Unmitigated Greenhouse Gas Emissions
Table 10 shows total GHG emissions during Phases 0-IC and Phase 2.

Table 10: Annual Total GHG Emissions in Phases 0-IC and 2

Phase	CO2e Emissions (metric tons per year)		
	Direct	Indirect	Total
O-IC	12,640	916	13,556
2	59,131	3,664	62,795

a) Conflict with an applicable plan or policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? ☐ ☐ ☒ ☐

a) Less Than Significant Impact. As shown in Table 10, future annual GHG emissions will greatly exceed the SCAQMD interim significance threshold of 10,000 metric tons per year of CO2e (MTCO2e), at a total of 62,795 MTCO2e per year. Therefore, under this criterion, GHG emissions would ordinarily be significant. However, the Project in and of itself offsets GHG emissions, and therefore the net change in GHG should be taken into account.

The proposed Project was evaluated with the ARB's Benefits Calculator Tool for organics programs. For standalone anaerobic digestion of organics (greenwaste and food waste) producing biofuels or bioenergy, GHG emission reductions are calculated as:

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	No Impact **(NI)**

Reductions = Avoided Landfill Methane Emissions + Avoided Emissions from Use of Biomethane in Vehicle Fuel, Electricity Production or Pipeline Injection – Fugitive Emissions from AD Process

For composting of organic material, GHG emission reductions are calculated as:

Reductions = Avoided landfill methane emissions – fugitive emissions from composting process.

Over the first ten years of operation, the anaerobic digesters and the composters would result in average annual net reductions of 101,138 and 39,343 MTCO2e, respectively, for a total of 140,481 MTCO2e per year. Once the facility is in full operation, the annual net reduction in emissions would be 210,600 MTCO2e per year. This not only offsets the Project's estimated emissions of 62,795 MTCO2e per year, but actually results in a net benefit to GHG emissions. Therefore, impacts would be less than significant.

b)	Conflict with an applicable plan or policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

b) Less than Significant Impact There are currently no regional or local climate action plans or general or specific plan provisions to reduce GHG emissions in the study area. The only applicable plan is the set of regulations to be developed under AB 32, which has a target of reducing GHG emissions to 1990 levels by 2020. The potential significance of emissions from the Project therefore depends upon the extent to which the project furthers or hinders implementation of AB 32. Given the net reduction in GHG emissions, the project would further the implementation of AB 32.

IX. *HAZARDS AND HAZARDOUS MATERIALS*

Would the project:

a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b)	Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d)	Be located on a site, which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☒	☐	☐
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☒	☐
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☒	☐	☐

Summary of Impacts Identified in the MEIR:
As previously mentioned, Geology and Soils, Hazards and Hazardous Materials, and Public Services related to fire, were all discussed under the Hazards and Hazardous Materials section of the MEIR in 2006.

Federal and State codes regulate the handling, storage, and transport of hazardous materials. Within Imperial County, the EHS of the Public Health Department administers the requirements of the State Health and Safety Code that a Business Plan be prepared for businesses that handle more than 500 pounds of a solid substance, 55 gallons of a liquid, or 200 cubic feet of a compressed gas. The Business Plan is required to provide an inventory and map of materials stored or used on the premises, an emergency response plan, and employee training procedures for materials handling and emergency actions. The EHS Division conducts routine inspections of businesses required to submit Business Plans and requires updates at least every 3 years. Businesses are also required to notify specified State and local authorities of an imminent or actual on-site emergency so that action to avoid or minimize public health or environmental impacts can be taken.

In addition to the County EHS Business Plan program, businesses within the MEIR would also be subject to regulation by the California Office of Emergency Services under the California Accidental Release Prevention (CalARP) program. The CalARP program merges the federal and State programs for the prevention of accidental release of regulated toxic and flammable substances from stationary sources that handle more than a threshold quantity of regulated substances. The regulated substances and their threshold quantities are specified in Section 2770.5 of the CalARP program contained in the California Code of Regulations (CCR), Title 19, Division 2, Chapter 4.5. The CalARP program requires that both a Risk Management Plan and an Emergency Response Program be prepared and submitted to the County EHS.

The MEIR noted that the County EHS Division would determine the need for a Business Plan pursuant to the State Health and Safety Code. Business Plans would be required for the storage of hydrocarbon fuels, solvents, and other substances necessary for the maintenance of vehicles and equipment. The MEIR also noted that potential human and wildlife exposure to hazards could also result from storage or evaporation ponds for containment of wastewater from industrial processes that might contain toxic substances.

The MEIR concluded that with compliance with County EHS Division requirements for a Business Plan and CalARP program requirements for a Risk Management Plan and an Emergency Response Program, as further required in compliance with mitigation, significant impacts associated with handling of hazardous materials would be avoided. The measures relevant to the Proposed Project are as follows:

Mitigation Measure 4.7.4: Prior to approval of a final map, grading plan, or building permit for any phase or unit of development within the Specific Plan, the applicant shall provide evidence to the Planning and Development Services Director that (1) a hazardous materials Business Plan has been prepared and implemented in accordance with federal, state, and local regulations; and (2) all local, state, and federal permit requirements to generate, use, store, and transport hazardous materials have been satisfied. This evidence shall include a determination by the County EHS Division whether toxic substances may be present in wastewater or stormwater runoff directed to a storage pond. If toxic substances could be present, measures shall be implemented to prevent such transport of toxic substances or to prevent human and wildlife, including birds, access to the storage pond. Additionally, in coordination with the County Fire Department's Office of Emergency Services and the Hazardous Materials Response Team, specific routes shall be established for the transport of hazardous materials to avoid public use areas.

Mitigation Measure 4.7.5: For any project determined by the Planning and Development Services Director to require County EHS approval under the CalARP Program, and prior to approval of a final map, grading plan, or building permit for any such project, the applicant shall provide evidence to the Planning and Development Services Director that (1) a determination has been made by the County EHS Division on the need for project approval under the CalARP Program to prevent accidental release of regulated toxic and flammable substances from stationary sources that handle more than the threshold quantity of regulated substances; and if applicable to the Project, (2) all local, state, and federal permit requirements to prevent accidental release of regulated toxic and flammable substances pursuant to the CalARP Program have been satisfied, including the requirement for preparation of a Risk Management Plan and an Emergency Response Program.

Impacts regarding wildfires are further discussed in Section X, Wildfire; however as mentioned, wildfire impacts were not previously discussed in the MEIR because those thresholds were not a required topic in 2006.

Impacts Related to the Proposed Project:

A Phase I Environmental Site Assessment (ESA) was prepared for the Project (Appendix E). The Phase I ESA had the following conclusions and recommendations:

Recognized Environmental Conditions
A recognized environmental condition (REC) refers to the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term REC includes hazardous substances and petroleum products even under conditions that might be in compliance with laws. The Phase I ESA revealed no evidence of recognized environmental conditions in connection with the subject property.

Historical Recognized Environmental Conditions
A historical recognized environmental condition (HREC) refers to a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). The Phase I ESA revealed no evidence of historical recognized environmental conditions in connection with the subject property.

Environmental Concerns and De Minimis Conditions
A de minimis condition is a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis conditions are not recognized environmental conditions nor controlled recognized environmental conditions. The Phase I ESA revealed that the

only de minimis conditions or environmental concerns in connection with the subject property due to pesticide residues (low concentrations) typical to agricultural crop applications are present (1) in the near surface soil and the concrete-lined basin, and (2) several piles of concrete debris located in the northeast corner that may have a potential to contain asbestos.

Conclusions
Based on the scope of work performed for the Phase I ESA, it was concluded that no RECs were identified in connection with the Project site that would warrant further environmental study (Phase II ESA).

The subject property has been in agricultural use since the 1930s, and residues of both currently available pesticides and currently banned pesticides, such as DDT/DDE may be present in near-surface soils in limited concentrations. A concrete-lined basin and several piles of concrete debris are located in the northeast portion of the subject property. To determine the presence and concentration of near surface pesticides in the site soils and asbestos content in the concrete-lined basin and concrete debris at the subject property, a Phase II ESA should be conducted. Therefore, the following mitigation measure would be required:

HAZ-1 Phase II Environmental Site Assessment: Prior to demolition and/or vegetation clearing, a qualified professional engineer shall conduct a Phase II Environmental Site Assessment to evaluate for presence and concentration of pesticides and asbestos. If high concentrations of either material are found on site, the Applicant would be required to adhere to any recommendations given by the professional engineer.

a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b)	Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐

a and b) Consistent with the MEIR; Less than Significant with Mitigation. The Proposed Project proposes construction of an anaerobic digestion facility with incidental advanced composting for the management and processing of residential, commercial, and industrial organic waste and green material.

The Project site has been in agricultural use since the 1930s, and residues of both currently available pesticides and currently banned pesticides, such as DDT/DDE, may be present in near surface soils in limited concentrations. Additionally, existing concrete on site may contain asbestos. The Project would be required to implement HAZ-1, which would require that a qualified Professional Engineer evaluate these materials prior to Project construction in the form of a Phase II Environmental Site Assessment, and that appropriate actions be taken to avoid any risk from potential materials.

During short term construction activities, the Proposed Project would involve the use of heavy equipment for grading, hauling, and handling of the construction materials and equipment. Construction would require the temporary use of fuels and other similar materials that may have hazardous properties (such as flammability, corrosivity, combustibility, etc.). During construction, the handling and disposal of these materials would occur in compliance with the manufacturer's requirements and local, State, and federal regulations. Portable bins or other storage containers would be on-site for storage of maintenance lube oils, chemicals, paints, and other construction materials as needed. The Proposed Project would have minimal levels of materials on-site that have been defined as hazardous under 40 CFR, Part 261. The following materials are expected to be used during the construction, operation, and long-term maintenance of the Proposed Project:

- Diesel fuel, gasoline and motor oil used in vehicles
- Mineral oil sealed within the transformers of the solar array
- Various solvents/detergents used for equipment cleaning

All hazardous wastes would be maintained at quantities below the threshold requiring a HMMP, also referred to as a Hazardous Materials Business Plan (HMBP) (one 55-gallon drum). Although not expected, should any on-site storage of hazardous materials exceed one 55-gallon drum, an HMMP/HMBP would be prepared and implemented. As further detailed and required by Mitigation Measure 4.7.4, the Project would develop and implement an HMMP/HMBP, in compliance with California Health and Safety Code, Division 20, Chapter 6.95, Sections 25500-25519 and California Code of Regulations, Title 19, Division 2, Chapter 4, if required. The HMMP/HMBP would be provided to the California Office of Emergency Services, the County Fire Department, and the Certified Unified Program Agency for the County (the local California Department of Toxic Substances Control [DTSC] office), for review and approval before plant operation. The HMMP/HMBP would include, at a minimum, procedures for:

- Hazardous materials handling, use and storage
- Emergency response
- Spill control and prevention
- Employee training

• Reporting and record keeping

The Proposed Project would also be required to implement Mitigation Measure 4.7.5, which requires compliance with the CalARP Program, including the requirement for preparation of a Risk Management Plan and an Emergency Response Program. Additionally, spill prevention and containment for construction and operation of the Proposed Project would adhere to the Environmental Protection Agency's (EPA) guidance on Spill Prevention Control and Countermeasures (SPCC). For any occupational hazards that may be encountered by workers, the Proposed Project would be required to comply with the California Occupational Safety and Health Administration (OSHA) requirements that relate to worker risk of exposure and on-site safety procedures.

Hazardous materials and wastes would be managed, used, handled, stored, and transported in accordance with applicable local and State regulations. Hazardous material carriers and hazardous waste transporters are required by law to adhere to applicable local, State, and federal regulations regarding proper truck signage, indicating the materials being transported, carrying a shipping/waste manifest of the types and concentrations of materials being transported, and other appropriate measures. Hazardous material carriers also are responsible for their loads, reporting spills, and initiating appropriate emergency response to releases of any transported hazardous materials, from the point of origin up to the destination of the hazardous material delivery.

Chemical storage tanks (if any) would be designed and installed to meet applicable local and State regulations. Any wastes classified as hazardous, such as solvents, degreasing agents, concrete curing compounds, paints, adhesives, chemicals, or chemical containers, would be stored in an approved storage facility, or other structure and disposed of as required by local and State regulations. Material quantities of hazardous wastes are not expected.

Given the proposed construction and operations of the Project, adherence with the required mitigation, and compliance with local, State, and federal regulations, impacts associated with the Proposed Project would be less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? ☐ ☐ ☐ ☒

c) Consistent with the MEIR; No Impact. The Proposed Project is not located within one-quarter mile of an existing or proposed school. The nearest schools are located southwest of the Project site within the City of Imperial downtown area, the nearest being Frank Wright Middle School, which is approximately 5.2 miles driving distance southwest (Google 2023). Due to the distance to the Project site, and that the Proposed Project does not involve operations that would create a significant impact to nearby schools. No impact would occur

d) Be located on a site, which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? ☐ ☒ ☐ ☐

d) Consistent with the MEIR; Less than Significant. According to the State Water Resources Control Board (SWRCB) GeoTracker (SWRCB 2023) and DTSC EnviroStor (DTSC 2023) databases, no active or inactive clean-up sites are within 1 mile from the Proposed Project. Nonetheless, as mentioned above, a Phase I ESA was prepared for the Proposed Project and concluded there were no RECs recorded on the site; however, a Phase II ESA would be required to evaluate the materials. As such, the Project would be required to implement Mitigation Measure HAZ-1, which would require that a qualified professional engineer evaluate these materials prior to Project construction in the form of a Phase II ESA and that appropriate actions be taken to avoid any risk from potential materials. Therefore, with incorporation of mitigation, the Proposed Project is not expected to result in the release of hazardous materials into the environment from existing sites that may have contained hazardous materials and impacts would be less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area? ☐ ☐ ☐ ☒

e) Consistent with the MEIR; No Impact. The nearest airport to the Project is the Imperial County Airport which is approximately 6.6 miles to the southwest (Google 2023). Because the Project is not located near an airport or within an airport zone of influence, the Project would not result in a safety hazard or excessive noise. Therefore, no impact would occur.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? ☐ ☐ ☒ ☐

f) Consistent with the MEIR; Less Than Significant Impact. Temporary or single-lane closure of some roadways may occur during the transport of oversized equipment or construction activities. Road closures would be coordinated with County Public Works, the County Sheriff, and ICFD prior to closure, and would be scheduled to occur during off-peak commute hours. The Project's construction

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	No Impact **(NI)**

and operational activities would be in compliance with the Imperial County Emergency Operations Plan (EOP) and Multi-Jurisdiction Hazard Mitigation Plan (MJHMP), and would not physically interfere with the execution of the policies and procedures in these plans (County 2015b; 2021a). Therefore, the Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Implementation of the Project would not result in any new impacts that were not previously analyzed and would be consistent with the MEIR, and impacts would be less than significant.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? ☐ ☒ ☐ ☐

g) Less than Significant with Mitigation. The California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (FRAP) provides a Fire Hazards Severity Zone Viewer (FHSZ) to provide a visual reference to locate fire hazards areas in California. The maps were developed utilizing science and field-tested models that assign a hazard score based on factors that influence fire likelihood and behavior. Factors include but are not limited to fire history, existing and potential fuel (natural vegetation), predicted flame length, embers, terrain, and typical fire weather in the area.

The Project site is not located within a FHSZ area. Most of the moderate to very high fire hazard areas are located north–northwest adjacent to the Salton Sea near Salton City, Anza-Borrego Desert State Park, and the Cleveland National Forest. No areas within the immediate vicinity of the Project site are designated as areas that have potential for wildland fires.

The Proposed Project may utilize solar panels for Project operations. The solar panels could utilize a battery energy storage element, which may result in an additional fire hazard. However, if a battery storage element is utilized, it would require approval from the County Planning Department and Fire Department prior to installation, and would be designed and operated in accordance with all relevant building and fire codes. Additionally, as noted in Section XV, Public Services, and as required by Mitigation Measure 4.7.8, the Project the applicant would be required to provide evidence to the Planning and Development Services Director that a determination has been made by the County Fire Department that an adequate system for delivery of an adequate supply of water for fire suppression, as well as other required equipment, alarms, and water connections, is provided to serve the Project. Therefore, with implementation of this mitigation, impacts would be less than significant.

X. *HYDROLOGY AND WATER QUALITY*

Would the project:

a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☒	☐	☐
b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☒	☐	☐
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
	(i) result in substantial erosion or siltation on- or off-site;	☐	☒	☐	☐
	(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☒	☐	☐
	(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or;	☐	☒	☐	☐
	(iv) impede or redirect flood flows?	☐	☒	☐	☐
d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☒	☐	☐

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	No Impact **(NI)**
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☒	☐	☐

Summary of Impacts Identified in the MEIR:

The MEIR analyzed the potential impacts to hydrological conditions and water quality associated with build out of the Specific Plan. The MEIR discussed flooding, surface water, rainfall, groundwater, and water quality. A summary of the existing conditions is discussed below:

Flooding
The MEIR noted that the Specific Plan contains a depressed sink area adjacent to Keystone Road that causes water to be retained during heavy rainstorms, which can make Keystone Road impassable.

Surface Water
The MEIR noted that surface waters in the Valley mostly drain toward the Salton Sea (north).

Rainfall
The MEIR noted that the average annual precipitation ranges from less than 3 inches over most of the planning area to 8 inches in the mountains along the western border.

Groundwater
The MEIR noted that groundwater is stored in the Pleistocene sediments of the valley floor, the mesas on the west, and the East Mesa and sand hills on the east. However, the fine-grained lake sediments in the central portion of Imperial Valley inhibit groundwater movement. Tile-drain systems are used to dewater sediments to a depth below the root zone of crops to prevent the surface accumulation of saline water. Few wells have been drilled in these lake sediments because the yield is poor and the water is generally saline. The few wells in the Valley are for domestic use only.

Water Quality
The Mesquite Lake SPA is located within the Colorado River Basin, which contains two substantial surface water bodies of State and national significance: the Colorado River and the Salton Sea. The major local rivers that flow into the Salton Sea are the New and Alamo Rivers, both of which originate in Mexico. The New River carries treated wastewater from point sources in the Imperial Valley, as well as in Mexico; and the Alamo River carries mostly agricultural return flows and treated municipal wastewater from the Imperial Valley. Existing topographic conditions in the Project area direct drainage to the Alamo River via the Rose Outlet, which discharges approximately 4 miles northeast of the Project site. The New River is approximately 2 miles west of the Project site but is upgradient and separated from the Project site by the Central Main Canal.

The Valley's agricultural drain system provides over 1,450 miles of surface drains that discharge directly into the Alamo and New rivers, and the Salton Sea. The Imperial Valley portion of the Colorado River Basin region faces several water quality issues, including increasing salinity, selenium, and eutrophication in the Salton Sea; and silt, nutrient, and pesticide pollution of the agricultural drains and the New and Alamo rivers. Discharges of water and stormwater runoff into the Valley's drains and river systems are subject to federal and State water quality regulations.

The MEIR concluded that from a watershed perspective, the topography, soil condition, vegetation, drainage features and other relevant hydrology and water quality factors would not be adversely affected by development within the Specific Plan area, with implementation of the listed mitigation. The MEIR provided both general mitigation measures for all projects within the Specific Plan, as well as project-specific mitigation measures for the developments that were proposed at the time of the Specific Plan implementation. Some of the previously proposed projects are similar to the Proposed Project, and therefore, some project-specific mitigation measures would be relevant for the Proposed Project. Alternatively, the Project site is not located in or near the Mesquite Lake depression area and therefore some general mitigation measures do not apply. The relevant mitigation measures are as follows:

General Mitigation Measures:

Mitigation Measures 4.2.1: Hydrological Analysis: As part of the building permit application process for each project, a hydrologic analysis shall be conducted to determine that:

- The proposed project would not cause undercutting erosion, slope stability degradation, vegetative stress (due to flooding, erosion, water quality degradation, or loss of water supplies), sedimentation, or habitat alteration in downstream areas as a result of an altered flow regime.
- Downstream IID drainage systems would have sufficient capacity to convey the increase in site runoff due to the increase in impervious surfaces, and the ability to attenuate the resulting peak flows.
- Any on-site BMPs are designed in accordance with the County Engineering Design Guidelines Manual (County of Imperial 2004) and to the satisfaction of the County Engineer.

Mitigation Measure 4.2.2: Hydrologic Design: Based on the hydrological analysis conducted in the MEIR, natural hydrologic designs shall be integrated into site layouts to the maximum extent practicable by:

- Reducing imperviousness and directly connected impervious surfaces to facilitate natural infiltration of runoff, conserving natural resources and areas, maintaining and using natural drainage courses in the stormwater conveyance system, and minimizing clearing and grading.
- Providing runoff storage measures dispersed uniformly throughout a site's landscape with the use of a variety of detention, retention, and runoff practices.
- Implementing on-site hydrologically functional landscape design and management practices.
- Incorporating pervious pavements wherever practicable.

Mitigation Measure 4.2.3: Construction Stormwater Pollution Prevention Plan: Prior to issuance of a grading permit for any phase or unit of development within the Specific Plan, an NOI shall be submitted to the SWRCB, and an SWPPP shall be developed and implemented on-site in compliance with Water Quality Order 99-08-DWQ/NPDES General Permit No. CAS000002 (General Construction Permit). The County Director of Public Works shall be provided an opportunity to review the SWPPP as part of the review/approval process at least 30 days prior to construction. The SWPPP shall include, but shall not be limited to, the following:

- BMPs to prevent construction-related pollutants from being exposed to runoff that can transport pollutants into nearby receiving waters. The selection and placement of BMPs shall be designed to protect all areas disturbed by construction activities from erosive forces and capture sediment from stormwater before it leaves the site. Erosion and sediment controls shall include both stabilization (erosion control) and structural (sediment control) measures. These measures shall be implemented such that the exposure of unprotected, disturbed earth during site development is minimized to the shortest duration practicable.
- Soil-tracking BMPs to limit off-site transport of sediment from the construction areas by implementing tire-cleaning measures such as stabilized construction entrance/exit designs (e.g., metal corrugated shaker plates, gravel strips, and/or wheel-washing facilities) at access points.
- Inspect/maintain all erosion and sediment control measures for proper integrity and function during the entire construction period. All stabilization and structural controls shall be inspected at least monthly or after any significant storm event and shall be repaired or maintained for optimum performance. Access to these facilities shall be maintained during wet weather.

    - Examples of erosion control include:
        - slope benching and terracing
        - soil roughening
        - temporary revegetation
        - soil stabilizers
        - mulches and matrices
        - erosion control blankets
        - fiber rolls
    - Examples of sediment control include:
        - perimeter controls (e.g., gravel bag or straw bale berms, silt fence)
        - stormwater inlet protection (e.g., fiber roll, gravel bags, geofabric grate covering)
        - silt fencing
        - gravel construction site entrance/exits
        - truck tire wheel wash
        - check dams

- Material and waste management programs during construction such as solid, sanitary, septic, hazardous, contaminated soil, concrete, and construction waste management; spill prevention; appropriate material delivery and storage; employee training; dust control; and vehicle and equipment cleaning, maintenance, and fueling. Each of these programs would address proper secondary containment requirements, spill prevention and protection, structural material storage needs, proper concrete wash-out design and containment, perimeter and surface protection for laydown and maintenance areas, and relaying all such requirements to construction staff.
- Structural and non-structural programs (i.e., routine procedures or practices) to reduce the amount of pollutants in runoff; to prohibit the storage of uncovered hazardous substances in outdoor areas; to prohibit the use of pesticides and herbicides; and to prevent spills.
- A monitoring program involving inspection and maintenance procedures for all post-construction stormwater pollution control measures to ensure that they continue to function properly. The monitoring program shall specify the monitoring entity; the funding source for the inspection/monitoring program; and enforcement provisions in the event of failure to implement, operate, or maintain the approved stormwater pollution control measures.
- Maintaining records of all stormwater control measure implementation, inspection, and maintenance activities for at least 5 years.

Mitigation Measure 4.2.4: Industrial SWPPP: Thirty (30) days prior to new facility start-up for any phase or unit of development within the Specific

Plan, an NOI shall be submitted to the SWRCB, and a SWPPP shall be developed and implemented on-site in compliance with Water Quality Order 97-03-DWQ/NPDES General Permit No. CAS000001 (General Industrial Permit), which requires:

- Verifying that any illicit connections to storm drains have been eradicated.
- Incorporating non-structural and structural BMPs to reduce pollutants in site runoff, such as outfall protection and treatment devices, proper storage and disposal of potential pollutants, secondary containment protection, and prohibiting pesticide and herbicide use; waste management, employee training, erosion control, vehicle/equipment cleaning, maintenance, and fueling; spill prevention/response practices; and shipping/receiving practices. Storage of potential pollutants shall be contained within approved safety lockers with secondary containment, within constructed secondary containment structures, or stored off-site in suitable protective enclosures. Disposal shall occur at an authorized landfill, waste collection center, or other certified disposal facility approved for disposing the waste in question. The methods and procedures shall be consistent with the philosophies of EPA and California guidance documentation for industrial stormwater pollution prevention.
- Developing and executing a Monitoring and Reporting Program to assess the effectiveness of BMPs through visual inspection of storm drains and outfall points during wet and dry weather and storm sampling. The program shall also address the maintenance needs of any on-site BMPs to ensure optimum functionality.
- Preparing and submitting an annual report to the RWQCB with monitoring results.
- Maintaining all related records of all control measure implementation, inspection, and maintenance for at least 5 years.

Mitigation Measure 4.2.5, Service Area Agreement: The Imperial County Planning and Development Services Director shall review and approve the County Service Area agreement or other documents establishing an independent authority responsible for operation of public facilities and services within the Specific Plan. The agreement or other documents shall include information sufficient to address the ongoing maintenance of stormwater facilities on individual lots/parcels as well as future storm drain systems within the County road rights-of-way. These considerations shall include, but not be limited to, maintaining erosion control BMPs to minimize on-site soil loss, clearing of sediment from BMPs on an as-needed basis, trash and debris collection (aesthetic maintenance), and maintaining public safety. The agreements shall demonstrate that there are sufficient funding sources to operate these facilities in an environmentally responsible manner, and that stormwater controls will be implemented and maintained throughout their operational lifetime.

Additionally, the following mitigation measure from the MEIR Hazards and Hazardous Materials section would be relevant.

Mitigation Measure 4.7.2: Since development would occur in the vicinity of the lakebed of Mesquite Lake shown in Figure 4-4, prior to construction, a hydrology study shall be prepared by a registered civil engineer for approval by the County Engineer and the Planning and Development Services Director that demonstrates that areas proposed for location of buildings or storage are protected from flooding by a 100-year frequency flood and that the sites of such buildings or storage are designed to drain to a retention basin with sufficient capacity to prevent flooding of the site.[1]

Relevant Portions of Project Specific Mitigation Measures:

Mitigation Measure 4.2.8:

Stormwater Retention Basin
The stormwater retention basin shall be designed to appropriately treat all water released to the Rose Drain such that any off-site discharge causes no further impairment of local water quality and complies with IID specifications and all other locally imposed performance-based regulations.

The retention pond shall also be designed to retain the volume generated by a 100-year frequency storm. An emergency drain valve shall incorporate a standpipe to bleed off surface water from the retention basin such that sediment and other settled materials are not conveyed to the natural drainage in the event of severe rainfall. Protocols for managing the emergency release of such waters shall meet all requirements of the IID, County EHS, the RWQCB, the CDFG, and the County Planning and Development Services Department.

Impacts Related to the Proposed Project:

As discussed in Section VII Geology and Soils above, a Preliminary Geotechnical Report was prepared for a portion of the Proposed Project Site in May 2021 (Appendix D). The report evaluated some impacts related to hydrology and water quality as shown below:

Groundwater
Groundwater levels were found at seven feet below the surface level.

[1] Minor revisions were made from the mitigation measure adopted in the MEIR to reflect the timing of implementation relevant to this Project, and to reference the correct figure number that is referred to in the mitigation measure.

	Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)

Tsunamis and Seiches
Tsunamis are giant ocean waves created by strong underwater seismic events, asteroid impact, or large landslides. Seiches are large waves generated in enclosed bodies of water in response to strong ground shaking. The site is not located near any large bodies of water, so the threat of tsunami, seiches, or other seismically-induced flooding is considered unlikely.

Flooding
Based on FEMA (2008) FIRM Panel 06025C1375C which encompasses the Project site, the Project site is located in Flood Zone X, an area determined to be outside the 0.2% annual chance (500-year) floodplain.

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? ☐ ☒ ☐ ☐

a) Consistent with the MEIR; Less than Significant with Mitigation. As mentioned above, groundwater is stored in the Pleistocene sediments of the valley floor, mesas to the east, and East Mesa and sand hills in the east. The sediments within the central portion of Imperial Valley inhibit groundwater movement. Therefore, tile-drain systems are used to dewater the sediments below the root zone of the crops to prevent accumulation of saline water on the surfaces. There are only a few wells in the Valley for domestic use.

The Proposed Project is located within the Mesquite Lake Specific Plan, which is within the Colorado River Basin. It contains two surface water bodies that are State and national significance which are the Colorado River and the Salton Sea. Surface waters within the Imperial Valley drain north towards the Salton Sea. The Alamo and New rivers convey agricultural irrigation drainage water, surface runoff, and treated municipal land industrial waste waters from the Imperial Valley to the Salton Sea.

The Project proposes construction and operation of an anaerobic digester facility. Construction and operational discharges would generate sediments, debris, green waste, oil and grease residue, from activities such as truck washout, site cleanups, accidental spills and other similar activities that may be carried over during rain or site water uses. Potential impacts during construction and operation are described below.

Construction Impacts
As previously discussed in the MEIR, any development occurring within the Specific Plan would not result in adverse impacts with implementation of the required permitting, construction measures and mitigation measures. Similar to the MEIR, the Project would be required to implement Mitigation Measures 4.2.1 and 4.2.2, which would ensure that runoff amount would be minimized, and that BMPs approved by the County engineer, would be implemented to ensure that runoff would not violate water quality. Additionally, Mitigation Measure 4.2.3 would be implemented which would require a stormwater pollution prevention plan (SWPPP) be developed to prevent construction-related pollutants from being exposed to runoff. With implementation of these mitigation measures, impacts would be less than significant.

Operational Impacts

Implementation of the Project could result in accidental releases and/or spills due to normal operations which could affect water quality. The majority of the process water would be recycled in the anaerobic digestion and composting process. However, there would be a small amount of effluent generated from the acid washer and runoff from the facility, which would be managed in accordance with State and local water quality regulations. The entire Project site would drain into a retention basin stormwater retention basin located on the northern western portion of the Project site that is approximately 4.44 acres with a volume of 18.99 acre-feet. A lined pond would be constructed to hold and treat the effluent generated during the composting process. Water from the lined pond would be recycled back into the process. Based on final design of the pond, if required by Environmental Health and Safety (EHS), a vector control plan would be submitted.

Similar to the MEIR, the Project would be required to implement Mitigation Measure 4.2.4, which would require that 30 days prior to the start of the Project, that a notice of intent (NOI) be submitted to the SWRCB, and an industrial SWPPP be developed and implemented on-site to ensure that runoff during operation would not violate any water quality standards. Nonetheless, the anaerobic digestion process could result in leakage during dewater or transportation. The energy storage, composting and anaerobic digestion process are proposed to occur within enclosed tanks which would be designed to prevent leakage; however, the Project would also develop and implement a Hazardous Materials Business Plan (HMBP) as required by Mitigation Measures 4.7.4 above, in compliance with California Health and Safety Code, Division 20, Chapter 6.95, Sections 25500-25519 and California Code of Regulations, Title 19, Division 2, Chapter 4. The HMBP would be provided to the California Office of Emergency Services, the County Fire Department, and the Certified Unified Program Agency for The County (the local California Department of Toxic Substances Control office), for review and approval before plant operation. The HMBP would include, at a minimum, procedures for hazardous materials handling, use and storage; emergency response; spill control and prevention; employee training; and reporting and record keeping.

In addition to preparation of the HMBP, the Project would conduct a hydrological analysis and design the Project around the findings

	Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)

of the analysis, as discussed in Mitigation Measures 4.2.1 and 4.2.2, in order to ensure that runoff amount would be minimized, and that runoff would not violate water quality. Additionally, the Proposed Project would be required to implement applicable parts of MEIR Mitigation Measure 4.2.8 as written above, to ensure compliance with on and off-site discharges, specifically to the Rose Drain. The stormwater retention basin would be constructed and designed to meet the County Engineering Design Guidelines

With implementation of the aforementioned mitigation measures and the HMBP, operation of the Proposed Project would not violate any water quality standards, and consistent with the MEIR, impacts would be less than significant.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? ☐ ☒ ☐ ☐

b) Consistent with the MEIR; Less than Significant Impact. As discussed in the MEIR, development within the Specific Plan would receive raw water service from IID. The Proposed Project would result in a net increase water demand of 15.6 acre-feet per year (AFY) with construction water demands at 67.4 AF.

The Project is adjacent to an IID water supply canal, which the Project anticipates using for its' water needs. It is anticipated that this water would be treated for domestic uses. Additionally, to help offset water needs, the Project anticipates treating on-site wastewater with a package treatment plant designed to meet the requirements of the RWQCB, and using that water for dust control, irrigation, or other similar uses.

A Water Supply Assessment (WSA) will be prepared for the Proposed Project for all water demands, to show water supply is able to meet demand over the next 20 years.

The introduction of new impervious surfaces to the Project would affect the amount of water absorption through the soils. However, the Project would implement Mitigation Measures 4.2.1 and 4.2.2 which would ensure that the amount and quality of stormwater would remain as unchanged as possible. The entire Project site would drain into a retention basin located on the western portion of the Project site that is approximately 4.44 acres with a volume of 18.99 acre-feet. A lined pond would be constructed to hold and treat the effluent generated during the composting process which would be managed in accordance with State and local water quality regulations, including the SWRCB. Water from the lined pond would be recycled back into the process. Based on final design of the pond, if required by Environmental Health and Safety (EHS), a vector control plan would be submitted. The retention basin would be designed to meet SWRCB requirements and would include an appropriate mosquito abatement per County guidelines if the retention basin does fully discharge in less than 72 hours. With implementation of these mitigation measures and project design features, impacts would be consistent with the MEIR.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

(i) result in substantial erosion or siltation on- or off-site; ☐ ☒ ☐ ☐

(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; ☐ ☒ ☐ ☐

(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? ☐ ☒ ☐ ☐

c) i) through iii) Consistent with the MEIR; Less Than Significant Impact with Mitigation. Drainage patterns are typically formed by the streams, rivers, lakes, or other bodies of water. Overtime, the system is formed via a network of channels and tributaries that determine the type of geologic features of a particular landscape. Soil erosion occurs when water or wind deteriorates soil particles in a given area. Siltation is caused by soil erosion and occurs when dirt, soil and sediment is carried by water and is accumulated.

The Proposed Project would require grading of the Project site which could affect the existing topographic and drainage features of the site. In addition, the proposed construction work could result in soil disturbance that could result in soil erosion or siltation.

However, the Project would implement Mitigation Measures 4.2.1 and 4.2.2 which would ensure that drainage, including erosion control, would be evaluated and that proper BMPs be implemented. Additionally, Mitigation Measures 4.2.3 and 4.2.4 would require SWPPPs during both construction and operation respectively, to ensure that erosion control, runoff, and spill prevention would be properly managed via BMPs.

Additionally, the Project would implement Mitigation Measure 4.2.5 which would require that the Project prepare a service area agreement with the County to address the ongoing maintenance of stormwater facilities on the site, as well as future storm drain systems within the County road rights-of-way. The agreement considerations shall include, but not be limited to, maintaining erosion

control BMPs to minimize on-site soil loss, clearing of sediment from BMPs on an as-needed basis, trash and debris collection (aesthetic maintenance), and maintaining public safety. The agreement should also demonstrate that there are sufficient funding sources to operate these facilities in an environmentally responsible manner, and that stormwater controls would be implemented and maintained throughout their operational lifetime.

With implementation of Mitigation Measures 4.2.1 through 4.2.5, impacts related altering drainage, erosion, and runoff, would be considered less than significant.

(iv) impede or redirect flood flows? ☐ ☒ ☐ ☐

c) iii) Consistent with the MEIR; Less Than Significant Impact. As mentioned above, the MEIR noted that the Specific Plan contains a depressed "sink" area adjacent to Keystone Road that causes water to be detained during heavy rainstorms, which can make Keystone Road impassable. This "sink" area is associated with the historic Mesquite Lake. The Project is located towards the southern part of this historic Mesquite Lake area. However, as noted in Section VII Geology and Soils, a Preliminary Geotechnical Report was conducted for the Project site and noted that 'Based on FEMA (2008) FIRM Panel 06025C1375C which encompasses the Project site, the Project site is located in Flood Zone X, an area determined to be outside the 0.2% annual chance (500-year) floodplain. However, due to the Project's location, the Project would be required to implement Mitigation Measure 4.7.2 which would require that the Project conduct a hydrology study prior to construction, to show that areas proposed for location of buildings or storage are protected from flooding by a 100-year frequency flood and that the sites of such buildings or storage are designed to drain to a retention basin with sufficient capacity to prevent flooding of the site. As such, with this mitigation, impacts would be less than significant.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? ☐ ☒ ☐ ☐

d) Consistent with the MEIR; Less Than Significant Impact. Tsunamis are high sea waves typically caused by earthquakes and underwater landslides. Seiche occurs in bodies of water (semi or full-enclosed) and are caused by strong winds or rapid changes in the atmosphere that pushes water from one end to another and typically acts as a standing wave/oscillating body of water. Floods are an overflow of large bodies of water beyond its normal capacity. The Proposed Project is over 20 miles from the nearest large body of water (Salton Sea) and over 95 miles from the ocean, therefore tsunamis or seiches would not occur.

As discussed above, according to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) number 06025C1375C, the Project site is located in Zone X, areas determined to be outside the 0.2% annual chance floodplain (FEMA 2008). However, due to the Project's location, the Project would be required to implement Mitigation Measure 4.7.2 which would require that the Project conduct a hydrology study prior to construction, to show that areas proposed for location of buildings or storage are protected from flooding by a 100-year frequency flood and that the sites of such buildings or storage are designed to drain to a retention basin with sufficient capacity to prevent flooding of the site. As such, with this mitigation, impacts would be less than significant.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? ☐ ☒ ☐ ☐

e) Consistent with the MEIR; Less Than Significant Impact with Mitigation As described under Thresholds a and b above, the Proposed Project would be required to implement mitigation measures to help ensure that impacts to water quality would remain less than significant.

The Proposed Project would utilize water from IID, which is ultimately sourced from the Colorado River. Nonetheless, a WSA will be prepared for the Proposed Project to show water supply is able to meet demand over the next 20 years. Additionally,, the Project would implement Mitigation Measures 4.2.1 and 4.2.2 which would ensure that flow and drainage of the site would remain as unchanged as possible. With implementation of these mitigation measures, impacts would remain less than significant.

XI. *LAND USE AND PLANNING*

Would the project:

a)	Physically divide an established community?	☐	☐	☐	☒
b)	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Summary of Impacts Identified in the MEIR:

The MEIR discussed the impacts of the Specific Plan with regards to land use and zoning associated with the build out of the Specific Plan. A summary of the existing conditions is discussed below:

At the time of the preparation of the MEIR, the area contained a variety of existing agricultural, industrial and commercial uses as well as extensive

vacant or fallow lands. Land uses onsite consisted of agricultural support services, agricultural processing, roofing and building materials, auto dismantling, a fleet storage and repair facility for a waste disposal company, a communications tower, and the Memory Gardens Cemetery and Memorial Park. Although caretaker dwellings may have been present, they were not located along public roads. Surrounding properties mainly included agricultural fields and one residence. The nearest urban centers were the City of Imperial (1 mile south) and Brawley (4 miles north). The Holly Sugar plant, two alternative-fuel-burning electrical power plants along Old Highway 111 and a 640-acre fish-farming operation are main land use operations existing in the area.

the 1993 County General Plan established the designation of the Specific Plan to provide opportunities to construct new job-producing light, medium, and heavy industrial uses. Future development, including the Project-specific development of the MEIR summarized that these would be typical of the types of uses that would be developed in the future and, "…would have visual and operational characteristics that are generally not compatible with residential uses. The Specific Plan's permitted uses would also not be compatible with uses such as hospitals or care facilities where occupants would have reduced tolerance for dust, noise, and potential air contaminants that might be associated with heavy industrial uses. The plan does not permit residential uses, other than caretaker dwellings, or uses such as hospitals or care facilities."

The MEIR summarized that because the surrounding properties would be for agricultural and/or industrial purposes, it would avoid any potential for land use conflicts and therefore would not require mitigation measures. In addition, individual proposed projects are anticipated to conform to the land use goals, and any permitting and conditions of approval shall be reviewed by the County to ensure consistency with the land use and development regulations.

Impacts Related to the Proposed Project:

The Proposed Project is located within the adopted Mesquite Lake Specific Plan. As mentioned, the Project would require a Specific Plan amendment and a zone change to amend parcels, approximately 50 acres, from ML I-2 to ML I-3 and from Medium Industrial to Heavy Industrial, as shown in Figure 5. The Project also includes a lot merger to merge all four parcels to one parcel to meet acreage requirements. The Heavy Industrial designation would allow for greater flexibility in terms of industrial uses. ML I-2 permits medium industrial uses such as distribution center, warehousing, manufacturing, research and development and other similar medium intensity processing facilities. Other permitted uses include power plants, truck and rail container storage and processing or fabrication. ML I-3 permits the most intense, heavy manufacturing or prefabrication facilities, in addition to permitted uses under ML I-2. The Project also proposes a text amendment to the Specific Plan to further clarify the anaerobic and composting processes, as noted below:

Specific Plan Text Amendments
The Project would require the following proposed text amendments to further clarify the anaerobic and composting processes.

Pages 50 and 51 of the Specific Plan would include a description of alternative fuel production using anaerobic digesters under 'Uses Permitted with a Conditional Use Permit Only' and the addition of composting facility to 'Agricultural Processing' permitted under a CUP. The proposed changes are shown below with ~~strikethrough~~ text to note deletions and <u>underlined</u> text to note additions.

b. Uses Permitted With a Conditional Use Permit Only

(a) Alternative Fuel Power-Generating Facilities
Activities typically include, but are not limited to, anaerobic digesters, biomass, biosolid, and solar conversions and/or transformation.
<u>(2) Alternative fuel production using anaerobic digesters.</u>
<u>(3) Anaerobic digestion – the controlled biological decomposition of organic material in the absence of oxygen or in an oxygen-starved environment. Anaerobic digestion produces biogas and a residual digestate.</u>

~~(3)~~(5) Agricultural Processing <u>and Composting</u>
Activities are limited to packing and processing of agricultural crops including animal products or byproducts such as an animal rendering plant. This would also include uses such as cotton gins, seed mills, and animal feed production; and may also allow expansion of existing fish or frog farming in the MLAA Zone onto adjacent property in the MLI-3 Zone.
<u>(6) Composting Facility</u>

The Project proposes construction and operation of an anaerobic digester. The construction and operation of an anaerobic digester is not permitted by right under the Specific Plan. The anaerobic digester is considered to be a renewable energy use and therefore would require the submittal and approval of a CUP per the Specific Plan guidelines.

a) Physically divide an established community? ☐ ☐ ☐ ☒
a) Consistent with the MEIR; No Impact. The Project proposes construction and operation of an anaerobic digester. The Proposed Project would not include the construction of new roadways or physical barriers between residential communities.

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	No Impact **(NI)**

The Project site does not contain any residences, nor is the area zoned for residential uses. As discussed in the MEIR, future development of the SPA would be consistent with the existing surrounding land uses. The area surrounding the Project site consists of agricultural land uses and industrial facilities. There are scattered single family homes throughout the surrounding area, with the closest one being located approximately one mile south of the Project site.

While one residence is adjacent to the Project site, there are no established communities in the area. Furthermore, the zoning of the area consists of industrial operations. While the Project proposes a Specific Plan amendment and zone change from Medium Industrial to Heavy Industrial, these would be consistent uses with the Specific Plan and larger Project site area, and therefore, the addition of the Project would not be an incompatible use. As such, the Proposed Project would not physically divide an established community. The Project would be consistent with the MEIR, would not result in any new impacts that were not previously analyzed, and no impact would occur**.**

b)	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

b) Consistent with the MEIR; Less than Significant Impact. The Project would require submittal and approval of the CUP, the approval of which would result in the Proposed Project to be compliant with the land use and zoning requirements. Furthermore, the existing land use and zoning of the Project site are compatible with industrial uses and other uses within the SPA. The Project is proposing industrial operations at an increased intensity; however, based on the results of the air quality and traffic analyses, the change in land uses would not result in a significant impact to these resources areas.

Additionally, as a result of the proposed changes, future heavy industrial uses as indicated in Table 2, Allowed Uses above, would now be able to be developed either with a CUP or as an allowed use. Although the newly allowed heavier industrial uses may have the potential to cause additional impacts as compared to the existing lighter industrial uses, the same standards and mitigation measures that the MEIR applied to those heavies uses would also be applied to these uses and parcels and therefore, as demonstrated throughout this IS/MND, impacts would remain less than significant.

The Project also includes a Specific Plan text change to further clarify, the anaerobic and composting processes. This is accomplished by adding the definition of anaerobic and composting processes. However, these text changes, as noted above, wouldn't result in any changes to the existing allowed uses and would not allow any additional allowed uses within the Specific Plan. Therefore, no changes would occur with the Specific Plan text change.

Similar to the MEIR, with the Specific Plan amendment, zone change, and Specific Plan text change, all future projects would be subject to County review and compliance with specific conditions of approval to ensure consistency with land use and development regulations. Therefore, impacts would be less than significant.

XII. *MINERAL RESOURCES*

Would the project:

a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b)	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Summary of Impacts Identified in the MEIR:
The MEIR noted that the County's mineral resources with the highest economic value, are gold, gypsum, sand, gravel, lime, clay, and stone. Industrial materials are also readily available, including kyanite, mineral fillers (clay, limestone, sericite, mica, and tuff), salt, potash, calcium chloride, and manganese. Most of the active mining operations are in the desert areas of the County and no active mining operations exist within the Project or nearby. Soils within the SPA are not known to possess any unique mineral value that aren't already typical of other similar lands throughout the irrigated portion of the County. The MEIR evaluated impacts to mineral resources within the SPA and found that with implementation of the Specific Plan, impacts to mineral resources would not occur.

Impacts Related to the Proposed Project:

a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b)	Result in the loss of availability of a locally-important mineral	☐	☐	☐	☒

	Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)

resource recovery site delineated on a local general plan, specific plan or other land use plan?

a) and b) Consistent with the MEIR; No Impact. The Project site has not been evaluated by the California Department of Conservation for potential mineral resources onsite (DOC 2022d). However, as noted previously, the MEIR evaluated impacts to mineral resources within the SPA, including the Project site, and found that no impacts to mineral resources would occur.

XIII. *NOISE*

Would the project result in:

a)	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b)	Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c)	For a project located within the vicinity of a private airstrip or an airport land use plan or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Summary of Impacts Identified in the MEIR:

The MEIR included a discussion of resources that were found to have environmental effects found not to be significant per CEQA Guidelines Section 15128. The MEIR summarized that in general, there are few existing, and no planned, residential uses surrounding the SPA, and therefore, there would be no incompatibility between industrial noises and residences. The MEIR noted that for all industrial zones within the Specific Plan (MLI-1 through MLI-3), industrial uses are allowed, provided that such facilities do not emit fumes, odor, dust, smoke, or gas or produce significant levels of noise or vibration beyond the confines of the property line within which their activity occurs. The MEIR concluded that the Specific Plan does not propose residential uses, and only a few single-family residences exist within or adjacent to the Specific Plan that could be potentially affected by noise of future industrial uses or traffic generated by the Project. Therefore, significant impacts would not occur.

Impacts Related to the Proposed Project:

A Noise Analysis was prepared by UltraSystems, as provided in Appendix F. The analysis looked at ambient noise levels, and then evaluated both construction and operational impacts associated with the Project as discussed below. Based on the applicable noise regulations, the Project would have a significant noise impact if it would:

- Result in exposures of sensitive receptor during construction to the short-term noise levels (in Table 11 below)
- During Project operations, result in an increase of 5 dBA CNEL or greater.

Construction Noise

For the closest sensitive receiver (6,000 feet away), it is estimated that construction noise exposure will be 45.4 dBA Leq (decibels, equivalent continuous level). This value is far below either the short-term daytime or the nighttime exposure limits shown below in Table 11. The resulting value of the community noise equivalent level (CNEL) for the construction activity would be 42.4 dBA CNEL. This value is about 15 dBA less than the existing ambient level and would not be noticed. The increase in exposure at the residence would be about 0.1 dBA CNEL, which is not perceptible to the human ear.

Table 11: County of Imperial Construction Noise Standards

Construction Duration	Sound Level (dBA)	Time Interval	Hours of Operation Restriction
Short-Term (days or weeks)	75	8 Hours	7:00 a.m. – 7:00 p.m. Monday to Friday 9:00 a.m. – 5:00 p.m. Saturday No commercial construction operation is permitted on Sundays and holidays
Extended Periods	75	1 Hour	7:00 a.m. – 7:00 p.m. Monday to Friday 9:00 a.m. – 5:00 p.m. Saturday No commercial construction operation is permitted on Sundays and holidays

	Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)

Operational Noise
The Imperial County General Plan, Noise Element includes Property Line Noise Limits, which apply to noise generation from one property to an adjacent property. The standards imply the existence of a sensitive receiver on the adjacent, or receiving, property. In the absence of a sensitive receiver, an exception or variance to the standard may be appropriate. Because no sensitive receivers are on properties adjacent to the Project Site these standards do not apply. Since most of the potentially noisy processing operations will be in fully enclosed buildings, the only operational phase noise sources left to consider are (1) the flare and (2) onroad truck traffic hauling feedstock to the facility which are described below.

Flare Noise
Elevated flares, especially those using steam as a smoke suppressant, have traditionally been quite noisy. Based on assumptions made in the noise analysis, a noise level of 121 dBA at the stack tip was calculated. Based on distance to the nearest sensitive receiver, the resulting noise exposure would be about 45.5 dBA at the nearest residence. A similar analysis, using an online flare noise calculator, resulted in an exposure of 43.7 dBA Leq. However, the proposed flare will not have steam injection and will have state-of-the art noise reducing design features.

Truck Traffic Noise
The Project will result in an increase in truck traffic as discussed in Section XVII Transportation. A general rule is that traffic needs to double for the increases in exposure to exceed 3 dBA Leq, which is the threshold for awareness of the change. Assuming 12.5 trucks per hour during an eight-hour day, an average vehicle speed of 30 miles per hour, and a worst-case distance of 35 feet from the roadway results in an estimated exposure of 55.6 dBA. Using the same approach for converting hourly average values to CNEL, the truck traffic contribution would be 52.8 dBA.

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? ☐ ☐ ☒ ☐

a) **Consistent with the MEIR; Less Than Significant Impact.** The Project does not propose residential uses and only a few single-family residences exist within or adjacent to the Project site that could be potentially affected by noise of future industrial uses or traffic generated by the Project. As discussed above, the Project would be consistent with the General Plan and would not exceed thresholds for either construction or operation related impacts. The Project would not result in a substantial temporary or permanent increase in ambient noise levels and therefore impacts would be less than significant.

b) Generation of excessive groundborne vibration or groundborne noise levels? ☐ ☐ ☒ ☐

b) Consistent with the MEIR; Less Than Significant Impact. Ground-borne vibration can be a concern for nearby neighbors of a transit system route or maintenance facility. However, in contrast to airborne noise, ground-borne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads (FTA 2018). The closest sensitive receiver is a stand alone single-family residence that is located approximately 6,000 feet away from the Proposed Project. Considering the distance from the Project to the residence, impacts would be considered less than significant.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? ☐ ☐ ☐ ☒

c) Consistent with the MEIR; No Impact. The nearest airport to the Project is the Imperial County Airport which is approximately 6.6 miles to the southwest (Google 2023). Because the Project is not located near an airport or within an airport zone of influence, the Project would not expose people in the Project area to excessive noise levels. Therefore, no impact would occur.

XIV. *POPULATION AND HOUSING*

Would the project:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and business) or indirectly (for example, through extension of roads or other infrastructure)? ☐ ☐ ☒ ☐

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? ☐ ☐ ☐ ☒

	Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)

Summary of Impacts Identified in the MEIR:

The MEIR noted that the Specific Plan does not propose residential uses and very few single-family residences are known to exist within the Specific Plan area. In addition, the Specific Plan is primarily zoned for agricultural and industrial use and is not designated for residential development on the County General Plan. The Specific Plan could induce population growth through new employment opportunities; however, with the chronically high unemployment rate in the County, a population increase would not be required to meet the labor needs of projects within the Specific Plan. The MEIR concluded that with implementation of the Specific Plan, significant impacts to population and housing would not occur.

Impacts Related to the Proposed Project:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and business) or indirectly (for example, through extension of roads or other infrastructure)? ☐ ☐ ☒ ☐

a) Consistent with the MEIR; Less Than Significant Impact. Similar to the MEIR, the Project does not propose residential uses and it is unlikely that the Proposed Project would induce substantial population growth. Also, similar to the MEIR, the Project could induce population growth through new employment opportunities. The on-site workforce has been conservatively estimated to peak of approximately 300 individuals for short periods of time, which is typically a few weeks. It is anticipated that the construction workforce would commute to the site each day from local communities. Construction staff not drawn from the local labor pool would stay in nearby hotels, and would not move to the area. Once fully operational, approximately 50 full-time employees are expected each day of the week during Project operations, which would be Monday through Friday from 5:00 AM to 7:00 PM. However, as noted in the MEIR, there is a chronically high unemployment rate in the County. This high unemployment rate still exists today, with the current unemployment rate at 16.0 percent in September 2022 (EDD 2022). It is expected that a majority of the projected employment opportunities would be met via the local employment pool, which would not result in an increase in population.

Additionally, one of the overall goals for the Specific Plan is to support economic development within Imperial County and allow for heavy industrial development in an area that is away from urban conflicts and its cities through job creation in the employment sectors of manufacturing, fabrication, processing, wholesaling, transportation, and energy resource development; and create and preserve an area where a full range of industrial uses with moderate to high nuisance characteristics may locate. The Proposed Project would help realize this goal within the SPA by creating job opportunities. Therefore, population growth impacts would be less than significant.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? ☐ ☐ ☐ ☒

b) **Consistent with the MEIR; No Impact.** As discussed in the 2006 MEIR, no residential uses and very few single-family residences are known to exist within the Project site (County 2006). No housing units would be removed as part of the Project, and no persons would require replacement housing. Therefore, no impact to housing requiring the construction of replacement housing would occur.

XV. *PUBLIC SERVICES*

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

1) Fire Protection?	☐	☒	☐	☐
2) Police Protection?	☐	☐	☒	☐
3) Schools?	☐	☐	☒	☐
4) Parks?	☐	☐	☒	☐
5) Other Public Facilities?	☐	☐	☒	☐

Summary of Impacts Identified in the MEIR:

The MEIR discussed the impacts of the Specific Plan with regards to public services in the Hazards and Hazardous Materials section of the MEIR. At the time of the preparation of the MEIR, the area generally lacked public services and utilities necessary to support the proposed project. The Specific Plan describes the need for a fire station in the southerly portion of the Project area, which might also be suitable for use by County Sheriff personnel. The MEIR does state, however, that the lack of an adequate water delivery system for fire suppression is a significant impact

that cannot be fully mitigated until a comprehensive program for installation of a system to deliver water to individual properties at pressure suitable for firefighting has been prepared and implemented. Nonetheless, the MEIR included mitigation measures to lessen significant impacts. The measures relevant to the Proposed Project are as follows:

Mitigation Measure 4.7.7: The County Fire Chief shall monitor development of the Specific Plan to determine the need for construction and operation of an on-site fire station. This is expected to require dedication of an approximately 2- to 3-acre site within the Specific Plan to be used for the purpose of developing future emergency service facilities including possibly a combined police/fire station as needed. This facility shall be constructed and become operational at such time as required by the County Fire Chief.

Mitigation Measure 4.7.8: Prior to approval of a final map, grading plan, or building permit for any phase or unit of development within the Specific Plan, the applicant shall provide evidence to the Planning and Development Services Director that a determination has been made by the County Fire Department that an adequate system for delivery of an adequate supply of water for fire suppression, and other required equipment, alarms, and water connections, is to be provided to serve the Project.

Mitigation Measure 4.7.9: Prior to issuance of a certificate of occupancy for any building within any phase or unit of development within the Specific Plan, the applicant shall provide evidence to the Planning and Development Services Director that the fire suppression system required by Mitigation Measure 4.7.8 has been installed to the County Fire Department's satisfaction and is operational.

Law enforcement services rely primarily on tax revenues and mitigation fees as provided in the County's Land Use Ordinance. The MEIR states that these revenue sources would offset the incremental increase in service caused by development of the Specific Plan.

The requirements for emergency medical response to the SPA would not be expected to be a significant impact. However, open irrigation canals, such as the Rose Canal within the Project, present continuing public safety concerns when uses change from agriculture to more urban forms of development. This increases the number of people present in the area of the canal and increases the potential for accidents. However, to ensure safety risk for projects located near the Rose Canal, the MEIR recommended the following mitigation:

Mitigation Measure 4.7.10: Prior to issuance of a certificate of occupancy for any new construction adjacent to the Rose Canal, it shall either be undergrounded, covered, or fenced within the entire unit of development that includes the building for which the certificate of occupancy is requested. Should fencing be the desired mitigation option, both sides of the canal shall be fenced to a height of 5 feet using chain-link material with warning signs installed.

No residential uses are permitted within the Specific Plan other than caretaker/security residences and the handling of hazardous materials would be conducted in compliance with County and State regulations. In addition, businesses and manufacturing processes would be conducted in compliance with California Occupational Safety and Health Administration (Cal/OSHA) requirements and procedures enforced by the California Division of Occupational Safety and Health for workplace safety. Schools and Parks, were not analyzed in the MEIR.

Impacts Related to the Proposed Project:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

1) Fire Protection? ☐ ☒ ☐ ☐

1) Inconsistent with the MEIR; Less than Significant with Mitigation. Fire Protection services are provided by the Imperial County Fire Department, which also provides emergency medical responses. The nearest fire station to the Proposed Project is Imperial County Fire Department Station 1, approximately 5 miles southwest of the Project site (as the crow flies) and approximately 13 minutes south of the Project site. Although the 2006 MEIR stated that the lack of an adequate water delivery system for fire suppression was a significant impact that could not be fully mitigated until a comprehensive program for installation of a system to deliver water to individual properties at pressure suitable for firefighting has been prepared and implemented, the Proposed Project would be required to install a fire protection system. Water for fire protection would be purchased from IID and stored in an above ground storage tank in accordance with County Fire Department standards. The system would be designed in accordance with federal, State, and local fire codes, occupational health and safety regulations and other jurisdictional codes, requirements, and standard practices. The Project site would also include hydrants for fire suppression. Additionally, similar to the MEIR, the Project would implement Mitigation Measures 4.7.7 and 4.7.8, which would require the County Fire Chief evaluate the Project development to ensure adequate operation of fire emergency services and supply of water. Additionally, Mitigation Measure 4.7.9, requires that the prior to occupancy the fire suppression system be installed and operational.

Furthermore, the Imperial County Fire Department maintains mutual aid agreements with Brawley Fire Department and Imperial County Fire Department and completion of the Proposed Project would include payment of development fees that would support the fire department and other County services. With implementation of the above mitigation and given the Project design features, impacts would be less than significant.

2) Police Protection? ☐ ☐ ☒ ☐

2) Consistent with the MEIR; Less Than Significant Impact. Police services are provided by the Imperial County Sheriff Department, which would provide patrol units and emergency response to the Project site. The nearest Sheriff Station is located approximately 6.3 miles northwest of the Project site (as the crow flies) and approximately 12 minutes from the site. Law enforcement services primarily rely on tax revenue and mitigation fees, per the County's Land Use Ordinance. These revenue sources would offset the incremental increase in service that could be caused by Project development. Similar to fire protection mutual aid, additional mutual aid services for police would be provided by Brawley and El Centro. The Project would also be subject to development fees that would support County services. Impacts would be less than significant.

3) Schools? ☐ ☐ ☒ ☐

3) Less Than Significant Impact. As previously described in Section IV, Population and Housing, it is expected that a majority of the projected employment opportunities would be met via the local employment pool, which would not result in an increase in population. The Project would not directly result in an increase in population and therefore, new students. Impacts would be less than significant.

4) Parks? ☐ ☐ ☒ ☐

4) Less Than Significant Impact. As discussed in Section IV Population and Housing, the Project does not propose residential uses and it is unlikely that the Proposed Project would induce substantial population growth that would use parks. Furthermore, there are no parks or recreational areas within or in the vicinity of the Project site. Impacts would therefore be less than significant.

5) Other Public Facilities? ☐ ☒ ☐ ☐

5) Consistent with the MEIR; Less Than Significant with Mitigation. The Proposed Project is expected to pull from the local employment pool and not encourage relocation of workers from other locations. Similar to the MEIR, the Proposed Project would not contain residential uses, and the handling of hazardous materials would be conducted in compliance with County and State regulations. However, the Project would be located adjacent to the Rose Canal, which as stated in the MEIR, could pose a safety risk. Similar to the MEIR, the Project would implement Mitigation Measure 4.7.10 which would require that prior to issuance of a certificate of occupancy for any new construction adjacent to the Rose Canal, it should either be undergrounded, covered, or fenced within the entire unit of development that includes the building for which the certificate of occupancy is requested. Therefore, similar to the MEIR, impacts on safety, would be considered less than significant with mitigation.

XVI. *RECREATION:*

Would the project:

a)	Would the project increase the use of the existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse effect on the environment?	☐	☐	☐	☒

Summary of Impacts Identified in the MEIR:

The MEIR included a discussion of resources that were found to have environmental effects found not to be significant per CEQA Guidelines Section 15128. The MEIR summarized that recreation sites within the Specific Plan area would be limited to fallow farmlands that are periodically flooded during duck hunting season to be used by hunting clubs. However, implementation of the Specific Plan was not found to prevent the continued use of these lands during duck hunting season. Furthermore, it was noted that there are other adequate sites that may be used should these properties be converted for industrial use. Any future planned industrial uses would not require the expansion or construction of new recreational areas in other areas of the County. No parks or recreation areas were located within the vicinity of the Project site.

Impacts Related to the Proposed Project:

a) Would the project increase the use of the existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? ☐ ☐ ☒ ☐

a) Consistent with the MEIR; Less than Significant Impact. The Project proposes construction and operation of an anaerobic

	Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)

digester. The nearest existing park to the Proposed Project is Evans Park located approximately 4 miles southwest from the Proposed Project (Google 2023). Increased uses of existing neighborhood and regional parks are typically a result of increased neighborhood populations that come with new residential development. The Proposed Project would result in a temporary increase in population with the presence of construction workers. However, their presence would be temporary. Once the Project is completed and in operation, the expected number of employees would be 50, the majority of which would come from the existing work force. The Proposed Project would not involve development of new residences that would introduce significant new permanent populations to the area. Therefore, the Proposed Project would not increase the use of existing neighborhood and regional parks that could result in accelerated deterioration. Implementation of the Project would be consistent with the MEIR and would not result in any new impacts not previously analyzed. Impacts would be less than significant.

b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse effect on the environment?	☐	☐	☐	☒

b) Consistent with the MEIR; Less than Significant Impact. The Proposed Project does not include any recreational facilities and as previously discussed in Section IV Population and Housing, would not result in a population increase that would require additional recreational facilities. Implementation of the Project would be consistent with the MEIR and would not result in any new impacts not previously analyzed. No impacts would occur.

XVII. TRANSPORTATION

Would the project:

a)	Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☒	☐	☐
b)	Would the project conflict or be inconsistent with the CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c)	Substantially increases hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
d)	Result in inadequate emergency access?	☐	☐	☒	☐

Summary of Impacts Identified in the MEIR:
The MEIR included a Traffic Impacts Analysis (TIA) prepared by Linocut, Law, and Greenspan, Engineers (LLG). The TIA evaluated existing traffic, traffic with full build out of the Specific Plan (2010), and cumulative impacts (2025), which included full build out of the Specific Plan, and off-site planned and approved developments.

The MEIR noted that the volume from Specific Plan buildout would impact existing roads in the area which are generally not currently improved to adequately accommodate the volume of traffic. The level of traffic generation would result in significant on- and offsite impacts. The MEIR included the following mitigation measures:

Mitigation Measure 4.10.1: Signalize the SR 86/Keystone intersection, provide a dedicated eastbound left-turn lane, and provide dedicated westbound left-turn, through, and right-turn lanes with an overlap phase. The existing southbound left-turn lane and northbound right-turn lane shall be lengthened.

Mitigation Measure 4.10.2: Signalize the SR 86/Harris Road intersection and provide dedicated left-turn lanes at all four approaches (i.e., northbound, southbound, eastbound, westbound).

Mitigation Measure 4.10.3: Provide dedicated eastbound and westbound left-turn, through and right-turn lanes at the SR 86/Worthington Road intersection; and provide a dedicated right-turn lane in the northbound direction and a shared through/right-turn lane in the southbound direction.

Mitigation Measure 4.10.4: Signalize the Dogwood Road/Keystone Road intersection and provide dedicated left-turn lanes at each approach (i.e., northbound, southbound, eastbound, westbound).

Mitigation Measure 4.10.5: Signalize the Dogwood Road/Harris Road intersection and provide dedicated left-turn lanes at each approach (i.e., northbound, southbound, eastbound, westbound).

Mitigation Measure 4.10.6: Signalize the Dogwood Road/Worthington Road intersection and provide dedicated left-turn lanes at each approach (i.e., northbound, southbound, eastbound, westbound).

Mitigation Measure 4.10.7: Provide a dedicated eastbound right-turn lane with an overlap phase and dual northbound left-turn lanes at the SR 111/Keystone Road intersection. The addition of a second northbound left-turn lane will require widening Keystone Road between SR 111 and Old Highway 111 to accommodate the additional lane of traffic.

Mitigation Measure 4.10.8: Signalize the SR 111/Harris Road intersection and provide dedicated dual left-turn lanes and a right-turn lane for northbound traffic and a dedicated southbound right turn lane. A 4-foot shoulder shall be provided adjacent to the right-turn lanes. The Harris Road intersections with Old Highway 111 and with the east side frontage road shall be realigned to provide increased separation from SR 111 to the satisfaction of Caltrans and the County Engineer.

Mitigation Measure 4.10.9: Widen Dogwood Road to four lanes (i.e., two lanes in each direction) from Keystone Road to Harris Road and from Harris Road to Worthington Road.

Mitigation Measures for Long-Term Traffic/Circulation Impacts:
Mitigation Measure 4.10.10: Future street intersections or proposed project driveways on Keystone Road, Harris Road, and Dogwood Road shall be evaluated for signalization or other driveway intersection controls. Projected traffic volumes on these roads will require that streets and driveways be signalized and configured with dual inbound and outbound left-turn lanes, and dedicated right-turn lanes. If a signal is not provided, access shall be limited to right-turn only on Dogwood Road. Inbound left turns at the Project driveways may be allowed on Keystone Road and Harris Road without signals, but outbound left-turns shall be prohibited at unsignalized intersections.

Mitigation Measure 4.10.11: If access rights to SR 86 exist or are allowed by Caltrans, proposed streets or private driveways shall be limited to right-turn only and dedicated northbound right-turn lanes shall be provided at all such intersections.

Mitigation Measure 4.10.12: All improvements to State-owned road segments and intersections shall provide operations at LOS C or better.

Mitigation Measure 4.10.13: All future development, including improvement to existing uses, shall contribute its fair share of the cost for improving off-site road segments and intersections significantly impacted by the Mesquite Lake Specific Plan. All fair share contributions on State-owned facilities shall be calculated using Caltrans' Guide for the Preparation of Traffic Impact Studies.

The MEIR concluded that with implementation of the Specific Plan, development would require extensive road improvements. At the time of the MEIR, no adequate funding mechanism was established to provide road improvements to the Specific Plan, which was determined to result in significant Traffic/Circulation impacts that cannot be fully mitigated. In addition, street improvements needed for mitigation of Specific Plan plus year 2025 cumulative impacts were determined not to be feasible at that time of the MEIR. Impacts were found to be significant and unavoidable.

The MEIR only evaluated level of service (LOS) as the vehicle miles traveled (VMT) threshold was not added to the Appendix G CEQA thresholds until 2018, and analysis of VMT was not required until July 1, 2020.

Impacts Related to the Proposed Project:
Linscott, Law and Greenspan, Engineers (LLG) prepared a Transportation Impact Analysis, which included a Vehicle Miles Traveled (VMT) and Local Mobility Analysis (LMA) to assess the impacts to the street system as a result of the Harris Road Recycling Project, located in Imperial County (Appendix G).

Project Access
Project access will be provided via a total of three (3) driveways on Old Highway 111 and on Harris Road. The Old Highway 111 driveway will serve employees and feedstock trucks. Two (2) gated driveways will be provided on Harris Road to serve compost trucks. The eastern Harris Road driveway will provide inbound only access and the western Harris Road driveway will provide outbound only access for compost trucks and will not be used by feedstock trucks or employees. The compost trucks will be processed through the gates in a very short amount of time, under a minute, and the arrival of the compost trucks will be sporadic and not all at once. No backups onto Harris Road are anticipated.

Project Traffic
Trip generation estimates for the Project are based on site specific information. The traffic generated by the Project will consist of several unique trip types as described below. Project traffic generation was calculated for each trip type as shown in Table 12. The Project is calculated to generate a total of 922 ADT, with 39 inbound / 29 outbound trips during the AM peak hour, and 29 inbound / 39 outbound trips during the PM peak hour.

Table 12: Project Trip Generation

Number and Types of Trips	Daily Trips			AM Peak Hour (w/ PCE)			PM Peak Hour (w/ PCE)		
	ADT[a]	PCE[b]	PCE Adjusted ADT	In	Out	Total	In	Out	Total
50 Worker Vehicles	105[c]	1.0	105	10	0	10	0	10	10
100 Feedstock	200	3.0	600	21	21	42	21	21	42

Trucks									
37 Compost Trucks	74	3.0	222	8	8	16	8	8	16
Total Trips:			927	39	29	68	29	39	68

a. Average Daily Trips
b. Passenger Car Equivalents. Based on the Highway Capacity Manual, a Passenger Car Equivalent (PCE) factor of 3.0 was applied to the Project's heavy-truck trips. This is the PCE for rolling terrain. This factor was applied conservatively, as the terrain within the study area is mostly level.
c. A total of 50 on-site employees are expected each day. A trip rate of 2.1 ADT per worker vehicle was assumed to account for the trips to and from the Project site as well as the occasional mid-workday errand. Based on the location of the site and the nature of the Project, mid-workday trips are expected to be very sporadic.

LMA

Analysis Scenarios

The Project's opening year is projected to be 2025. The following analysis scenarios are analyzed in this study.

- Existing
- Opening Year (Existing + Cumulative Projects) without Project
- Opening Year + Project

Substantial Effect Criteria

Imperial County does not have published substantial effect criteria. However, the County General Plan does state that the level of service (LOS) goal for intersections is to operate at LOS C or better. Therefore, if a segment degrades from LOS C or better to LOS D or worse with the addition of project traffic, the Project has a substantial effect. If the location operates at LOS D or worse with and without project traffic, the Project has a substantial effect if the Project causes the intersection delta to increase by more than two seconds, or the V/C ratio to increase by more than 0.02. The Traffic Impact Substantial Effect Criteria is shown in Table 13.

Table 13: Traffic Impact Substantial Effect Criteria

Level of Service with Project	Allowable Increase Due to project Impacts					
	Freeways		Roadway Segments		Intersections	Ramp Metering
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (Sec)	Delay (min)
D,E, & F	0.01	1	0.02	1	2	2

V/C = Volume to Capacity Ratio
Speed = Arterial speed measured in miles per hour
Delay = Average stopped delay per vehicle measured in seconds for intersections, or minutes for ramp meters.

Peak Hour Intersection Operations

Opening Year (Existing + Cumulative Projects) Without Project Conditions

Table 14 summarizes the Opening Year without Project intersection operations. As shown, the study intersections are calculated to operate at LOS C or better, with the exception of the Harris Road / SR 111 intersection, where the worst-case minor-street left-turn movement is calculated to operate at LOS E during the AM peak hour and LOS F during the PM peak hour. Opening Year traffic volumes at the minor-street east- and westbound movements are forecast to be very low, with a total of 14/28 eastbound AM/PM peak hour trips and a total of 14/13 westbound AM/PM peak hour trips. The worst-case delay will be experienced by fewer than 30 vehicles in each direction during the peak hours. Overall, the intersection is calculated to operate acceptably.

Opening Year with Project Conditions

Table 14 summarizes the Opening Year with Project intersection operations. As shown, the study intersections are calculated to continue to operate at LOS C or better, with the exception of the Harris Road / SR 111 intersection, where the worst-case minor-street movement is calculated to operate at LOS E during the AM peak hour and LOS F during the PM peak hour.

Table 14: Opening Year Intersection Operations

Intersection	Control Type	Movement	Peak Hour	Opening Year		Opening Year + Project		Delta
				Delay	LOS	Delay	LOS	
1) Keystone Road/Old Highway 111	MSSC	NB/SB	AM PM	10.5 10.2	B B	10.6 10.2	B B	0.1 0.0
2)Keystone Road/SR 111	Signal	Overall	AM PM	7.3 7.1	A A	7.3 7.2	A A	0.0 0.1
3) Harris	MSSC	EB/WB	AM	13.7	B	13.8	B	0.1

				Potentially Significant Impact **(PSI)**		Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	No Impact **(NI)**
Road/Dogwood Road			PM	14.8	B	15.2	C	0.4
4) Keystone Road /Old highway 111	MSSC	NB/SB	AM PM	10.4 10.3	B B	10.9 10.6	B B	0.5 0.3
5) Harris Road/SR 111	MSSC	EB/WB NBL SBL Overall	AM PM AM PM AM PM AM PM	**43.7** 69.0 9.6 11.1 9.1 8.8 1.8 2.3	E F A B A A -[b] -[b]	47.9 73.9 9.7 11.2 9.1 8.8 2.5 3.9	E F A B A A -[b] -[b]	4.2 4.9 0.1 0.1 0.0 0.0 - -
6) Worthington Road/Old Highway 111	Signal	Overall	AM PM	15.1 15.2	B B	15.1 15.2	B B	0.0 0.0
7) Worthington Road/SR 111	Signal	Overall	AM PM	10.7 10.2	B A	10.7 10.2	B B	0.0 0.0
8) Harris Road/Proj Dwy #1 [a]	MSSC	SB	AM PM	- -	- -	9.4 9.3	A A	9.4 9.3
9) Harris Road/Proj Dwy #2 [a]	MSSC	EB	AM PM	- -	- -	7.4 7.4	A A	76.4 7.4
10) Old Highway 111/Proj Dwy #3[a]	MSSC	EB	AM PM	- -	- -	8.7 8.7	A A	8.7 8.7

Delay is average delay expressed in seconds per vehicle.
MSSC – Minor-Street Stop Controlled intersection. Worst case delay reported.
Change in delay attributable to the Project
NBL = North-bound left-turn
SBL = South-bound left-turn
[a] Intersection does not exist under "without Project" conditions.
[b] Synchro does not provide an overall LOS for minor-street stop-controlled intersections.

VMT

Imperial County has not yet formally developed guidelines or adopted significance criteria or technical methodologies for VMT analysis. The Project will generate trips from two distinct types of vehicles: heavy vehicles, which consist of the Project's feedstock and compost trucks, and employee passenger vehicles. Heavy vehicles and passenger vehicles are classified as different vehicle types in the OPR guidelines, and are considered differently in regards to VMT analysis.

Heavy Vehicles

Per OPR guidelines, VMT refers to the amount and distance of automobile travel attributable to a project. The term "automobile" refers to on-road passenger vehicles, specifically cars and light trucks. VMT does not include trips from heavy-trucks. Therefore, the trips generated by the Project's feedstock and compost trucks are excluded from VMT analysis.

Employee Passenger Vehicles

OPR contains a screening threshold for small projects which states that, "absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact." The Project's employee passenger vehicles are calculated to generate 105 ADT, as shown in Table 12. Therefore, the employee component of the Project can be considered a "small project".

a)	Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☒	☐	☐
c)	Substantially increases hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐

a and c) Consistent with the MEIR; Less Than Significant with Mitigation. As discussed above, and as shown in Table 14, impacts

associated without Project conditions, would be considered less than significant. However, impacts associated with Project conditions, would result in an impact at Harris Road / SR 111 intersection, where the worst-case minor street left turn movement is calculated to operate at LOS E during the AM peak hour and LOS F during the PM peak hour. This impact is primarily caused by heavy trucks traveling from the Project site to northbound SR 111 via Harris Drive. However, all future Projects located within the MEIR, are required to implement mitigation measures to ensure impacts would remain less than significant. The Project would be required to implement Mitigation Measure 4.10.12, which requires all intersections operate at LOS C or better. The Project would accomplish this by implementing Mitigation Measure 4.10.13, which requires that all Projects built within the SPA, pay their fair share for improvements. The MEIR included the required improvements in Mitigation Measures 4.10.1 through 4.10.9. To summarize these Mitigation Measures, the Project would be required to implement Mitigation Measures TRANS-1 as described below:

Mitigation Measures TRANS-1: All future development, including improvement to existing uses, shall contribute its fair share of the cost for improving off-site road segments and intersections significantly impacted by the Mesquite Lake Specific Plan. All fair share contributions on State-owned facilities shall be calculated using Caltrans' Guide for the Preparation of Traffic Impact Studies. The measures that the Project shall pay their fair share of, are as follows:

- Signalize the SR 86/Keystone intersection, provide a dedicated eastbound left-turn lane, and provide dedicated westbound left-turn, through, and right-turn lanes with an overlap phase. The existing southbound left-turn lane and northbound right-turn lane shall be lengthened.
- Signalize the SR 86/Harris Road intersection and provide dedicated left-turn lanes at all four approaches (i.e., northbound, southbound, eastbound, westbound).
- Provide dedicated eastbound and westbound left-turn, through and right-turn lanes at the SR 86/Worthington Road intersection; and provide a dedicated right-turn lane in the northbound direction and a shared through/right-turn lane in the southbound direction.
- Signalize the Dogwood Road/Keystone Road intersection and provide dedicated left-turn lanes at each approach (i.e., northbound, southbound, eastbound, westbound).
- Signalize the Dogwood Road/Harris Road intersection and provide dedicated left-turn lanes at each approach (i.e., northbound, southbound, eastbound, westbound).
- Signalize the Dogwood Road/Worthington Road intersection and provide dedicated left-turn lanes at each approach (i.e., northbound, southbound, eastbound, westbound).
- Provide a dedicated eastbound right-turn lane with an overlap phase and dual northbound left-turn lanes at the SR 111/Keystone Road intersection. The addition of a second northbound left-turn lane will require widening Keystone Road between SR 111 and Old Highway 111 to accommodate the additional lane of traffic.
- Signalize the SR 111/Harris Road intersection and provide dedicated dual left-turn lanes and a right-turn lane for northbound traffic and a dedicated southbound right turn lane. A 4-foot shoulder shall be provided adjacent to the right-turn lanes. The Harris Road intersections with Old Highway 111 and with the east side frontage road shall be realigned to provide increased separation from SR 111 to the satisfaction of Caltrans and the County Engineer.
- Widen Dogwood Road to four lanes (i.e., two lanes in each direction) from Keystone Road to Harris Road and from Harris Road to Worthington Road.

Additionally, this movement requires a left-turn at an unsignalized minor-street stop-controlled interchange which may result in a potential hazard. In order to address this potential hazard, the Proposed Project would be required to implement Mitigation Measure TRANS-2, which would require that the Applicant implement a heavy truck route. Additionally, the Proposed Project would be required to implement Mitigation Measure 4.10.10, which would require that future street intersections or proposed project driveways on Keystone Road, Harris Road, and Dogwood Road be evaluated for signalization or other driveway intersection controls. Projected traffic volumes on these roads will require that streets and driveways be signalized and configured with dual inbound and outbound left-turn lanes, and dedicated right-turn lanes. If a signal is not provided, access shall be limited to right-turn only on Dogwood Road. With implementation of these mitigation measures, impacts would be less than significant.

Mitigation Measure TRANS-2: The Applicant shall implement a heavy truck route, approved by Imperial County Public Works, in order to ensure that heavy trucks departing the Project-site be prohibited from accessing northbound SR 111 via Harris Drive. Trucks heading northbound from the Project site shall be required to travel along Old Highway 111 to access SR 111 via Keystone Road. This will remove the majority of the eastbound to northbound Project trips at the intersection of Harris Road / SR 111. The heavy truck route shall be enforced through on-site signage, off-site signage as appropriate, and will be included in contracts with outside trucking companies.

b) Would the project conflict or be inconsistent with the CEQA Guidelines section 15064.3, subdivision (b)? ☐ ☐ ☒ ☐

b) Less than Significant Impact. As discussed above, the Project's employee passenger vehicles are calculated to generate 105 ADT, which is under the thresholds of 110 ADT per the OPR Guidelines. Therefore, the employee component of the Project can be considered a "small project", assumed to cause a less-than significant transportation impact.

	Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
d) Result in inadequate emergency access?	☐	☐	☒	☐

d) Consistent with the MEIR; Less than Significant Impact. Temporary or single-lane closure of some roadways may occur during the transport of oversized equipment or construction activities. Road closures would be coordinated with County Public Works, the County Sheriff, and ICFD prior to closure, and would be scheduled to occur during off-peak commute hours. The Project's construction and operational activities would be in compliance with the Imperial County Emergency Operations Plan (EOP) and Multi-Jurisdiction Hazard Mitigation Plan (MJHMP), and would not physically interfere with the execution of the policies and procedures in these plans (County 2015b; 2021a). Access roads may be additionally compacted to 90 percent or greater, as required, to support construction and emergency vehicles. Certain access roads may also require the use of aggregate to meet emergency access requirements. Therefore, the Project would not result in inadequate emergency access and impacts would be less than significant.

XVIII. *TRIBAL CULTURAL RESOURCES*

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place or object with cultural value to a California Native American tribe, and that is:				
(i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as define in Public Resources Code Section 5020.1(k), or	☐	☒	☐	☐
(ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth is subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.	☐	☒	☐	☐

California AB 52 was enacted in 2014 (Chapter 532, Statutes of 2014) and became effective within CEQA on January 1, 2015. Per PRC §21080.3.1 lead agencies are required to notify formally requesting tribes of proposed projects located within their traditional use area. Pursuant to Government Codes §65352.3 and §65352.4 SB 18 requires local governments to consult with California Native American Tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding, protecting, and/or mitigating impacts to cultural places when creating or amending General Plans, Specific Plans and Community Plans. The principal objective of SB 18 is to preserve and protect cultural places of California Native Americans. SB 18 is unique in that it requires local governments to involve California Native Americans in early stages of land use planning, extends to both public and private lands, and includes both federally recognized and non-federally recognized tribes.

Summary of Impacts Identified in the MEIR:

Neither AB 52 nor SB 18 were enacted at the time the MEIR was approved. The MEIR states that development within the Specific Plan would have the potential to impact Late Prehistoric archaeological materials in areas associated with lower elevation recessional shorelines of Lake Cahuilla, which include the Project site.

Impacts Related to the Proposed Project:

On September 7, 2022, Chambers Group requested a Sacred Lands File (SLF) records search from the Native American Heritage Commission (NAHC). The purpose of the request is to determine if any sacred lands or other resources have been recorded within the Project site or adjacent areas. The results of the SLF search, provided by the NAHC on November 4, 2022, were positive, indicated the area could contain Tribal Cultural Resources.

SB 18 letters are required to be sent to all Tribes listed on the NAHC list. AB 52 letters are required to be sent Tribes who request to consult with the County. SB 18 letters were sent to the Tribes listed below, and AB 52 letters were also sent to the bolded Tribes. All letters were sent on November 23, 2022. Responses for SB 18 were due by December 23, 2022, and AB 52 responses were due by February 21, 2023.The Quechan Tribe responded on December 19, 2022, noting that they had no further comments, and the Manzanita Tribe responded on January 31, 2023 requesting further information via email.

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	No Impact **(NI)**

- Augustine Band of Cahuilla Mission Indians
- Barona Group of the Capitan Grande
- **Campo Band of Diegueño Mission Indians**
- Chemehuevi Reservation
- Cocopah Indian Tribe
- Colorado River Indian Tribe
- Ewiiaapaayp Band of Kumeyaay Indians
- Ewiiaapaayp Tribal Office
- Iipay Nation of Santa Ysabel
- Inaja-Cosmit Band of Indians
- Inter-Tribal Cultural Resource Protection Council
- Jamul Indian Village
- Kwaaymii Laguna Band of Mission Indians
- La Posta Band of Diegueño Mission Indians
- Manzanita Band of Kumeyaay Nation
- Mesa Grande Band of Diegueño Mission Indians
- NAHC
- **Quechan Tribe of the Fort Yuma Reservation**
- San Pasqual Band of Diegueno Mission Indians
- Sycuan Band of the Kumeyaay Nation
- Torres-Martinez Desert Cahuilla Indians
- **Torres-Martinez Indian Tribe**
- Viejas Band of Kumeyaay Indians

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place or object with cultural value to a California Native American tribe, and that is:				
(ii) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as define in Public Resources Code Section 5020.1(k), or	☐	☒	☐	☐
(iii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth is subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.	☐	☒	☐	☐

a) ii) and iii) Less Than Significant with Mitigation. As discussed above, SB 18 and AB 52 consultation were conducted by the County, and the Quechan Tribe responded on December 19, 2022, noting that they had no further comments, and the Manzanita Tribe responded on January 31, 2023, requesting further information via email. Nonetheless, Chambers Group conducted a Cultural Resources Site visit on October 26, 2022. Chambers Group concluded that while surface manifestations of cultural resources were not observed during the previous cultural resources study in support of the MEIR or the current site visit, it should be noted that the landscape has been under historic-period use and settlement. This historic utilization may have resulted in unrecognized buried features such as footings and foundations or refuse area such as trash pits or outhouses. Similarly, ethnographic data and historic-period maps indicate that Native American groups such as the Kamia occupied and utilized major and minor drainages within the Salton Basin, as is documented on the 1856 General Land Office map, which depicted an "Indian Village" in the northeast quarter of Section 36 (Township 14S, Range 14E). The understanding that the area is important to Native American groups is further supported by the positive NAHC SLF records search results. However, the Project would implement MEIR Mitigation Measures 4.6.1 and 4.6.2, the former of which notes that if any unanticipated discovery of potential cultural resources are encountered during the Project, that proper protocols would be implemented. With implementation of these mitigation measures, impacts would remain less than significant.

XIX. *UTILITIES AND SERVICE SYSTEMS*

Would the project:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects?	☐	☒	☐	☐
b) Have sufficient water supplies available to serve the project	☐	☒	☐	☐

		Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	No Impact **(NI)**
	from existing and reasonably foreseeable future development during normal, dry, and multiple dry years?				
c)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☒	☐	☐
d)	Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☒	☐	☐
e)	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☒	☐	☐

Summary of Impacts Identified in the MEIR:

The MEIR evaluated public services and utilities for the entire SPA. The MEIR evaluated impacts to electrical service, water service, drainage systems, wastewater treatment, solid waste disposal, other facilities including natural gas and telecommunications, and other essential services which included police, fire and emergency which are evaluated further in Section V Public Services.

Additionally, development within the SPA was expected to result in an increase in recycling and a net reduction in solid waste disposal and energy use in the County. The MEIR concluded that fully accomplishing the land use objectives would not be possible until a public agency was able to establish, accomplish and operate the necessary infrastructures within the SPA. The MEIR provided general mitigation for public services and utilities as follows:

Mitigation Measure 4.9.1: The County of Imperial and its Departments shall review all final maps, grading plans, building permits, use permits, and other applications for development of property within the Specific Plan and shall determine whether adequate public service improvements are provided or planned to accomplish the long-term land use objectives of the Mesquite Lake Specific Plan. While individual development may be allowed to proceed, the County shall determine the need for appropriate fair-share contributions, by fee or facility construction, to be required of any applicant. In addition, the County may require development agreements from project applicants to ensure participation in the formation and funding of a CFD or other public agency to accomplish the construction and operation of the required infrastructure improvements identified in the Specific Plan. When deemed necessary by the County, further development shall be denied pending establishment of a CFD or other public agency.

Electrical Services

Electrical power to the SPA is supplied by IID Energy from its local power generating resources. The MEIR concluded that adequate electrical services could be provided by IID on site with the following mitigation:

Mitigation Measure 4.9.2: Prior to issuance of any building permit for any new building within the Project, the building permit applicant shall provide evidence from IID Energy that adequate electrical service exists for the Project or that required new facilities would be available prior to issuance of a certificate of occupancy for the building.

Water Service

Water is provided by IID from the Colorado River via the All-American Canal. The SPA is served from the Rose Canal, which bisects the SPA west of Dogwood Road and also via laterals from the Central Main Canal west of SR 86 and the Redwood Canal east of SR 111. The SPA is not within the service area of any water treatment plant, the nearest being the City of Imperial plant approximately 3 miles to the southwest. Raw water from IID can also be used for many industrial processes. The Specific Plan estimated that industrial uses typically require 1,250 to 2,500 gallons per day (GPD) per acre and noted requirements under SB 610. The MEIR concluded that water treatment, storage, pumping, and distribution systems would need to be developed throughout the SPA, not only to supply water to future businesses but also to ensure that water is available at sufficient pressure for firefighting requirements. The MEIR included the following mitigation:

Mitigation Measure 4.9.3: Prior to issuance of any building permit for any new building within the Project, the building permit applicant shall provide evidence from IID that water service exists for the Project, including for irrigation of landscape areas and dust control, and shall provide facilities for on-site treatment of raw water or for storage and distribution of delivered filtered water for hand washing and other sanitary requirements. All facilities required for adequate water service shall be installed and in working order prior to issuance of a certificate of occupancy for the building. Mitigation Measure 4.9.1 shall also be implemented to ensure to ensure participation in the formation and funding of a CFD or other public agency to accomplish the construction and operation of the required infrastructure improvements identified in the Specific Plan.

Drainage Systems

The MEIR noted that existing IID drainage systems in the Project area do not have sufficient capacity for stormwater drainage and retention basins would need to be developed or be available for use by all Mesquite Lake non-agricultural projects. The MEIR offered the following mitigation to ensure impacts would remain less than significant:

Mitigation Measure 4.9.4: Prior to issuance of any building permit for any new building within the Project, the building permit applicant shall provide evidence satisfactory to the Planning and Development Services Director that an adequate stormwater retention system exists for the Project or that required new facilities will be available prior to issuance of a certificate of occupancy for the building. All new or expanded stormwater retention facilities shall be designed and constructed in accordance with a hydrology report prepared by a registered civil engineer and approved by the County Engineer, Planning and Development Services Director, and IID as adequate to accommodate stormwater runoff and disposal. Mitigation Measure 4.9.1 shall also be implemented to ensure participation in the formation and funding of a CFD or other public agency to accomplish the construction and operation of the required infrastructure improvements identified in the Specific Plan.

Wastewater Treatment

No wastewater treatment is available in the Project area; the nearest treatment plant is in the City of Imperial approximately 1.8 miles to the south, which would require a pump station and force main, as well as an agreement from the City of Imperial to provide service to the SPA. Another alternative would be a future gravity line via Dogwood Road to Brawley approximately 4 miles to the north, which would also require an agreement with the City of Brawley. Evaporation ponds for industrial process water may also be required for some uses. The MEIR offered the following mitigation to ensure impacts would remain less than significant:

Mitigation Measure 4.9.5: Prior to issuance of any building permit for any new building within the project, the building permit applicant shall provide evidence that an adequate system for wastewater disposal and, if required, for industrial process water evaporation, exists for the project or will be constructed and available for use upon completion of the building. All facilities required for adequate wastewater disposal and process water evaporation shall be installed and in working order prior to issuance of a certificate of occupancy for the building. Mitigation Measure 4.9.1 shall also be implemented to ensure participation in the formation and funding of a CFD or other public agency to accomplish the construction and operation of the required infrastructure improvements identified in the Specific Plan.

Solid Waste Disposal

The MEIR found that there are adequate services and infrastructure for solid waste disposal. The Allied Imperial Landfill accepts Class III (municipal) waste at its facility located approximately 1 mile south of the Project on SR 111. Class II (special) waste is accepted at the Desert Valley Company disposal facility and storage site located northwest of Westmorland. A Class III (hazardous) waste facility is operated by Clean Harbors at a site west of Westmorland. Recycling facilities are limited to privately owned and operated drop-off centers.

In addition to regulation of facilities that handle hazardous materials, the California Integrated Waste Management Board (CIWMB) established procedures to implement the requirements of the PRC for solid waste facilities. This would include a solid waste transfer or processing station and composting, transformation, and disposal facilities. The following mitigation measures were included in the MEIR to ensure impacts remain less than significant.

Mitigation Measure 4.9.6: Prior to approval of final maps for each phase or unit of development within the specific plan area, a waste management plan shall be prepared in accordance with the County's Integrated Waste Management Plan and approved by the Planning and Development Services Director and the County Engineer. The plan shall include, but shall not be limited to, an assessment of the type and quantity of waste materials expected to enter the waste stream; source and separation techniques and on-site storage of separated materials; methods of transport and destination of waste materials; and, where economically feasible, implementation of buy-recycled programs.

Solid waste management measures were also discussed under the Hazards and Hazardous Materials section in the MEIR summarized below.

Mitigation Measure 4.7.6: For any project determined by the Planning and Development Services Director to require County Environmental Health and Safety/Local Enforcement Agency (EHS/LEA) approval under procedures established by the CIWMB, and prior to approval of a final map, grading plan, or building permit for any for such project, the applicant shall provide evidence to the Planning and Development Services Director that (1) a determination has been made by the County EHS/LEA on the need for project approval under procedures established by the CIWMB for compliance with the California Public Resources Code for solid waste facilities, including a solid waste transfer or processing station, composting facility, transformation facility, and/or disposal facility; and if applicable to the Project, (2) the property has been designated on the County NDFE and all local, state, and federal requirements for operation of a solid waste facility have been satisfied, including the requirement for issuance of a Solid Waste Facilities Permit by the LEA and in compliance with the County's Integrated Waste Management Plan.

Impacts Related to the Proposed Project:

a)	Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects?	☐	☒	☐	☐

a) Consistent with the MEIR; Less than Significant Impact with Mitigation. The Proposed Project would require new connections for utilities to conduct their operations. The MEIR identified that there are existing services and infrastructure that would be able to support future development such as electric, water, solid waste, natural gas, and telecommunications. Section E of the Project Summary discusses the proposed uses and sources of the utilities on the Project site.

Mitigation Measure 4.9.1 would be required to be implemented by the Project to ensure all public service improvements can be adequately provided by all utility providers. A discussion of each utility and service system is detailed below:

Water

The Proposed Project would require 15.6 AFY of water. The Project is adjacent to an IID water supply canal, which the Project anticipates using for its' water needs. It is anticipated that this water would be treated on site for domestic uses. Similar to other Projects in the MEIR, the Project would be required to implement Mitigation Measure 4.9.3, which requires that prior to issuance of a building permit, the applicant shall provide evidence from IID that water service exists for the Project for all needs on site. As described in Threshold b) below, with implementation of Mitigation Measure 4.9.3, impacts would be less than significant.

Wastewater Treatment

The Proposed Project would result in an increase in wastewater generation; however, as described further in Threshold c) below, most of the process water would be recycled in the anaerobic digestion and composting process. The Project is expected to result in approximately 11.7 AFY of wastewater generation (worst-case scenario without the recycling of the process water). The Project anticipates treating on-site wastewater from domestic uses with a package treatment plant designed to meet the requirements of the RWQCB and then using that water for dust control, irrigation, or other similar uses. Process water from the facility will be recycled in the anaerobic digesting and composting processes.

The Project would be required to implement Mitigation Measure 4.9.5 which would require that prior to issuance of any building permit for any new building, the building permit applicant shall provide evidence that an adequate system for wastewater disposal. With implementation of the aforementioned mitigation and compliance with the RWQCB requirements, impacts would remain less than significant.

Stormwater/Runoff

The introduction of new impervious surfaces to the Project would affect the amount of water absorption through the soils. However, the Project would implement Mitigation Measures 4.2.1 and 4.2.2, which would ensure that the amount and quality of stormwater would remain as unchanged as possible. The entire Project site would drain into a stormwater retention basin located on the northern western portion of the Project site that is approximately 24.440 acres, with a volume of 18.99 AF. A lined pond would be constructed to hold and treat the effluent generated during the composting process, which would be managed in accordance with State and local water quality regulations, including those of the SWRCB. Water from the lined pond would be recycled back into the process. Based on final design of the pond, if required by Environmental Health and Safety (EHS), a vector control plan would be submitted. The basin may require an appropriate mosquito abatement per County guidelines if the retention basin does fully discharge in less than 72 hours. Storm water will be retained in a pond prior to discharging into surface waters.

The Project would be required to implement Mitigation Measure 4.9.4 which would require that an adequate stormwater retention system exists for the Project or that required new facilities would be available prior to issuance of a certificate of occupancy for the building. Additionally, compliance with Specific Plan Mitigation Measure 4.2.3, Construction Stormwater Pollution Prevention Plan, as described in Section X, Hydrology and Water Quality, would require that a SWPPP be implemented during construction.

Electric Power

Electrical services would be provided from either IID and/or self-generated with solar panels. Electrical service would be provided by IID and/or self-generated solar panels. A facility Study Report was prepared by IID on April, 28, 2022, which indicated that IID requires the design and construction of the new 34.5kV Harris Switching Station to allow the Project to feed from the 34.5kV "LB" Line. The existing 34.5kV transmission line would be looped into and out of the new switching station to safely and reliably allow the addition of the Project. The switching station would be located in the electrical area in the northeast corner. as shown on the site plan in Figure 4. The construction and operation of the switching station would not result in expanded services other than those previously approved within the Specific Plan. If solar panels are used, they would be installed on the roofs of buildings and would interconnect by way of a bidirectional meter that would also serve as the metering element for power purchased from IID. The solar panels would be used solely for Project operations and would be 11 MW. The solar panels could utilize a battery energy storage element that would require approval from the County Planning Department, prior to installation. The Proposed Project would require approximately 331,526 kWh/year, which would be offset by use of the solar panels if utilized.. The Project would be required to implement Mitigation Measure 4.9.2, which would require that the Project provide evidence that electrical services can be adequately provided prior to issuance of a building permit, if services are required through IID.

Natural Gas

Natural gas would be serviced by the existing SoCalGas pipeline and from the Project's anaerobic digester. Additionally, the anaerobic digester output would produce an output of approximately 3,240 million standard cubic feet per day or 1,182,600 Mscf/year of renewable biogas annually, which would be pumped back into the SoCalGas pipeline. The Proposed Project would

require approximately 1,059 Mscf/year of natural gas to operate. This would result in a net increase in natural gas. While natural gas wasn't specifically analyzed in the MEIR previously, general Mitigation Measure 4.9.1 would ensure that all public utilities would be evaluated for ability to be supplied prior to Project construction.

Telecommunication

Cellular coverage would likely be provided by telecom, and internet service would likely be provided by Spectrum. Both providers have coverage for the area, and given that the area was a planned development, have likely planned buildout of the site into existing and future capacity.

The Proposed Project would utilize the same utility providers that are used by the existing facilities around the Project site. The mitigation measures discussed in the MEIR and discussed above (Mitigation Measures 4.9.1 to 4.9.6 and 4.7.6) would be implemented by the Proposed Project to ensure that the utility providers confirm and work with the Applicant to determine where the utilities shall be connected and that adequate services are available for the Project site. Implementation of the Project would be consistent with the MEIR and would not result in any new impacts not previously analyzed. Impacts would be less than significant with mitigation incorporated.

b) Have sufficient water supplies available to serve the project from existing and reasonably foreseeable future development during normal, dry, and multiple dry years? ☐ ☒ ☐ ☐

b) **Consistent with the MEIR; Less than Significant with Mitigation**. Construction water demands for each phase are estimated to be approximately 33.7 acre-feet (AF), or approximately 67.4 AF total. Operational water use is expected to be 15.6 AFY. The Project is adjacent to an IID water supply canal, which the Project anticipates using for its' water needs. It is anticipated that this water would be treated on site for domestic uses. Similar to other Projects in the MEIR, the Project would be required to implement Mitigation Measure 4.9.3, which requires that prior to issuance of a building permit, that the applicant shall provide evidence from IID that water service exists for the Project for all needs on site. The Project will do this by completing a Water Supply Assessment and submitting to IID for approval. With implementation of this Mitigation Measures, impacts would be less than significant.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? ☐ ☒ ☐ ☐

c) Consistent with the MEIR; Less than Significant with Mitigation. As previously mentioned, according to the MEIR, there is no wastewater treatment available within the SPA. The nearest treatment plant is located in the City of Imperial, which would require a pump station and force main, and an agreement from the City to provide service to the Proposed Project.

The Proposed Project would require 15.6 AFY of water. The majority of the process water would be recycled in the anaerobic digestion and composting process. However, evaluating a worst-case scenario, if all water required does go to a wastewater system, a standard conversion rate of water to wastewater generation is 125 percent water and 75 percent wastewater. This would result in approximately 11.7 AFY of wastewater generation. The Project anticipates treating on-site wastewater from domestic uses with a package treatment plant designed to meet the requirements of the RWQCB and then using that water for dust control, irrigation, or other similar uses. Process water from the facility will be recycled in the anaerobic digesting and composting processes.

The Project would be required to implement Mitigation Measure 4.9.5, which would require that prior to issuance of any building permit for any new building, the building permit applicant shall provide evidence that an adequate system for wastewater disposal. With implementation of the aforementioned mitigation and compliance with the RWQCB requirements, impacts would remain less than significant.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? ☐ ☒ ☐ ☐

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? ☐ ☒ ☐ ☐

d and e) Consistent with the MEIR; Less than Significant with Mitigation. Solid wastes would be generated during construction and operation of the Proposed Project. These wastes would include discarded materials and packaging such as scrap metal, concrete, rubble, plaster, wood, paper material and potentially hazardous materials (which are discussed in Section IX Hazards and Hazardous Materials). The Proposed Project would also include construction and operation of an anaerobic digester which would process up to 600,000 tons of organic waste annually, and create an output of approximately 1,226,356,200 MMBtu of renewable biogas annually, which would be pumped back into the SoCalGas pipeline and/or pumped

directly to the Project's on-site CNG fueling station.

All municipal waste would be sent to Allied Imperial Landfill, which is owned and operated by Republic Services, Inc. and is located approximately 4 miles southeast of the Project site (Google 2023). While there no significant information is available for the landfill, in 2011, the permitted area of the landfill increased from 170 acres to 337 acres, waste tonnage limits increased from 1,135 to 1,700 tons per day; and estimated closure date changed from 2012 to 2040 (CalRecycle 2011).

All special waste would be sent to the Desert Valley Company Monofill, and all hazardous waste would be sent to the Clean Harbors facility. Desert Valley Company Monofill is expected to reach capacity by 2025. However, the company has proposed to expand the facility by adding new waste storage cells and associated facilities. Daily volumes of waste are not expected to change (at 750 tons per day). Expansion would increase the capacity by 2.6 million cubic yards, thereby extending its operations to 2080 (County 2021b). The Clean Harbors facility is one of three Class I hazardous wastes treatment, storage, and disposal facility in California. It has a design capacity of 5 million cubic yards and receives an annual capacity of 440,000 cubic yards (Clean Harbors 2023).

According to CalRecycle's estimated solid waste generation rates, industrial sectors can generate a range of 8.93 pounds to 41.64 pounds of waste per employee per day (CalRecycle 2023a). With an estimate of 50 employees, this would equate to approximately 2,082 pounds per day or 1.04 tons per day (41.64 pounds per employee). Analyzing a worst-case scenario, this amount would represent a minimal increase in the daily throughput at each facility. However, this waste amount would represent approximately 379.6 tons per year, and the Project would be processing up to 600,000 tons per year of organic waste. The Project would represent a net decrease in waste generation.

Per CalGreen Construction Waste Management requirements, projects are required to recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition wastes or meet local construction and demolition waste, whichever is more stringent (CalRecycle 2023b). The Proposed Project is also required to comply with SB 1383, which establishes emission reduction goals by reducing the amount of organic material disposed in landfills. The Project would directly help with meeting SB 1383 with construction and operation of the Proposed Project.

As described in the MEIR (Mitigation Measures 4.7.6 and 4.9.6), prior to final approval of the final maps for development within the SPA, a Waste Management Plan (WMP) shall be implemented to comply with the County's Integrated Waste Management Plan to be approved by Planning and Development Services. This should include types and quantity of waste materials that are expected to enter the waste stream. This would ensure that an adequate plan is in place and that the Project is consistent with the County's requirements. Additionally, for construction waste, the Project would prepare and implement a Construction Waste Management Plan that would be reviewed and approved by the County and would represent a diversion of a minimum of 50 percent of construction waste from landfills, consistent with local regulations and the California Green Building Code. Therefore, implementation of the Project would be consistent with the MEIR and would not result in any new impacts not previously analyzed. Impacts would be less than significant with mitigation incorporated.

XX. *WILDFIRE*

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:

		Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b)	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c)	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☒	☐	☐
d)	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

Summary of Impacts Identified in the MEIR:

In 2018, the Office of Planning and Research updated the CEQA Guidelines to include Wildfire as a resource area to the Appendix G checklist.

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	No Impact **(NI)**

The section aimed to answer wildfire-related questions indicating whether a project was located in or near a State responsibility area or on lands that are classified as Very High Fire Hazard Severity Zones. During the preparation of the MEIR, wildfire impacts were not part of the analysis because it was not a resource area required for discussion. Any fire-related discussions were limited to hazardous materials, public services, fire suppression, and emergency services with the County Fire Department.

Impacts Related to the Proposed Project:

a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b)	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c)	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☒	☐	☐
d)	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

a), b) and d) Less than Significant Impact. The California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (FRAP) provides a Fire Hazards Severity Zone Viewer (FHSZ) to provide a visual reference to locate fire hazards areas in California. The maps were developed utilizing science and field-tested models that assign a hazard score based on factors that influence fire likelihood and behavior. Factors include but are not limited to fire history, existing and potential fuel (natural vegetation), predicted flame length, embers, terrain, and typical fire weather in the area.

The Project site is not located within a FHSZ area. Most of the moderate to very high fire hazard areas are located to the north adjacent to the Salton Sea near Salton City, Anza-Borrego Desert State Park, and the Cleveland National Forest. No areas within the immediate vicinity of the Project site are designated as areas that have potential for wildland fires. Additionally, the Project site and surrounding area is generally flat and would not result in downstream flooding, landslides or exacerbate wildfire risks or result in result in post-fire slope instability.

As previously discussed in the Hazards and Hazardous Materials Section, temporary or single-lane closure of some roadways may occur during the transport of oversized equipment or construction activities. Road closures would be coordinated with County Public Works, the County Sheriff, and ICFD prior to closure, and would be scheduled to occur during off-peak commute hours. The Project's construction and operational activities would be in compliance with the Imperial County Emergency Operations Plan (EOP) and Multi-Jurisdiction Hazard Mitigation Plan (MJHMP), and would not physically interfere with the execution of the policies and procedures in these plans (County 2015b; 2021a). The Proposed Project would have an Emergency Response Plan (ERP). The ERP would address potential emergencies including chemical releases, fires, and injuries. All employees would be provided with communication devices, cell phones, or walkie-talkies to provide aid in the event of an emergency. Therefore, the Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

The Project proposes construction and operation of an anaerobic digester. These uses are permitted with the submittal and approval of Project applications. The Proposed Project does not propose any changes to the EOC or the EOP, nor would construction occur near the primary and alternate EOCs that could cause a physical impairment to the facilities. Therefore, impacts would be less than significant.

c)	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☒	☐	☐

c) Less than Significant Impact with Mitigation. The Proposed Project is not located with a FHSZ; however, as previously mentioned, the Proposed Project would be required to install fire suppression systems. Water for fire protection would be purchased from IID and stored in an aboveground storage tank in accordance with County Fire Department standards. The system would be designed in accordance with federal, State, and local fire codes, occupational health and safety regulations and other jurisdictional codes, requirements, and standard practices. The Project site would also include hydrants for fire suppression. Additionally, as mentioned in Section V Public Services, the Project would implement Mitigation Measure 4.7.7 and 4.7.8, which would require the County Fire Chief evaluate the Project development to ensure adequate operation of fire emergency services and supply of water. Additionally, Mitigation Measure 4.7.9 requires that prior to occupancy, the fire suppression system be installed and operational.

Furthermore, the Imperial County Fire Department maintains mutual aid agreements with Brawley Fire Department and Imperial County Fire Department and completion of the Proposed Project would include payment of development fees that would support the fire department and other County services. With implementation of the above mitigation and given the Project design features, impacts would be less than significant.

Note: Authority cited: Sections 21083 and 21083.05, Public Resources Code. Reference: Section 65088.4, Gov. Code; Sections 21080(c), 21080.1, 21080.3, 21083, 21083.05, 21083.3, 21093, 21094, 21095, and 21151, Public Resources Code; Sundstrom v. County of Mendocino,(1988) 202 Cal.App.3d 296; Leonoff v. Monterey Board of Supervisors, (1990) 222 Cal.App.3d 1337; Eureka Citizens for Responsible Govt. v. City of Eureka (2007) 147 Cal.App.4th 357; Protect the Historic Amador Waterways v. Amador Water Agency (2004) 116 Cal.App.4th at 1109; San Franciscans Upholding the Downtown Plan v. City and County of San Francisco (2002) 102 Cal.App.4th 656.

Revised 2009- CEQA
Revised 2011- ICPDS
Revised 2016 – ICPDS
Revised 2017 – ICPDS
Revised 2019 – ICPDS

	Potentially Significant Impact **(PSI)**	Potentially Significant Unless Mitigation Incorporated **(PSUMI)**	Less Than Significant Impact **(LTSI)**	No Impact **(NI)**

SECTION 3
III. MANDATORY FINDINGS OF SIGNIFICANCE

The following are Mandatory Findings of Significance in accordance with Section 15065 of the CEQA Guidelines.

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, eliminate tribal cultural resources or eliminate important examples of the major periods of California history or prehistory? ☐ ☐ ☐ ☐

a) Less than Significant Impact with Mitigation. As discussed above, the Project is the construction and operation of an Anaerobic Digestor, in an area with an existing Specific Plan. Based on the discussions in Section IV Biological Resources, a biological resources survey was complete for the Project site, and with implementation of mitigation, impacts would be less than significant, and the proposed Project would not have the potential to substantially reduce the habitat of fish and wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal.

Lastly, as discussed in Section V, Cultural Resources, a cultural resources survey was complete for the Project, and the Project would not have the potential to substantially adversely affect previously unidentified archaeological resources or eliminate important examples of the major periods of California history or prehistory. For the reasons outlined above, the Project would not substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory, and therefore the Project would have less than significant impacts.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.) ☐ ☐ ☐ ☐

b) Less than Significant Impact with Mitigation. The Project does not have potential impacts that are individually limited, but cumulatively considerable. Based on the analysis contained in the above Sections, the proposed Project would not result in any significant and unmitigable impacts in any environmental categories. In all cases, effects associated with the Project would be limited to the existing Project Area/disturbance footprint and either result in no new impacts, less than significant impacts, or less than significant impacts with mitigation incorporated. As such, Project impacts are of such a negligible degree that they would not result in a significant contribution to any cumulative impacts. This is largely due to the fact that the impacts from the Specific Plan buildout were already evaluated in the MEIR, and the Project activities would not significantly stray from what was previously analyzed in the Mesquite Lake Specific Plan.

Cumulative impacts could occur if the construction of other projects occurs at the same time as the Proposed Project and in the same geographic scope, such that the effects of similar impacts of multiple projects combine to create greater levels of impact than would occur at the Project-level. The nearest cumulative Project which may contribute to cumulative impacts, is the Green Valley Logistics Center project, which is located just under 2.5 miles west of the Project site. However, this Project is also located within the Mesquite Lake Specific Plan area, which the area was evaluated as a whole, in the MEIR.

Similar to the Proposed Project, the Green Valley Logistics Center project is also requesting a Specific Plan Amendment to Heavy Industrial uses. Therefore, similar to the Proposed Project, the Green Valley Logistics Center project isn't analyzed fully in the MEIR, but the Specific Plan Amendment will not create impacts that could be cumulatively considerable. Additionally, the approval of either Project would not result in future approvals of any Specific Plan Amendments, or make any Specific Plan Amendments easier to obtain.

All Project impacts were considered to be less than significant with mitigation implemented. Additionally, given that the Project operations would not occur in close proximity to any residences or neighborhood communities, and the fact that Project activities would be short-term (12 to 24 months), the Project's impacts would not combine with the impacts of other projects to create cumulative construction- and/or operation-related impacts in resource areas such as air quality, noise, and transportation.

c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly? ☐ ☒ ☐ ☐

c) Less than Significant Impact with Mitigation. Effects to human beings are generally associated with air quality, noise, traffic safety, geology/soils, and hazards/hazardous materials. As discussed in the previous environmental topic areas, the Project would not result in significant impacts to human beings because the Proposed Project would not cause significant impacts to air quality, noise, hazards, and traffic that would impact humans in the area. Implementation of mitigation measures for air quality and hazards/hazardous materials would reduce impacts to less than significant. The impacts to human beings as a result of the Project, would be less than significant with the mitigation incorporated.

IV. SUMMARY OF MITIGATION MEASURES

The following mitigation measures would be implemented for the Proposed Project:

Mitigation Measure 4.3.1: Prior to issuance of any grading permit or building permit, the applicant shall provide evidence that construction specifications incorporate the requirement to comply with Imperial County Air Pollution Control District (ICAPCD) Regulation VIII, Fugitive Dust Rules, and the standard and discretionary mitigation measures for construction equipment and fugitive PM10 control for construction activities in Section 7.1 of the Imperial County APCD CEQA Air Quality Handbook.

Mitigation Measure 4.3.2: Prior to issuance of any grading permit or building permit, the applicant shall provide evidence that construction plans and specifications incorporate elements that ensure the paving, planting, or equivalent long-term dust stabilization of all surfaces that would be disturbed during construction.

Mitigation Measure 4.3.3: Prior to issuance of any grading permit or building permit, the applicant shall provide an analysis to APCD of forecast construction equipment emissions attributable to the Project as well as all foreseeable concurrent construction within 1 mile of the Project. If forecast direct or cumulative NOX or ROC emissions would exceed 50 tons per year, the applicant shall incorporate feasible emission reduction measures to reduce emissions to less than 50 tons per year to the satisfaction of the Air Pollution Control Officer. If emission reduction measures do not provide adequate reduction, applicant shall conduct further project-specific environmental review pursuant to CEQA or provide evidence from APCD that forecast emissions from construction activities would not cause a significant air quality impact.

Mitigation Measure 4.3.4: Prior to issuance of any building permit, the applicant shall provide evidence from APCD that the project is in compliance with APCD rules for permitting of new or modified stationary sources, or is exempt from permitting requirements.

Mitigation Measure 4.3.5: Prior to issuance of any discretionary approval or building permit, the applicant shall provide information to the Planning and Development Services Director on average daily truck and employees trips and one-way average miles traveled. Based on this information, the Planning and Development Services Director, in consultation with the Air Pollution Control Officer, may require an analysis of potential long-term vehicle emissions attributable to the Project. If forecast NOX or ROC emissions would exceed 55 pound per day, the applicant shall be required to incorporate feasible emission reduction measures to reduce emissions to a less than significant level. If emission reduction measures do not provide adequate reduction, applicant shall conduct further project-specific environmental review pursuant to CEQA or provide evidence from APCD that forecast long-term vehicle emissions from the Project would not cause a significant air quality impact.

Mitigation Measure 4.3.6: Prior to issuance of any building permit, the permit applicant shall provide, for approval by the County Planning/Building Department, a description of the odor-producing potential of the facility and the controls that would be incorporated into the Project to avoid an impact to on-site or off-site receptors. Uses proposing composting, sorting of recyclables, or biosolids transformation, shall be required to obtain approval by the Local Enforcement Agency (LEA) at the County Environmental Health Services Division (EHS), which may require preparation of an Odor Impact Minimization Plan (OIMP) and approval of a Solid Waste Facilities Permit (SWFP).

Mitigation Measure BIO-1 Worker Awareness Education Program: Prior to the start of construction activities, an environmental education program shall be provided for all project personnel. The education program shall include the following: (1) the potential presence of covered species and their habitats, (2) the requirements and boundaries of the Project, (3) the importance of complying with avoidance and minimization measures, (4) environmentally responsible construction practices, (5) identification of sensitive resource areas in the field, and (6) problem reporting and resolution methods. The construction footprint shall be clearly defined with flagging and/or fencing and shall be removed upon completion.

Mitigation Measure BIO-2 Burrowing Owl Preconstruction Surveys: Preconstruction surveys shall be conducted for the burrowing owl within 30 days of construction in all suitable habitat within the Proposed Project Impact Areas.

Mitigation Measure BIO-3 Burrowing Owl Avoidance Measures: If any ground-disturbing activities are planned during the burrowing owl nesting season (approximately February 1 through August 31), avoidance measures shall include a no construction buffer zone of a minimum distance of 250 feet, consistent with the Staff Report on Burrowing Owl Mitigation (CDFG, 2012). Compliance shall be maintained with CDFW burrowing owl mitigation guidelines as detailed in the Staff Report on Burrowing Owl Mitigation (CDFG, 2012) or more recent updates, if available.

Mitigation Measure BIO-4 Nesting Bird Surveys for Clearing: If vegetation clearing or project construction activities must occur during the bird breeding season (February 15–August 31), a qualified biologist shall conduct a preconstruction nesting survey to ensure that no active nests are present within or adjacent to the Project areas. If an active nest is observed that may be impacted by project-related activities, avoidance measures shall be implemented to avoid impacting the nest. Avoidance measures include delaying construction within the immediate vicinity of the active nest until the young have fledged or naturally failed, or instituting a buffer around the nest that prohibits construction activities to occur, but allows construction to continue outside the buffer. The appropriate avoidance buffer is to be determined by the qualified biologist based on vegetative cover, topography, stage of nest or young development, and species type.

Mitigation Measure 4.6.1 No preconstruction archaeological surveys shall be required in areas previously developed. However, if during grading or construction, evidence of potential archaeological resources is encountered, grading and construction shall be halted, the SCIC [South Coastal

Information Center (located at California State University, San Diego)] and the County Planning and Development Services Director shall be notified, and a qualified archaeologist shall be contracted by the developer to inspect the site. Resumption of grading or construction shall not be commenced until the archaeologist has advised the Planning and Development Services Director regarding the potential for cultural resources at the site, and the Planning and Development Services Director notifies the developer that grading or construction may proceed. If further archaeological investigation is required by the Planning and Development Services Director, the procedures in Mitigation Measure 4.6.2 shall be followed.

Mitigation Measure 4.6.2 Prior to approval of a CUP, tentative map, site plan, grading plan, or building permit for any phase or unit of development on lands not previously disturbed by agricultural use that are within the portion of the Specific Plan shown as the Cultural Resource Survey Area in Figure 4-5, field surveys shall be conducted to determine the presence/absence of archaeological resources and a report of the surveys provided to the Planning and Development Services Director. A testing program shall be approved by the Planning and Development Services Director for any identified resources to determine their significance and proper mitigation. Mitigation may include preservation in place, documentation, including recordation of findings at the Southeastern Information Center (located at the Imperial Valley College Desert Museum), and curation of materials at an appropriate local facility for long-term preservation and study. If a testing and/or excavation program is required, local Native American groups shall be notified, and a Native American monitor shall be present during excavation.

Mitigation Measure 4.7.1: Prior to approval of a final map, grading plan, or building permit for any phase or unit of development within the Specific Plan in the vicinity of the Imperial Fault near the Rose Canal, fault investigations shall be performed for human occupancy structures (structures designed for 2,000 or more person-hours per year) to be located in the State of California Special Studies Zone for Earthquake Faults in accordance with the County's Geologic Hazards Ordinance. The fault investigations shall include, but shall not be limited to, the following: (1) excavation of an exploratory fault trench; (2) logging of the trench by a California-registered engineering geologist; (3) evaluation of liquefaction potential of the subsurface data; and (4) report on the results of the fault investigations, to be approved by the Planning and Development Services Director. Should an active fault be found, a minimum 50-foot building setback from the fault shall be required and shown on the face of all applicable final maps, plot plans, and grading plans. If liquefiable soils are present, special building foundations (e.g., driven piles, cast-in-drilled-hole piers, stone columns) and/or ground modification (e.g., dynamic compaction) shall be incorporated into the design of all applicable human-occupancy structures.

Mitigation Measure GEO-1 Prepare Final Geotechnical Report and Implement Required Measures: Facility design for all project components shall comply with the site-specific design recommendations as provided by a licensed geotechnical or civil engineer to be retained by the Project applicant. The final geotechnical and/or civil engineering report shall address and make recommendations on the following:]

- Site preparation
- Soil-bearing capacity
- Appropriate sources and types of fill
- Potential need for soil amendments
- Structural foundations
- Grading practices
- Soil corrosion of concrete and steel
- Erosion/Winterization
- Seismic ground shaking
- Liquefaction
- Expansive/Unstable soils

Mitigation Measure 4.7.4: Prior to approval of a final map, grading plan, or building permit for any phase or unit of development within the Specific Plan, the applicant shall provide evidence to the Planning and Development Services Director that (1) a hazardous materials Business Plan has been prepared and implemented in accordance with federal, state, and local regulations; and (2) all local, state, and federal permit requirements to generate, use, store, and transport hazardous materials have been satisfied. This evidence shall include a determination by the County EHS Division whether toxic substances may be present in wastewater or stormwater runoff directed to a storage pond. If toxic substances could be present, measures shall be implemented to prevent such transport of toxic substances or to prevent human and wildlife, including birds, access to the storage pond. Additionally, in coordination with the County Fire Department's Office of Emergency Services and the Hazardous Materials Response Team, specific routes shall be established for the transport of hazardous materials to avoid public use areas.

Mitigation Measure 4.7.5: For any project determined by the Planning and Development Services Director to require County EHS approval under the CalARP Program, and prior to approval of a final map, grading plan, or building permit for any such project, the applicant shall provide evidence to the Planning and Development Services Director that (1) a determination has been made by the County EHS Division on the need for project approval under the CalARP Program to prevent accidental release of regulated toxic and flammable substances from stationary sources that handle more than the threshold quantity of regulated substances; and if applicable to the Project, (2) all local, state, and federal permit requirements to prevent accidental release of regulated toxic and flammable substances pursuant to the CalARP Program have been satisfied, including the requirement for preparation of a Risk Management Plan and an Emergency Response Program.

HAZ-1 Phase II Environmental Site Assessment: Prior to demolition and/or vegetation clearing, a qualified professional engineer shall conduct a Phase II Environmental Site Assessment to evaluate for presence and concentration of pesticides and asbestos. If high concentrations of either material are found on site, the Applicant would be required to adhere to any recommendations given by the professional engineer.

Mitigation Measures 4.2.1: Hydrological Analysis: As part of the building permit application process for each project, a hydrologic analysis shall be conducted to determine that:

- The proposed project would not cause undercutting erosion, slope stability degradation, vegetative stress (due to flooding, erosion, water quality degradation, or loss of water supplies), sedimentation, or habitat alteration in downstream areas as a result of an altered flow regime.
- Downstream IID drainage systems would have sufficient capacity to convey the increase in site runoff due to the increase in impervious surfaces, and the ability to attenuate the resulting peak flows.
- Any on-site BMPs are designed in accordance with the County Engineering Design Guidelines Manual (County of Imperial 2004) and to the satisfaction of the County Engineer.

Mitigation Measure 4.2.2: Hydrologic Design: Based on the hydrological analysis conducted in the MEIR, natural hydrologic designs shall be integrated into site layouts to the maximum extent practicable by:

- Reducing imperviousness and directly connected impervious surfaces to facilitate natural infiltration of runoff, conserving natural resources and areas, maintaining and using natural drainage courses in the stormwater conveyance system, and minimizing clearing and grading.
- Providing runoff storage measures dispersed uniformly throughout a site's landscape with the use of a variety of detention, retention, and runoff practices.
- Implementing on-site hydrologically functional landscape design and management practices.
- Incorporating pervious pavements wherever practicable.

Mitigation Measure 4.2.3: Construction Stormwater Pollution Prevention Plan: Prior to issuance of a grading permit for any phase or unit of development within the Specific Plan, an NOI shall be submitted to the SWRCB, and an SWPPP shall be developed and implemented on-site in compliance with Water Quality Order 99-08-DWQ/NPDES General Permit No. CAS000002 (General Construction Permit). The County Director of Public Works shall be provided an opportunity to review the SWPPP as part of the review/approval process at least 30 days prior to construction. The SWPPP shall include, but shall not be limited to, the following:

- BMPs to prevent construction-related pollutants from being exposed to runoff that can transport pollutants into nearby receiving waters. The selection and placement of BMPs shall be designed to protect all areas disturbed by construction activities from erosive forces and capture sediment from stormwater before it leaves the site. Erosion and sediment controls shall include both stabilization (erosion control) and structural (sediment control) measures. These measures shall be implemented such that the exposure of unprotected, disturbed earth during site development is minimized to the shortest duration practicable.
- Soil-tracking BMPs to limit off-site transport of sediment from the construction areas by implementing tire-cleaning measures such as stabilized construction entrance/exit designs (e.g., metal corrugated shaker plates, gravel strips, and/or wheel-washing facilities) at access points.
- Inspect/maintain all erosion and sediment control measures for proper integrity and function during the entire construction period. All stabilization and structural controls shall be inspected at least monthly or after any significant storm event and shall be repaired or maintained for optimum performance. Access to these facilities shall be maintained during wet weather.

    - Examples of erosion control include:
        - slope benching and terracing
        - soil roughening
        - temporary revegetation
        - soil stabilizers
        - mulches and matrices
        - erosion control blankets
        - fiber rolls
    - Examples of sediment control include:
        - perimeter controls (e.g., gravel bag or straw bale berms, silt fence)
        - stormwater inlet protection (e.g., fiber roll, gravel bags, geofabric grate covering)
        - silt fencing
        - gravel construction site entrance/exits
        - truck tire wheel wash
        - check dams

- Material and waste management programs during construction such as solid, sanitary, septic, hazardous, contaminated soil, concrete, and construction waste management; spill prevention; appropriate material delivery and storage; employee training; dust control; and vehicle and equipment cleaning, maintenance, and fueling. Each of these programs would address proper secondary containment requirements, spill prevention and protection, structural material storage needs, proper concrete wash-out design and containment, perimeter and surface protection for laydown and maintenance areas, and relaying all such requirements to construction staff.
- Structural and non-structural programs (i.e., routine procedures or practices) to reduce the amount of pollutants in runoff; to prohibit

the storage of uncovered hazardous substances in outdoor areas; to prohibit the use of pesticides and herbicides; and to prevent spills.

- A monitoring program involving inspection and maintenance procedures for all post-construction stormwater pollution control measures to ensure that they continue to function properly. The monitoring program shall specify the monitoring entity; the funding source for the inspection/monitoring program; and enforcement provisions in the event of failure to implement, operate, or maintain the approved stormwater pollution control measures.
- Maintaining records of all stormwater control measure implementation, inspection, and maintenance activities for at least 5 years.

Mitigation Measure 4.2.4: Industrial SWPPP: Thirty (30) days prior to new facility start-up for any phase or unit of development within the Specific Plan, an NOI shall be submitted to the SWRCB, and a SWPPP shall be developed and implemented on-site in compliance with Water Quality Order 97-03-DWQ/NPDES General Permit No. CAS000001 (General Industrial Permit), which requires:

- Verifying that any illicit connections to storm drains have been eradicated.
- Incorporating non-structural and structural BMPs to reduce pollutants in site runoff, such as outfall protection and treatment devices, proper storage and disposal of potential pollutants, secondary containment protection, and prohibiting pesticide and herbicide use; waste management, employee training, erosion control, vehicle/equipment cleaning, maintenance, and fueling; spill prevention/response practices; and shipping/receiving practices. Storage of potential pollutants shall be contained within approved safety lockers with secondary containment, within constructed secondary containment structures, or stored off-site in suitable protective enclosures. Disposal shall occur at an authorized landfill, waste collection center, or other certified disposal facility approved for disposing the waste in question. The methods and procedures shall be consistent with the philosophies of EPA and California guidance documentation for industrial stormwater pollution prevention.
- Developing and executing a Monitoring and Reporting Program to assess the effectiveness of BMPs through visual inspection of storm drains and outfall points during wet and dry weather and storm sampling. The program shall also address the maintenance needs of any on-site BMPs to ensure optimum functionality.
- Preparing and submitting an annual report to the RWQCB with monitoring results.
- Maintaining all related records of all control measure implementation, inspection, and maintenance for at least 5 years.

Mitigation Measure 4.2.5, Service Area Agreement: The Imperial County Planning and Development Services Director shall review and approve the County Service Area agreement or other documents establishing an independent authority responsible for operation of public facilities and services within the Specific Plan. The agreement or other documents shall include information sufficient to address the ongoing maintenance of stormwater facilities on individual lots/parcels as well as future storm drain systems within the County road rights-of-way. These considerations shall include, but not be limited to, maintaining erosion control BMPs to minimize on-site soil loss, clearing of sediment from BMPs on an as-needed basis, trash and debris collection (aesthetic maintenance), and maintaining public safety. The agreements shall demonstrate that there are sufficient funding sources to operate these facilities in an environmentally responsible manner, and that stormwater controls will be implemented and maintained throughout their operational lifetime.

Mitigation Measure 4.7.2: Since development occur in the vicinity of the lakebed of Mesquite Lake shown in Figure 4-4, prior to construction, a hydrology study shall be prepared by a registered civil engineer for approval by the County Engineer and the Planning and Development Services Director that demonstrates that areas proposed for location of buildings or storage are protected from flooding by a 100-year frequency flood and that the sites of such buildings or storage are designed to drain to a retention basin with sufficient capacity to prevent flooding of the site.

Mitigation Measure 4.2.8:
Stormwater Retention Basin
The stormwater retention basin shall be designed to appropriately treat all water released to the Rose Drain such that any off-site discharge causes no further impairment of local water quality and complies with IID specifications and all other locally imposed performance-based regulations.

The retention pond shall also be designed to retain the volume generated by a 100-year frequency storm. An emergency drain valve shall incorporate a standpipe to bleed off surface water from the retention basin such that sediment and other settled materials are not conveyed to the natural drainage in the event of severe rainfall. Protocols for managing the emergency release of such waters shall meet all requirements of the IID, County EHS, the RWQCB, the CDFG, and the County Planning and Development Services Department.

Mitigation Measure 4.7.7: The County Fire Chief shall monitor development of the Specific Plan to determine the need for construction and operation of an on-site fire station. This is expected to require dedication of an approximately 2- to 3-acre site within the Specific Plan to be used for the purpose of developing future emergency service facilities including possibly a combined police/fire station as needed. This facility shall be constructed and become operational at such time as required by the County Fire Chief.

Mitigation Measure 4.7.8: Prior to approval of a final map, grading plan, or building permit for any phase or unit of development within the Specific Plan, the applicant shall provide evidence to the Planning and Development Services Director that a determination has been made by the County Fire Department that an adequate system for delivery of an adequate supply of water for fire suppression, and other required equipment, alarms, and water connections, is to be provided to serve the Project.

Mitigation Measure 4.7.9: Prior to issuance of a certificate of occupancy for any building within any phase or unit of development within the

Specific Plan, the applicant shall provide evidence to the Planning and Development Services Director that the fire suppression system required by Mitigation Measure 4.7.8 has been installed to the County Fire Department's satisfaction and is operational.

Mitigation Measure 4.7.10: Prior to issuance of a certificate of occupancy for any new construction adjacent to the Rose Canal, it shall either be undergrounded, covered, or fenced within the entire unit of development that includes the building for which the certificate of occupancy is requested. Should fencing be the desired mitigation option, both sides of the canal shall be fenced to a height of 5 feet using chain-link material with warning signs installed.

Mitigation Measure 4.10.10: Future street intersections or proposed project driveways on Keystone Road, Harris Road, and Dogwood Road shall be evaluated for signalization or other driveway intersection controls. Projected traffic volumes on these roads will require that streets and driveways be signalized and configured with dual inbound and outbound left-turn lanes, and dedicated right-turn lanes. If a signal is not provided, access shall be limited to right-turn only on Dogwood Road. Inbound left turns at the Project driveways may be allowed on Keystone Road and Harris Road without signals, but outbound left-turns shall be prohibited at unsignalized intersections.

Mitigation Measure 4.10.12: All improvements to State-owned road segments and intersections shall provide operations at LOS C or better.

Mitigation Measures TRANS-1: All future development, including improvement to existing uses, shall contribute its fair share of the cost for improving off-site road segments and intersections significantly impacted by the Mesquite Lake Specific Plan. All fair share contributions on State-owned facilities shall be calculated using Caltrans' Guide for the Preparation of Traffic Impact Studies. The measures that the Project shall pay their fair share of, are as follows:

- Signalize the SR 86/Keystone intersection, provide a dedicated eastbound left-turn lane, and provide dedicated westbound left-turn, through, and right-turn lanes with an overlap phase. The existing southbound left-turn lane and northbound right-turn lane shall be lengthened.
- Signalize the SR 86/Harris Road intersection and provide dedicated left-turn lanes at all four approaches (i.e., northbound, southbound, eastbound, westbound).
- Provide dedicated eastbound and westbound left-turn, through and right-turn lanes at the SR 86/Worthington Road intersection; and provide a dedicated right-turn lane in the northbound direction and a shared through/right-turn lane in the southbound direction.
- Signalize the Dogwood Road/Keystone Road intersection and provide dedicated left-turn lanes at each approach (i.e., northbound, southbound, eastbound, westbound).
- Signalize the Dogwood Road/Harris Road intersection and provide dedicated left-turn lanes at each approach (i.e., northbound, southbound, eastbound, westbound).
- Signalize the Dogwood Road/Worthington Road intersection and provide dedicated left-turn lanes at each approach (i.e., northbound, southbound, eastbound, westbound).
- Provide a dedicated eastbound right-turn lane with an overlap phase and dual northbound left-turn lanes at the SR 111/Keystone Road intersection. The addition of a second northbound left-turn lane will require widening Keystone Road between SR 111 and Old Highway 111 to accommodate the additional lane of traffic.
- Signalize the SR 111/Harris Road intersection and provide dedicated dual left-turn lanes and a right-turn lane for northbound traffic and a dedicated southbound right turn lane. A 4-foot shoulder shall be provided adjacent to the right-turn lanes. The Harris Road intersections with Old Highway 111 and with the east side frontage road shall be realigned to provide increased separation from SR 111 to the satisfaction of Caltrans and the County Engineer.
- Widen Dogwood Road to four lanes (i.e., two lanes in each direction) from Keystone Road to Harris Road and from Harris Road to Worthington Road.

Mitigation Measure TRANS-2: The Applicant shall implement a heavy truck route, approved by Imperial County Public Works, in order to ensure that heavy trucks departing the Project-site be prohibited from accessing northbound SR 111 via Harris Drive. Trucks heading northbound from the Project site shall be required to travel along Old Highway 111 to access SR 111 via Keystone Road. This will remove the majority of the eastbound to northbound Project trips at the intersection of Harris Road / SR 111. The heavy truck route shall be enforced through on-site signage, off-site signage as appropriate, and will be included in contracts with outside trucking companies.

Mitigation Measure 4.9.1: The County of Imperial and its Departments shall review all final maps, grading plans, building permits, use permits, and other applications for development of property within the Specific Plan and shall determine whether adequate public service improvements are provided or planned to accomplish the long-term land use objectives of the Mesquite Lake Specific Plan. While individual development may be allowed to proceed, the County shall determine the need for appropriate fair-share contributions, by fee or facility construction, to be required of any applicant. In addition, the County may require development agreements from project applicants to ensure participation in the formation and funding of a CFD or other public agency to accomplish the construction and operation of the required infrastructure improvements identified in the Specific Plan. When deemed necessary by the County, further development shall be denied pending establishment of a CFD or other public agency.

Mitigation Measure 4.9.2: Prior to issuance of any building permit for any new building within the Project, the building permit applicant shall provide evidence from IID Energy that adequate electrical service exists for the Project or that required new facilities would be available prior to issuance of a certificate of occupancy for the building.

Mitigation Measure 4.9.3: Prior to issuance of any building permit for any new building within the Project, the building permit applicant shall provide evidence from IID that water service exists for the Project, including for irrigation of landscape areas and dust control, and shall provide facilities for on-site treatment of raw water or for storage and distribution of delivered filtered water for hand washing and other sanitary requirements. All facilities required for adequate water service shall be installed and in working order prior to issuance of a certificate of occupancy for the building. Mitigation Measure 4.9.1 shall also be implemented to ensure to ensure participation in the formation and funding of a CFD or other public agency to accomplish the construction and operation of the required infrastructure improvements identified in the Specific Plan.

Mitigation Measure 4.9.4: Prior to issuance of any building permit for any new building within the Project, the building permit applicant shall provide evidence satisfactory to the Planning and Development Services Director that an adequate stormwater retention system exists for the Project or that required new facilities will be available prior to issuance of a certificate of occupancy for the building. All new or expanded stormwater retention facilities shall be designed and constructed in accordance with a hydrology report prepared by a registered civil engineer and approved by the County Engineer, Planning and Development Services Director, and IID as adequate to accommodate stormwater runoff and disposal. Mitigation Measure 4.9.1 shall also be implemented to ensure participation in the formation and funding of a CFD or other public agency to accomplish the construction and operation of the required infrastructure improvements identified in the Specific Plan.

Mitigation Measure 4.9.5: Prior to issuance of any building permit for any new building within the project, the building permit applicant shall provide evidence that an adequate system for wastewater disposal and, if required, for industrial process water evaporation, exists for the project or will be constructed and available for use upon completion of the building. All facilities required for adequate wastewater disposal and process water evaporation shall be installed and in working order prior to issuance of a certificate of occupancy for the building. Mitigation Measure 4.9.1 shall also be implemented to ensure participation in the formation and funding of a CFD or other public agency to accomplish the construction and operation of the required infrastructure improvements identified in the Specific Plan.

Mitigation Measure 4.9.6: Prior to approval of final maps for each phase or unit of development within the specific plan area, a waste management plan shall be prepared in accordance with the County's Integrated Waste Management Plan and approved by the Planning and Development Services Director and the County Engineer. The plan shall include, but shall not be limited to, an assessment of the type and quantity of waste materials expected to enter the waste stream; source and separation techniques and on-site storage of separated materials; methods of transport and destination of waste materials; and, where economically feasible, implementation of buy-recycled programs.

Mitigation Measure 4.7.6: For any project determined by the Planning and Development Services Director to require County Environmental Health and Safety/Local Enforcement Agency (EHS/LEA) approval under procedures established by the CIWMB, and prior to approval of a final map, grading plan, or building permit for any for such project, the applicant shall provide evidence to the Planning and Development Services Director that (1) a determination has been made by the County EHS/LEA on the need for project approval under procedures established by the CIWMB for compliance with the California Public Resources Code for solid waste facilities, including a solid waste transfer or processing station, composting facility, transformation facility, and/or disposal facility; and if applicable to the Project, (2) the property has been designated on the County NDFE and all local, state, and federal requirements for operation of a solid waste facility have been satisfied, including the requirement for issuance of a Solid Waste Facilities Permit by the LEA and in compliance with the County's Integrated Waste Management Plan.

V. PERSONS AND ORGANIZATIONS CONSULTED

This section identifies those persons who prepared or contributed to preparation of this document. This section is prepared in accordance with Section 15129 of the CEQA Guidelines.

A. COUNTY OF IMPERIAL

- Jim Minnick, Director of Planning & Development Services
- Michael Abraham, AICP, Assistant Director of Planning & Development Services
- Diana Robinson, Planning Division Manager

B. CHAMBERS GROUP

- Corinne Lytle-Bonine, Principal In Charge
- Victoria Boyd, Project Manager
- Eunice Bagwan, Environmental Planner
- Erik Segura, Environmental Planner
- Paul Morrissey, Director of Biology
- Lucas Tutschulte, Director of Cultural Resources
- Phillip Carlos, GIS Specialist

C. OTHER AGENCIES/ORGANIZATIONS

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GTS (Peer Review)

- Rawad Hani, P.E., T.E., Managing Principal

LandMark Consultants, Inc.

Ldn Consulting (Peer Review)

- Jeremy Louden, Principal

Linscott, Law & Greenspan, Engineers

- John A. Boarman, P.E., Principal

UltraSystems Environmental Incorporated

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VII. FINDINGS

This is to advise that the County of Imperial, acting as the lead agency, has conducted an Initial Study to determine if the project may have a significant effect on the environment and is proposing this Negative Declaration based upon the following findings:

☐ The Initial Study shows that there is no substantial evidence that the project may have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.

☐ The Initial Study identifies potentially significant effects but:

(1) Proposals made or agreed to by the applicant before this proposed Mitigated Negative Declaration was released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur.

(2) There is no substantial evidence before the agency that the project may have a significant effect on the environment.

(3) Mitigation measures are required to ensure all potentially significant impacts are reduced to levels of insignificance.

A MITIGATED NEGATIVE DECLARATION will be prepared.

If adopted, the Negative Declaration means that an Environmental Impact Report will not be required. Reasons to support this finding are included in the attached Initial Study. The project file and all related documents are available for review at the County of Imperial, Planning & Development Services Department, 801 Main Street, El Centro, CA 92243 (442) 265-1736.

NOTICE

The public is invited to comment on the proposed Negative Declaration during the review period.

_____

Date of Determination Jim Minnick, Director of Planning & Development Services

---

The Applicant hereby acknowledges and accepts the results of the Environmental Evaluation Committee (EEC) and hereby agrees to implement all Mitigation Measures, if applicable, as outlined in the MMRP.

_____

Applicant Signature Date

APPENDIX A – Air Quality and Greenhouse Gas Emissions Study for Imperial Organic Renewable Energy Facility, prepared by UltraSystems Environmental Incorporated, Revised February 2023.

AIR QUALITY AND GREENHOUSE GAS EMISSIONS STUDY
FOR
IMPERIAL ORGANICS RENEWABLE ENERGY FACILITY (IO-REF)

Prepared for:

True North Renewable Energy, LLC
2390 E. Camelback Road, Suite 203
Phoenix, AZ 85016

Prepared by:

UltraSystems Environmental Incorporated
16431 Scientific Way
Irvine, California 92618-4355

Job No. 7096

Revised February 2023

This analysis was prepared in accordance with § 15063(d)(3) and Appendix G of the State CEQA Guidelines to determine the potential significant air quality effects on the physical environment that could result from the implementation of the project.

Report Preparer:

Name & Title: MICHAEL ROGOZEN, Senior Principal Engineer

Signature: _____ Date: February 2, 2023

TABLE OF CONTENTS

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ATTACHMENTS

1.0 INTRODUCTION

True North Renewable Energy, LLC (TNRE), the applicant, proposes to build a project[1] that includes an anaerobic digester and an advanced, aerated static pile compost facility to process mixed organics diverted from landfills throughout Southern California. The proposed project is on approximately 73 acres of vacant land in unincorporated Imperial County, northwest of the intersection of East Harris Road and Highway 111, at 194 East Harris Road, Imperial, CA. It is in the Mesquite Lake Specific Plan and is currently zoned ML-1-3-RE and ML-1-2-RE. The regional location of the development is shown in **Figure 1.0-1**. The site and surrounding properties are shown in **Figure 1.0-2**.

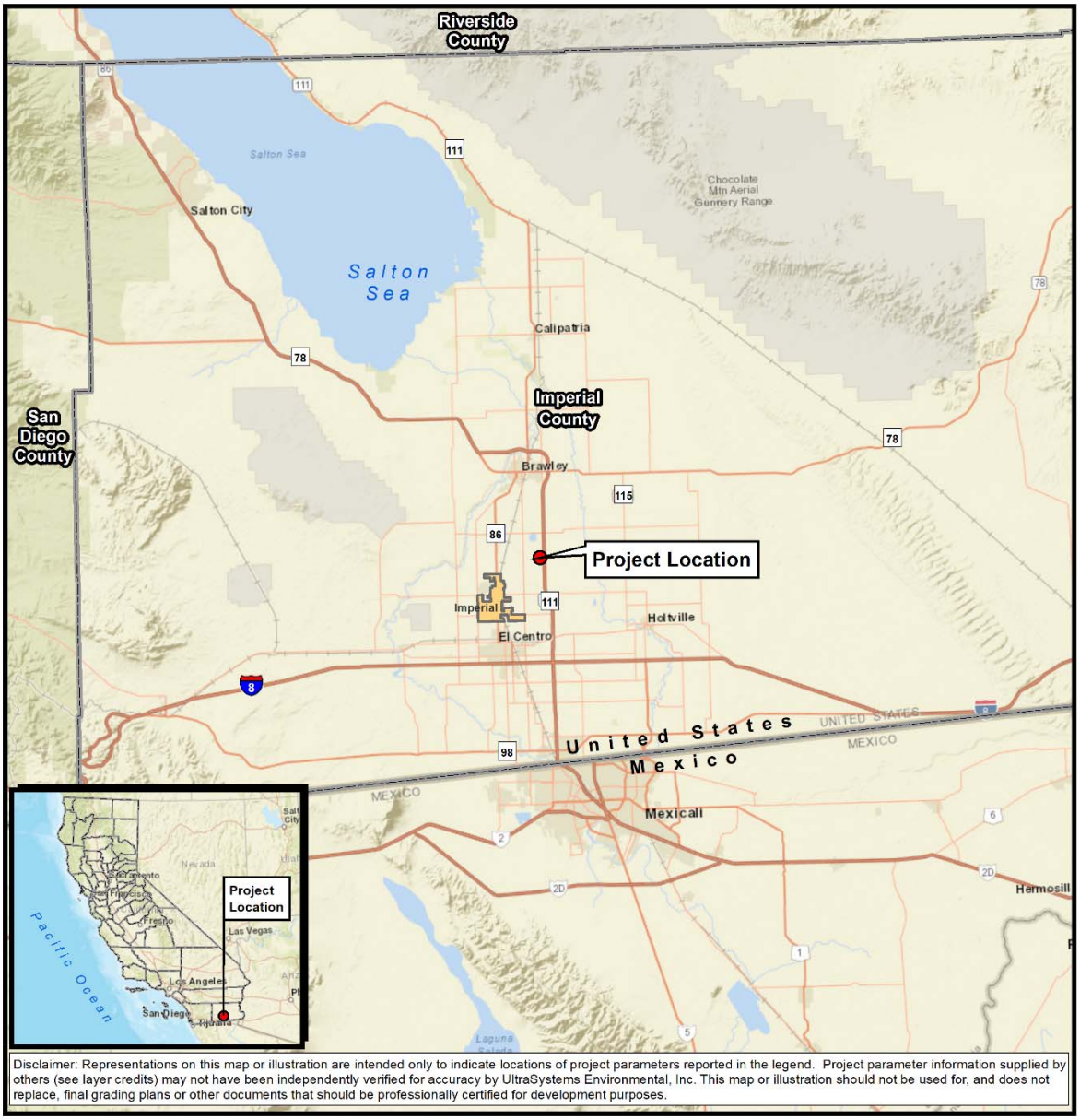
At full buildout, the facility will process 600,000 tons per year (tpy) through anaerobic digesters, to produce pipeline quality renewable natural gas. Digestate from the digester will be routed to aerated static piles and/or aerated closed vessels to produce compost for local agricultural use. Potential stationary air emissions sources include feedstock handling equipment; high solids anerobic digestion vessels; a biogas cleaning and upgrading unit with flares; a hot water boiler; and scrubbers and biofilters. Air emissions will also be expected from vehicular activity related to employees, visitors and trucks delivering organic feedstock and distributing finished compost. The County of Imperial has determined that an air quality and greenhouse gas (GHG) emission study is needed as part of California Environmental Quality Act (CEQA) documentation for a conditional use permit.

This air quality analysis was conducted within the context of CEQA (California Public Resources Code §§ 21000 et seq.). The methodology follows the CEQA Air Quality Handbook[2] prepared by the Imperial County Air Pollution Control District (ICAPCD) for quantification of emissions and evaluation of potential impacts on air resources.

1 Imperial Organics Renewable Energy Facility, formerly known as Harris Road Recycling Facility.

2 CEQA Air Quality Handbook: Guidelines for the Implementation of the California Air Quality Act of 1970 as amended. Imperial County Air Pollution Control District. Final - December 12, 2017.

Figure 1.0-1
REGIONAL LOCATION MAP



Path: \\GISSVR\gis\Projects\7096_True_North_Renewable_Harris Rd_Tech Studies\MXDs\7096_True_North_Renewable_Regional_Location_2021_08_09.mxd
Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community; California Department of Forestry and Fire Protection, 2009; UltraSystems Environmental, Inc., 2021

August 09, 2021

Scale: 1:633,600

N

0 5 10 Miles

0 5 10 Kilometers

Legend

- Project Location
- County Boundary
- City of Imperial

Harris Road Recycling Facility

Regional Location

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Figure 1.0-2
VICINITY MAP

Path: \\GISSVR\gis\Projects\7096_True_North_Renewable_Harris Rd_Tech Studies\MXDs\7096_True_North_Renewable_Project_Vicinity_2021_08_09.mxd
August 09, 2021
Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community; SCAG, March 2020: UltraSystems Environmental, Inc., 2021

Scale: 1:24,000

N

0 1,000 2,000 Feet

0 250 500 Meters

Legend

Project Location

Harris Road Recycling Facility

Project Vicinity

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2.0 PROJECT DESCRIPTION

2.1 General Description

The project will be constructed and operated in the following phases:[3]

- **Phase 0-IC (Initial Composting):** Outdoor primary and secondary[4] composting of 150,000 tpy greenwaste (>90%) and food waste (<10%) in aerated static piles; no anaerobic digestion.
- **Phase1-A:** Anaerobic digestion of 300,000 tpy greenwaste (>75%) and food waste (<25%) and outdoor composting of digestate in aerated static piles.
- **Phase1-B:** Anaerobic digestion of 300,000 tpy greenwaste (<75%) and food waste (>25%) and in-vessel, indoor composting of digestate with biofilters for emissions control, followed by outdoor secondary composting in aerated static piles.
- **Phase 2-A:** Anaerobic digestion of 300,000 tpy greenwaste (>75%) and food waste (<25%) and composting of digestate in outdoor aerated static piles.
- **Phase 2-B:** Anaerobic digestion of 300,000 tpy greenwaste (>75%) and food waste (>25%) and in-vessel, indoor composting of digestate with biofilters for emissions control, followed by outdoor secondary composting in aerated static piles.

2.2 Construction Activities and Schedule

Construction will begin with clearing and grading of 73 acres, along with excavations for trenching. Building of structures is summarized in **Table 2.2-1**.

Table 2.2-1
CONSTRUCTION CHARACTERISTICS

Site Element	Area				
	Phase 0-IC	Phase 1-A	Phase 1-B	Phase 2-A	Phase 2-B
Clearing and Grading	3,179,880 ft^2				
Buildings	33,420 ft^2	145,000 ft^2	165,121 ft^2	79,543 ft^2	165,121 ft^2
Concrete Pads	191,630 ft^2	146,400 ft^2	None	303,380 ft^2	None
Demolition	None	27,420 ft^2	None	None	None
Asphalt Paving	472,881 ft^2				

Table 2.2-2 shows the project implementation schedule. For the purpose of the analysis in this report, it is assumed that Phase 0-IC will begin in June 2022 and that Phase 2-B will be completed in February 2030. After the latter date, only Phases 1-B and 2-B will be operational.

3 Conceptual site plans for the phases are in **Attachment 1**.
4 Secondary = finishing.

Table 2.2-2
PROJECT IMPLEMENTATION SCHEDULE

Phase	Construction Start	Construction End	Operations Start	Operations End
0-IC	June 2024	February 2025	February 2025	August 2026
1-A	February 2025	August 2026	August 2026	February 2028
1-B	August 2027	February 2028	February 2028	--
2-A	January 2029	July 2030	July 2030	February 2032
2-B	July 2031	February 2032	February 2032	2056

2.3 Existing Sensitive Land Uses

The project site, which comprises four parcels, is zoned ML-1-2-RE (Mesquite Lake Medium Industrial) and ML-1-3-RE (Mesquite Lake Heavy Industrial), Zoning in the area immediately surrounding the site is:

North: ML-I-2-RE (Mesquite Lake Medium Industrial)

West: ML-I-2-RE (Mesquite Lake Medium Industrial)

South: A-2-G (General Agricultural)

East: ML-I-3-RE (Mesquite Lake Heavy Industrial)

Staff of DuBose Design Group in El Centro made a windshield survey of the area[5] and found only one sensitive receptor within one mile of the facility boundary: a residence near the intersection of Studer Road and East Ralph Road, about 6,000 feet south-southwest of the center of activity of the project site.

3.0 EXISTING CONDITIONS

The project site is located in an unincorporated area of Imperial County, which is in the Salton Sea Air Basin (SSAB). The SSAB includes the Imperial Valley and the central part of Riverside County, including the Coachella Valley. The Imperial Valley is bordered by the Salton Sea to the north, the Anza-Borrego Desert State Park to the west, the Chocolate Mountains to the northeast, and the U.S./Mexican Border to the south. The proposed site is located approximately six miles south of the city of Brawley and approximately three miles east-northeast of the city of Imperial.

3.1 Regional Climate/Meteorology

Meteorology is the study of weather and climate. Weather refers to the state of the atmosphere at a given time and place regarding temperature, air pressure, humidity, cloudiness, and precipitation. The term "weather" refers to conditions over short periods; conditions over prolonged periods, generally at least 30 to 50 years, are referred to as climate. Climate, in a narrow sense, is usually defined as the "average weather," or more rigorously as the statistical description in terms of the

5 Email from Lorena Fimbres, DuBose Design Group Inc., El Centro, CA to Michael Rogozen, UltraSystems Environmental Inc., Irvine, CA. August 6, 2021.

mean and variability of relevant quantities over a period ranging from months to thousands or millions of years. These quantities are most often surface variables such as temperature, precipitation, and wind.

Climatic conditions in Imperial County are governed by the large-scale sinking and warming of air in the semi-permanent tropical high-pressure center of the Pacific Ocean. The high-pressure ridge blocks out most mid-latitude storms except in winter when the high is weakest and farthest south. The coastal mountains prevent the intrusion of any cool, damp air found in California coastal environs. Because of the weakened storms and barrier, Imperial County experiences clear skies, extremely hot summers, mild winters, and little rainfall. The flat terrain of the valley and the strong temperature differentials created by intense solar heating, produce moderate winds and deep thermal convection.

The combination of subsiding air, protective mountains, and distance from the ocean all combine to limit precipitation severely. Rainfall is highly variable with precipitation from a single heavy storm sometimes exceeding the entire annual total during a later drought condition.

Imperial County enjoys a year-round climate characterized by a temperate fall, winter, and spring and a harsh summer. Humidity often combines with the valley's normal elevated temperatures to produce a moist, tropical atmosphere that frequently seems hotter than the thermometer suggests. The sun shines, on the average, more in the Imperial County that anywhere else in the United States.

3.1.1 Temperature and Precipitation

The nearest National Weather Service Cooperative Observer Program weather station to the project is the station in Imperial, located approximately 9 miles south-southwest of the project. At the Imperial station, average annual rainfall during the period of record (1901 to 2016) was 2.84 inches. Monthly average maximum temperatures at this station vary annually by 35.6 degrees Fahrenheit (°F): 105.4°F at the hottest to 69.8ºF at the coldest and monthly average minimum temperatures vary by 36°F annually, i.e., from 41°F to 77°F. In fact, this station shows that the months of June, July, August, and September have monthly maximum temperatures greater than 100ºF.

3.1.2 Humidity

Humidity in Imperial County is typically low throughout the year, ranging from 28% in summer to 52 % in winter. The large daily oscillation of temperature produces a corresponding large variation in the relative humidity. Nocturnal humidity rises to 50-60% but drop to about 10% during the day. Summer weather patterns are dominated by intense heat-induced low-pressure areas that form over the interior desert.

3.1.3 Wind

The wind direction follows two general patterns. The first occurs from fall through spring, where prevailing winds are from the west and northwest. Most of these winds originate in the Los Angeles Basin. The second pattern consists of occasional periods of high winds. Wind speeds exceeding 31 miles per hour (mph) occur most frequently in April and May. On an annual basis, high winds, those exceeding 31 mph, are observed 0.6% of the time, where speeds of less than 6.8 miles per hour account for more than one-half of the observed winds. Wind statistics indicate that prevailing winds are from the west-northwest through southwest; however, a secondary flow pattern from the southeast is also evident.

3.1.4 Inversions

Air pollutant concentrations are primarily determined by the amount of pollutant emissions in an area and the degree to which these pollutants are dispersed in the atmosphere. The stability of the atmosphere is one of the key factors affecting pollutant dispersion. Atmospheric stability regulates the amount of vertical and horizontal air exchange, or mixing, that can occur within a given air basin. Horizontal mixing is a result of winds, as discussed above, but vertical mixing also affects the degree of stability in the atmosphere. An interruption of vertical mixing is called an inversion.

In the atmosphere, air temperatures normally decrease as altitude increases. At varying distances above the earth's surface, however, a reversal of this gradient can occur. This condition, termed an inversion, is simply a warm layer of air above a layer of cooler air, and it has the effect of limiting the vertical dispersion of pollutants. The height of the inversion determines the size of the vertical mixing volume trapped below. Inversion strength or intensity is measured by the thickness of the layer and the difference in temperature between the base and the top of the inversion. The strength of the inversion determines how easily it can be broken by winds or solar heating.

Imperial County experiences surface inversions almost every day of the year. Due to strong surface heating, these inversions are usually broken allowing pollutants to disperse more easily. Weak, surface inversions are caused by radiational cooling of air in contact with the cold surface of the earth at night. In valleys and low-lying areas, this condition is intensified by the addition of chilly air flowing down slope from the hills and pooling on the valley floor.

The presence of the Pacific High-Pressure Cell can cause the air to warm to a temperature higher than the air below. This highly stable atmospheric condition, termed a subsidence inversion can act as a nearly impenetrable lid to the vertical mixing of pollutants. The strength of these inversions makes them difficult to disrupt. Consequently, they can persist for one or more days, causing air stagnation and the buildup of pollutants. Highest or worst-case ozone levels are often associated with the presence of this type of inversion.

3.2 Regulatory Setting

Federal, state, and local agencies have set ambient air quality standards for certain air pollutants through statutory requirements and have established regulations and various plans and policies to maintain and improve air quality, as described below.

3.2.1 Air Pollutants of Concern[6]

3.2.1.1 Criteria Pollutants

As required by the Federal Clean Air Act (FCAA), the U. S. Environmental Protection Agency (USEPA) has identified criteria pollutants and established National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. NAAQS have been established for ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide, suspended particulate matter (PM), and lead. Suspended PM includes both PM with an aerodynamic diameter of 10 micrometers or less (respirable PM, or PM_{10}) and PM with an aerodynamic diameter of 2.5 micrometers or less (fine PM, or $PM_{2.5}$). The California Air Resources Board (ARB) has established separate standards for the state, i.e., the California

6 This section discusses only criteria pollutants and air toxics. Greenhouse gases are defined and discussed in **Section 5.**

Ambient Air Quality Standards (CAAQS). The ARB established CAAQS for all the federal pollutants and sulfates, hydrogen sulfide, and visibility-reducing particles.

For some of the pollutants, the identified air quality standards are expressed in more than one averaging time to address the typical exposures found in the environment. For example, CO is expressed as a one-hour averaging time and an eight-hour averaging time. Regulations have set NAAQS and CAAQS limits in parts per million (ppm) or micrograms per cubic meter ($\mu g/m^3$). **Table 3.2-1** summarizes the state and federal ambient air quality standards for all criteria pollutants. Criteria pollutants of concern in Imperial County are ozone and PM, since the standards for other criteria pollutants are either being met or are unclassified in the Basin, and the latest pollutant trends suggest that these standards will not be exceeded in the foreseeable future.

Ozone (O_3) is not emitted directly to the atmosphere but is formed by photochemical reactions between reactive organic gases (ROG), or volatile organic compounds[7] (VOC), and oxides of nitrogen (NO_X) in the presence of sunlight. The long, hot, humid days of summer are particularly conducive to ozone formation; thus, ozone levels are of concern primarily during May through September. Ozone is a strong chemical oxidant that adversely impacts human health through effects on respiratory function. It can also damage forests and crops. Tropospheric[8] ozone is formed by a complex series of chemical reactions involving NO_X, the result of combustion processes and evaporative ROGs such as industrial solvents, toluene, xylene, and hexane as well as the various hydrocarbons that are evaporated from the gasoline used by motor vehicles or emitted through the tailpipe following combustion. Additionally, ROGs are emitted by natural sources such as trees and crops. Ozone formation is promoted by strong sunlight, warm temperatures, and winds. High concentrations tend to be a problem in the Imperial County only during the hot summer months when these conditions frequently occur.

Reactive Organic Gases (ROG) are defined as any compound of carbon, excluding CO, carbon dioxide (CO_2), carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participate in atmospheric photochemical reactions. It should be noted that there is no state or national ambient air quality standard for ROG because ROGs are not classified as criteria pollutants. They are regulated, however, because a reduction in ROG emissions reduces certain chemical reactions that contribute to the formulation of ozone. ROGs are also transformed into organic aerosols in the atmosphere, which contribute to higher PM_{10} and lower visibility.

Nitrogen Oxides (NO_x) serve as integral participants in the process of photochemical smog production. The two major forms of NO_x are nitric oxide (NO) and nitrogen dioxide (NO_2).[9] NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. NO_2 is a reddish-brown irritating gas formed by the combination of NO and oxygen. NO_X is an ozone precursor. A precursor is a directly emitted air contaminant that, when released into the atmosphere, forms, causes to be formed, or contributes to the formation of a secondary air contaminant for which an Ambient Air Quality Standard (AAQS) has been adopted, or whose presence in the atmosphere will contribute to the violation of one or more

7 Emissions of organic gases are typically reported only as aggregate organics, either as Volatile Organic Compounds (VOC) or as Reactive Organic Gases (ROG). These terms are meant to reflect what specific compounds have been included or excluded from the aggregate estimate. Although EPA defines VOC to exclude both methane and ethane, and CARB defines ROG to exclude only methane, in practice it is assumed that VOC and ROG are essentially synonymous.

8 The troposphere is the atmospheric layer closest to the Earth's surface. Ozone produced here is an air pollutant that is harmful to breathe, and it damages crops, trees and other vegetation.

9 Another form of NO_x, nitrous oxide (N_2O), is a greenhouse gas and is discussed below.

AAQSs. When NO_X and ROG are released in the atmosphere, they can chemically react with one another in the presence of sunlight to form ozone.

Particulate Matter (PM) is a general term used to describe a complex group of airborne solid, liquid, or semi-volatile materials of various size and composition. Primary PM is emitted directly into the atmosphere from both human activities (including agricultural operations, industrial processes, construction and demolition activities, and entrainment of road dust into the air) and non-anthropogenic activities (such as windblown dust and ash resulting from forest fires). Secondary PM is formed in the atmosphere from predominantly gaseous combustion by-product precursors, such as sulfur oxides and NO_X, and ROGs. The overwhelming majority of airborne PM in Imperial County is primary PM. The major source of primary PM is fugitive windblown dust, with other contributions from entrained road dust, farming, and construction activities.

Particle size is a critical characteristic of PM that primarily determines the location of PM deposition along the respiratory system (and associated health effects) as well as the degradation of visibility through light scattering. In the United States, federal and state agencies have established two types of PM air quality standards as shown in **Table 3.2-1**. PM_{10} corresponds to the fraction of PM no greater than 10 micrometers in aerodynamic diameter and is commonly called respirable particulate matter, while $PM_{2.5}$ refers to the subset of PM_{10} of aerodynamic diameter smaller than 2.5 micrometers, which is commonly called fine particulate matter.

PM air pollution has undesirable and detrimental environmental effects. PM affects vegetation, both directly (e.g., deposition of nitrates and sulfates may cause direct foliar damage) and indirectly (e.g., coating of plants upon gravitational settling reduces light absorption). PM also accumulates to form regional haze, which reduces visibility due to scattering of light.

PM_{10} is respirable, with fine and ultrafine particles[10] reaching the alveoli deep in the lungs, and larger particles depositing principally in the nose and throat area. PM_{10} deposition in the lungs results in irritation that triggers a range of inflammation responses, such as mucus secretion and bronchoconstriction, and exacerbates pulmonary dysfunctions, such as asthma, emphysema, and chronic bronchitis. Sufficiently small particles ($PM_{2.5}$ and ultrafines) may penetrate the bloodstream and impact functions such as blood coagulation, cardiac autonomic control, and mobilization of inflammatory cells from the bone marrow. Individuals susceptible to higher health risks from exposure to PM_{10} airborne pollution include children, the elderly, smokers, and people of all ages with low pulmonary/cardiovascular function. For these individuals in particular, adverse health effects of PM_{10} pollution include coughing, wheezing, shortness of breath, phlegm, bronchitis, and aggravation of lung or heart disease, leading for example to increased risks of hospitalization and mortality from asthma attacks and heart attacks.

Pollutant Transport

As stated above, ozone is a "secondary" pollutant, formed in the atmosphere by reactions between NO_X and ROG. These reactions are driven by sunlight and proceed at varying rates. Transport is the movement of ozone or the pollutants that form ozone from one area (known as the upwind area) to another area (known as the downwind area). Pollutant transport is a very complex phenomenon. Sometimes transport is a straightforward matter of wind blowing from one area to another at ground

10 Ultrafine particles (UFPs) are nanoscale, less than 100 nanometers. Regulations do not currently exist for this size class of ambient air pollution particles, which are far smaller than the regulated PM_{10} and $PM_{2.5}$ particle classes and are believed to have several more aggressive health implications than those classes of larger particles.

level, carrying ozone with it, but usually it is not that simple. Transport is three-dimensional; it can take place at the surface, or high above the ground. Meteorologists use the terms "surface" and "aloft" to distinguish these two cases. Often, winds can blow in different directions at different heights above the ground. To complicate matters further, winds can shift during the day, pushing a polluted air mass first one way, then another. Finally, because ozone and ozone forming emissions from an upwind area can mix with locally generated ozone and locally generated emissions, it is often difficult to determine the origin of the emission causing high pollution levels. Political boundaries do not prevent transport of pollutants. Transport over distances of several hundred miles has often been documented in California.

The accurate determination of the impacts of transport requires detailed technical analyses in conjunction with modeling studies. The Imperial County Air Quality Management Plan[11] (AQMP) identifies how the transport of emissions and pollutants from Mexico and other areas (South Coast and San Diego) influences ozone violations within Imperial County. Although Imperial County is currently in attainment of the 1997 8-hour ozone NAAQS, it is important to note that any future analysis of air emissions impacting Imperial County must take into consideration the influence of transport from three distinct sources: the South Coast Air Basin via the Coachella Valley to the north, the San Diego Air Basin to the west and the international city of Mexicali, Mexico to the south.

3.2.1.2 Air Toxics

Air toxics, also called toxic air contaminants (TAC), are substances that are airborne and that can cause serious, and sometimes lethal, adverse health effects at relatively low ambient concentrations. The main exposure route for most TACs is through the respiratory tract, although people can also be exposed through contact with soil or food upon which airborne contaminants have settled. The ARB and the Office of Environmental Health Hazard Assessment (OEHHA) have identified 24 TACs,[12] as individual substances or classes of substances, and have compiled health effects data for them. Except for special studies, TAC concentrations in ambient air are not monitored routinely.

3.2.2 Applicable Regulations

3.2.2.1 Federal Regulations

The federal Clean Air Act (FCAA), passed in 1970, established the national air pollution control program. The basic elements of the CAA are the National Ambient Air Quality Standards (NAAQS) for criteria air pollutants, hazardous air pollutants standards, state attainment plans, motor vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

NAAQS are the maximum allowable concentrations of criteria pollutants, over specified averaging periods, to protect human health. The FCAA requires that the U.S. Environmental Protection Agency (USEPA) establish NAAQS and reassess, at least every five years, whether they are adequate to protect public health, based on current scientific evidence. The NAAQS are divided into primary and

11 Final 2009 1997 8-Hour Modified Air Quality Management Plan. Imperial County Air Pollution Control District. July 13, 2010.

12 Toxic Air Contaminant List with Staff Reports/Executive Summaries. Office of Environmental Health Hazard Assessment, July 17, 2008. URL: https://oehha.ca.gov/air/general-info/toxic-air-contaminant-list-staff-reportsexecutive-summaries.

secondary standards; the former standards are set to protect human health within an adequate margin of safety, and the latter to protect environmental values, such as plant and animal life.

The USEPA has identified nonattainment and attainment areas for each NAAQS. Under amendments to the FCAA, EPA has designated air basins or portions thereof as attainment, nonattainment, or unclassifiable, based on whether the national standards have been achieved.

In addition, the FCAA uses a classification system to design clean-up requirements appropriate for the severity of the pollution and set realistic deadlines for reaching clean-up goals. If an air basin is not in federal attainment for a particular pollutant, the Basin is classified as a marginal, moderate, serious, severe, or extreme nonattainment area, based on the estimated time it would take to reach attainment. Nonattainment areas must take steps towards attainment by a specific timeline. **Table 3.3-1** shows the federal and state attainment designations and federal classifications for the Basin.

Data collected at permanent monitoring stations are used by the USEPA to classify regions as "attainment" or "nonattainment," depending on whether the regions met the requirements stated in the primary NAAQS. Nonattainment areas are subject to additional restrictions, as required by the USEPA.

The FCAA Amendments in 1990 substantially revised the planning provisions for those areas not currently meeting NAAQS. The Amendments identify specific emission reduction goals, require both a demonstration of reasonable further progress and attainment, and incorporate more stringent sanctions for failure to attain the NAAQS or to meet interim attainment milestones.

The USEPA does not set ambient standards for toxic air contaminants. Its regulatory approach is to set emissions limits and/or work practice standards for TACs in specific industrial categories.

3.2.2.2 State Regulations

The State of California began to set California ambient air quality standards (CAAQS) in 1969 under the mandate of the Mulford-Carrell Act. There were no attainment deadlines for the CAAQS originally. However, the State Legislature passed the California Clean Air Act (CCAA) in 1988 to establish air quality goals, planning mechanisms, regulatory strategies, and standards of progress to promote their attainment. The ARB, which became part of the California Environmental Protection Agency (CalEPA) in 1991, is responsible for ensuring implementation of the CCAA, responding to the FCAA, and for regulating emissions from motor vehicles and consumer products.

The CCAA requires attainment of CAAQS by the earliest practicable date. The state standards are generally more stringent than the corresponding federal standards. Attainment plans are required for air basins in violation of the State ozone, PM_{10}, CO, SO_2, or NO_2 standards. Responsibility for achieving state standards is placed on the ARB and local air pollution control districts. District plans for nonattainment areas must be designed to achieve a 5% annual reduction in emissions. Preparation of and adherence to attainment plans are the responsibility of the local air pollution districts or air quality management districts. **Table 3.2-1** illustrates NAAQS and CAAQS for criteria pollutants.[13]

13 Ambient Air Quality Standards. California Air Resources Board. https://www.arb.ca.gov/research/aaqs/aaqs2.pdf. May 4, 2016. Accessed July 2018.

The ARB regulates TACs in several ways. First, it has adopted air toxics control measures (ATCMs) based – in large part – on USEPA regulations, but sometimes more stringent. Many air pollution control districts have incorporated ATCMs into their rules.[14] The ARB also requires, through AB 2588, large emitters to create and maintain TAC emission inventories and, in some cases, to prepare air toxics health risk assessments (HRAs). The main categories of health risk defined by the ARB and the Office of Environmental Health Hazard Assessment (OEHHA) are cancer, chronic non-cancer, and acute non-cancer. The cancer and chronic non-cancer assessments are based upon 70 years exposure, while the acute noncancer assessments are based upon one-hour exposures.

Table 3.2-1
AMBIENT AIR QUALITY STANDARDS FOR CRITERIA AIR POLLUTANTS

Air Pollutant	Averaging Time	California Standard	National Standard
Ozone (O_3)	1 hour 8 hours	0.09 ppm 0.070 ppm	— 0.070 ppm *
Respirable particulate matter (PM_{10})	24 hour Annual Arithmetic Mean	50 µg/m^3 20 µg/m^3	150 µg/m^3 —
Fine particulate matter ($PM_{2.5}$)	24 hour Annual Arithmetic Mean	— 12 µg/m^3	35 µg/m^3 12.0 µg/m^3 **
Carbon monoxide (CO)	1 hour 8 hour	20 ppm 9.0 ppm	35 ppm 9 ppm
Nitrogen dioxide (NO_2)	1 hour Annual Arithmetic Mean	0.18 ppm 0.030 ppm	100 ppb 0.053 ppm
Sulfur dioxide (SO_2)	1 hour 24 hour	0.25 ppm 0.04 ppm	75 ppb —
Lead	30-day Rolling 3-month	1.5 µg/m3 —	— 0.15 µg/m^3
Sulfates	24 hour	25 µg/m^3	**No National Standards**
Hydrogen sulfide	1 hour	0.03 ppm	
Vinyl chloride	24 hour	0.01 ppm	
Visibility-reducing particles	8 hour	Extinction coefficient of 0.23 per kilometer, visibility of ten miles or more due to particles when relative humidity is less than 70%.	

* On October 1, 2015, the national 8-hour ozone standard was lowered from 0.075 to 0.070 ppm.

14 For example, ICAPCD Rule 1002 incorporates by reference seven ATCMs.

Air Pollutant	Averaging Time	California Standard	National Standard

** On December 14, 2012, the national $PM_{2.5}$ standard was lowered from 15 µg/m³ to 12.0 µg/m³.

Abbreviations:
ppm = parts per million
ppb = parts per billion
30-day = 30-day average
µg/m³ = micrograms per cubic meter
Mean = Annual Arithmetic Mean

3.2.3 Air Quality Plans

3.2.3.1 Ozone Plan

After Imperial County failed to meet the 2008 8-hour standard of 0.075 parts per million (ppm), the USEPA reclassified it "marginal" nonattainment to "moderate" nonattainment. This reclassification required development and submittal of a 2008 8-Hr Ozone state implementation plan (SIP)[15] and a reasonable available control technology (RACT) SIP by January 1, 2017.[16] The final 2017 Ozone SIP demonstrated that a part of the reason why Imperial County has elevated ozone concentrations is because of transport of emissions from Mexico. Therefore, the SIP relies on the provisions in CAA §179B to demonstrate that Imperial County is in attainment of the 2008 8-hour ozone standard but for emissions emanating across the international border.[17] A weight-of-evidence analysis was included to show that Imperial County will maintain this status of attainment through the July 2018 attainment date.

3.2.3.2 PM_{10} Plan

2009 Plan

The ICAPCD District Board of Directors adopted the PM_{10} SIP for Imperial County on August 11, 2009.[18] The PM_{10} SIP meets USEPA requirements to demonstrate that the County will attain the PM_{10} standard as expeditiously as practicable. The PM_{10} SIP was required to address and meet the following elements, required under the FCAA of areas classified to be in serious nonattainment of the NAAQS:

- Best available emission inventories.
- A plan that enables attainment of the PM_{10} federal air quality standards.
- Annual reductions in PM_{10} or PM_{10} precursor emissions that are of not less than 5% from the date of SIP submission until attainment.

15 California's State Implementation Plan (SIP) is a collection of regional and local plans and regulations for achieving compliance with national ambient air quality standards.

16 State Implementation Plans. Ozone (O3), Imperial County Air Pollution Control District. URL: https://apcd.imperialcounty.org/planning/#stateplan. Accessed October 24, 2021.

17 Imperial County 2017 State Implementation Plan for the 2008 8-Hour Ozone Standard. Prepared by Ramboll Environ US Corporation, Los Angeles, CA for the Imperial County Air Pollution Control District, El Centro, CA. September 12, 2017. URL: https://apcd.imperialcounty.org/wp-content/uploads/2020/01/OzoneSIP.pdf. Accessed October 24, 2021.

18 2009 Imperial County State Implementation Plan for Particulate Matter Less Than 10 Microns in Aerodynamic Diameter. Imperial County Air Pollution Control District. July 10, 2009.

- Best available control measures and best available control technologies for significant sources and major stationary sources of PM_{10}, to be implemented no later than four years after reclassification of the area as serious.
- Transportation conformity and motor vehicle emission budgets in accord with the attainment plan.
- Reasonable further progress and quantitative milestones.
- Contingency measures to be implemented (without the need for additional rulemaking actions) if the control measure regulations incorporated in the plan cannot be successfully implemented or fail to give the expected emission reductions.

The PM_{10} SIP updated the emission inventory to incorporate revised cattle emissions, revised windblown dust model results, revised Southern California Association of Governments (SCAG) activity data, and updated entrained and windblown unpaved road dust estimates. The adjustments made to the emission inventory fell in two categories: (1) adjustments to incorporate new methodology and updated information (e.g., throughputs, activity data, etc.), and (2) adjustments to incorporate emission reductions arising from the implementation of new control measures.

Additionally, the PM_{10} SIP demonstrates that Imperial County attained the Federal PM_{10} NAAQS, but for international emissions from Mexico, based on 2006-2008 monitoring data. Attainment was due, in part, to ICAPCD's November 2005 adoption and subsequent implementation of Regulation VIII fugitive dust rules; those rules were based on the related 2005 Best Available Control Measure (BACM) analysis.

Since the reclassification of Imperial County to serious nonattainment for PM_{10} occurred on August 2004, control of fugitive PM_{10} emissions from the significant source categories that meets BACM stringency identified in the PM_{10} SIP began in January 2006.

Major stationary sources are required to implement Best Available Control Technology (BACT) to control PM_{10} emissions (Rule 207) and they are required to comply with the 20% opacity (Rule 403). In addition, stationary sources will be required to mitigate fugitive dust emissions from access roads, construction activities, handling and transferring of bulk materials, and track-out/carry-out according to the requirements of Regulation VIII.

Because the Imperial County is shown in the PM_{10} SIP to have attained the 24-hour PM_{10} NAAQS but for international transport of Mexicali emissions in 2006-2008, reasonable further progress and milestone requirements are unnecessary, and specifically the 5% yearly emission reductions requirement does not apply to future years. As documented in the PM_{10} SIP, all remaining SIP requirements applicable to the 2009 Imperial County PM_{10} Plan have been successfully addressed.

2018 Redesignation Request and Maintenance Plan

In 2018, the ICAPCD prepared a PM_{10} Request for Redesignation and Maintenance Plan, which was approved by the District Board on October 23, 2018.[19] The document requested that the Imperial Valley Planning Area's PM_{10} attainment status be changed from serious nonattainment to attainment, and included a maintenance plan. The request was approved by the California Air Resources Board

19 State Implementation Plans. Particulate Matter 10 (PM10), Imperial County Air Pollution Control District. URL: https://apcd.imperialcounty.org/planning/#stateplan. Accessed October 24, 2021.

on December 13, 2018 after a public hearing.[20] The USEPA approved the SIP revision and the redesignation, effective October 19, 2020.[21]

3.2.3.3 $PM_{2.5}$ Plan

The ICAPCD District Board of Directors adopted the Imperial County 2013 State Implementation Plan for the 2006 24-hour $PM_{2.5}$ Moderate Nonattainment Area on December 2, 2014.[22] The $PM_{2.5}$ SIP fulfills the requirements of the CAA for those areas classified as "moderate" nonattainment for $PM_{2.5}$. It incorporates updated emission inventories, and analysis of Reasonable Available Control Measures (RACM), an assessment of Reasonable Further Progress (RFP), and a discussion of contingency measures. Analyses in the $PM_{2.5}$ SIP included assessing emission inventories from Imperial County and Mexicali; evaluating the composition and elemental makeup of samples collected on Calexico violation days; reviewing the meteorology associated with high concentration measurements; and performing directional analysis of the sources potentially impacting the Calexico $PM_{2.5}$ monitor. As is demonstrated in the $PM_{2.5}$ SIP, the primary reason for elevated $PM_{2.5}$ levels in Imperial County is transport from Mexico. Essentially, the $PM_{2.5}$ SIP demonstrated attainment of the 2006 $PM_{2.5}$ NAAQS "but for" transport of international emissions from Mexicali, Mexico. The ARB approved this SIP on December 18, 2014.

Between 2013 and 2016, the USEPA implemented a new, lower, annual $PM_{2.5}$ standard and designated the previously determined non-attainment area in Imperial County as a "moderate" non-attainment area. The County was required to prepare a new $PM_{2.5}$ SIP and did so on April 24, 2018. The new SIP was approved by the ARB on May 25, 2018.[23] Elements of the 2018 $PM_{2.5}$ SIP include:[24]

- Base year emission inventories and future year forecasts for manmade sources of directly emitted $PM_{2.5}$ and $PM_{2.5}$ precursors.
- A comprehensive precursor demonstration.
- An attainment demonstration;
- Demonstration that control measures meet Reasonably Available Control Technology (RACT), Reasonably Available Control Measures (RACM), and Additional Reasonable Measures (ARM) requirements, as applicable.
- Requirements for Reasonable Further Progress (RFP).
- Contingency measures for RFP
- Quantitative milestones.

20 2018 Imperial County PM10 State Implementation Plan. California Air Resources Board, Sacramento, CA. URL: https://ww2.arb.ca.gov/resources/documents/2018-imperial-county-pm10-state-implementation-plan. Accessed October 24, 2021.

21 85 Federal Register 58286-58294. September 18, 2020. URL: https://www.govinfo.gov/content/pkg/FR-2020-09-18/pdf/2020-18427.pdf. Accessed October 24, 2021.

22 Imperial County 2013 SIP for the 2006 24-hr PM2.5 Moderate Nonattainment Area. Imperial County Air Pollution Control District. December 2, 2014.

23 State Implementation Plans. 2012 Annual Particulate Matter 2.5 (PM2.5), Imperial County Air Pollution Control District. URL: https://apcd.imperialcounty.org/planning/#stateplan. Accessed October 24, 2021

24 2018 Imperial County Annual Particulate Matter Less Than 2.5 Microns in Diameter State Implementation Plan. Prepared by Ramboll Environ US Corporation, Los Angeles, CA for the Imperial County Air Pollution Control District, El Centro, CA. April, 2018. URL: https://apcd.imperialcounty.org/wp-content/uploads/2020/01/2018-IC-PM25SIP.pdf. Accessed October 24, 2021.

- Transportation conformity emission budgets to ensure transportation projects are consistent with the SIP.

3.2.4 Local Regulations

3.2.4.1 Air Quality

The ICAPCD also has the authority to adopt and enforce regulations dealing with controls for specific types of sources, emissions of hazardous air pollutants, and New Source Review. The ICAPCD Rules and Regulations are part of the SIP and are separately enforceable by the EPA. The following ICAPCD rules potentially apply to the Project.

Rules 800 (General Requirements for Control of Fine Particulate Matter), **801** (Construction and Earthmoving Activities), **802** (Bulk Materials, **803** (Carry-out and Track-out), **804** (Open Areas), and **805** (Paved and Unpaved Roads) are intended to reduce the amount of PM_{10} entrained in the ambient air as a result of emissions generated by anthropogenic fugitive dust sources by requiring actions to prevent, reduce, or mitigate PM_{10} emissions. These rules include opacity limits, control measure requirements, and dust control plan requirements that apply to activities at the facility.

The 2017 Ozone SIP (see Section 3.2.3.1) strengthened new source review (NSR) requirements for facilities with potential to emit NO_x and ROG emissions above certain thresholds. Some of these requirements, which are in **Rule 207** (New and Modified Stationary Source) may come into play during the permitting process.

3.2.4.2 Right-to-Farm Ordinance

In recognition of the role of agriculture in the county, Imperial County has adopted a right-to-farm ordinance. A "right-to-farm" ordinance creates a legal presumption that ongoing, standard farming practices are not a nuisance to adjoining residences. It requires a disclosure to owners and purchasers of property near agricultural land operations, or areas zoned for agricultural purposes. The disclosure advises persons that discomfort and inconvenience from odors, fumes, dust, smoke, and chemicals resulting from conforming and accepted agricultural operations are normal and necessary aspects of living in the agricultural areas of the county.

3.3 REGIONAL AIR QUALITY

Table 3.3-1 shows the area designation status of Imperial County for each criteria pollutant for both the NAAQS and the CAAQS.

Table 3.3-1
FEDERAL AND STATE ATTAINMENT STATUS FOR IMPERIAL COUNTY

Pollutant	State Designation	Federal Designation (Classification)
Ozone	Nonattainment (Moderate)	Attainment
Respirable PM (PM_{10})	Attainment	Nonattainment (Serious) *
Fine PM ($PM_{2.5}$)	Nonattainment (Moderate)***	Nonattainment **

Pollutant	State Designation	Federal Designation (Classification)
Carbon Monoxide (CO)	Attainment	Unclassifiable/ Attainment
Nitrogen Dioxide (NO_2)	Attainment	Unclassifiable/ Attainment
Sulfur Dioxide	Attainment	Attainment
Sulfates	Attainment	**No Federal Standard**
Lead	Attainment	
Hydrogen Sulfide	Unclassified	
Visibility reducing Particles	Unclassified	

* *Designation for Imperial Valley Planning Area only, which is most of Imperial County save for a small stretch of land on the County's eastern end.*
** *Designation is only for the urban areas within Imperial County*
*** *Designation for the whole of Imperial County except the City of Calexico.*
***Source**: Maps of State and Federal Area Designations. California Air Resources Board. 2021. URL: https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations. Accessed October 24, 2021.*

3.4 LOCAL AIR QUALITY

Existing levels of ambient air concentrations and historical trends and projections in the project area are best documented by measurements made by the ICAPCD and the ARB. Imperial County began its ambient air monitoring in 1976; however, monitoring of ozone began in 1986 at the El Centro monitoring station. Since that time, monitoring has been performed by the ICAPCD, ARB, and private industry. There are six monitoring sites in Imperial County from Niland to Calexico.

The nearest monitoring stations to the project site are Brawley and El Centro, approximately 8.1 miles north-northwest of the site and approximately 9.3 miles southwest of the site, respectively. The El Centro-9th Street station is located at El Centro West State Street, and monitors ozone, PM_{10} and $PM_{2.5}$. The other nearest site that monitors PM_{10} and $PM_{2.5}$ is the Brawley-220 Main Street station, which is located at 220 West Main Street. **Table 3.4-1** summarizes 2017 through 2019 published monitoring data from the ARB's Aerometric Data Analysis and Management System (ADAM) for the Project vicinity.[25]

The monitoring data show that the estimated number of days above the national 0.070 ppm 8-hour standard for ozone decreased drastically from 2017 to 2019 from 17 to 1, respectively. State and national 24-hour concentrations ($\mu g/m^3$) for PM_{10} were reduced gradually from 2017 to 2019 for Brawley and El Centro. It should be noted that the national annual average for PM_{10} at Brawley and El Centro for 2018 is higher than for 2017 and 2019. The estimated number of days above the national 24-hour standard for $PM_{2.5}$ is increased in 2018 and decreased in 2019 for the Brawley station.

25 ADAM Air Quality Data Statistics. California Air Resources Board. https://www.arb.ca.gov/adam/select8/sc8start.php Accessed August 2021

Table 3.4-1
AMBIENT CRITERIA POLLUTANT CONCENTRATION DATA FOR PROJECT VICINITY

Air Pollutant	Monitoring Sites	Standard/Exceedance	2017	2018	2019
Ozone (O_3)	El Centro	Max. 1-hour Concentration (ppm)	0.110	0.102	0.080
		Max. 8-hour Concentration (ppm)	0.092	0.090	0.071
		# Days > Federal 8-hour Std. of 0.070 ppm	17	14	1
		# Days > California 1-hour Std. of 0.09 ppm	4	2	0
		# Days > California 8-hour Std. of 0.07 ppm	17	15	1
Respirable Particulate Matter (PM_{10})	Brawley	Max. Federal 24-hour Concentration (µg/m³)	449.8	407.0	324.4
	El Centro	Max. Federal 24-hour Concentration (µg/m3)	268.5	256.3	123.9
	Brawley	Max. State 24-hour Concentration (µg/m3)	425.0	411.2	323.5
	El Centro	Max. State 24-hour Concentration (µg/m3)	186.4	253.0	130.0
	Brawley	#Days > Fed. 24-hour Std. of 150 µg/m³	9.0	13.1	2.1
	El Centro	#Days > Fed. 24-hour Std. of 150 µg/m³	5.0	5.1	0
	Brawley	#Days > California 24-hour Std. of 50 µg/m³	ND	107.1	53.6
	El Centro	#Days > California 24-hour Std. of 50 µg/m³	ND	113.0	53.7
	Brawley	Federal Annual Average(µg/m³)	45.4	52.2	35.8
	El Centro	Federal Annual Average(µg/m³)	41.6	47.3	34.9
	Brawley	State Annual Average(µg/m3)	ND	51.5	36.2
	El Centro	State Annual Average(µg/m³)	ND	46.8	35.6
Fine Particulate Matter ($PM_{2.5}$)	Brawley	Max. 24-hour Concentration (µg/m³)	46.1	55.1	28.9
	El Centro	Max. 24-hour Concentration (µg/m3)	23.2	22.4	21.4
	Brawley	Annual Average (µg/m³)	9.4	10.4	8.3
	El Centro	Annual Average (µg/m³)	8.4	8.6	7.8
	Brawley	#Days > Fed. 24-hour Std. of 35 µg/m³	3.1	6.1	0
	El Centro	#Days > Fed. 24-hour Std. of 35 µg/m³	0	0	0

Source: California Air Resources Board, "iADAM Air Quality Data Statistics." Internet URL: http://www.arb.ca.gov/adam/ (September 2018)
ND There were insufficient (or no) data available to determine the value.

4.0 AIR QUALITY IMPACTS ANALYSIS

This analysis was prepared in accordance with the ICAPCD CEQA Air Quality Handbook and with Appendix G of the California Environmental Quality Act (CEQA) Guidelines. Air quality impacts are typically divided into short-term and long-term impacts. Short-term impacts are associated with construction activities, such as site grading, excavation and building construction of a project. Long-term impacts are associated with the operation of a project upon its completion.

4.1 CEQA IMPACT REVIEW CRITERIA

In accordance with *State CEQA Guidelines* Appendix G, implementation of the project would result in a potentially significant impact if it were to:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Where available, the significance criteria established by the applicable air quality management district (AQMD) or air pollution control district (APCD) may be relied upon to make the significance determinations. As will be discussed in the next section, the ICAPCD has developed a CEQA Air Quality Handbook to provide a protocol for air quality analyses that are prepared under the requirements of CEQA.

4.2 IMPERIAL COUNTY APCD THRESHOLDS OF SIGNIFICANCE

Under the ICAPCD guidelines, an air quality evaluation must address the following:

- Comparison of calculated project emissions with ICAPCD emission thresholds.
- Consistency with the most recent Clean Air Plan for Imperial County.
- Comparison of predicted ambient pollutant concentrations resulting from the project to state and federal health standards, when applicable.
- The evaluation of special conditions that apply to certain projects.

4.2.1 Construction Impacts

As will be discussed in **Section 4.5.2**, this is a "Tier I" project. In general, projects whose *operational* emissions qualify them as Tier I do not need to quantify their construction emissions; instead they adopt the standard mitigation measures for construction (See **Section 5.0**). The ICAPCD CEQA Guidelines states the "approach of the CEQA analyses for construction particulate matter impacts should be qualitative as opposed to quantitative." Since this is an atypical development project, this analysis quantifies construction emissions. The quantification serves the purpose of determining which construction-related mitigation measures to prescribe. The ICAPCD's thresholds for significance are shown in **Table 4.2-1**.

Table 4.2-1
THRESHOLDS OF SIGNIFICANCE FOR CONSTRUCTION ACTIVITIES[26]

Pollutant	Threshold
PM_{10}	150 lbs/day
ROG	75 lbs/day
NO_x	100 lbs/day
CO	550 lbs/day

4.2.2 Operational Impacts

To evaluate long-term air quality impacts due to operation of a project, the ICAPCD recommends the significance criteria shown in **Table 4.2-2.**

Table 4.2-2
THRESHOLDS OF SIGNIFICANCE FOR PROJECT OPERATIONS[27]

Pollutant	Emissions (lbs/day)	
	Tier I	Tier II
Carbon Monoxide (CO)	< 550	≥ 550
Reactive Organic Gases (ROG)	< 137	≥ 137
Nitrogen Oxides (NO_X)	< 137	≥ 137
Sulfur Oxides (SO_X)	< 150	≥ 150
Particulate Matter (PM_{10})	< 150	≥ 150
Particulate Matter ($PM_{2.5}$)	< 550	≥ 550
Level of Significance	Less Than Significant	Significant Impact
Level of Analysis	Initial Study	Comprehensive Air Quality Report
Environmental Document	Negative Declaration	Mitigated Negative Declaration or Environmental Impact Report

4.3 CO "HOTSPOTS" THRESHOLDS

Exhaust emissions from motor vehicles can potentially cause a direct, localized hotspot impact at or near proposed developments or sensitive receptors. The optimum condition for the occurrence of a CO hotspot would be cool and calm weather at a congested major roadway intersection with sensitive receptors nearby, and where vehicles are idling or moving at a stop-and-go pace.

The significance of localized project impacts depends on whether project-related emissions result in a violation of state and/or federal CO standards. A significant impact would occur if the CO hotspot analysis of vehicular intersection emissions exposes sensitive receptors to concentrations that are in excess of the following thresholds:

- 20 parts per million (ppm) for a 1-hour average, and/or
- 9 ppm for 8-hour average.

26 Imperial County Air Pollution Control District. 2017. CEQA Air Quality Handbook. November, p. 20.
27 Imperial County Air Pollution Control District. 2017. CEQA Air Quality Handbook. November, p. 10.

The ICAPCD *CEQA Air Quality* Handbook does not specify criteria for significance when ambient CO levels already exceed a state or federal standard. For that case, we used the South Coast Air Quality Management District's specification that project impacts are considered significant if they increase 1-hour CO concentrations by 1.0 ppm or more or 8-hour CO concentrations by 0.45 ppm or more.[28]

4.4 METHODOLOGY

Regional emissions of criteria air pollutants and precursors, and toxic air contaminants during project construction and operations were assessed in accordance with the methodologies described below. ICAPCD suggests that the "approach of the CEQA analyses for construction PM_{10} impacts should be qualitative as opposed to quantitative"[29] but that any projects which are greater than the level of significance for construction may have a significant impact on local and, under certain circumstances, regional air quality. For full disclosure purposes, construction emissions were quantified.

Details of our assumptions and calculations are presented in **Attachment 1** and **Attachment 2** to this report. In this section, we give an overview of our approach.

4.4.1 Construction

Construction emissions were estimated with the California Emission Estimator Model (CalEEMod), Version 2020.4.0.[30,31] Inputs to the model included construction phase definitions and schedules, plant area, areas of paving for the ASPs and compost finishing, buildings and other site elements were obtained from the applicant. CalEEMod's default assumptions were used, except for the following items.

- Offroad construction equipment will meet USEPA Tier IV emission reduction requirements as a project design feature (not as mitigation).
- Architectural coating (flat for interiors and non-flat for exteriors) will meet the VOC requirements of ICAPCD Rule 424.
- All construction employee trips, and 95% of hauling and vendor vehicle travel will be on paved roads.

4.4.2 Operations

Emissions were estimated for the following source categories:

Onsite

- Aerated static piles with incidental biofilters (Phase 0-IC only).
- Diesel-powered loaders.

28 South Coast Air Quality Management District. 1993. CEQA Air Quality Handbook. April.
29 CEQA Air Quality Handbook: Guidelines for the Implementation of the California Air Quality Act of 1970, and amended. Imperial County Air Pollution Control District, November 2007.
30 BREEZE Software. User's Guide for CalEEMod Version 2020.4.0. Prepared for California Air Pollution Control Officers Association. May2021. Accessed online at http://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/01_user-39-s-guide2020-4-0.pdf?sfvrsn=6.
31 CalEEMod was not used to calculate operating emissions.

- Anaerobic digester.
- In-vessel composting of digestate.
- Natural gas combustion in water heaters.
- Finished biogas flares.

Onroad

- Feedstock supply trucks.
- Product (finished compost) delivery to customers.
- Employee commuting.

Table 4.4-1 shows the distribution of emission sources by operating phase.

Table 4.4-1
AIR EMISSION SOURCES, BY PROJECT PHASE

Onsite Equipment	0-IC	1-A	1-B	2-A	2-B
Outdoor aerated static piles	x	x	x	x	x
Diesel-powered loaders	x	x	x	x	x
Anaerobic digester with controls		x	x	x	x
Indoor composting vessels with biofilters			x		x
Gas-fired water heaters		x	x	x	x
Flares		x	x	x	x
Onroad Equipment					
Feedstock supply trucks	x	x	x	x	x
Compost delivery trucks	x	x	x	x	x
Employee Commuting	x	x	x	x	x

4.4.2.1 Aerated Static Piles

The main pollutants emitting during composting of greenwaste and food waste are volatile organic compounds (VOC), ammonia (NH_3) and sulfur compounds, A literature search found relatively little recent information on aerated static piles having greenwaste as the main feedstock. Our analysis is based mainly on a 2012 northern California study in which the one collection of greenwaste feedstock was divided between a set of ASPs and a set of windrows. The ASPs and windrows were composted concurrently, and emissions were captured by flux chambers and analyzed for VOC, NH_3, and greenhouse gases.[32,33] Emission factors were reported as pounds per ton of compost mix. Details are provided in **Attachment 2**.

32 Greenwaste Compost Site Emissions Reductions from Solar-powered Aeration and Biofilter Layer. San Joaquin Valley Air Pollution Control District, Technology Advancement Program (TAP) 11-01. May 14, 2013. Accessed online at https://www.valleyair.org/Grant_Programs/TAP/documents/C-15636-ACP/C-15636_ACP_FinalReport.pdf.

33 Schmidt, C.E. and Card, T.R. Aerated Static Pile Composting with Surface Biofiltration Layer Emissions Control. Air Emissions Assessment. Summary of VOC and Greenhouse Gas Air Emissions with Comparison to Windrow Composting Emissions. Prepared by Environmental Management Consulting, Enumclaw, WA for San Joaquin Valley Air Pollution Control District, Fresno, CA. January [2013]; appendix to Greenwaste Compost Site Emissions Reductions from Solar-powered Aeration and Biofilter Layer.

Schmidt and Card measured cumulative emissions over 22 days of primary composting, and then estimated cumulative emissions at 30 and 60 days.[34] TNRE plans for primary composting to take 21 days,[35] so using the 22-day measured rate would be reasonable. As worst case, however, we based our calculations on the 60-day cumulative emission rate, since some emissions will occur during the curing phase.

4.4.2.2 Diesel-powered Loaders

The facility will have eight diesel-powered loaders in Phase 1, and another eight in Phase 2, for a total of 16 at full buildout. Criteria pollutant and GHG emission factors were obtained from the CalEEMod™ Users Guide, Appendix D. Because many diesel equipment emission factors are projected to change over time, the Phase 1 and Phase 2 loaders were assigned emission factors for 2024 and 2028, respectively. It was assumed that they would operate for 14 hours per day, five days per week.[36] More details are provided in **Attachment 2**.

4.4.2.3 Anaerobic Digester

Anaerobic digesters do not generate significant air pollutant emissions by themselves; the emissions come from what is done to the biogas and the digestate after they exit the digester. (Digestate-based emissions are discussed in **Section 4.4.2.4**.) In the case of the Harris Road facility, the biogas is treated to bring it to SoCal Gas' composition and higher heating value requirements. This process requires eliminating "off-gases" (mainly CO_2 with a small amount of CH_4). Although some facilities burn the off-gases in flares, the common practice in California is to release them untreated into the atmosphere, and this is what TNRE proposes to do.[37] Negligible amounts of criteria pollutants are expected from these releases.

4.4.2.4 In-Vessel Composting of Digestate

As a worst case, the same emission factors used for aerated static piles were used for in-vessel composting of digestate. In reality, the latter's emissions would be lower, given that they will be treated by biofilters.

4.4.2.5 Water Heaters

The plant will have two gas-fired hot water heaters, each with heat input rate of 6 million Btu per hour (MMBtu/hr). Since the heat input rate will exceed 5 MMBtu/hr, the water heaters will be subject to ICAPCD Rule 400.2 (Boilers, Process Heaters and Steam Generators).[38] The NO_x emission limit is 9 ppm at 3% O_2 when digester gas is not used and 15 ppm when it is used.[39] In either case, it is reasonable to assume that the boilers will have "low NO_x" burners. For a conservative estimate, we assumed that flue gas recirculation would not be used. Emission factors for criteria pollutants, GHG,

34 Schmidt and Card, 2013, p. 1.
35 Email from Frank Lauro, True North Renewable Energy, Phoenix, AZ to Michael Rogozen, UltraSystems Environmental Incorporated, Irvine, CA. October 18, 2021.
36 Ibid.
37 Personal communication from Frank Lauro, True North Renewable Energy, Phoenix, AZ to Michael Rogozen, UltraSystems Environmental Incorporated, Irvine, CA. October 18, 2021.
38 ICAPCD Rule 400.2.A.2.
39 ICAPCD Rule 400.2C.5.

and toxic air contaminants were obtained from the USEPA's AP-42.[40] The emission factors are in terms of pounds per million standard cubic feet, with the assumption that the natural gas has a higher heating value of 1,020 Btu per standard cubic foot (scf). The two boilers will use a combined 1 million therms[41] (10^{11} Btu) of natural gas per year. The emissions calculations assumed that the boilers will operate continuously, 365 days per year. The daily gas volume would then be 0.269 million scf. This value was multiplied by the emission factor for each pollutant.

4.4.2.6 Flares

The facility will have two enclosed flares to burn off biogas product under upset conditions; an example would be the temporary inability to inject product into the SoCal delivery pipeline. The facility estimates that the heat input rate to the flare(s) would be 150 MMBtu/hr, and that the flares would be used for 400 hours per year. The design higher heating values of the biogas product are either 567 or 607 Btu/scf.[42] Using the lower of these values leads to a volumetric input rate of 0.265 million scf per hour. Emission calculations were based on an average daily use of 400/365, or 1.09589 hours per day.

There is considerable uncertainty in the values of emission factors for biogas flare combustion products. Most of the published emission factors are for refinery or chemical plant flares, and many are for flares serving landfills or wastewater treatment plants. In addition, some results of emissions tests at facilities that use anaerobic digesters to produce biogas are available, but they vary widely in magnitude, and probably depend too much on individual flare characteristics to be reliably generalized.

Emission factors for criteria pollutants and GHG emissions, were obtained from a joint study by the USEPA and the University of California at Davis.[43] It is based on three source tests within the South Coast Air Quality Management District and one within the San Joaquin Valley Air Pollution Control District between 2007 and 2013. Unfortunately, three of the tests were for digester gas flares at wastewater treatment plants and one was at a landfill. We selected this data set because it contained information on flow rates, digester gas heating values, and other parameters which were somewhat similar to those of the proposed project flares. In addition, a recent Canadian study[44] developed a methane emission factor that, when used with project-specific information, yielded similar emissions results for methane. **Table 4.4-2** shows the criteria pollutant and GHG emission factors from this document.

40 U.S. Environmental Protection Agency, AP 42, Fifth Edition, Supplement D, Volume I, Chapter 1: External Combustion Sources, Section 1.4 Natural Gas Combustion, Table 1.4-1. July 1988. Accessed online at https://www.epa.gov/sites/default/files/2020-09/documents/1.4_natural_gas_combustion.pdf. On October 7, 2021.

41 One therm = 100,000 Btu.

42 Email from Frank Lauro, True North Renewable Energy, Phoenix, AZ to Michael Rogozen, UltraSystems Environmental Incorporated, Irvine, CA. September 2, 2021.

43 Evaluating the Air Quality, Climate & Economic Impacts of Biogas Management Technologies. UC Davis Biomass Collaborative (Davis, CA), U.S. Environmental Protection Agency, Region 9 (San Francisco, CA) and U.S. Environmental Protection Agency, National Risk Management Research Lab, Office of Research and Development (Cincinnati, OH). EPA/600/R-16/099. September 2016. Accessed online at https://biomass.ucdavis.edu/wp-content/uploads/EPA600R-16099_BiogasTech_Sept2016.pdf.

44 Gogolek, P. Methane Emission Factors for Biogas Flares. Industrial Combustion. Journal of the International Flame Research Foundation, Article No. 201203, July 2012. URL: https://ifrf.net/research/archive/methane-emission-factors-for-biogas-flares/. Accessed October 23, 2021.

Table 4.4-2
FLARE EMISSION FACTORS FOR CRITERIA POLLUTANTS AND GHG

Pollutant	Emission Factor (lb/MMBtu)
Volatile Organic Compounds	0.0062
Nitrogen Oxides	0.057
Carbon Monoxide	0.047
Sulfur Oxides	0.0403
Particulate Matter	0.0123
Carbon Dioxide[a]	191.3
Methane	0.07
Nitrous Oxide	0.0024

Source: Evaluating the Air Quality, Climate & Economic Impacts of Biogas Management Technologies. UC Davis Biomass Collaborative, Table 30.
[a]This is biogenic CO_2.

4.4.2.7 Onroad Emissions

In each phase there will be three sources of onroad emissions. First will be trucks bringing feedstock to the facility. For this traffic, criteria pollutant emissions were calculated only for the truck mileage within Imperial County; for GHG emissions, all feedstock truck mileage was taken into account. Second will be trucks distributing finished compost to agricultural consumers; all of this mileage was assumed to be within Imperial County. Finally, the analysis includes employee commuting mileage, all of which was in the county. **Table 4.4-3** and **Table 4.4-4** show the assumed mileages for Phase 0-IC and full buildout in Phase 2, respectively. Onroad emission factors (in grams per vehicle-mile traveled) were obtained from the ARB's EMFAC2017 model, using vehicle characteristics for Imperial County in various years. Weighted average values for different vehicle speeds, as calculated by EMFAC 2017, were used. These are presented in **Attachment 2**.

Table 4.4-3
VEHICLE MILES TRAVELED FOR PHASE 0-IC

Activity	Vehicles Per Day	One-Way Trip Length (miles)		In-County VMT	Total VMT
		In-County	Total	Per Day	Per Year
Incoming Feedstock Trucks	25	53.4	170	2,669	1,108,166
Outgoing Compost Trucks	9	10.0	10.0	184	48,000
Employee Commuting	25	7.3	7.3	366	95,291
Totals	**59**			**3,219**	**1,251,457**

Table 4.4-4
VEHICLE MILES TRAVELED FOR PHASE 2

Activity	Vehicles Per Day	One-Way Trip Length (miles)		In-County VMT	Total VMT
		In-County	Total	Per Day	Per Year
Incoming Feedstock Trucks	100	53.4	170	10,676	4,432,664
Outgoing Compost Trucks	37	10.0	10.0	736	192,000
Employee Commuting	50	7.3	7.3	731	190,582
Totals	**187**			**12,143**	**4,815,246**

Road dust emissions were also calculated for paved and unpaved roads, using formulas from CalEEMod[45] and the USEPA's AP-42.[46,47] It was assumed that all the feedstock deliveries and employee commuting would be over roads, and that 5% of the compost deliveries would be on unpaved surfaces. Detailed calculations are provided in **Attachment 2**.

4.4.2.8 Air Toxics

The main source of toxic air contaminant (TAC) emissions from project operations will be the diesel-fueled loaders, water heating, flares, and onroad vehicle traffic.

Diesel Loaders

The most important TAC associated with diesel equipment operation is diesel particulate matter (DPM), which is a subset of $PM_{2.5}$.[48] As equipment specific DPM emission factors were unavailable, we assumed that all $PM_{2.5}$ from diesel loaders will be DPM.

Water Heating

TAC emission factors for natural gas-fired water heaters were obtained from USEPA's AP=42 compilation[49] and multiplied by natural gas use. Detailed calculations are provided in **Attachment 2**.

Flares

Flare TAC emissions factors were obtained from a compilation maintained by the San Diego Air Pollution Control District.[50] We used it because (1) it is specific to enclosed flares burning digester gas and (2) it has emission factors for many toxic air contaminants. Its principal drawback is that many of the source tests on which it is based were conducted at a wastewater treatment plant, whose anaerobic digester has a feedstock composition different from the feedstock for the proposed Harris Road facility. The emission factors are in units of pounds per million cubic feet of gas burned. Using the information in the preceding paragraph, we calculated the volumetric input rate to be 0.265 million cubic feet per hour. This was multiplied by the number of hours per day and the emission factor for each pollutant. Detailed calculations are provided in **Attachment 2**.

45 Equations are from BREEZE Software. User's Guide for CalEEMod Version 2020.4.0, Appendix A. Prepared for California Air Pollution Control Officers Association. May2021. Accessed online at http://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/appendix-a2020-4-0.pdf?sfvrsn=6.

46 U.S. Environmental Protection Agency, AP 42, Fifth Edition, Volume I, Chapter 13: Miscellaneous Sources, Section 13.2.1 Paved Roads. January 2011. Accessed online at https://www.epa.gov/sites/default/files/2020-10/documents/13.2.1_paved_roads.pdf.

47 U.S. Environmental Protection Agency, AP 42, Fifth Edition, Volume I, Chapter 13: Miscellaneous Sources, Section 13.2.2 Unpaved Roads. November 2006. Accessed online https://www.epa.gov/sites/default/files/2020-10/documents/13.2.2_unpaved_roads.pdf.

48 California Air Resources Board. Overview: Diesel Exhaust & Health. 2021. URL: https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health. Accessed October 23, 2021.

49 U.S. Environmental Protection Agency, AP 42, Fifth Edition, Supplement D, Volume I, Chapter 1: External Combustion Sources, Section 1.4 Natural Gas Combustion, Table 1.4-1. July 1988. Accessed online at https://www.epa.gov/sites/default/files/2020-09/documents/1.4_natural_gas_combustion.pdf. On October 7, 2021

50 F02 – Flares, Digester Gas Fired, Enclosed. San Diego Air Pollution Control District, Last updated August 19, 2021. Accessed online at https://www.sdapcd.org/content/dam/sdc/apcd/PDF/Toxics_Program/APCD-Flare-Digester-Gas-Fired-Enclosed-F02-template-post-revision2.pdf.

Onroad Diesel Truck Emissions

The most important TAC associated with diesel truck operation is diesel particulate matter (DPM). DPM emissions were not estimated for this project for the following reasons:

- DPM is of concern only for its carcinogenicity over long periods of continuous exposure. Sensitive receptors along feedstock and finished compost transportation routes will be a matter of seconds per day, so that doses received will be too small to be of consequence.
- UltraSystems recently performed a health risk assessment (HRA) of operations of a warehouse with diesel truck traffic volumes comparable to those of the Harris Road project.[51] The HRA found that the individual cancer risk along the truck routes leading to and from the warehouse were far below the common CEQA significance threshold of 10 in one million.

4.5 AIR QUALITY IMPACTS

4.5.1 Short-Term Impacts

Project construction activities will generate short-term air quality impacts. Construction emissions can be distinguished as either onsite or offsite. Onsite air pollutant emissions would consist principally of exhaust emissions from off-road heavy-duty construction equipment, as well as fugitive particulate matter from earthwork. Offsite emissions would result from workers commuting to and from the job site, as well as from trucks hauling building materials and taking away debris. For calculations, each of the five main phases was divided into the following subphases, which do not overlap in time:

- Demolition (for Phase 1-A only)
- Site preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

Table 4.5-1 shows the results of the CalEEMod analysis and compares them with the ICAPCD significance criteria. Daily emissions of all pollutants are below their significance thresholds, and no mitigation is necessary. Calculation assumptions and results files are provided in **Attachment 1**.

51 Air Toxics Health Risk Assessment for DCT Jurupa Logistics Center II Project, Fontana. California. Memorandum from Michael B. Rogozen and Mohamed Sayed, UltraSystems Environmental Incorporated, Irvine, CA to Brett Hamilton, City of Fontana, CA. January 17, 2018.

Table 4.5-1
MAXIMUM DAILY UNMITIGATED CONSTRUCTION EMISSIONS

Project Phase Construction	Maximum Emissions (lbs/day)			
	ROG	CO	NO_x	PM_{10}
Phase 0-IC	13.1	9.2	0.8	3.4
Phase 1-A	13.9	23.8	3.2	16.3
Phase 1-B	56.7	21.2	3.3	18.3
Phase 2-A	27.3	13.2	12.4	9.2
Phase 2-B	27.7	21.1	3.2	18.3
ICAPCD Significance Thresholds[a]	*75*	*550*	*100*	*150*
Significant (Yes or No)	**No**	**No**	**No**	**No**

***Source**: OB-1 Air Analyses.*
[a]The ICAPCD does not have a significance threshold for $PM_{2.5}$ during construction.

4.5.2 Long-Term Impacts

To properly characterize air pollution impacts under CEQA, we calculated operational impacts for two period of maximum emissions: Phase 0-IC, the only phase in which there is direct composting of feedstock and no anaerobic digestion; and the combination of Phases 1-B and 2-B, when the facility is fully operational.

4.5.2.1 Phase 0-IC Operational Emissions

During the months in which the facility will only perform composting of greenwaste and food waste, the main emissions sources will be the aerated static piles, onroad trucks delivering feedstock to the facility and distributing compost to customers, and employee commuting. Details of the calculations are in **Attachment 2**. **Table 4.5-2** summarizes the daily operating emissions for this phase. Because the daily emissions of all the pollutants are below the Tier I thresholds, these emissions are less than significant and no mitigation is needed.

Table 4.5-2
DAILY PROJECT OPERATIONAL EMISSIONS IN PHASE 0-IC

Emissions Source	Pollutant (maximum lbs/day)					
	ROG	CO	NO_X	PM_{10}	$PM_{2.5}$	NH_3
Composting	10.8	-	-	-	-	0.66
Incoming Feedstock Trucks	0.08	0.63	8.41	0.68	0.31	-
Outgoing Compost Trucks	0.01	0.04	0.58	0.05	0.02	-
Employee Commuting	0.01	0.68	0.05	0.04	0.02	-
Road Dust	-	-	-	8.8	1.2	
Total Operational Emissions	**10.9**	**1.3**	**9.0**	**9.6**	**1.6**	**0.7**
Thresholds for Tier II	*137*	*550*	*137*	*150*	*550*	*N/A*
Tier	**I**	**I**	**I**	**I**	**I**	**N/A**

***Source**:* Calculated by OB-1 Air Analyses.

4.5.2.2 Phase 1-B and Phase 2-B Operational Emissions

This part of the analysis covers the project at full buildout, after equipment no longer needed has been demolished or otherwise removed, and all the equipment needed for processing the maximum expected rate of feedstock has been built. Details of the emission calculations are in **Attachment 2**. **Table 4.5-3** summarizes maximum daily emissions under full operation.

Table 4.5-3
DAILY PROJECT OPERATIONAL EMISSIONS IN PHASE 1-B PLUS 2-B

Emissions Source	Pollutant (maximum lbs/day)						
	ROG	CO	NO_X	PM_{10}	$PM_{2.5}$	NH_3	SO_x
Anaerobic Digestion	-	-	-	-	-	-	-
In-Vessel Composting	43.4	-	-	-	-	2.6	-
Mobile Diesel Equipment	9.0	51.1	54.7	1.8	1.7	-	-
Boilers	1.5	23.0	13.7	2.1	2.1[a]	-	0.2
Flares	1.0	7.7	9.4	2.0	2.0[a]	-	6.6
Incoming Feedstock Trucks	0.3	2.7	35.5	2.8	1.3	-	-
Incoming Feedstock (Road Dust)	-	-	-	6.9	1.7	-	-
Outgoing Compost Trucks	0.0	0.2	2.5	0.2	0.1	-	-
Outgoing Compost (Road Dust)	-	-	-	27.4	2.8	-	-
Employee Commuting	0.0	1.1	0.1	0.1	0.0	-	-
Employee Commuting (Road Dust)	-	-	-	0.2	0.1	-	-
Total Operational Emissions	**55.2**	**44.7**	**115.9**	**41.9**	**11.8**	**2.6**	**6.8**
Thresholds for Tier II	*137*	*550*	*137*	*150*	*550*	*N/A*	*N/A*
Tier	**I**	**I**	**I**	**I**	**I**	*N/A*	*N/A*

[a]As a worst case, $PM_{2.5}$ was assumed to equal PM_{10}.

As indicated in **Table 4.5-3**, the long-term project operational emissions would not exceed applicable thresholds for any criteria pollutant and would therefore be less than significant. No mitigation is required.

4.5.2.3 Air Toxics Emissions

Table 4.5-4 shows TAC emissions for pollutants whose emission factor were available. The health implications of the emissions shown in this table cannot be ascertained without a formal health risk assessment that takes into account release characteristics (e.g., stack height and temperature), local topography and meteorology, distance to sensitive populations, toxicity of pollutants released, duration of exposure, distribution of emissions in environmental media, and several other factors.

Table 4.5-4
ANNUAL TOXIC AIR CONTAMINANT EMISSIONS IN PHASE 1-B PLUS 2-B

Pollutant	TAC Emissions (lb/year)			
	Diesel Loaders	Boiler	Flare	Total
Acetone			0.0741	0.0741
Ammonia			0.508	0.508
Arsenic				0
Benzene		0.210	2.93	3.14
Chlorobenzene			0.0212	0.0212
Dichlorobenzene			0.190	0.190
Diesel Particulate Matter	473			473
Ethyl Benzene			0.106	0.106
Ethylene Dichloride			0.148	0.148
Formaldehyde		7.50		7.50
Hexane		180.0	1.07	181
Hydrogen Sulfide			2.28	2.28
Methylene Chloride			0.0106	0.0106
Methyl Ethyl Ketone			0.0106	0.0106
Perchloroethylene			0.0529	0.0529
Polycyclic Organic Matter		0.0698		0.0698
Toluene		0.340	1.07	1.41
1,1,1-Trichloroethane			0.0106	0.0106

4.5.3 Sensitive Receptors

Sensitive receptors are persons who would be more susceptible to air pollution than the general population, such as children, athletes, the elderly, and the chronically ill. Examples of land uses where substantial numbers of sensitive receptors are often found are schools, daycare centers, parks, recreational areas, medical facilities, nursing homes, and convalescent care facilities. Residential areas are also considered to be sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended times, resulting in sustained exposure to pollutants. The closest sensitive receptor currently is a rural residence near the intersection of Studer Road and East Ralph Road, about 6,000 feet south-southwest of the center of activity of the project site. It is too far away to be affected by emissions from the proposed project.

4.5.4 Objectionable Odors

Construction activities for the project would generate airborne odors associated with the operation of construction vehicles (i.e., diesel exhaust) and asphalt paving operations. These emissions would occur during daytime hours only and would be isolated to the immediate vicinity of the construction site and activity. Therefore, they would not affect a substantial number of people. Operational emissions would include some diesel engine exhaust, but the location of the project is remote and will not affect a substantial number of people.

4.5.5 Conformity with Air Quality Management Plan

The ICAPCD *CEQA Air Quality Handbook* calls for a consistency analysis with the regional clean air plans, namely ozone and PM_{10} attainment demonstration plans, for large residential and commercial developments that are required to develop an EIR. Projects that are projected to exceed ICAPCD thresholds of significance for its operations are considered large developments and are required to demonstrate consistency with regional air quality plans. Because the proposed projects emissions will not exceed the District's significance thresholds, analysis for conformity with regional air quality plans is not required for the project.

5.0 GREENHOUSE GAS EMISSIONS ANALYSIS

5.1 Climate Change and Greenhouse Gases

If the earth had no atmosphere, almost all of the energy received from the sun would be re-radiated out into space. Our atmosphere helps retain a major portion of the solar radiation through "the greenhouse effect." Short-wavelength solar radiation passes through the atmosphere and is absorbed by the earth's surface. The earth re-radiates the heat up into the atmosphere, at a longer wavelength. GHG in the atmosphere absorb the longer-wavelength heat and then radiate it back downward. In general, as concentrations of GHG in the atmosphere increase, global temperatures increase.

For many centuries, atmospheric GHG concentrations were relatively stable. As combustion of fossil fuels for industrial activities and transportation increased, concentrations of CO_2 in the atmosphere increased dramatically. The result has been an observed increase in average global temperature. The current consensus among scientists is that continued increases in atmospheric GHG will not only raise the average global temperature but will also lead to changes in climate. While air temperatures will mainly rise, temperatures may decrease in some areas. Rainfall distribution and storm patterns will be affected. As polar ice melts, sea levels may rise, inundating coastal areas.

GHG is defined under the California Global Warming Solutions Act of 2006 (AB 32) as CO_2, CH_4, N_2O, hydrofluorocarbons (HFC), perfluorocarbons (PFC) and sulfur hexafluoride (SF_6). Associated with each GHG species is a "global warming potential" (GWP), which is defined as the ratio of degree of warming to the atmosphere that would result from the emission of one mass unit of a given GHG compared with one equivalent mass unit of CO_2 over a given period of time. By this definition, the GWP of CO_2 is always 1. The GWP of methane and N_2O are 25 and 298, respectively.[52] "Carbon dioxide equivalent" (CO_2e) emissions are calculated by weighting each GHG compound's emissions by its GWP and then summing the products.

Carbon dioxide (CO_2) is a clear, colorless, and odorless gas. Fossil fuel combustion is the main human-related source of CO_2 emissions; electricity generation and transportation are first and second in the amount of CO_2 emissions, respectively. Carbon dioxide is the basis of GWP, and thus has a GWP of 1.

Methane (CH_4) is a clear, colorless gas, and is the main component of natural gas. Anthropogenic sources of CH_4 are fossil fuel production, biomass burning, waste management, and mobile and stationary combustion of fossil fuel. Wetlands are responsible for the majority of the natural

52 Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. 2007.

methane emissions.[53] As mentioned above, CH_4, within a 100-year period, is 25 times more effective in trapping heat than is CO_2.

Nitrous oxide (N_2O) is a colorless, clear gas, with a slightly sweet odor. N_2O has both natural and human-related sources, and is removed from the atmosphere mainly by photolysis, or breakdown by sunlight, in the stratosphere. The main human-related sources of N_2O in the United States are agricultural soil management (synthetic nitrogen fertilization), mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production.[54] Nitrous oxide is also produced from a wide range of biological sources in soil and water. Within a 100-year span, N_2O is 298 times more effective in trapping heat than is CO_2.[55]

Note that when estimating GHG emissions from project construction and operation, we excluded "biogenic" CO_2 from the calculations. Biogenic CO_2 is part of the natural carbon cycle, since it is consumed by living matter and is released back to the atmosphere through decomposition of plant material. In this study, the two sources of biogenic CO_2 were anaerobic digestion of the facility feedstock and combustion (in flares) of excess biogas product. On the other hand, CO_2 emissions from combustion of fossil fuel were included in the calculations, since they are not part of the natural carbon cycle.

5.1.1 Potential Environmental Effects

Worldwide, average temperatures are likely to increase by 3°F to 7°F by the end of the 21st century.[56] However, a global temperature increase does not directly translate to a uniform increase in temperature in all locations on the earth. Regional climate changes are dependent on multiple variables, such as topography. One region of the Earth may experience increased temperature, increased incidents of drought, and similar warming effects, whereas another region may experience a relative cooling. According to the International Panel on Climate Change's (IPCC's) Working Group II Report,[57] climate change impacts on North America may include diminishing snowpack, increasing evaporation, exacerbated shoreline erosion, exacerbated inundation from sea level rising, increased risk and frequency of wildfire, increased risk of insect outbreaks, increased experiences of heat waves, and rearrangement of ecosystems, as species and ecosystem zones shift northward and to higher elevations.

5.1.2 California Implications

Even though climate change is a global problem and GHGs are global pollutants, the specific potential effects of climate change on California have been studied. The third assessment produced by the California Natural Resources Agency (CNRA)[58] explores local and statewide vulnerabilities to climate

53 U.S. Environmental Protection Agency, "Methane." Climate Change Web Site. Internet URL: http://www.epa.gov/methane/. Updated April 1, 2011.
54 U.S. Environmental Protection Agency, "Nitrous Oxide." Climate Change Web Site. Internet URL: http://www.epa.gov/nitrousoxide/. Updated June 22, 2010.
55 Ibid.
56 Climate Change 2007: Impacts, Adaptation, and Vulnerability. Website http://www.ipcc.ch/ipccreports/ar4-wg2.htm. Accessed March 2013.
57 Ibid.
58 Our Changing Climate 2012: Vulnerability & Adaptation to the Increasing Risks from Climate Change in California. California Natural Resources Agency. July 2012 / CEC-500-2012-007.

change, highlighting opportunities for taking concrete actions to reduce climate-change impacts. Projected changes for the remainder of this century in California include:

- **Temperatures** – By 2050, California is projected to warm by approximately 2.7°F above 2000 averages, a threefold increase in the rate of warming over the last century and springtime warming — a critical influence on snowmelt — will be particularly pronounced.

- **Rainfall** – Even though model projections continue to show the Mediterranean pattern of wet winters and dry summers with seasonal, year-to-year, and decade-to-decade variability, improved climate models shift towards drier conditions by the mid-to-late 21st century in Central, and most notably, Southern California.

- **Wildfire** - Earlier snowmelt, higher temperatures, and longer dry periods over a longer fire season will directly increase wildfire risk. Indirectly, wildfire risk will also be influenced by potential climate-related changes in vegetation and ignition potential from lightning, with human activities continuing to be the biggest factor in ignition risk. Models are showing that estimated that property damage from wildfire risk could be as much as 35% lower if smart growth policies were adopted and followed than if there is no change in growth policies and patterns.

The third assessment by CNRA not only defines projected vulnerabilities to climatic changes but analyzes potential impacts from adaptation measures used to minimize harm and take advantage of beneficial opportunities that may arise from climate change.

The report highlights important new insights and data, using probabilistic and detailed climate projections and refined topographic, demographic, and land use information. The findings include:

- The state's electricity system is more vulnerable than was previously understood.
- The Sacramento-San Joaquin Delta is sinking, putting levees at growing risk.
- Wind and waves, in addition to faster rising seas, will worsen coastal flooding.
- Animals and plants need connected "migration corridors" to allow them to move to habitats that are more suitable to avoid serious impacts.
- Native freshwater fish are particularly threatened by climate change.
- Minority and low-income communities face the greatest risks from climate change.

5.2 Regulatory Background

5.2.1 Federal Climate Change Regulation

The federal government is taking several common-sense steps to address the challenge of climate change. The U.S. Environmental Protection Agency (USEPA) collects several types of GHG emissions data. These data help policy makers, businesses, and USEPA track GHG emissions trends and identify opportunities for reducing emissions and increasing efficiency. USEPA has been collecting a national inventory of GHG emissions since 1990, and in 2009 established mandatory reporting of GHG emissions from large GHG emissions sources.

Until January 19, 2017 the USEPA's regulatory initiatives included USEPA's vehicle GHG rules and Clean Power Plan; partnering with the private sector through voluntary energy and climate

programs; and reducing USEPA's carbon footprint with the federal GHG requirements and USEPA's Strategic Sustainability Performance Plan.

The recently concluded Trump administration had a different strategy in relation to climate change and took the USEPA in a new direction (USEPA, 2017)[59]. President Trump's Executive Order 13783, "Promoting Energy Independence and Economic Growth,"[60] specifically addressed revisions in the Clean Power Plan and standards of performance for GHGs for new stationary sources; CH_4 standards for the oil and gas sector; and light-duty vehicle GHG standards. On January 20, 2021, President Biden issued Executive Order 13990[61], which rescinded the Executive Order on Energy Independence, along with several other executive orders concerning energy, climate, and environmental protection. Among the stated goals of Executive Order 13990 are "to reduce greenhouse gas emissions" and "to bolster resilience to the impacts of climate change." Various federal agencies are restoring prior regulations and developing new ones to further these policies.

5.2.2 California Climate Change Regulation

Through several pieces of legislation, gubernatorial executive orders, and administrative regulations that relate to GHG emissions and climate change, California has set aggressive goals for GHG reductions within the state. Per Senate Bill (SB) 97, the California Natural Resources Agency adopted amendments to the CEQA Guidelines, which address the specific obligations of public agencies when analyzing GHG emissions under CEQA to determine a project's effects on the environment. However, neither a threshold of significance nor any specific mitigation measures are included or provided in these CEQA Guideline amendments. The major state provisions for reducing GHG emissions are as follows.

Assembly Bill 32 (AB 32)

The California Global Warming Solutions Act of 2006, widely known as AB 32, requires the California Air Resources Board (ARB) to develop and enforce regulations for the reporting and verification of statewide GHG emissions. The ARB is directed to set a statewide GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner. The heart of the bill is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020.

The AB 32 Scoping Plan (Scoping Plan) (ARB, 2008)[62] contains the main strategies to achieve the 2020 emissions cap. The Scoping Plan was developed by the ARB with input from the Climate Action Team and proposes a comprehensive set of actions designed to reduce overall carbon emissions in California, improve the environment, reduce oil dependency, diversify energy sources, and enhance public health while creating new jobs and improving the state's economy. The GHG reduction strategies contained in the Scoping Plan include direct regulations, alternative compliance

59 USEPA, 2020. Available online at: https://www.epa.gov/laws-regulations/summary-energy-independence-and-security-act accessed 3/19/2020.

60 Executive Order 13783, Promoting Energy Independence and Economic Growth. March 31, 2017. URL: https://www.federalregister.gov/documents/2017/03/31/2017-06576/promoting-energy-independence-and-economic-growth.

61 Executive Order 13990. Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis. January 20, 2021. URL:

62 ARB, 2008. Climate Change Scoping Plan: A Framework for Change. California Air Resources Board. December 2008.

mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system.

In May 2014, the ARB adopted the First Update to the Climate Change Scoping Plan (ARB, 2014)[63]. This update identifies the next steps for California's leadership on climate change. The first update to the initial Scoping Plan describes progress made to meet the near-term objectives of AB 32 and defines California's climate change priorities and activities for the next several years. It also frames activities and issues facing the state as it develops an integrated framework for achieving both air quality and climate goals in California beyond 2020.

In the original Scoping Plan, the ARB approved a total statewide GHG 1990 emissions level and 2020 emissions limit of 427 million metric tons (MT) of CO_2e. As part of the update, the ARB revised the 2020 Statewide limit to 431 million MT of CO_2e, an approximately 1% increase from the original estimate. The 2020 business-as-usual forecast in the update is 509 million MT of CO_2e. The state would need to reduce those emissions by 15.3% to meet the 431 million MT of CO_2e 2020 limit.

In November 2017, the ARB published the 2017 Scoping Plan (ARB, 2017)[64], which builds upon the former Scoping Plan and Update by outlining priorities and recommendations for the state to achieve a 40% reduction in GHGs by 2030, compared to 1990 levels. The major elements of the framework proposed are enhancement of the Renewables Portfolio Standard (RPS) and the Low Carbon Fuel Standard (LCFS); a Mobile Source Strategy, Sustainable Freight Action Plan, Short-Lived Climate Pollutant Reduction Strategy, Sustainable Communities Strategies, and a Post-2020 Cap-and-Trade Program; a 20% reduction in GHG emissions from the refinery sector and an Integrated Natural and Working Lands Action Plan.

The 2020 Scoping Plan is under development.[65]

Executive Order B-30-15

On April 29, 2015, Governor Edmund G. Brown Jr. issued an executive order to establish a California GHG reduction target of 40% below 1990 levels by 2030. This new emission reduction target is a step toward the ultimate goal of reducing emissions by 80% below 1990 levels by 2050. The executive order also specifically addresses the need for climate adaptation and directs state government to:

- Incorporate climate change impacts into the state's Five-Year Infrastructure Plan.
- Update the Safeguarding California Plan – the state climate adaption strategy – to identify how climate change will affect California infrastructure and industry, and what actions the state can take to reduce the risks posed by climate change.
- Factor climate change into state agencies' planning and investment decisions.

63 ARB, 2014. First Update to the Climate Change Scoping Plan, Building on the Framework. California Air Resources Board. May 2014.

64 ARB, 2017b. California's 2017 Climate Change Scoping Plan. California Air Resources Board. November 2017. URL: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf

65 2022 Scoping Plan Update - Achieving Carbon Neutrality by 2045. California Air Resources Board, URL: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan.

- Implement measures under existing agency and departmental authority to reduce GHG emissions.

California Senate Bills 1078, 107, 2, and 350; Renewables Portfolio Standard

Established in 2002 under California SB 1078 and accelerated in 2006 under California SB 107, California's RPS requires retail suppliers of electric services to increase procurement from eligible renewable energy resources by at least 1% of their retail sales annually, until they reach 20% by 2010.

On April 2, 2011, Governor Brown signed California SB 2 to increase California's RPS to 33% by 2020. This new standard also requires regulated sellers of electricity to procure 25% of their energy supply from certified renewable resources by 2016. Most recently, Governor Brown signed into legislation SB 350 in October 2015, which requires retail sellers and publicly owned utilities to procure 50% of their electricity from eligible renewable energy resources by 2030.

California Senate Bill 100 (Chapter 312, Statutes of 2018)

Senate Bill 100 (SB 100)[66] sets a 2045 goal of powering all retail electricity sold in California and state agency electricity needs with renewable and zero-carbon resources — those such as solar and wind energy that do not emit climate-altering greenhouse gases. SB 100 updates the state's Renewables Portfolio Standard to ensure that by 2030 at least 60% of California's electricity is renewable. SB 100 requires the Energy Commission, Public Utilities Commission and Air Resources Board to use programs under existing laws to achieve 100% clean electricity.

Low Carbon Fuel Standard

California Executive Order S-01-07 (January 18, 2007)[67] requires a 10% or greater reduction in the average carbon intensity for transportation fuels in California regulated by the ARB. The ARB identified the LCFS as a Discrete Early Action item under AB 32, and the final resolution (09-31) was issued on April 23, 2009.

Sustainable Communities and Climate Protection Act (SB 375)

California's Sustainable Communities and Climate Protection Act, also referred to as SB 375, became effective January 1, 2009. The goal of SB 375 is to help achieve AB 32's GHG emissions reduction goals by aligning the planning processes for regional transportation, housing, and land use. SB 375 requires the ARB to develop regional reduction targets for GHGs and prompts the creation of regional plans to reduce emissions from vehicle use throughout the state. California's 18 Metropolitan Planning Organizations (MPOs) have been tasked with creating Sustainable Community Strategies in an effort to reduce the region's vehicle miles traveled (VMT) in order to help meet AB 32 targets through integrated transportation, land use, housing and environmental planning. Pursuant to SB 375, the ARB set per-capita GHG emissions reduction targets from passenger vehicles for each of the state's 18 MPOs. On September 23, 2010, the ARB issued a regional 8% per capita reduction target for the planning year 2020, and a conditional target of 13% for 2035.

66 https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB100.

67 Office of the Governor. Executive Order S-01-07. January 18, 2007. URL: https://climateactionnetwork.ca/wp-content/uploads/2011/06/eos0107.pdf.

California Green Building Standards (CALGreen) Code

The California Green Building Standards Code—Part 11, Title 24, California Code of Regulations—known as CALGreen, is the first-in-the-nation mandatory green building standards code. In 2007, the California Building Standards Commission (CBSC) developed green building standards in an effort to meet the goals of California's landmark initiative AB 32, which established a comprehensive program of cost-effective reductions of greenhouse gases (GHG) to 1990 levels by 2020. The Title 24 Energy Efficiency Standards and CALGreen Code are updated on a regular basis, with the most recent approved updates consisting of the 2022 Energy Efficiency Standards and 2022 CALGreen Code, which became effective on January 1, 2023.

California Senate Bill 1383 (SB 1383)

California Senate Bill 1383 (SB 1383), which was signed into law on September 19, 2016, required the ARB to approve and implement a comprehensive strategy to reduce emissions of short-lived climate pollutants, including methane. By 2030, methane emissions are to be decreased to 40% below their 2013 levels.68 A principal method for achieving this goal is the setting of the following targets to reduce the landfill disposal of organics:[69]

- A 50-percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020.
- A 75-percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2025.

This legislation, and its implementing regulation,[70] are based on the idea that the methane that would be generated by decomposition of organic waste in landfills, can be recovered by anaerobic digestion or other technologies and converted to biogas, which can then be used to generate electricity, power motor vehicles, or supplement or replace fossil fuel-derived natural gas. The CO_2 emitted from these end uses has a significantly lower global warming potential than the CH_4 that would be emitted from organic waste disposal.

5.2.3 Local Significance Thresholds

It is widely recognized that no single project could generate enough GHG emissions to change the global climate temperature noticeably. However, the combination of GHG emissions from past, present, and future projects could contribute substantially to global climate change. Thus, project specific GHG emissions should be evaluated in terms of whether they would result in a cumulatively significant impact on global climate change.

68 Senate Bill No. 1383. Chapter 395. URL: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB1383. Accessed October 29, 2021.
69 Health and Safety Code § 39730.6(a).
70 Short-lived Climate Pollutants (SLCP): Organic Waste Reductions. Final Regulation Text. California Department of Resources Recycling and Recovery (CalRecycle), November 2020. URL: file:///A:/Downloads/2021Sep3NonADAFinalRegulationText.pdf. Accessed October 29, 2021.

Since the County of Imperial has not established a threshold of significance for GHGs, we used an interim South Coast Air Quality Management District value[71] of 10,000 metric tons per year of CO_2e for a new industrial facility as a significance threshold.

5.3 Methodology

The project will cause both direct and indirect source emissions of GHG. Direct emission sources are those which produce onsite emissions through the combustion of fossil fuels or oxidation or fermentation of feedstock. Typically, the two main direct emission sources will be use of internal combustion (IC) engines and space heating. Indirect GHG source emissions are those for which the project is responsible, but that occur offsite. For example, the solid waste that is distributed to landfills will decay and emit the GHGs CO_2 and CH_4. GHG are also emitted by combustion of fossil fuels to generate electricity used by the project. Production of the electricity used to convey water to the project and to treat wastewater generated by the project is also an indirect source.

In this report, we also distinguish between CO_2 emissions from fossil fuel combustion and those from biological processes (i.e., composting or anaerobic digestion of plant material or food waste). The latter are known as "biogenic emissions." There are several approaches to evaluating the significance of biogenic emissions in their relation to the carbon cycle,[72] Such an evaluation is beyond the scope of this project. For full disclosure purposes, we report fossil fuel- and biogenic-related CO_2 emissions separately.

5.3.1 Construction

GHG emissions from construction were estimated with the CalEEMod Version 2020.4.0 software, as described in **Section 4.4.1**.

5.3.2 Operations

5.3.2.1 Direct GHG Emissions

GHG emissions were estimated for the following direct source categories:

Onsite

- Aerated static piles with biofilter covers (Phase 0-IC only) (biogenic).
- Diesel-powered loaders.
- Anaerobic digester (tail gas)(biogenic).
- In-vessel composting of digestate (biogenic).
- Natural gas combustion in water heaters.

71 Interim CEQA GHG Significance Threshold for Stationary Sources, Rules, and Plans. South Coast Air Quality Management District Board. Adopted December 5, 2008. URL: http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf.

72 Accounting Framework for Biogenic CO_2 Emissions from Stationary Sources. U.S. Environmental Protection Agency, Office of Atmospheric Programs, Climate Change Division/ Washington, DC. September, 2011. URL: https://cfpub.epa.gov/si/si_public_record_report.cfm?Lab=OAP&dirEntryID=308343. Accessed October 24, 2021.

- Finished biogas flares.

Onroad

- Feedstock supply trucks.
- Product (finished compost) delivery to customers.
- Employee commuting.

The distribution of GHG emission sources by phase is the same as shown in **Table 4.4-1**.

Aerated Static Piles

The same report on emissions from aerated static piles that was used as a source of criteria pollutant emission factors was used for biogenic GHG emission factors, which were reported as pounds per ton of compost mix. (See **Section 4.4.2.1**.) Details are provided in **Attachment 2**.

Diesel-powered Loaders

GHG emissions from diesel-powered loaders were calculated by the same method as were criteria pollutants from these sources. (See **Section 4.4.2.2**.) Details are provided in **Attachment 2**.

Anaerobic Digester

Anaerobic digesters do not generate significant air pollutant emissions by themselves; the emissions come from what is done to the biogas and the digestate after they exit the digester. (Digestate-based emissions are discussed below.) In the case of the Harris Road facility, the biogas is treated to bring it to SoCal Gas' composition and higher heating value requirements. This process requires eliminating "off-gases" (mainly CO_2 with a small amount of CH_4). Although some facilities burn the off-gases in flares, the common practice in California is to release them untreated into the atmosphere, and this is what TNRE proposes to do.[73] Negligible amounts of GHG are expected from these releases.

In-Vessel Composting of Digestate

As a worst case, the same biogenic GHG emission factors used for aerated static piles were used for in-vessel composting of digestate.

Water Heaters

GHG emission factors were obtained from USEPA's AP-42, with the same assumptions as were used for criteria pollutants and air toxics emissions. (See **Section 4.4.2.5**.)

Flares

The source that was used for criteria pollutant emission factors also contained emission factors for GHG compounds. These are presented in **Table 4.4-2**.

73 Personal communication from Frank Lauro, True North Renewable Energy, Phoenix, AZ to Michael Rogozen, UltraSystems Environmental Incorporated, Irvine, CA. October 18, 2021.

Onroad Emissions

The ARB's EMFAC2017 model, which was used to calculate onroad mobile source emissions, was also used to obtain emission factors for GHG pollutants. The same assumptions as were described in **Section 4.4.2.7** were used in calculating GHG emissions.

5.3.2.2 Indirect GHG Emissions

GHG emissions were estimated for two indirect source categories: electricity generation and water distribution. The following calculation methods were used.

Electricity Generation

The project will purchase all its electricity from the Imperial Irrigation District (IID). GHG emission factors for electricity provided by the IID in 2021 were obtained from a database accessed by the CalEEMod™ software.[74] Annual electrical energy requirements for each phase were obtained from TNRE.[75]

Water Delivery

Project water requirements were obtained from TNRE.[76] Electricity requirements for delivery of the water to the project site were obtained from a database accessed by the CalEEMod™ software.[77] This value was then multiplied by the aforementioned emission factors for IID electricity supply.

5.4 PROJECT GREENHOUSE GAS EMISSIONS INVENTORY

Because of the persistence of GHG in the atmosphere, all the impacts addressed in this section are defined as long-term. Greenhouse gas emissions from construction are amortized over the next 30 years and added to operational emissions for the purpose of estimating annual emissions.

5.4.1 Direct Source Emissions

5.4.1.1 Construction Emissions

The same equipment characteristics and schedule information that were used for the air quality analysis described in **Section 4.5** were used in the GHG analysis. **Table 5.4.1** shows the estimated annual construction-related GHG emissions, by construction year. The total of these values would be **1,716 tonnes of CO_2e**. The annual average over 30 years would be **57.2 tonnes per year**.

74 BREEZE Software. User's Guide for CalEEMod Version 2020.4.0, Appendix D, p. D-3. Prepared for California Air Pollution Control Officers Association. May 2021. Accessed online at http://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/appendix-d2020-4-0-full-merge.pdf?sfvrsn=12.

75 Harris Road Recycling Facility. Prepared for Imperial County Pre-Application Meeting. February 12, 2021, p. 10.

76 Ibid.

77 BREEZE Software. User's Guide for CalEEMod Version 2020.4.0, Appendix D, p. D-342. Prepared for California Air Pollution Control Officers Association. May 2021. Accessed online at http://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/appendix-d2020-4-0-full-merge.pdf?sfvrsn=12.

Table 5.4-1
ANNUAL GHG EMISSIONS FROM CONSTRUCTION, 2024-2032

Phase	CO_2e Emissions (metric tons) (All fossil-fuel related)									
	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
0-IC	90.3	14.8								105
1-A		368	192.7							561
1-B				173.6	22.1					196
2-A						286	128			414
2-B								225	215.4	440
Total	**90**	**383**	**193**	**174**	**22**	**286**	**128**	**225**	**215**	**1,716**

5.4.1.2 Operational Emissions

Tables 5.4-2 and **5.4-3** show direct annual GHG emissions during Phases 0-IC and Phase 2, respectively.

Table 5.4-2
ANNUAL DIRECT GHG EMISSIONS IN PHASE 0-IC

Emissions Source	Emissions (metric tons/year)			
	Fossil-Fuel CO_2	CH_4	N_2O	CO_2e
Composting		381	5	11,015
Incoming Feedstock Trucks	1,459	0.0007	0.23	1,528
Outgoing Compost Trucks	63	0	0.01	66
Employee Commuting	27	0.0003	0.0005	27
Amortized Construction				4
Total Operational Emissions				**12,640**

Table 5.4-3
ANNUAL DIRECT GHG EMISSIONS IN PHASE 2

Emissions Source	Emissions (metric tons/year)			
	Fossil-Fuel CO_2	CH_4	N_2O	CO_2e
Anaerobic Digestion	-	-	-	-
In-Vessel Composting		1,524	22	44,656
Mobile Diesel Equipment	2,728	0.45		2,739
Boilers	5,442	0.10	0.03	5,453
Flares		1.9	0.07	67
Incoming Feedstock Trucks	5,594	0.003	0.88	5,856
Outgoing Compost Trucks	242	0.0001	0.038	253
Employee Commuting	50	0.0004	0.0008	50
Amortized Construction				57
Total Operational Emissions				**59,131**

5.4.2 Indirect Source Emissions

Table 5.4-4 shows indirect source GHG emissions during Phases 0-IC and Phase 2.

Table 5.4-4
ANNUAL INDIRECT GHG EMISSIONS IN PHASES 0-IC AND 2

Phase	CO_2e Emissions (metric tons/yr)	
	Electricity	Water
0-IC	915	1.4
2	3,658	5.8

5.4.3 Total Unmitigated Greenhouse Gas Emissions

Table 5.4-5 shows total GHG emissions in Phases 0-IC and 2.

Table 5.4-5
ANNUAL TOTAL GHG EMISSIONS IN PHASES 0-IC AND 2

Phase	CO_2e Emissions (metric tons per year)		
	Direct	Indirect	Total
0-IC	12,640	916	**13,556**
2	59,131	3,664	**62,795**

5.5 IMPACT ANALYSIS

UltraSystems used the following factors from § 15064.4(b) of the CEQA Guidelines to assess the significance of impacts from greenhouse gas emissions on the environment:[78]

- The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.

- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions.

5.5.1 Change in Greenhouse Gas Emissions

Future annual GHG emissions will greatly exceed the SCAQMD interim significance threshold of 10,000 metric tons per year of CO_2e. (See **Section 5.2.3**.) Therefore, under this criterion, GHG emissions would ordinarily be significant. However, when GHG emissions that would occur without the project are taken into account, the significance conclusion changes.

78 CEQA Guidelines §§ 15064.4(b)(1) through 15064.4(b)(3).

The proposed project was evaluated with the ARB's Benefits Calculator Tool for organics programs.[79,80] For standalone anaerobic digestion of organics (greenwaste and food waste) producing biofuels or bioenergy, GHG emission reductions are calculated as:

Reductions = Avoided Landfill Methane Emissions + Avoided Emissions from Use of Biomethane in Vehicle Fuel, Electricity Production or Pipeline Injection – Fugitive Emissions from AD Process

For composting of organic material, GHG emission reductions are calculated as:

Reductions = Avoided landfill methane emissions – fugitive emissions from composting process

Note that only CH_4 emissions are included in these calculations; they are not considered to be biogenic. The calculator tool was used with information for the proposed project. Results are provided in **Attachment 3**. Over the first ten years of operation, the anaerobic digesters and the composters would result in average annual net reductions of 101,138 and 39,343 metric tons of CO_2e per year, respectively, for a total of 140,481 $MTCO_2e$ per year. Once the facility is in full operation, the annual net reduction in emissions would be 210,600 $MTCO_2e$ per year. This more than offsets the project's estimated emissions of 62,795 $MTCO_2e$ per year. Therefore, GHG emissions would be less than significant under this criterion.

5.5.2 Compliance with Greenhouse Gas Reduction Plans

There are currently no regional or local climate action plans or general or specific plan provisions to reduce GHG emissions in the study area. The only applicable plan is the set of regulations to be developed under AB 32, which has a target of reducing GHG emissions to 1990 levels by 2020. The potential significance of emissions from the project therefore depends upon the extent to which the project furthers or hinders implementation of AB 32. Given the net reduction in GHG emissions calculated in **Section 5.5.1**, the project would further the implementation of AB 32.

6.0 MITIGATION MEASURES

6.1 Mitigation For Air Quality Impacts

No mitigation is necessary.

6.2 Mitigation for Climate Change Impacts

No mitigation is necessary.

79 Quantification Methodology. California Department of Resources Recycling and Recovery Organics Programs. California Climate Investments. California Air Resources Board. June 15, 2020. URL: https://ww2.arb.ca.gov/sites/default/files/auction-proceeds/calrecycle_organics_finalqm_6-15-20.pdf. Accessed July 14, 2022.

80 User Guide. California Department of Resources Recycling and Recovery Organics Programs. California Climate Investments. California Air Resources Board. June 15, 2020. URL: https://ww2.arb.ca.gov/sites/default/files/auction-proceeds/calrecycle_organics_finalqm_6-15-20.pdf. Accessed July 14, 2022.

ATTACHMENTS

ATTACHMENT 1
CONSTRUCTION EMISSIONS CALCULATIONS

TNRE Harris Road Facility - Phase 0-1C - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

TNRE Harris Road Facility - Phase 0-1C

Imperial County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	33.42	1000sqft	0.77	33,420.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2025
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Imperial Water District is not on list, chose SCE for proxy

Land Use - For construction purposes only

Construction Phase - Schedule provided by client

On-road Fugitive Dust - All employee trips were on paved roads. 95% of haulers and vendors on paved roads.

Grading -

Architectural Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Construction Off-road Equipment Mitigation - Tier 4 Final equipment willl be used where applicable

Area Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Area Mitigation - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	100.00

TNRE Harris Road Facility - Phase 0-1C - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	100
tblAreaCoating	Area_EF_Nonresidential_Interior	150	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	150	50
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	1.00	2.00
tblConstructionPhase	NumDays	2.00	3.00
tblConstructionPhase	NumDays	100.00	161.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	5.00	15.00
tblConstructionPhase	PhaseEndDate	5/31/2024	6/3/2024
tblConstructionPhase	PhaseEndDate	6/4/2024	6/6/2024
tblConstructionPhase	PhaseEndDate	10/22/2024	1/18/2025
tblConstructionPhase	PhaseEndDate	10/29/2024	1/31/2025
tblConstructionPhase	PhaseEndDate	11/5/2024	2/7/2025
tblConstructionPhase	PhaseStartDate	6/1/2024	6/4/2024
tblConstructionPhase	PhaseStartDate	6/5/2024	6/7/2024
tblConstructionPhase	PhaseStartDate	10/23/2024	1/19/2025
tblConstructionPhase	PhaseStartDate	10/30/2024	1/19/2025
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00

2.0 Emissions Summary

TNRE Harris Road Facility - Phase 0-1C - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	0.9454	9.7427	7.5036	0.0145	3.3921	0.4003	3.6767	0.8680	0.3683	1.2363	0.0000	1,405.5607	1,405.5607	0.4428	0.0185	1,417.0113
2025	13.7217	6.0965	9.3099	0.0153	3.3921	0.2707	3.6356	0.3589	0.2566	0.5830	0.0000	1,421.3897	1,421.3897	0.3604	0.0180	1,430.3351
Maximum	**13.7217**	**9.7427**	**9.3099**	**0.0153**	**3.3921**	**0.4003**	**3.6767**	**0.8680**	**0.3683**	**1.2363**	**0.0000**	**1,421.3897**	**1,421.3897**	**0.4428**	**0.0185**	**1,430.3351**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	0.2064	0.8176	8.1622	0.0145	3.3921	0.0232	3.4130	0.3589	0.0232	0.3797	0.0000	1,405.5607	1,405.5607	0.4428	0.0185	1,417.0113
2025	13.1287	0.8126	9.2102	0.0153	3.3921	0.0208	3.4129	0.3589	0.0207	0.3796	0.0000	1,421.3897	1,421.3897	0.3604	0.0180	1,430.3351
Maximum	**13.1287**	**0.8176**	**9.2102**	**0.0153**	**3.3921**	**0.0232**	**3.4130**	**0.3589**	**0.0232**	**0.3797**	**0.0000**	**1,421.3897**	**1,421.3897**	**0.4428**	**0.0185**	**1,430.3351**

TNRE Harris Road Facility - Phase 0-1C - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	9.08	89.71	-3.32	0.00	0.00	93.44	6.65	41.49	92.97	58.26	0.00	0.00	0.00	0.00	0.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.7686	3.0000e-005	3.4000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.3100e-003	7.3100e-003	2.0000e-005		7.7900e-003
Energy	0.0319	0.2902	0.2438	1.7400e-003		0.0221	0.0221		0.0221	0.0221		348.2574	348.2574	6.6700e-003	6.3800e-003	350.3269
Mobile	0.8383	0.6888	5.7147	0.0106	485.5037	7.5700e-003	485.5113	48.4503	7.0800e-003	48.4574		1,073.3718	1,073.3718	0.0572	0.0529	1,090.5749
Total	**1.6387**	**0.9790**	**5.9619**	**0.0123**	**485.5037**	**0.0296**	**485.5334**	**48.4503**	**0.0292**	**48.4795**		**1,421.6365**	**1,421.6365**	**0.0639**	**0.0593**	**1,440.9096**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.7686	3.0000e-005	3.4000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.3100e-003	7.3100e-003	2.0000e-005		7.7900e-003
Energy	0.0319	0.2902	0.2438	1.7400e-003		0.0221	0.0221		0.0221	0.0221		348.2574	348.2574	6.6700e-003	6.3800e-003	350.3269
Mobile	0.8383	0.6888	5.7147	0.0106	485.5037	7.5700e-003	485.5113	48.4503	7.0800e-003	48.4574		1,073.3718	1,073.3718	0.0572	0.0529	1,090.5749
Total	**1.6387**	**0.9790**	**5.9619**	**0.0123**	**485.5037**	**0.0296**	**485.5334**	**48.4503**	**0.0292**	**48.4795**		**1,421.6365**	**1,421.6365**	**0.0639**	**0.0593**	**1,440.9096**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/31/2024	6/3/2024	5	2	
2	Grading	Grading	6/4/2024	6/6/2024	5	3	
3	Building Construction	Building Construction	6/7/2024	1/18/2025	5	161	
4	Paving	Paving	1/19/2025	1/31/2025	5	10	
5	Architectural Coating	Architectural Coating	1/19/2025	2/7/2025	5	15	

Acres of Grading (Site Preparation Phase): 1.5

Acres of Grading (Grading Phase): 0.75

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 50,130; Non-Residential Outdoor: 16,710; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	14.00	5.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

TNRE Harris Road Facility - Phase 0-1C - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7954	0.0000	0.7954	0.0859	0.0000	0.0859			0.0000			0.0000
Off-Road	0.4985	5.6040	3.8921	9.7300e-003		0.2012	0.2012		0.1851	0.1851		942.2742	942.2742	0.3048		949.8930
Total	**0.4985**	**5.6040**	**3.8921**	**9.7300e-003**	**0.7954**	**0.2012**	**0.9966**	**0.0859**	**0.1851**	**0.2710**		**942.2742**	**942.2742**	**0.3048**		**949.8930**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0202	8.0900e-003	0.1226	2.5000e-004	0.0278	1.4000e-004	0.0279	7.3700e-003	1.3000e-004	7.5000e-003		25.5615	25.5615	9.0000e-004	8.0000e-004	25.8219
Total	**0.0202**	**8.0900e-003**	**0.1226**	**2.5000e-004**	**0.0278**	**1.4000e-004**	**0.0279**	**7.3700e-003**	**1.3000e-004**	**7.5000e-003**		**25.5615**	**25.5615**	**9.0000e-004**	**8.0000e-004**	**25.8219**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3102	0.0000	0.3102	0.0335	0.0000	0.0335			0.0000			0.0000
Off-Road	0.1191	0.5162	5.3170	9.7300e-003		0.0159	0.0159		0.0159	0.0159	0.0000	942.2742	942.2742	0.3048		949.8930
Total	**0.1191**	**0.5162**	**5.3170**	**9.7300e-003**	**0.3102**	**0.0159**	**0.3261**	**0.0335**	**0.0159**	**0.0494**	**0.0000**	**942.2742**	**942.2742**	**0.3048**		**949.8930**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0202	8.0900e-003	0.1226	2.5000e-004	0.0278	1.4000e-004	0.0279	7.3700e-003	1.3000e-004	7.5000e-003		25.5615	25.5615	9.0000e-004	8.0000e-004	25.8219
Total	**0.0202**	**8.0900e-003**	**0.1226**	**2.5000e-004**	**0.0278**	**1.4000e-004**	**0.0279**	**7.3700e-003**	**1.3000e-004**	**7.5000e-003**		**25.5615**	**25.5615**	**9.0000e-004**	**8.0000e-004**	**25.8219**

TNRE Harris Road Facility - Phase 0-1C - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.7707	0.0000	1.7707	0.8562	0.0000	0.8562			0.0000			0.0000
Off-Road	0.9132	9.7297	5.5468	0.0141		0.4001	0.4001		0.3681	0.3681		1,364.6623	1,364.6623	0.4414		1,375.6962
Total	**0.9132**	**9.7297**	**5.5468**	**0.0141**	**1.7707**	**0.4001**	**2.1708**	**0.8562**	**0.3681**	**1.2243**		**1,364.6623**	**1,364.6623**	**0.4414**		**1,375.6962**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0322	0.0130	0.1962	4.0000e-004	0.0445	2.2000e-004	0.0447	0.0118	2.0000e-004	0.0120		40.8984	40.8984	1.4400e-003	1.2800e-003	41.3151
Total	**0.0322**	**0.0130**	**0.1962**	**4.0000e-004**	**0.0445**	**2.2000e-004**	**0.0447**	**0.0118**	**2.0000e-004**	**0.0120**		**40.8984**	**40.8984**	**1.4400e-003**	**1.2800e-003**	**41.3151**

TNRE Harris Road Facility - Phase 0-1C - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6906	0.0000	0.6906	0.3339	0.0000	0.3339			0.0000			0.0000
Off-Road	0.1725	0.7475	7.1557	0.0141		0.0230	0.0230		0.0230	0.0230	0.0000	1,364.6623	1,364.6623	0.4414		1,375.6962
Total	**0.1725**	**0.7475**	**7.1557**	**0.0141**	**0.6906**	**0.0230**	**0.7136**	**0.3339**	**0.0230**	**0.3569**	**0.0000**	**1,364.6623**	**1,364.6623**	**0.4414**		**1,375.6962**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0322	0.0130	0.1962	4.0000e-004	0.0445	2.2000e-004	0.0447	0.0118	2.0000e-004	0.0120		40.8984	40.8984	1.4400e-003	1.2800e-003	41.3151
Total	**0.0322**	**0.0130**	**0.1962**	**4.0000e-004**	**0.0445**	**2.2000e-004**	**0.0447**	**0.0118**	**2.0000e-004**	**0.0120**		**40.8984**	**40.8984**	**1.4400e-003**	**1.2800e-003**	**41.3151**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5950	5.9739	7.0675	0.0114		0.2824	0.2824		0.2598	0.2598		1,104.9834	1,104.9834	0.3574		1,113.9177
Total	**0.5950**	**5.9739**	**7.0675**	**0.0114**		**0.2824**	**0.2824**		**0.2598**	**0.2598**		**1,104.9834**	**1,104.9834**	**0.3574**		**1,113.9177**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0104	0.1897	0.0928	1.1300e-003	3.3143	1.8400e-003	3.3162	0.3383	1.7600e-003	0.3401		118.6063	118.6063	5.3000e-004	0.0163	123.4752
Worker	0.0564	0.0227	0.3433	7.1000e-004	0.0778	3.8000e-004	0.0782	0.0206	3.5000e-004	0.0210		71.5722	71.5722	2.5200e-003	2.2400e-003	72.3014
Total	**0.0668**	**0.2124**	**0.4361**	**1.8400e-003**	**3.3921**	**2.2200e-003**	**3.3943**	**0.3589**	**2.1100e-003**	**0.3610**		**190.1785**	**190.1785**	**3.0500e-003**	**0.0185**	**195.7766**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1397	0.6052	7.7261	0.0114		0.0186	0.0186		0.0186	0.0186	0.0000	1,104.9834	1,104.9834	0.3574		1,113.9177
Total	**0.1397**	**0.6052**	**7.7261**	**0.0114**		**0.0186**	**0.0186**		**0.0186**	**0.0186**	**0.0000**	**1,104.9834**	**1,104.9834**	**0.3574**		**1,113.9177**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0104	0.1897	0.0928	1.1300e-003	3.3143	1.8400e-003	3.3162	0.3383	1.7600e-003	0.3401		118.6063	118.6063	5.3000e-004	0.0163	123.4752
Worker	0.0564	0.0227	0.3433	7.1000e-004	0.0778	3.8000e-004	0.0782	0.0206	3.5000e-004	0.0210		71.5722	71.5722	2.5200e-003	2.2400e-003	72.3014
Total	**0.0668**	**0.2124**	**0.4361**	**1.8400e-003**	**3.3921**	**2.2200e-003**	**3.3943**	**0.3589**	**2.1100e-003**	**0.3610**		**190.1785**	**190.1785**	**3.0500e-003**	**0.0185**	**195.7766**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5510	5.4820	7.0282	0.0114		0.2413	0.2413		0.2220	0.2220		1,105.5711	1,105.5711	0.3576		1,114.5102
Total	**0.5510**	**5.4820**	**7.0282**	**0.0114**		**0.2413**	**0.2413**		**0.2220**	**0.2220**		**1,105.5711**	**1,105.5711**	**0.3576**		**1,114.5102**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0101	0.1871	0.0901	1.1100e-003	3.3143	1.8300e-003	3.3162	0.3383	1.7500e-003	0.3400		116.5482	116.5482	5.2000e-004	0.0159	121.3030
Worker	0.0524	0.0203	0.3167	6.8000e-004	0.0778	3.6000e-004	0.0781	0.0206	3.3000e-004	0.0210		69.1137	69.1137	2.2700e-003	2.0800e-003	69.7903
Total	**0.0625**	**0.2074**	**0.4068**	**1.7900e-003**	**3.3921**	**2.1900e-003**	**3.3943**	**0.3589**	**2.0800e-003**	**0.3610**		**185.6619**	**185.6619**	**2.7900e-003**	**0.0180**	**191.0932**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1397	0.6052	7.7261	0.0114		0.0186	0.0186		0.0186	0.0186	0.0000	1,105.5711	1,105.5711	0.3576		1,114.5102
Total	**0.1397**	**0.6052**	**7.7261**	**0.0114**		**0.0186**	**0.0186**		**0.0186**	**0.0186**	**0.0000**	**1,105.5711**	**1,105.5711**	**0.3576**		**1,114.5102**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0101	0.1871	0.0901	1.1100e-003	3.3143	1.8300e-003	3.3162	0.3383	1.7500e-003	0.3400		116.5482	116.5482	5.2000e-004	0.0159	121.3030
Worker	0.0524	0.0203	0.3167	6.8000e-004	0.0778	3.6000e-004	0.0781	0.0206	3.3000e-004	0.0210		69.1137	69.1137	2.2700e-003	2.0800e-003	69.7903
Total	**0.0625**	**0.2074**	**0.4068**	**1.7900e-003**	**3.3921**	**2.1900e-003**	**3.3943**	**0.3589**	**2.0800e-003**	**0.3610**		**185.6619**	**185.6619**	**2.7900e-003**	**0.0180**	**191.0932**

TNRE Harris Road Facility - Phase 0-1C - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5638	4.9206	7.0257	0.0113		0.2186	0.2186		0.2046	0.2046		1,036.2711	1,036.2711	0.3019		1,043.8179
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5638**	**4.9206**	**7.0257**	**0.0113**		**0.2186**	**0.2186**		**0.2046**	**0.2046**		**1,036.2711**	**1,036.2711**	**0.3019**		**1,043.8179**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0673	0.0261	0.4072	8.8000e-004	0.1000	4.6000e-004	0.1005	0.0265	4.3000e-004	0.0270		88.8604	88.8604	2.9200e-003	2.6700e-003	89.7303
Total	**0.0673**	**0.0261**	**0.4072**	**8.8000e-004**	**0.1000**	**4.6000e-004**	**0.1005**	**0.0265**	**4.3000e-004**	**0.0270**		**88.8604**	**88.8604**	**2.9200e-003**	**2.6700e-003**	**89.7303**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1119	0.4851	6.9028	0.0113		0.0149	0.0149		0.0149	0.0149	0.0000	1,036.2711	1,036.2711	0.3019		1,043.8179
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1119**	**0.4851**	**6.9028**	**0.0113**		**0.0149**	**0.0149**		**0.0149**	**0.0149**	**0.0000**	**1,036.2711**	**1,036.2711**	**0.3019**		**1,043.8179**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0673	0.0261	0.4072	8.8000e-004	0.1000	4.6000e-004	0.1005	0.0265	4.3000e-004	0.0270		88.8604	88.8604	2.9200e-003	2.6700e-003	89.7303
Total	**0.0673**	**0.0261**	**0.4072**	**8.8000e-004**	**0.1000**	**4.6000e-004**	**0.1005**	**0.0265**	**4.3000e-004**	**0.0270**		**88.8604**	**88.8604**	**2.9200e-003**	**2.6700e-003**	**89.7303**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.9085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**13.0793**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0112	4.3500e-003	0.0679	1.5000e-004	0.0167	8.0000e-005	0.0167	4.4200e-003	7.0000e-005	4.4900e-003		14.8101	14.8101	4.9000e-004	4.5000e-004	14.9551
Total	**0.0112**	**4.3500e-003**	**0.0679**	**1.5000e-004**	**0.0167**	**8.0000e-005**	**0.0167**	**4.4200e-003**	**7.0000e-005**	**4.4900e-003**		**14.8101**	**14.8101**	**4.9000e-004**	**4.5000e-004**	**14.9551**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.9085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**12.9382**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0112	4.3500e-003	0.0679	1.5000e-004	0.0167	8.0000e-005	0.0167	4.4200e-003	7.0000e-005	4.4900e-003		14.8101	14.8101	4.9000e-004	4.5000e-004	14.9551
Total	**0.0112**	**4.3500e-003**	**0.0679**	**1.5000e-004**	**0.0167**	**8.0000e-005**	**0.0167**	**4.4200e-003**	**7.0000e-005**	**4.4900e-003**		**14.8101**	**14.8101**	**4.9000e-004**	**4.5000e-004**	**14.9551**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.8383	0.6888	5.7147	0.0106	485.5037	7.5700e-003	485.5113	48.4503	7.0800e-003	48.4574		1,073.3718	1,073.3718	0.0572	0.0529	1,090.5749
Unmitigated	0.8383	0.6888	5.7147	0.0106	485.5037	7.5700e-003	485.5113	48.4503	7.0800e-003	48.4574		1,073.3718	1,073.3718	0.0572	0.0529	1,090.5749

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	131.34	214.56	170.11	328,891	328,891
Total	131.34	214.56	170.11	328,891	328,891

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	6.70	5.00	8.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.521846	0.059402	0.180067	0.151114	0.027614	0.006908	0.008276	0.016396	0.000918	0.000121	0.022925	0.000779	0.003633

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0319	0.2902	0.2438	1.7400e-003		0.0221	0.0221		0.0221	0.0221		348.2574	348.2574	6.6700e-003	6.3800e-003	350.3269
NaturalGas Unmitigated	0.0319	0.2902	0.2438	1.7400e-003		0.0221	0.0221		0.0221	0.0221		348.2574	348.2574	6.6700e-003	6.3800e-003	350.3269

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	2960.19	0.0319	0.2902	0.2438	1.7400e-003		0.0221	0.0221		0.0221	0.0221		348.2574	348.2574	6.6700e-003	6.3800e-003	350.3269
Total		**0.0319**	**0.2902**	**0.2438**	**1.7400e-003**		**0.0221**	**0.0221**		**0.0221**	**0.0221**		**348.2574**	**348.2574**	**6.6700e-003**	**6.3800e-003**	**350.3269**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	2.96019	0.0319	0.2902	0.2438	1.7400e-003		0.0221	0.0221		0.0221	0.0221		348.2574	348.2574	6.6700e-003	6.3800e-003	350.3269
Total		**0.0319**	**0.2902**	**0.2438**	**1.7400e-003**		**0.0221**	**0.0221**		**0.0221**	**0.0221**		**348.2574**	**348.2574**	**6.6700e-003**	**6.3800e-003**	**350.3269**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.7686	3.0000e-005	3.4000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.3100e-003	7.3100e-003	2.0000e-005		7.7900e-003
Unmitigated	0.7686	3.0000e-005	3.4000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.3100e-003	7.3100e-003	2.0000e-005		7.7900e-003

TNRE Harris Road Facility - Phase 0-1C - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0531					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7152					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.1000e-004	3.0000e-005	3.4000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.3100e-003	7.3100e-003	2.0000e-005		7.7900e-003
Total	**0.7686**	**3.0000e-005**	**3.4000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**7.3100e-003**	**7.3100e-003**	**2.0000e-005**		**7.7900e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0531					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7152					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.1000e-004	3.0000e-005	3.4000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.3100e-003	7.3100e-003	2.0000e-005		7.7900e-003
Total	**0.7686**	**3.0000e-005**	**3.4000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**7.3100e-003**	**7.3100e-003**	**2.0000e-005**		**7.7900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

TNRE Harris Road Facility - Phase 0-1C

Imperial County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	33.42	1000sqft	0.77	33,420.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2025
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Imperial Water District is not on list, chose SCE for proxy

Land Use - For construction purposes only

Construction Phase - Schedule provided by client

On-road Fugitive Dust - All employee trips were on paved roads. 95% of haulers and vendors on paved roads.

Grading -

Architectural Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Construction Off-road Equipment Mitigation - Tier 4 Final equipment willl be used where applicable

Area Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Area Mitigation - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	100.00

TNRE Harris Road Facility - Phase 0-1C - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	100
tblAreaCoating	Area_EF_Nonresidential_Interior	150	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	150	50
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	1.00	2.00
tblConstructionPhase	NumDays	2.00	3.00
tblConstructionPhase	NumDays	100.00	161.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	5.00	15.00
tblConstructionPhase	PhaseEndDate	5/31/2024	6/3/2024
tblConstructionPhase	PhaseEndDate	6/4/2024	6/6/2024
tblConstructionPhase	PhaseEndDate	10/22/2024	1/18/2025
tblConstructionPhase	PhaseEndDate	10/29/2024	1/31/2025
tblConstructionPhase	PhaseEndDate	11/5/2024	2/7/2025
tblConstructionPhase	PhaseStartDate	6/1/2024	6/4/2024
tblConstructionPhase	PhaseStartDate	6/5/2024	6/7/2024
tblConstructionPhase	PhaseStartDate	10/23/2024	1/19/2025
tblConstructionPhase	PhaseStartDate	10/30/2024	1/19/2025
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00

2.0 Emissions Summary

TNRE Harris Road Facility - Phase 0-1C - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	0.9363	9.7432	7.4175	0.0144	3.3921	0.4003	3.6767	0.8680	0.3683	1.2363	0.0000	1,399.4851	1,399.4851	0.4429	0.0187	1,410.9444
2025	13.6995	6.0977	9.1873	0.0151	3.3921	0.2707	3.6356	0.3589	0.2566	0.5830	0.0000	1,406.0244	1,406.0244	0.3605	0.0181	1,414.9906
Maximum	**13.6995**	**9.7432**	**9.1873**	**0.0151**	**3.3921**	**0.4003**	**3.6767**	**0.8680**	**0.3683**	**1.2363**	**0.0000**	**1,406.0244**	**1,406.0244**	**0.4429**	**0.0187**	**1,414.9906**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	0.1956	0.8378	8.0761	0.0144	3.3921	0.0232	3.4130	0.3589	0.0232	0.3797	0.0000	1,399.4851	1,399.4851	0.4429	0.0187	1,410.9444
2025	13.1065	0.8324	9.0876	0.0151	3.3921	0.0208	3.4129	0.3589	0.0207	0.3796	0.0000	1,406.0244	1,406.0244	0.3605	0.0181	1,414.9906
Maximum	**13.1065**	**0.8378**	**9.0876**	**0.0151**	**3.3921**	**0.0232**	**3.4130**	**0.3589**	**0.0232**	**0.3797**	**0.0000**	**1,406.0244**	**1,406.0244**	**0.4429**	**0.0187**	**1,414.9906**

TNRE Harris Road Facility - Phase 0-1C - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	9.11	89.46	-3.37	0.00	0.00	93.44	6.65	41.49	92.97	58.26	0.00	0.00	0.00	0.00	0.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.7686	3.0000e-005	3.4000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.3100e-003	7.3100e-003	2.0000e-005		7.7900e-003
Energy	0.0319	0.2902	0.2438	1.7400e-003		0.0221	0.0221		0.0221	0.0221		348.2574	348.2574	6.6700e-003	6.3800e-003	350.3269
Mobile	0.5323	0.7530	4.6516	9.3200e-003	485.5037	7.5800e-003	485.5113	48.4503	7.0900e-003	48.4574		947.5469	947.5469	0.0606	0.0543	965.2453
Total	**1.3328**	**1.0433**	**4.8988**	**0.0111**	**485.5037**	**0.0297**	**485.5334**	**48.4503**	**0.0292**	**48.4795**		**1,295.8116**	**1,295.8116**	**0.0673**	**0.0607**	**1,315.5800**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.7686	3.0000e-005	3.4000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.3100e-003	7.3100e-003	2.0000e-005		7.7900e-003
Energy	0.0319	0.2902	0.2438	1.7400e-003		0.0221	0.0221		0.0221	0.0221		348.2574	348.2574	6.6700e-003	6.3800e-003	350.3269
Mobile	0.5323	0.7530	4.6516	9.3200e-003	485.5037	7.5800e-003	485.5113	48.4503	7.0900e-003	48.4574		947.5469	947.5469	0.0606	0.0543	965.2453
Total	**1.3328**	**1.0433**	**4.8988**	**0.0111**	**485.5037**	**0.0297**	**485.5334**	**48.4503**	**0.0292**	**48.4795**		**1,295.8116**	**1,295.8116**	**0.0673**	**0.0607**	**1,315.5800**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/31/2024	6/3/2024	5	2	
2	Grading	Grading	6/4/2024	6/6/2024	5	3	
3	Building Construction	Building Construction	6/7/2024	1/18/2025	5	161	
4	Paving	Paving	1/19/2025	1/31/2025	5	10	
5	Architectural Coating	Architectural Coating	1/19/2025	2/7/2025	5	15	

Acres of Grading (Site Preparation Phase): 1.5

Acres of Grading (Grading Phase): 0.75

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 50,130; Non-Residential Outdoor: 16,710; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	14.00	5.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7954	0.0000	0.7954	0.0859	0.0000	0.0859			0.0000			0.0000
Off-Road	0.4985	5.6040	3.8921	9.7300e-003		0.2012	0.2012		0.1851	0.1851		942.2742	942.2742	0.3048		949.8930
Total	**0.4985**	**5.6040**	**3.8921**	**9.7300e-003**	**0.7954**	**0.2012**	**0.9966**	**0.0859**	**0.1851**	**0.2710**		**942.2742**	**942.2742**	**0.3048**		**949.8930**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0144	8.4100e-003	0.0907	2.2000e-004	0.0278	1.4000e-004	0.0279	7.3700e-003	1.3000e-004	7.5000e-003		21.7643	21.7643	9.5000e-004	8.1000e-004	22.0301
Total	**0.0144**	**8.4100e-003**	**0.0907**	**2.2000e-004**	**0.0278**	**1.4000e-004**	**0.0279**	**7.3700e-003**	**1.3000e-004**	**7.5000e-003**		**21.7643**	**21.7643**	**9.5000e-004**	**8.1000e-004**	**22.0301**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3102	0.0000	0.3102	0.0335	0.0000	0.0335			0.0000			0.0000
Off-Road	0.1191	0.5162	5.3170	9.7300e-003		0.0159	0.0159		0.0159	0.0159	0.0000	942.2742	942.2742	0.3048		949.8930
Total	**0.1191**	**0.5162**	**5.3170**	**9.7300e-003**	**0.3102**	**0.0159**	**0.3261**	**0.0335**	**0.0159**	**0.0494**	**0.0000**	**942.2742**	**942.2742**	**0.3048**		**949.8930**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0144	8.4100e-003	0.0907	2.2000e-004	0.0278	1.4000e-004	0.0279	7.3700e-003	1.3000e-004	7.5000e-003		21.7643	21.7643	9.5000e-004	8.1000e-004	22.0301
Total	**0.0144**	**8.4100e-003**	**0.0907**	**2.2000e-004**	**0.0278**	**1.4000e-004**	**0.0279**	**7.3700e-003**	**1.3000e-004**	**7.5000e-003**		**21.7643**	**21.7643**	**9.5000e-004**	**8.1000e-004**	**22.0301**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.7707	0.0000	1.7707	0.8562	0.0000	0.8562			0.0000			0.0000
Off-Road	0.9132	9.7297	5.5468	0.0141		0.4001	0.4001		0.3681	0.3681		1,364.6623	1,364.6623	0.4414		1,375.6962
Total	**0.9132**	**9.7297**	**5.5468**	**0.0141**	**1.7707**	**0.4001**	**2.1708**	**0.8562**	**0.3681**	**1.2243**		**1,364.6623**	**1,364.6623**	**0.4414**		**1,375.6962**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0231	0.0135	0.1450	3.4000e-004	0.0445	2.2000e-004	0.0447	0.0118	2.0000e-004	0.0120		34.8228	34.8228	1.5200e-003	1.3000e-003	35.2482
Total	**0.0231**	**0.0135**	**0.1450**	**3.4000e-004**	**0.0445**	**2.2000e-004**	**0.0447**	**0.0118**	**2.0000e-004**	**0.0120**		**34.8228**	**34.8228**	**1.5200e-003**	**1.3000e-003**	**35.2482**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6906	0.0000	0.6906	0.3339	0.0000	0.3339			0.0000			0.0000
Off-Road	0.1725	0.7475	7.1557	0.0141		0.0230	0.0230		0.0230	0.0230	0.0000	1,364.6623	1,364.6623	0.4414		1,375.6962
Total	**0.1725**	**0.7475**	**7.1557**	**0.0141**	**0.6906**	**0.0230**	**0.7136**	**0.3339**	**0.0230**	**0.3569**	**0.0000**	**1,364.6623**	**1,364.6623**	**0.4414**		**1,375.6962**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0231	0.0135	0.1450	3.4000e-004	0.0445	2.2000e-004	0.0447	0.0118	2.0000e-004	0.0120		34.8228	34.8228	1.5200e-003	1.3000e-003	35.2482
Total	**0.0231**	**0.0135**	**0.1450**	**3.4000e-004**	**0.0445**	**2.2000e-004**	**0.0447**	**0.0118**	**2.0000e-004**	**0.0120**		**34.8228**	**34.8228**	**1.5200e-003**	**1.3000e-003**	**35.2482**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5950	5.9739	7.0675	0.0114		0.2824	0.2824		0.2598	0.2598		1,104.9834	1,104.9834	0.3574		1,113.9177
Total	**0.5950**	**5.9739**	**7.0675**	**0.0114**		**0.2824**	**0.2824**		**0.2598**	**0.2598**		**1,104.9834**	**1,104.9834**	**0.3574**		**1,113.9177**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.7400e-003	0.2091	0.0962	1.1300e-003	3.3143	1.8500e-003	3.3162	0.3383	1.7700e-003	0.3401		118.8788	118.8788	5.1000e-004	0.0164	123.7723
Worker	0.0404	0.0235	0.2538	6.0000e-004	0.0778	3.8000e-004	0.0782	0.0206	3.5000e-004	0.0210		60.9400	60.9400	2.6500e-003	2.2800e-003	61.6843
Total	**0.0501**	**0.2326**	**0.3500**	**1.7300e-003**	**3.3921**	**2.2300e-003**	**3.3943**	**0.3589**	**2.1200e-003**	**0.3610**		**179.8187**	**179.8187**	**3.1600e-003**	**0.0187**	**185.4566**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1397	0.6052	7.7261	0.0114		0.0186	0.0186		0.0186	0.0186	0.0000	1,104.9834	1,104.9834	0.3574		1,113.9177
Total	**0.1397**	**0.6052**	**7.7261**	**0.0114**		**0.0186**	**0.0186**		**0.0186**	**0.0186**	**0.0000**	**1,104.9834**	**1,104.9834**	**0.3574**		**1,113.9177**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.7400e-003	0.2091	0.0962	1.1300e-003	3.3143	1.8500e-003	3.3162	0.3383	1.7700e-003	0.3401		118.8788	118.8788	5.1000e-004	0.0164	123.7723
Worker	0.0404	0.0235	0.2538	6.0000e-004	0.0778	3.8000e-004	0.0782	0.0206	3.5000e-004	0.0210		60.9400	60.9400	2.6500e-003	2.2800e-003	61.6843
Total	**0.0501**	**0.2326**	**0.3500**	**1.7300e-003**	**3.3921**	**2.2300e-003**	**3.3943**	**0.3589**	**2.1200e-003**	**0.3610**		**179.8187**	**179.8187**	**3.1600e-003**	**0.0187**	**185.4566**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5510	5.4820	7.0282	0.0114		0.2413	0.2413		0.2220	0.2220		1,105.5711	1,105.5711	0.3576		1,114.5102
Total	**0.5510**	**5.4820**	**7.0282**	**0.0114**		**0.2413**	**0.2413**		**0.2220**	**0.2220**		**1,105.5711**	**1,105.5711**	**0.3576**		**1,114.5102**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.4700e-003	0.2062	0.0935	1.1100e-003	3.3143	1.8400e-003	3.3162	0.3383	1.7600e-003	0.3400		116.8197	116.8197	5.0000e-004	0.0160	121.5980
Worker	0.0376	0.0210	0.2349	5.8000e-004	0.0778	3.6000e-004	0.0781	0.0206	3.3000e-004	0.0210		58.8702	58.8702	2.4000e-003	2.1200e-003	59.5606
Total	**0.0471**	**0.2272**	**0.3285**	**1.6900e-003**	**3.3921**	**2.2000e-003**	**3.3943**	**0.3589**	**2.0900e-003**	**0.3610**		**175.6899**	**175.6899**	**2.9000e-003**	**0.0181**	**181.1586**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1397	0.6052	7.7261	0.0114		0.0186	0.0186		0.0186	0.0186	0.0000	1,105.5711	1,105.5711	0.3576		1,114.5102
Total	**0.1397**	**0.6052**	**7.7261**	**0.0114**		**0.0186**	**0.0186**		**0.0186**	**0.0186**	**0.0000**	**1,105.5711**	**1,105.5711**	**0.3576**		**1,114.5102**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.4700e-003	0.2062	0.0935	1.1100e-003	3.3143	1.8400e-003	3.3162	0.3383	1.7600e-003	0.3400		116.8197	116.8197	5.0000e-004	0.0160	121.5980
Worker	0.0376	0.0210	0.2349	5.8000e-004	0.0778	3.6000e-004	0.0781	0.0206	3.3000e-004	0.0210		58.8702	58.8702	2.4000e-003	2.1200e-003	59.5606
Total	**0.0471**	**0.2272**	**0.3285**	**1.6900e-003**	**3.3921**	**2.2000e-003**	**3.3943**	**0.3589**	**2.0900e-003**	**0.3610**		**175.6899**	**175.6899**	**2.9000e-003**	**0.0181**	**181.1586**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5638	4.9206	7.0257	0.0113		0.2186	0.2186		0.2046	0.2046		1,036.2711	1,036.2711	0.3019		1,043.8179
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5638**	**4.9206**	**7.0257**	**0.0113**		**0.2186**	**0.2186**		**0.2046**	**0.2046**		**1,036.2711**	**1,036.2711**	**0.3019**		**1,043.8179**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0483	0.0271	0.3021	7.5000e-004	0.1000	4.6000e-004	0.1005	0.0265	4.3000e-004	0.0270		75.6902	75.6902	3.0900e-003	2.7200e-003	76.5779
Total	**0.0483**	**0.0271**	**0.3021**	**7.5000e-004**	**0.1000**	**4.6000e-004**	**0.1005**	**0.0265**	**4.3000e-004**	**0.0270**		**75.6902**	**75.6902**	**3.0900e-003**	**2.7200e-003**	**76.5779**

TNRE Harris Road Facility - Phase 0-1C - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1119	0.4851	6.9028	0.0113		0.0149	0.0149		0.0149	0.0149	0.0000	1,036.2711	1,036.2711	0.3019		1,043.8179
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1119**	**0.4851**	**6.9028**	**0.0113**		**0.0149**	**0.0149**		**0.0149**	**0.0149**	**0.0000**	**1,036.2711**	**1,036.2711**	**0.3019**		**1,043.8179**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0483	0.0271	0.3021	7.5000e-004	0.1000	4.6000e-004	0.1005	0.0265	4.3000e-004	0.0270		75.6902	75.6902	3.0900e-003	2.7200e-003	76.5779
Total	**0.0483**	**0.0271**	**0.3021**	**7.5000e-004**	**0.1000**	**4.6000e-004**	**0.1005**	**0.0265**	**4.3000e-004**	**0.0270**		**75.6902**	**75.6902**	**3.0900e-003**	**2.7200e-003**	**76.5779**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.9085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**13.0793**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0500e-003	4.5100e-003	0.0503	1.2000e-004	0.0167	8.0000e-005	0.0167	4.4200e-003	7.0000e-005	4.4900e-003		12.6150	12.6150	5.1000e-004	4.5000e-004	12.7630
Total	**8.0500e-003**	**4.5100e-003**	**0.0503**	**1.2000e-004**	**0.0167**	**8.0000e-005**	**0.0167**	**4.4200e-003**	**7.0000e-005**	**4.4900e-003**		**12.6150**	**12.6150**	**5.1000e-004**	**4.5000e-004**	**12.7630**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.9085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**12.9382**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0500e-003	4.5100e-003	0.0503	1.2000e-004	0.0167	8.0000e-005	0.0167	4.4200e-003	7.0000e-005	4.4900e-003		12.6150	12.6150	5.1000e-004	4.5000e-004	12.7630
Total	**8.0500e-003**	**4.5100e-003**	**0.0503**	**1.2000e-004**	**0.0167**	**8.0000e-005**	**0.0167**	**4.4200e-003**	**7.0000e-005**	**4.4900e-003**		**12.6150**	**12.6150**	**5.1000e-004**	**4.5000e-004**	**12.7630**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5323	0.7530	4.6516	9.3200e-003	485.5037	7.5800e-003	485.5113	48.4503	7.0900e-003	48.4574		947.5469	947.5469	0.0606	0.0543	965.2453
Unmitigated	0.5323	0.7530	4.6516	9.3200e-003	485.5037	7.5800e-003	485.5113	48.4503	7.0900e-003	48.4574		947.5469	947.5469	0.0606	0.0543	965.2453

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	131.34	214.56	170.11	328,891	328,891
Total	131.34	214.56	170.11	328,891	328,891

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	6.70	5.00	8.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.521846	0.059402	0.180067	0.151114	0.027614	0.006908	0.008276	0.016396	0.000918	0.000121	0.022925	0.000779	0.003633

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0319	0.2902	0.2438	1.7400e-003		0.0221	0.0221		0.0221	0.0221		348.2574	348.2574	6.6700e-003	6.3800e-003	350.3269
NaturalGas Unmitigated	0.0319	0.2902	0.2438	1.7400e-003		0.0221	0.0221		0.0221	0.0221		348.2574	348.2574	6.6700e-003	6.3800e-003	350.3269

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	2960.19	0.0319	0.2902	0.2438	1.7400e-003		0.0221	0.0221		0.0221	0.0221		348.2574	348.2574	6.6700e-003	6.3800e-003	350.3269
Total		**0.0319**	**0.2902**	**0.2438**	**1.7400e-003**		**0.0221**	**0.0221**		**0.0221**	**0.0221**		**348.2574**	**348.2574**	**6.6700e-003**	**6.3800e-003**	**350.3269**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	2.96019	0.0319	0.2902	0.2438	1.7400e-003		0.0221	0.0221		0.0221	0.0221		348.2574	348.2574	6.6700e-003	6.3800e-003	350.3269
Total		**0.0319**	**0.2902**	**0.2438**	**1.7400e-003**		**0.0221**	**0.0221**		**0.0221**	**0.0221**		**348.2574**	**348.2574**	**6.6700e-003**	**6.3800e-003**	**350.3269**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.7686	3.0000e-005	3.4000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.3100e-003	7.3100e-003	2.0000e-005		7.7900e-003
Unmitigated	0.7686	3.0000e-005	3.4000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.3100e-003	7.3100e-003	2.0000e-005		7.7900e-003

TNRE Harris Road Facility - Phase 0-1C - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0531					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7152					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.1000e-004	3.0000e-005	3.4000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.3100e-003	7.3100e-003	2.0000e-005		7.7900e-003
Total	**0.7686**	**3.0000e-005**	**3.4000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**7.3100e-003**	**7.3100e-003**	**2.0000e-005**		**7.7900e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0531					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7152					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.1000e-004	3.0000e-005	3.4000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.3100e-003	7.3100e-003	2.0000e-005		7.7900e-003
Total	**0.7686**	**3.0000e-005**	**3.4000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**7.3100e-003**	**7.3100e-003**	**2.0000e-005**		**7.7900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

TNRE Harris Road Facility - Phase 0-1C - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

TNRE Harris Road Facility - Phase 0-1C

Imperial County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	33.42	1000sqft	0.77	33,420.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2025
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Imperial Water District is not on list, chose SCE for proxy

Land Use - For construction purposes only

Construction Phase - Schedule provided by client

On-road Fugitive Dust - All employee trips were on paved roads. 95% of haulers and vendors on paved roads.

Grading -

Architectural Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Construction Off-road Equipment Mitigation - Tier 4 Final equipment willl be used where applicable

Area Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Area Mitigation - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	100.00

TNRE Harris Road Facility - Phase 0-1C - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	100
tblAreaCoating	Area_EF_Nonresidential_Interior	150	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	150	50
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	1.00	2.00
tblConstructionPhase	NumDays	2.00	3.00
tblConstructionPhase	NumDays	100.00	161.00

TNRE Harris Road Facility - Phase 0-1C - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	5.00	15.00
tblConstructionPhase	PhaseEndDate	5/31/2024	6/3/2024
tblConstructionPhase	PhaseEndDate	6/4/2024	6/6/2024
tblConstructionPhase	PhaseEndDate	10/22/2024	1/18/2025
tblConstructionPhase	PhaseEndDate	10/29/2024	1/31/2025
tblConstructionPhase	PhaseEndDate	11/5/2024	2/7/2025
tblConstructionPhase	PhaseStartDate	6/1/2024	6/4/2024
tblConstructionPhase	PhaseStartDate	6/5/2024	6/7/2024
tblConstructionPhase	PhaseStartDate	10/23/2024	1/19/2025
tblConstructionPhase	PhaseStartDate	10/30/2024	1/19/2025
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0500	0.4791	0.5631	1.0100e-003	0.2465	0.0219	0.2684	0.0272	0.0201	0.0473	0.0000	89.3162	89.3162	0.0251	1.2500e-003	90.3155
2025	0.1052	0.0704	0.0987	1.7000e-004	0.0220	3.0600e-003	0.0250	2.4300e-003	2.8700e-003	5.2900e-003	0.0000	14.6541	14.6541	3.6100e-003	1.2000e-004	14.7807
Maximum	**0.1052**	**0.4791**	**0.5631**	**1.0100e-003**	**0.2465**	**0.0219**	**0.2684**	**0.0272**	**0.0201**	**0.0473**	**0.0000**	**89.3162**	**89.3162**	**0.0251**	**1.2500e-003**	**90.3155**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0148	0.0633	0.6157	1.0100e-003	0.2444	1.5900e-003	0.2460	0.0263	1.5900e-003	0.0279	0.0000	89.3161	89.3161	0.0251	1.2500e-003	90.3154
2025	0.0992	8.9300e-003	0.1028	1.7000e-004	0.0220	2.4000e-004	0.0222	2.4300e-003	2.4000e-004	2.6700e-003	0.0000	14.6541	14.6541	3.6100e-003	1.2000e-004	14.7807
Maximum	**0.0992**	**0.0633**	**0.6157**	**1.0100e-003**	**0.2444**	**1.5900e-003**	**0.2460**	**0.0263**	**1.5900e-003**	**0.0279**	**0.0000**	**89.3161**	**89.3161**	**0.0251**	**1.2500e-003**	**90.3154**

TNRE Harris Road Facility - Phase 0-1C - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**26.54**	**86.86**	**-8.56**	**0.00**	**0.79**	**92.66**	**8.59**	**2.84**	**92.04**	**41.83**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**5-31-2024**	**8-30-2024**	0.2281	0.0331
2	**8-31-2024**	**11-29-2024**	0.2226	0.0334
3	**11-30-2024**	**2-27-2025**	0.2464	0.1148
		Highest	0.2464	0.1148

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1402	0.0000	3.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.0000e-004	6.0000e-004	0.0000	0.0000	6.4000e-004
Energy	5.8300e-003	0.0530	0.0445	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003	0.0000	86.2267	86.2267	6.0700e-003	1.6600e-003	86.8727
Mobile	0.0803	0.0924	0.6127	1.2400e-003	61.2668	9.5000e-004	61.2678	6.1140	8.9000e-004	6.1149	0.0000	114.2126	114.2126	6.5400e-003	6.1100e-003	116.1982
Waste						0.0000	0.0000		0.0000	0.0000	8.4120	0.0000	8.4120	0.4971	0.0000	20.8402
Water						0.0000	0.0000		0.0000	0.0000	2.4519	8.6717	11.1236	0.2533	6.1300e-003	19.2834
Total	**0.2263**	**0.1453**	**0.6575**	**1.5600e-003**	**61.2668**	**4.9800e-003**	**61.2718**	**6.1140**	**4.9200e-003**	**6.1189**	**10.8638**	**209.1117**	**219.9755**	**0.7631**	**0.0139**	**243.1951**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1402	0.0000	3.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.0000e-004	6.0000e-004	0.0000	0.0000	6.4000e-004
Energy	5.8300e-003	0.0530	0.0445	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003	0.0000	86.2267	86.2267	6.0700e-003	1.6600e-003	86.8727
Mobile	0.0803	0.0924	0.6127	1.2400e-003	61.2668	9.5000e-004	61.2678	6.1140	8.9000e-004	6.1149	0.0000	114.2126	114.2126	6.5400e-003	6.1100e-003	116.1982
Waste						0.0000	0.0000		0.0000	0.0000	8.4120	0.0000	8.4120	0.4971	0.0000	20.8402
Water						0.0000	0.0000		0.0000	0.0000	2.4519	8.6717	11.1236	0.2533	6.1300e-003	19.2834
Total	**0.2263**	**0.1453**	**0.6575**	**1.5600e-003**	**61.2668**	**4.9800e-003**	**61.2718**	**6.1140**	**4.9200e-003**	**6.1189**	**10.8638**	**209.1117**	**219.9755**	**0.7631**	**0.0139**	**243.1951**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/31/2024	6/3/2024	5	2	
2	Grading	Grading	6/4/2024	6/6/2024	5	3	
3	Building Construction	Building Construction	6/7/2024	1/18/2025	5	161	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Paving	Paving	1/19/2025	1/31/2025	5	10	
5	Architectural Coating	Architectural Coating	1/19/2025	2/7/2025	5	15	

Acres of Grading (Site Preparation Phase): 1.5

Acres of Grading (Grading Phase): 0.75

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 50,130; Non-Residential Outdoor: 16,710; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Grading	3	8.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	14.00	5.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.0000e-004	0.0000	8.0000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.0000e-004	5.6000e-003	3.8900e-003	1.0000e-005		2.0000e-004	2.0000e-004		1.9000e-004	1.9000e-004	0.0000	0.8548	0.8548	2.8000e-004	0.0000	0.8617
Total	**5.0000e-004**	**5.6000e-003**	**3.8900e-003**	**1.0000e-005**	**8.0000e-004**	**2.0000e-004**	**1.0000e-003**	**9.0000e-005**	**1.9000e-004**	**2.8000e-004**	**0.0000**	**0.8548**	**0.8548**	**2.8000e-004**	**0.0000**	**0.8617**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0212	0.0212	0.0000	0.0000	0.0214
Total	**2.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0212**	**0.0212**	**0.0000**	**0.0000**	**0.0214**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.1000e-004	0.0000	3.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2000e-004	5.2000e-004	5.3200e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.8548	0.8548	2.8000e-004	0.0000	0.8617
Total	**1.2000e-004**	**5.2000e-004**	**5.3200e-003**	**1.0000e-005**	**3.1000e-004**	**2.0000e-005**	**3.3000e-004**	**3.0000e-005**	**2.0000e-005**	**5.0000e-005**	**0.0000**	**0.8548**	**0.8548**	**2.8000e-004**	**0.0000**	**0.8617**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0212	0.0212	0.0000	0.0000	0.0214
Total	**2.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0212**	**0.0212**	**0.0000**	**0.0000**	**0.0214**

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6600e-003	0.0000	2.6600e-003	1.2800e-003	0.0000	1.2800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3700e-003	0.0146	8.3200e-003	2.0000e-005		6.0000e-004	6.0000e-004		5.5000e-004	5.5000e-004	0.0000	1.8570	1.8570	6.0000e-004	0.0000	1.8720
Total	**1.3700e-003**	**0.0146**	**8.3200e-003**	**2.0000e-005**	**2.6600e-003**	**6.0000e-004**	**3.2600e-003**	**1.2800e-003**	**5.5000e-004**	**1.8300e-003**	**0.0000**	**1.8570**	**1.8570**	**6.0000e-004**	**0.0000**	**1.8720**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	2.0000e-005	2.4000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0508	0.0508	0.0000	0.0000	0.0513
Total	**4.0000e-005**	**2.0000e-005**	**2.4000e-004**	**0.0000**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0508**	**0.0508**	**0.0000**	**0.0000**	**0.0513**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0400e-003	0.0000	1.0400e-003	5.0000e-004	0.0000	5.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6000e-004	1.1200e-003	0.0107	2.0000e-005		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.8570	1.8570	6.0000e-004	0.0000	1.8720
Total	**2.6000e-004**	**1.1200e-003**	**0.0107**	**2.0000e-005**	**1.0400e-003**	**3.0000e-005**	**1.0700e-003**	**5.0000e-004**	**3.0000e-005**	**5.3000e-004**	**0.0000**	**1.8570**	**1.8570**	**6.0000e-004**	**0.0000**	**1.8720**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	2.0000e-005	2.4000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0508	0.0508	0.0000	0.0000	0.0513
Total	**4.0000e-005**	**2.0000e-005**	**2.4000e-004**	**0.0000**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0508**	**0.0508**	**0.0000**	**0.0000**	**0.0513**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0440	0.4421	0.5230	8.4000e-004		0.0209	0.0209		0.0192	0.0192	0.0000	74.1794	74.1794	0.0240	0.0000	74.7792
Total	**0.0440**	**0.4421**	**0.5230**	**8.4000e-004**		**0.0209**	**0.0209**		**0.0192**	**0.0192**	**0.0000**	**74.1794**	**74.1794**	**0.0240**	**0.0000**	**74.7792**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.3000e-004	0.0151	6.9700e-003	8.0000e-005	0.2373	1.4000e-004	0.2374	0.0242	1.3000e-004	0.0244	0.0000	7.9699	7.9699	4.0000e-005	1.1000e-003	8.2977
Worker	3.3000e-003	1.7000e-003	0.0206	5.0000e-005	5.7100e-003	3.0000e-005	5.7400e-003	1.5200e-003	3.0000e-005	1.5400e-003	0.0000	4.3832	4.3832	1.7000e-004	1.5000e-004	4.4321
Total	**4.0300e-003**	**0.0168**	**0.0276**	**1.3000e-004**	**0.2430**	**1.7000e-004**	**0.2432**	**0.0258**	**1.6000e-004**	**0.0259**	**0.0000**	**12.3531**	**12.3531**	**2.1000e-004**	**1.2500e-003**	**12.7299**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0103	0.0448	0.5717	8.4000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	74.1793	74.1793	0.0240	0.0000	74.7791
Total	**0.0103**	**0.0448**	**0.5717**	**8.4000e-004**		**1.3800e-003**	**1.3800e-003**		**1.3800e-003**	**1.3800e-003**	**0.0000**	**74.1793**	**74.1793**	**0.0240**	**0.0000**	**74.7791**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.3000e-004	0.0151	6.9700e-003	8.0000e-005	0.2373	1.4000e-004	0.2374	0.0242	1.3000e-004	0.0244	0.0000	7.9699	7.9699	4.0000e-005	1.1000e-003	8.2977
Worker	3.3000e-003	1.7000e-003	0.0206	5.0000e-005	5.7100e-003	3.0000e-005	5.7400e-003	1.5200e-003	3.0000e-005	1.5400e-003	0.0000	4.3832	4.3832	1.7000e-004	1.5000e-004	4.4321
Total	**4.0300e-003**	**0.0168**	**0.0276**	**1.3000e-004**	**0.2430**	**1.7000e-004**	**0.2432**	**0.0258**	**1.6000e-004**	**0.0259**	**0.0000**	**12.3531**	**12.3531**	**2.1000e-004**	**1.2500e-003**	**12.7299**

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.5800e-003	0.0356	0.0457	7.0000e-005		1.5700e-003	1.5700e-003		1.4400e-003	1.4400e-003	0.0000	6.5192	6.5192	2.1100e-003	0.0000	6.5719
Total	**3.5800e-003**	**0.0356**	**0.0457**	**7.0000e-005**		**1.5700e-003**	**1.5700e-003**		**1.4400e-003**	**1.4400e-003**	**0.0000**	**6.5192**	**6.5192**	**2.1100e-003**	**0.0000**	**6.5719**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-005	1.3100e-003	5.9000e-004	1.0000e-005	0.0208	1.0000e-005	0.0209	2.1300e-003	1.0000e-005	2.1400e-003	0.0000	0.6879	0.6879	0.0000	9.0000e-005	0.7160
Worker	2.7000e-004	1.3000e-004	1.6700e-003	0.0000	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.3719	0.3719	1.0000e-005	1.0000e-005	0.3759
Total	**3.3000e-004**	**1.4400e-003**	**2.2600e-003**	**1.0000e-005**	**0.0213**	**1.0000e-005**	**0.0214**	**2.2600e-003**	**1.0000e-005**	**2.2800e-003**	**0.0000**	**1.0598**	**1.0598**	**1.0000e-005**	**1.0000e-004**	**1.0919**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.1000e-004	3.9300e-003	0.0502	7.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	6.5192	6.5192	2.1100e-003	0.0000	6.5719
Total	**9.1000e-004**	**3.9300e-003**	**0.0502**	**7.0000e-005**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**	**0.0000**	**6.5192**	**6.5192**	**2.1100e-003**	**0.0000**	**6.5719**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-005	1.3100e-003	5.9000e-004	1.0000e-005	0.0208	1.0000e-005	0.0209	2.1300e-003	1.0000e-005	2.1400e-003	0.0000	0.6879	0.6879	0.0000	9.0000e-005	0.7160
Worker	2.7000e-004	1.3000e-004	1.6700e-003	0.0000	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.3719	0.3719	1.0000e-005	1.0000e-005	0.3759
Total	**3.3000e-004**	**1.4400e-003**	**2.2600e-003**	**1.0000e-005**	**0.0213**	**1.0000e-005**	**0.0214**	**2.2600e-003**	**1.0000e-005**	**2.2800e-003**	**0.0000**	**1.0598**	**1.0598**	**1.0000e-005**	**1.0000e-004**	**1.0919**

3.5 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.8200e-003	0.0246	0.0351	6.0000e-005		1.0900e-003	1.0900e-003		1.0200e-003	1.0200e-003	0.0000	4.7005	4.7005	1.3700e-003	0.0000	4.7347
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.8200e-003**	**0.0246**	**0.0351**	**6.0000e-005**		**1.0900e-003**	**1.0900e-003**		**1.0200e-003**	**1.0200e-003**	**0.0000**	**4.7005**	**4.7005**	**1.3700e-003**	**0.0000**	**4.7347**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	1.3000e-004	1.6500e-003	0.0000	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3678	0.3678	1.0000e-005	1.0000e-005	0.3717
Total	**2.7000e-004**	**1.3000e-004**	**1.6500e-003**	**0.0000**	**5.0000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3678**	**0.3678**	**1.0000e-005**	**1.0000e-005**	**0.3717**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.6000e-004	2.4300e-003	0.0345	6.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	4.7004	4.7004	1.3700e-003	0.0000	4.7347
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.6000e-004**	**2.4300e-003**	**0.0345**	**6.0000e-005**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**4.7004**	**4.7004**	**1.3700e-003**	**0.0000**	**4.7347**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	1.3000e-004	1.6500e-003	0.0000	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3678	0.3678	1.0000e-005	1.0000e-005	0.3717
Total	**2.7000e-004**	**1.3000e-004**	**1.6500e-003**	**0.0000**	**5.0000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3678**	**0.3678**	**1.0000e-005**	**1.0000e-005**	**0.3717**

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0968					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2800e-003	8.5900e-003	0.0136	2.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	1.9149	1.9149	1.0000e-004	0.0000	1.9176
Total	**0.0981**	**8.5900e-003**	**0.0136**	**2.0000e-005**		**3.9000e-004**	**3.9000e-004**		**3.9000e-004**	**3.9000e-004**	**0.0000**	**1.9149**	**1.9149**	**1.0000e-004**	**0.0000**	**1.9176**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	3.0000e-005	4.1000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0920	0.0920	0.0000	0.0000	0.0929
Total	**7.0000e-005**	**3.0000e-005**	**4.1000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0920**	**0.0920**	**0.0000**	**0.0000**	**0.0929**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0968					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2000e-004	9.7000e-004	0.0137	2.0000e-005		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.9149	1.9149	1.0000e-004	0.0000	1.9176
Total	**0.0970**	**9.7000e-004**	**0.0137**	**2.0000e-005**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**1.9149**	**1.9149**	**1.0000e-004**	**0.0000**	**1.9176**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	3.0000e-005	4.1000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0920	0.0920	0.0000	0.0000	0.0929
Total	**7.0000e-005**	**3.0000e-005**	**4.1000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0920**	**0.0920**	**0.0000**	**0.0000**	**0.0929**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0803	0.0924	0.6127	1.2400e-003	61.2668	9.5000e-004	61.2678	6.1140	8.9000e-004	6.1149	0.0000	114.2126	114.2126	6.5400e-003	6.1100e-003	116.1982
Unmitigated	0.0803	0.0924	0.6127	1.2400e-003	61.2668	9.5000e-004	61.2678	6.1140	8.9000e-004	6.1149	0.0000	114.2126	114.2126	6.5400e-003	6.1100e-003	116.1982

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	131.34	214.56	170.11	328,891	328,891
Total	131.34	214.56	170.11	328,891	328,891

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	6.70	5.00	8.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.521846	0.059402	0.180067	0.151114	0.027614	0.006908	0.008276	0.016396	0.000918	0.000121	0.022925	0.000779	0.003633

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	28.5688	28.5688	4.9600e-003	6.0000e-004	28.8721
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	28.5688	28.5688	4.9600e-003	6.0000e-004	28.8721
NaturalGas Mitigated	5.8300e-003	0.0530	0.0445	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003	0.0000	57.6579	57.6579	1.1100e-003	1.0600e-003	58.0006
NaturalGas Unmitigated	5.8300e-003	0.0530	0.0445	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003	0.0000	57.6579	57.6579	1.1100e-003	1.0600e-003	58.0006

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	1.08047e+006	5.8300e-003	0.0530	0.0445	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003	0.0000	57.6579	57.6579	1.1100e-003	1.0600e-003	58.0006
Total		**5.8300e-003**	**0.0530**	**0.0445**	**3.2000e-004**		**4.0300e-003**	**4.0300e-003**		**4.0300e-003**	**4.0300e-003**	**0.0000**	**57.6579**	**57.6579**	**1.1100e-003**	**1.0600e-003**	**58.0006**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	1.08047e+006	5.8300e-003	0.0530	0.0445	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003	0.0000	57.6579	57.6579	1.1100e-003	1.0600e-003	58.0006
Total		**5.8300e-003**	**0.0530**	**0.0445**	**3.2000e-004**		**4.0300e-003**	**4.0300e-003**		**4.0300e-003**	**4.0300e-003**	**0.0000**	**57.6579**	**57.6579**	**1.1100e-003**	**1.0600e-003**	**58.0006**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	331526	28.5688	4.9600e-003	6.0000e-004	28.8721
Total		**28.5688**	**4.9600e-003**	**6.0000e-004**	**28.8721**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	331526	28.5688	4.9600e-003	6.0000e-004	28.8721
Total		**28.5688**	**4.9600e-003**	**6.0000e-004**	**28.8721**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1402	0.0000	3.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.0000e-004	6.0000e-004	0.0000	0.0000	6.4000e-004
Unmitigated	0.1402	0.0000	3.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.0000e-004	6.0000e-004	0.0000	0.0000	6.4000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.6800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1305					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.0000e-004	6.0000e-004	0.0000	0.0000	6.4000e-004
Total	**0.1402**	**0.0000**	**3.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.0000e-004**	**6.0000e-004**	**0.0000**	**0.0000**	**6.4000e-004**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.6800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1305					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.0000e-004	6.0000e-004	0.0000	0.0000	6.4000e-004
Total	**0.1402**	**0.0000**	**3.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.0000e-004**	**6.0000e-004**	**0.0000**	**0.0000**	**6.4000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	11.1236	0.2533	6.1300e-003	19.2834
Unmitigated	11.1236	0.2533	6.1300e-003	19.2834

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	7.72837 / 0	11.1236	0.2533	6.1300e-003	19.2834
Total		**11.1236**	**0.2533**	**6.1300e-003**	**19.2834**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	7.72837 / 0	11.1236	0.2533	6.1300e-003	19.2834
Total		**11.1236**	**0.2533**	**6.1300e-003**	**19.2834**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	8.4120	0.4971	0.0000	20.8402
Unmitigated	8.4120	0.4971	0.0000	20.8402

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	41.44	8.4120	0.4971	0.0000	20.8402
Total		**8.4120**	**0.4971**	**0.0000**	**20.8402**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	41.44	8.4120	0.4971	0.0000	20.8402
Total		**8.4120**	**0.4971**	**0.0000**	**20.8402**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

TNRE Harris Road Facility - Phase 1-A

Imperial County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	145.00	1000sqft	3.33	145,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2026
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Imperial Water District is not on list, chose SCE for proxy

Land Use - For construction purposes only

Construction Phase - Schedule provided by client

On-road Fugitive Dust - All employee trips were on paved roads. 95% of haulers and vendors on paved roads.

Demolition -

Grading -

Architectural Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Construction Off-road Equipment Mitigation - Tier 4 Final equipment willl be used where applicable

Area Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Area Mitigation - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

TNRE Harris Road Facility - Phase 1-A - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	100
tblAreaCoating	Area_EF_Nonresidential_Interior	150	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	150	50
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

TNRE Harris Road Facility - Phase 1-A - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	18.00	62.00
tblConstructionPhase	NumDays	230.00	298.00
tblConstructionPhase	NumDays	20.00	25.00
tblConstructionPhase	NumDays	8.00	9.00
tblConstructionPhase	NumDays	18.00	24.00
tblConstructionPhase	PhaseEndDate	4/2/2026	8/23/2026
tblConstructionPhase	PhaseEndDate	2/11/2026	5/27/2026
tblConstructionPhase	PhaseEndDate	3/7/2025	3/15/2025
tblConstructionPhase	PhaseEndDate	3/26/2025	4/5/2025
tblConstructionPhase	PhaseEndDate	3/9/2026	6/30/2026
tblConstructionPhase	PhaseEndDate	3/14/2025	3/23/2025
tblConstructionPhase	PhaseStartDate	3/10/2026	5/28/2026
tblConstructionPhase	PhaseStartDate	3/27/2025	4/6/2025
tblConstructionPhase	PhaseStartDate	3/15/2025	3/25/2025
tblConstructionPhase	PhaseStartDate	2/12/2026	5/28/2026
tblConstructionPhase	PhaseStartDate	3/8/2025	3/16/2025
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00

2.0 Emissions Summary

TNRE Harris Road Facility - Phase 1-A - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	2.5401	25.2600	19.9023	0.0422	23.6884	1.0873	24.7757	12.1495	1.0003	13.1498	0.0000	4,096.3708	4,096.3708	1.1961	0.0854	4,136.1465
2026	14.6519	13.4344	17.7879	0.0351	16.2477	0.5378	16.7854	1.7137	0.5060	2.2197	0.0000	3,397.4485	3,397.4485	0.6124	0.0831	3,437.5080
Maximum	**14.6519**	**25.2600**	**19.9023**	**0.0422**	**23.6884**	**1.0873**	**24.7757**	**12.1495**	**1.0003**	**13.1498**	**0.0000**	**4,096.3708**	**4,096.3708**	**1.1961**	**0.0854**	**4,136.1465**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	0.6044	3.2213	23.7637	0.0422	16.2477	0.0681	16.2988	4.7545	0.0678	4.8170	0.0000	4,096.3708	4,096.3708	1.1961	0.0854	4,136.1465
2026	13.9105	3.1994	19.1635	0.0351	16.2477	0.0510	16.2987	1.7137	0.0505	1.7642	0.0000	3,397.4485	3,397.4485	0.6124	0.0831	3,437.5080
Maximum	**13.9105**	**3.2213**	**23.7637**	**0.0422**	**16.2477**	**0.0681**	**16.2988**	**4.7545**	**0.0678**	**4.8170**	**0.0000**	**4,096.3708**	**4,096.3708**	**1.1961**	**0.0854**	**4,136.1465**

TNRE Harris Road Facility - Phase 1-A - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	15.57	83.41	-13.89	0.00	18.63	92.67	21.57	53.34	92.15	57.18	0.00	0.00	0.00	0.00	0.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.3345	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338
Energy	0.1385	1.2592	1.0577	7.5500e-003		0.0957	0.0957		0.0957	0.0957		1,510.9911	1,510.9911	0.0290	0.0277	1,519.9702
Mobile	3.4543	2.7820	23.4025	0.0445	2,106.4637	0.0315	2,106.4953	210.2121	0.0295	210.2416		4,517.8484	4,517.8484	0.2352	0.2191	4,589.0332
Total	**6.9273**	**4.0413**	**24.4749**	**0.0520**	**2,106.4637**	**0.1273**	**2,106.5910**	**210.2121**	**0.1252**	**210.3373**		**6,028.8713**	**6,028.8713**	**0.2643**	**0.2468**	**6,109.0372**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.3345	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338
Energy	0.1385	1.2592	1.0577	7.5500e-003		0.0957	0.0957		0.0957	0.0957		1,510.9911	1,510.9911	0.0290	0.0277	1,519.9702
Mobile	3.4543	2.7820	23.4025	0.0445	2,106.4637	0.0315	2,106.4953	210.2121	0.0295	210.2416		4,517.8484	4,517.8484	0.2352	0.2191	4,589.0332
Total	**6.9273**	**4.0413**	**24.4749**	**0.0520**	**2,106.4637**	**0.1273**	**2,106.5910**	**210.2121**	**0.1252**	**210.3373**		**6,028.8713**	**6,028.8713**	**0.2643**	**0.2468**	**6,109.0372**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/10/2025	3/15/2025	5	25	
2	Site Preparation	Site Preparation	3/16/2025	3/23/2025	5	5	
3	Grading	Grading	3/25/2025	4/5/2025	5	9	
4	Building Construction	Building Construction	4/6/2025	5/27/2026	5	298	
5	Paving	Paving	5/28/2026	6/30/2026	5	24	
6	Architectural Coating	Architectural Coating	5/28/2026	8/23/2026	5	62	

Acres of Grading (Site Preparation Phase): 9

Acres of Grading (Grading Phase): 8

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 217,500; Non-Residential Outdoor: 72,500; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	125.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	61.00	24.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Water Exposed Area

3.2 Demolition - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.1218	0.0000	1.1218	0.1699	0.0000	0.1699			0.0000			0.0000
Off-Road	2.0926	19.1966	19.4184	0.0388		0.8528	0.8528		0.7920	0.7920		3,747.5996	3,747.5996	1.0464		3,773.7606
Total	**2.0926**	**19.1966**	**19.4184**	**0.0388**	**1.1218**	**0.8528**	**1.9746**	**0.1699**	**0.7920**	**0.9618**		**3,747.5996**	**3,747.5996**	**1.0464**		**3,773.7606**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0120	0.4721	0.1445	2.5900e-003	7.4428	6.0400e-003	7.4488	0.7575	5.7800e-003	0.7633		274.7209	274.7209	8.4000e-004	0.0432	287.6107
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0561	0.0217	0.3393	7.3000e-004	0.0833	3.9000e-004	0.0837	0.0221	3.6000e-004	0.0225		74.0504	74.0504	2.4300e-003	2.2300e-003	74.7753
Total	**0.0682**	**0.4939**	**0.4839**	**3.3200e-003**	**7.5261**	**6.4300e-003**	**7.5326**	**0.7796**	**6.1400e-003**	**0.7858**		**348.7712**	**348.7712**	**3.2700e-003**	**0.0454**	**362.3859**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4375	0.0000	0.4375	0.0663	0.0000	0.0663			0.0000			0.0000
Off-Road	0.4623	2.0032	23.2798	0.0388		0.0616	0.0616		0.0616	0.0616	0.0000	3,747.5996	3,747.5996	1.0464		3,773.7606
Total	**0.4623**	**2.0032**	**23.2798**	**0.0388**	**0.4375**	**0.0616**	**0.4992**	**0.0663**	**0.0616**	**0.1279**	**0.0000**	**3,747.5996**	**3,747.5996**	**1.0464**		**3,773.7606**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0120	0.4721	0.1445	2.5900e-003	7.4428	6.0400e-003	7.4488	0.7575	5.7800e-003	0.7633		274.7209	274.7209	8.4000e-004	0.0432	287.6107
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0561	0.0217	0.3393	7.3000e-004	0.0833	3.9000e-004	0.0837	0.0221	3.6000e-004	0.0225		74.0504	74.0504	2.4300e-003	2.2300e-003	74.7753
Total	**0.0682**	**0.4939**	**0.4839**	**3.3200e-003**	**7.5261**	**6.4300e-003**	**7.5326**	**0.7796**	**6.1400e-003**	**0.7858**		**348.7712**	**348.7712**	**3.2700e-003**	**0.0454**	**362.3859**

3.3 Site Preparation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					23.5884	0.0000	23.5884	12.1229	0.0000	12.1229			0.0000			0.0000
Off-Road	2.4727	25.2339	17.9118	0.0381		1.0868	1.0868		0.9999	0.9999		3,689.1037	3,689.1037	1.1931		3,718.9320
Total	**2.4727**	**25.2339**	**17.9118**	**0.0381**	**23.5884**	**1.0868**	**24.6752**	**12.1229**	**0.9999**	**13.1228**		**3,689.1037**	**3,689.1037**	**1.1931**		**3,718.9320**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0673	0.0261	0.4072	8.8000e-004	0.1000	4.6000e-004	0.1005	0.0265	4.3000e-004	0.0270		88.8604	88.8604	2.9200e-003	2.6700e-003	89.7303
Total	**0.0673**	**0.0261**	**0.4072**	**8.8000e-004**	**0.1000**	**4.6000e-004**	**0.1005**	**0.0265**	**4.3000e-004**	**0.0270**		**88.8604**	**88.8604**	**2.9200e-003**	**2.6700e-003**	**89.7303**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.1995	0.0000	9.1995	4.7279	0.0000	4.7279			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0381		0.0621	0.0621		0.0621	0.0621	0.0000	3,689.1037	3,689.1037	1.1931		3,718.9320
Total	**0.4656**	**2.0175**	**20.8690**	**0.0381**	**9.1995**	**0.0621**	**9.2616**	**4.7279**	**0.0621**	**4.7900**	**0.0000**	**3,689.1037**	**3,689.1037**	**1.1931**		**3,718.9320**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0673	0.0261	0.4072	8.8000e-004	0.1000	4.6000e-004	0.1005	0.0265	4.3000e-004	0.0270		88.8604	88.8604	2.9200e-003	2.6700e-003	89.7303
Total	**0.0673**	**0.0261**	**0.4072**	**8.8000e-004**	**0.1000**	**4.6000e-004**	**0.1005**	**0.0265**	**4.3000e-004**	**0.0270**		**88.8604**	**88.8604**	**2.9200e-003**	**2.6700e-003**	**89.7303**

3.4 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2956	0.0000	6.2956	3.0442	0.0000	3.0442			0.0000			0.0000
Off-Road	1.5227	15.3148	14.5402	0.0297		0.6236	0.6236		0.5737	0.5737		2,873.7052	2,873.7052	0.9294		2,896.9405
Total	**1.5227**	**15.3148**	**14.5402**	**0.0297**	**6.2956**	**0.6236**	**6.9192**	**3.0442**	**0.5737**	**3.6179**		**2,873.7052**	**2,873.7052**	**0.9294**		**2,896.9405**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0561	0.0217	0.3393	7.3000e-004	0.0833	3.9000e-004	0.0837	0.0221	3.6000e-004	0.0225		74.0504	74.0504	2.4300e-003	2.2300e-003	74.7753
Total	**0.0561**	**0.0217**	**0.3393**	**7.3000e-004**	**0.0833**	**3.9000e-004**	**0.0837**	**0.0221**	**3.6000e-004**	**0.0225**		**74.0504**	**74.0504**	**2.4300e-003**	**2.2300e-003**	**74.7753**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4553	0.0000	2.4553	1.1872	0.0000	1.1872			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0297		0.0484	0.0484		0.0484	0.0484	0.0000	2,873.7052	2,873.7052	0.9294		2,896.9405
Total	**0.3632**	**1.5737**	**17.7527**	**0.0297**	**2.4553**	**0.0484**	**2.5037**	**1.1872**	**0.0484**	**1.2357**	**0.0000**	**2,873.7052**	**2,873.7052**	**0.9294**		**2,896.9405**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0561	0.0217	0.3393	7.3000e-004	0.0833	3.9000e-004	0.0837	0.0221	3.6000e-004	0.0225		74.0504	74.0504	2.4300e-003	2.2300e-003	74.7753
Total	**0.0561**	**0.0217**	**0.3393**	**7.3000e-004**	**0.0833**	**3.9000e-004**	**0.0837**	**0.0221**	**3.6000e-004**	**0.0225**		**74.0504**	**74.0504**	**2.4300e-003**	**2.2300e-003**	**74.7753**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

TNRE Harris Road Facility - Phase 1-A - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0484	0.8982	0.4326	5.3200e-003	15.9088	8.8000e-003	15.9176	1.6238	8.4200e-003	1.6322		559.4315	559.4315	2.4900e-003	0.0764	582.2542
Worker	0.2282	0.0884	1.3799	2.9800e-003	0.3389	1.5700e-003	0.3405	0.0899	1.4500e-003	0.0914		301.1381	301.1381	9.9000e-003	9.0600e-003	304.0861
Total	**0.2766**	**0.9866**	**1.8125**	**8.3000e-003**	**16.2477**	**0.0104**	**16.2580**	**1.7137**	**9.8700e-003**	**1.7236**		**860.5696**	**860.5696**	**0.0124**	**0.0854**	**886.3403**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0484	0.8982	0.4326	5.3200e-003	15.9088	8.8000e-003	15.9176	1.6238	8.4200e-003	1.6322		559.4315	559.4315	2.4900e-003	0.0764	582.2542
Worker	0.2282	0.0884	1.3799	2.9800e-003	0.3389	1.5700e-003	0.3405	0.0899	1.4500e-003	0.0914		301.1381	301.1381	9.9000e-003	9.0600e-003	304.0861
Total	**0.2766**	**0.9866**	**1.8125**	**8.3000e-003**	**16.2477**	**0.0104**	**16.2580**	**1.7137**	**9.8700e-003**	**1.7236**		**860.5696**	**860.5696**	**0.0124**	**0.0854**	**886.3403**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0472	0.8850	0.4220	5.2200e-003	15.9088	8.7200e-003	15.9175	1.6238	8.3400e-003	1.6321		549.3422	549.3422	2.4500e-003	0.0746	571.6228
Worker	0.2124	0.0798	1.2812	2.8900e-003	0.3389	1.4800e-003	0.3404	0.0899	1.3600e-003	0.0913		291.6319	291.6319	8.9600e-003	8.4900e-003	294.3872
Total	**0.2596**	**0.9647**	**1.7032**	**8.1100e-003**	**16.2477**	**0.0102**	**16.2579**	**1.7137**	**9.7000e-003**	**1.7234**		**840.9741**	**840.9741**	**0.0114**	**0.0831**	**866.0100**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0472	0.8850	0.4220	5.2200e-003	15.9088	8.7200e-003	15.9175	1.6238	8.3400e-003	1.6321		549.3422	549.3422	2.4500e-003	0.0746	571.6228
Worker	0.2124	0.0798	1.2812	2.8900e-003	0.3389	1.4800e-003	0.3404	0.0899	1.3600e-003	0.0913		291.6319	291.6319	8.9600e-003	8.4900e-003	294.3872
Total	**0.2596**	**0.9647**	**1.7032**	**8.1100e-003**	**16.2477**	**0.0102**	**16.2579**	**1.7137**	**9.7000e-003**	**1.7234**		**840.9741**	**840.9741**	**0.0114**	**0.0831**	**866.0100**

3.6 Paving - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8197	7.5321	12.1778	0.0189		0.3524	0.3524		0.3259	0.3259		1,805.3926	1,805.3926	0.5673		1,819.5741
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8197**	**7.5321**	**12.1778**	**0.0189**		**0.3524**	**0.3524**		**0.3259**	**0.3259**		**1,805.3926**	**1,805.3926**	**0.5673**		**1,819.5741**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0696	0.0262	0.4201	9.5000e-004	0.1111	4.9000e-004	0.1116	0.0295	4.5000e-004	0.0299		95.6170	95.6170	2.9400e-003	2.7900e-003	96.5204
Total	**0.0696**	**0.0262**	**0.4201**	**9.5000e-004**	**0.1111**	**4.9000e-004**	**0.1116**	**0.0295**	**4.5000e-004**	**0.0299**		**95.6170**	**95.6170**	**2.9400e-003**	**2.7900e-003**	**96.5204**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2194	0.9509	13.5323	0.0189		0.0293	0.0293		0.0293	0.0293	0.0000	1,805.3926	1,805.3926	0.5673		1,819.5741
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2194**	**0.9509**	**13.5323**	**0.0189**		**0.0293**	**0.0293**		**0.0293**	**0.0293**	**0.0000**	**1,805.3926**	**1,805.3926**	**0.5673**		**1,819.5741**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0696	0.0262	0.4201	9.5000e-004	0.1111	4.9000e-004	0.1116	0.0295	4.5000e-004	0.0299		95.6170	95.6170	2.9400e-003	2.7900e-003	96.5204
Total	**0.0696**	**0.0262**	**0.4201**	**9.5000e-004**	**0.1111**	**4.9000e-004**	**0.1116**	**0.0295**	**4.5000e-004**	**0.0299**		**95.6170**	**95.6170**	**2.9400e-003**	**2.7900e-003**	**96.5204**

3.7 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	13.5499					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**13.7208**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0418	0.0157	0.2520	5.7000e-004	0.0667	2.9000e-004	0.0670	0.0177	2.7000e-004	0.0180		57.3702	57.3702	1.7600e-003	1.6700e-003	57.9122
Total	**0.0418**	**0.0157**	**0.2520**	**5.7000e-004**	**0.0667**	**2.9000e-004**	**0.0670**	**0.0177**	**2.7000e-004**	**0.0180**		**57.3702**	**57.3702**	**1.7600e-003**	**1.6700e-003**	**57.9122**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	13.5499					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**13.5796**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0418	0.0157	0.2520	5.7000e-004	0.0667	2.9000e-004	0.0670	0.0177	2.7000e-004	0.0180		57.3702	57.3702	1.7600e-003	1.6700e-003	57.9122
Total	**0.0418**	**0.0157**	**0.2520**	**5.7000e-004**	**0.0667**	**2.9000e-004**	**0.0670**	**0.0177**	**2.7000e-004**	**0.0180**		**57.3702**	**57.3702**	**1.7600e-003**	**1.6700e-003**	**57.9122**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.4543	2.7820	23.4025	0.0445	2,106.4637	0.0315	2,106.4953	210.2121	0.0295	210.2416		4,517.8484	4,517.8484	0.2352	0.2191	4,589.0332
Unmitigated	3.4543	2.7820	23.4025	0.0445	2,106.4637	0.0315	2,106.4953	210.2121	0.0295	210.2416		4,517.8484	4,517.8484	0.2352	0.2191	4,589.0332

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	569.85	930.90	738.05	1,426,965	1,426,965
Total	569.85	930.90	738.05	1,426,965	1,426,965

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	6.70	5.00	8.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.526464	0.059349	0.179786	0.147621	0.026929	0.006851	0.008316	0.016412	0.000925	0.000120	0.022958	0.000766	0.003504

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1385	1.2592	1.0577	7.5500e-003		0.0957	0.0957		0.0957	0.0957		1,510.9911	1,510.9911	0.0290	0.0277	1,519.9702
NaturalGas Unmitigated	0.1385	1.2592	1.0577	7.5500e-003		0.0957	0.0957		0.0957	0.0957		1,510.9911	1,510.9911	0.0290	0.0277	1,519.9702

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	12843.4	0.1385	1.2592	1.0577	7.5500e-003		0.0957	0.0957		0.0957	0.0957		1,510.9911	1,510.9911	0.0290	0.0277	1,519.9702
Total		**0.1385**	**1.2592**	**1.0577**	**7.5500e-003**		**0.0957**	**0.0957**		**0.0957**	**0.0957**		**1,510.9911**	**1,510.9911**	**0.0290**	**0.0277**	**1,519.9702**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	12.8434	0.1385	1.2592	1.0577	7.5500e-003		0.0957	0.0957		0.0957	0.0957		1,510.9911	1,510.9911	0.0290	0.0277	1,519.9702
Total		**0.1385**	**1.2592**	**1.0577**	**7.5500e-003**		**0.0957**	**0.0957**		**0.0957**	**0.0957**		**1,510.9911**	**1,510.9911**	**0.0290**	**0.0277**	**1,519.9702**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.3345	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338
Unmitigated	3.3345	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338

TNRE Harris Road Facility - Phase 1-A - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2302					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.1030					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3600e-003	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338
Total	**3.3345**	**1.3000e-004**	**0.0148**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0317**	**0.0317**	**8.0000e-005**		**0.0338**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2302					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.1030					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3600e-003	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338
Total	**3.3345**	**1.3000e-004**	**0.0148**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0317**	**0.0317**	**8.0000e-005**		**0.0338**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

TNRE Harris Road Facility - Phase 1-A

Imperial County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	145.00	1000sqft	3.33	145,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2026
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Imperial Water District is not on list, chose SCE for proxy

Land Use - For construction purposes only

Construction Phase - Schedule provided by client

On-road Fugitive Dust - All employee trips were on paved roads. 95% of haulers and vendors on paved roads.

Demolition -

Grading -

Architectural Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Construction Off-road Equipment Mitigation - Tier 4 Final equipment willl be used where applicable

Area Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Area Mitigation - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

TNRE Harris Road Facility - Phase 1-A - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	100
tblAreaCoating	Area_EF_Nonresidential_Interior	150	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	150	50
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

TNRE Harris Road Facility - Phase 1-A - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	18.00	62.00
tblConstructionPhase	NumDays	230.00	298.00
tblConstructionPhase	NumDays	20.00	25.00
tblConstructionPhase	NumDays	8.00	9.00
tblConstructionPhase	NumDays	18.00	24.00
tblConstructionPhase	PhaseEndDate	4/2/2026	8/23/2026
tblConstructionPhase	PhaseEndDate	2/11/2026	5/27/2026
tblConstructionPhase	PhaseEndDate	3/7/2025	3/15/2025
tblConstructionPhase	PhaseEndDate	3/26/2025	4/5/2025
tblConstructionPhase	PhaseEndDate	3/9/2026	6/30/2026
tblConstructionPhase	PhaseEndDate	3/14/2025	3/23/2025
tblConstructionPhase	PhaseStartDate	3/10/2026	5/28/2026
tblConstructionPhase	PhaseStartDate	3/27/2025	4/6/2025
tblConstructionPhase	PhaseStartDate	3/15/2025	3/25/2025
tblConstructionPhase	PhaseStartDate	2/12/2026	5/28/2026
tblConstructionPhase	PhaseStartDate	3/8/2025	3/16/2025
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00

2.0 Emissions Summary

TNRE Harris Road Facility - Phase 1-A - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	2.5401	25.2600	19.9023	0.0422	23.6884	1.0873	24.7757	12.1495	1.0003	13.1498	0.0000	4,096.3708	4,096.3708	1.1961	0.0854	4,136.1465
2026	14.6519	13.4344	17.7879	0.0351	16.2477	0.5378	16.7854	1.7137	0.5060	2.2197	0.0000	3,397.4485	3,397.4485	0.6124	0.0831	3,437.5080
Maximum	**14.6519**	**25.2600**	**19.9023**	**0.0422**	**23.6884**	**1.0873**	**24.7757**	**12.1495**	**1.0003**	**13.1498**	**0.0000**	**4,096.3708**	**4,096.3708**	**1.1961**	**0.0854**	**4,136.1465**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	0.6044	3.2213	23.7637	0.0422	16.2477	0.0681	16.2988	4.7545	0.0678	4.8170	0.0000	4,096.3708	4,096.3708	1.1961	0.0854	4,136.1465
2026	13.9105	3.1994	19.1635	0.0351	16.2477	0.0510	16.2987	1.7137	0.0505	1.7642	0.0000	3,397.4485	3,397.4485	0.6124	0.0831	3,437.5080
Maximum	**13.9105**	**3.2213**	**23.7637**	**0.0422**	**16.2477**	**0.0681**	**16.2988**	**4.7545**	**0.0678**	**4.8170**	**0.0000**	**4,096.3708**	**4,096.3708**	**1.1961**	**0.0854**	**4,136.1465**

TNRE Harris Road Facility - Phase 1-A - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	15.57	83.41	-13.89	0.00	18.63	92.67	21.57	53.34	92.15	57.18	0.00	0.00	0.00	0.00	0.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.3345	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338
Energy	0.1385	1.2592	1.0577	7.5500e-003		0.0957	0.0957		0.0957	0.0957		1,510.9911	1,510.9911	0.0290	0.0277	1,519.9702
Mobile	3.4543	2.7820	23.4025	0.0445	2,106.4637	0.0315	2,106.4953	210.2121	0.0295	210.2416		4,517.8484	4,517.8484	0.2352	0.2191	4,589.0332
Total	**6.9273**	**4.0413**	**24.4749**	**0.0520**	**2,106.4637**	**0.1273**	**2,106.5910**	**210.2121**	**0.1252**	**210.3373**		**6,028.8713**	**6,028.8713**	**0.2643**	**0.2468**	**6,109.0372**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.3345	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338
Energy	0.1385	1.2592	1.0577	7.5500e-003		0.0957	0.0957		0.0957	0.0957		1,510.9911	1,510.9911	0.0290	0.0277	1,519.9702
Mobile	3.4543	2.7820	23.4025	0.0445	2,106.4637	0.0315	2,106.4953	210.2121	0.0295	210.2416		4,517.8484	4,517.8484	0.2352	0.2191	4,589.0332
Total	**6.9273**	**4.0413**	**24.4749**	**0.0520**	**2,106.4637**	**0.1273**	**2,106.5910**	**210.2121**	**0.1252**	**210.3373**		**6,028.8713**	**6,028.8713**	**0.2643**	**0.2468**	**6,109.0372**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/10/2025	3/15/2025	5	25	
2	Site Preparation	Site Preparation	3/16/2025	3/23/2025	5	5	
3	Grading	Grading	3/25/2025	4/5/2025	5	9	
4	Building Construction	Building Construction	4/6/2025	5/27/2026	5	298	
5	Paving	Paving	5/28/2026	6/30/2026	5	24	
6	Architectural Coating	Architectural Coating	5/28/2026	8/23/2026	5	62	

Acres of Grading (Site Preparation Phase): 9

Acres of Grading (Grading Phase): 8

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 217,500; Non-Residential Outdoor: 72,500; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	125.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	61.00	24.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Water Exposed Area

3.2 Demolition - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.1218	0.0000	1.1218	0.1699	0.0000	0.1699			0.0000			0.0000
Off-Road	2.0926	19.1966	19.4184	0.0388		0.8528	0.8528		0.7920	0.7920		3,747.5996	3,747.5996	1.0464		3,773.7606
Total	**2.0926**	**19.1966**	**19.4184**	**0.0388**	**1.1218**	**0.8528**	**1.9746**	**0.1699**	**0.7920**	**0.9618**		**3,747.5996**	**3,747.5996**	**1.0464**		**3,773.7606**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0120	0.4721	0.1445	2.5900e-003	7.4428	6.0400e-003	7.4488	0.7575	5.7800e-003	0.7633		274.7209	274.7209	8.4000e-004	0.0432	287.6107
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0561	0.0217	0.3393	7.3000e-004	0.0833	3.9000e-004	0.0837	0.0221	3.6000e-004	0.0225		74.0504	74.0504	2.4300e-003	2.2300e-003	74.7753
Total	**0.0682**	**0.4939**	**0.4839**	**3.3200e-003**	**7.5261**	**6.4300e-003**	**7.5326**	**0.7796**	**6.1400e-003**	**0.7858**		**348.7712**	**348.7712**	**3.2700e-003**	**0.0454**	**362.3859**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4375	0.0000	0.4375	0.0663	0.0000	0.0663			0.0000			0.0000
Off-Road	0.4623	2.0032	23.2798	0.0388		0.0616	0.0616		0.0616	0.0616	0.0000	3,747.5996	3,747.5996	1.0464		3,773.7606
Total	**0.4623**	**2.0032**	**23.2798**	**0.0388**	**0.4375**	**0.0616**	**0.4992**	**0.0663**	**0.0616**	**0.1279**	**0.0000**	**3,747.5996**	**3,747.5996**	**1.0464**		**3,773.7606**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0120	0.4721	0.1445	2.5900e-003	7.4428	6.0400e-003	7.4488	0.7575	5.7800e-003	0.7633		274.7209	274.7209	8.4000e-004	0.0432	287.6107
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0561	0.0217	0.3393	7.3000e-004	0.0833	3.9000e-004	0.0837	0.0221	3.6000e-004	0.0225		74.0504	74.0504	2.4300e-003	2.2300e-003	74.7753
Total	**0.0682**	**0.4939**	**0.4839**	**3.3200e-003**	**7.5261**	**6.4300e-003**	**7.5326**	**0.7796**	**6.1400e-003**	**0.7858**		**348.7712**	**348.7712**	**3.2700e-003**	**0.0454**	**362.3859**

3.3 Site Preparation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					23.5884	0.0000	23.5884	12.1229	0.0000	12.1229			0.0000			0.0000
Off-Road	2.4727	25.2339	17.9118	0.0381		1.0868	1.0868		0.9999	0.9999		3,689.1037	3,689.1037	1.1931		3,718.9320
Total	**2.4727**	**25.2339**	**17.9118**	**0.0381**	**23.5884**	**1.0868**	**24.6752**	**12.1229**	**0.9999**	**13.1228**		**3,689.1037**	**3,689.1037**	**1.1931**		**3,718.9320**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0673	0.0261	0.4072	8.8000e-004	0.1000	4.6000e-004	0.1005	0.0265	4.3000e-004	0.0270		88.8604	88.8604	2.9200e-003	2.6700e-003	89.7303
Total	**0.0673**	**0.0261**	**0.4072**	**8.8000e-004**	**0.1000**	**4.6000e-004**	**0.1005**	**0.0265**	**4.3000e-004**	**0.0270**		**88.8604**	**88.8604**	**2.9200e-003**	**2.6700e-003**	**89.7303**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.1995	0.0000	9.1995	4.7279	0.0000	4.7279			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0381		0.0621	0.0621		0.0621	0.0621	0.0000	3,689.1037	3,689.1037	1.1931		3,718.9320
Total	**0.4656**	**2.0175**	**20.8690**	**0.0381**	**9.1995**	**0.0621**	**9.2616**	**4.7279**	**0.0621**	**4.7900**	**0.0000**	**3,689.1037**	**3,689.1037**	**1.1931**		**3,718.9320**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0673	0.0261	0.4072	8.8000e-004	0.1000	4.6000e-004	0.1005	0.0265	4.3000e-004	0.0270		88.8604	88.8604	2.9200e-003	2.6700e-003	89.7303
Total	**0.0673**	**0.0261**	**0.4072**	**8.8000e-004**	**0.1000**	**4.6000e-004**	**0.1005**	**0.0265**	**4.3000e-004**	**0.0270**		**88.8604**	**88.8604**	**2.9200e-003**	**2.6700e-003**	**89.7303**

3.4 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2956	0.0000	6.2956	3.0442	0.0000	3.0442			0.0000			0.0000
Off-Road	1.5227	15.3148	14.5402	0.0297		0.6236	0.6236		0.5737	0.5737		2,873.7052	2,873.7052	0.9294		2,896.9405
Total	**1.5227**	**15.3148**	**14.5402**	**0.0297**	**6.2956**	**0.6236**	**6.9192**	**3.0442**	**0.5737**	**3.6179**		**2,873.7052**	**2,873.7052**	**0.9294**		**2,896.9405**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0561	0.0217	0.3393	7.3000e-004	0.0833	3.9000e-004	0.0837	0.0221	3.6000e-004	0.0225		74.0504	74.0504	2.4300e-003	2.2300e-003	74.7753
Total	**0.0561**	**0.0217**	**0.3393**	**7.3000e-004**	**0.0833**	**3.9000e-004**	**0.0837**	**0.0221**	**3.6000e-004**	**0.0225**		**74.0504**	**74.0504**	**2.4300e-003**	**2.2300e-003**	**74.7753**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4553	0.0000	2.4553	1.1872	0.0000	1.1872			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0297		0.0484	0.0484		0.0484	0.0484	0.0000	2,873.7052	2,873.7052	0.9294		2,896.9405
Total	**0.3632**	**1.5737**	**17.7527**	**0.0297**	**2.4553**	**0.0484**	**2.5037**	**1.1872**	**0.0484**	**1.2357**	**0.0000**	**2,873.7052**	**2,873.7052**	**0.9294**		**2,896.9405**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0561	0.0217	0.3393	7.3000e-004	0.0833	3.9000e-004	0.0837	0.0221	3.6000e-004	0.0225		74.0504	74.0504	2.4300e-003	2.2300e-003	74.7753
Total	**0.0561**	**0.0217**	**0.3393**	**7.3000e-004**	**0.0833**	**3.9000e-004**	**0.0837**	**0.0221**	**3.6000e-004**	**0.0225**		**74.0504**	**74.0504**	**2.4300e-003**	**2.2300e-003**	**74.7753**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

TNRE Harris Road Facility - Phase 1-A - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0484	0.8982	0.4326	5.3200e-003	15.9088	8.8000e-003	15.9176	1.6238	8.4200e-003	1.6322		559.4315	559.4315	2.4900e-003	0.0764	582.2542
Worker	0.2282	0.0884	1.3799	2.9800e-003	0.3389	1.5700e-003	0.3405	0.0899	1.4500e-003	0.0914		301.1381	301.1381	9.9000e-003	9.0600e-003	304.0861
Total	**0.2766**	**0.9866**	**1.8125**	**8.3000e-003**	**16.2477**	**0.0104**	**16.2580**	**1.7137**	**9.8700e-003**	**1.7236**		**860.5696**	**860.5696**	**0.0124**	**0.0854**	**886.3403**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0484	0.8982	0.4326	5.3200e-003	15.9088	8.8000e-003	15.9176	1.6238	8.4200e-003	1.6322		559.4315	559.4315	2.4900e-003	0.0764	582.2542
Worker	0.2282	0.0884	1.3799	2.9800e-003	0.3389	1.5700e-003	0.3405	0.0899	1.4500e-003	0.0914		301.1381	301.1381	9.9000e-003	9.0600e-003	304.0861
Total	**0.2766**	**0.9866**	**1.8125**	**8.3000e-003**	**16.2477**	**0.0104**	**16.2580**	**1.7137**	**9.8700e-003**	**1.7236**		**860.5696**	**860.5696**	**0.0124**	**0.0854**	**886.3403**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0472	0.8850	0.4220	5.2200e-003	15.9088	8.7200e-003	15.9175	1.6238	8.3400e-003	1.6321		549.3422	549.3422	2.4500e-003	0.0746	571.6228
Worker	0.2124	0.0798	1.2812	2.8900e-003	0.3389	1.4800e-003	0.3404	0.0899	1.3600e-003	0.0913		291.6319	291.6319	8.9600e-003	8.4900e-003	294.3872
Total	**0.2596**	**0.9647**	**1.7032**	**8.1100e-003**	**16.2477**	**0.0102**	**16.2579**	**1.7137**	**9.7000e-003**	**1.7234**		**840.9741**	**840.9741**	**0.0114**	**0.0831**	**866.0100**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0472	0.8850	0.4220	5.2200e-003	15.9088	8.7200e-003	15.9175	1.6238	8.3400e-003	1.6321		549.3422	549.3422	2.4500e-003	0.0746	571.6228
Worker	0.2124	0.0798	1.2812	2.8900e-003	0.3389	1.4800e-003	0.3404	0.0899	1.3600e-003	0.0913		291.6319	291.6319	8.9600e-003	8.4900e-003	294.3872
Total	**0.2596**	**0.9647**	**1.7032**	**8.1100e-003**	**16.2477**	**0.0102**	**16.2579**	**1.7137**	**9.7000e-003**	**1.7234**		**840.9741**	**840.9741**	**0.0114**	**0.0831**	**866.0100**

3.6 Paving - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8197	7.5321	12.1778	0.0189		0.3524	0.3524		0.3259	0.3259		1,805.3926	1,805.3926	0.5673		1,819.5741
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8197**	**7.5321**	**12.1778**	**0.0189**		**0.3524**	**0.3524**		**0.3259**	**0.3259**		**1,805.3926**	**1,805.3926**	**0.5673**		**1,819.5741**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0696	0.0262	0.4201	9.5000e-004	0.1111	4.9000e-004	0.1116	0.0295	4.5000e-004	0.0299		95.6170	95.6170	2.9400e-003	2.7900e-003	96.5204
Total	**0.0696**	**0.0262**	**0.4201**	**9.5000e-004**	**0.1111**	**4.9000e-004**	**0.1116**	**0.0295**	**4.5000e-004**	**0.0299**		**95.6170**	**95.6170**	**2.9400e-003**	**2.7900e-003**	**96.5204**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2194	0.9509	13.5323	0.0189		0.0293	0.0293		0.0293	0.0293	0.0000	1,805.3926	1,805.3926	0.5673		1,819.5741
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2194**	**0.9509**	**13.5323**	**0.0189**		**0.0293**	**0.0293**		**0.0293**	**0.0293**	**0.0000**	**1,805.3926**	**1,805.3926**	**0.5673**		**1,819.5741**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0696	0.0262	0.4201	9.5000e-004	0.1111	4.9000e-004	0.1116	0.0295	4.5000e-004	0.0299		95.6170	95.6170	2.9400e-003	2.7900e-003	96.5204
Total	**0.0696**	**0.0262**	**0.4201**	**9.5000e-004**	**0.1111**	**4.9000e-004**	**0.1116**	**0.0295**	**4.5000e-004**	**0.0299**		**95.6170**	**95.6170**	**2.9400e-003**	**2.7900e-003**	**96.5204**

3.7 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	13.5499					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**13.7208**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0418	0.0157	0.2520	5.7000e-004	0.0667	2.9000e-004	0.0670	0.0177	2.7000e-004	0.0180		57.3702	57.3702	1.7600e-003	1.6700e-003	57.9122
Total	**0.0418**	**0.0157**	**0.2520**	**5.7000e-004**	**0.0667**	**2.9000e-004**	**0.0670**	**0.0177**	**2.7000e-004**	**0.0180**		**57.3702**	**57.3702**	**1.7600e-003**	**1.6700e-003**	**57.9122**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	13.5499					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**13.5796**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0418	0.0157	0.2520	5.7000e-004	0.0667	2.9000e-004	0.0670	0.0177	2.7000e-004	0.0180		57.3702	57.3702	1.7600e-003	1.6700e-003	57.9122
Total	**0.0418**	**0.0157**	**0.2520**	**5.7000e-004**	**0.0667**	**2.9000e-004**	**0.0670**	**0.0177**	**2.7000e-004**	**0.0180**		**57.3702**	**57.3702**	**1.7600e-003**	**1.6700e-003**	**57.9122**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.4543	2.7820	23.4025	0.0445	2,106.4637	0.0315	2,106.4953	210.2121	0.0295	210.2416		4,517.8484	4,517.8484	0.2352	0.2191	4,589.0332
Unmitigated	3.4543	2.7820	23.4025	0.0445	2,106.4637	0.0315	2,106.4953	210.2121	0.0295	210.2416		4,517.8484	4,517.8484	0.2352	0.2191	4,589.0332

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	569.85	930.90	738.05	1,426,965	1,426,965
Total	569.85	930.90	738.05	1,426,965	1,426,965

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	6.70	5.00	8.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.526464	0.059349	0.179786	0.147621	0.026929	0.006851	0.008316	0.016412	0.000925	0.000120	0.022958	0.000766	0.003504

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1385	1.2592	1.0577	7.5500e-003		0.0957	0.0957		0.0957	0.0957		1,510.9911	1,510.9911	0.0290	0.0277	1,519.9702
NaturalGas Unmitigated	0.1385	1.2592	1.0577	7.5500e-003		0.0957	0.0957		0.0957	0.0957		1,510.9911	1,510.9911	0.0290	0.0277	1,519.9702

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	12843.4	0.1385	1.2592	1.0577	7.5500e-003		0.0957	0.0957		0.0957	0.0957		1,510.9911	1,510.9911	0.0290	0.0277	1,519.9702
Total		**0.1385**	**1.2592**	**1.0577**	**7.5500e-003**		**0.0957**	**0.0957**		**0.0957**	**0.0957**		**1,510.9911**	**1,510.9911**	**0.0290**	**0.0277**	**1,519.9702**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	12.8434	0.1385	1.2592	1.0577	7.5500e-003		0.0957	0.0957		0.0957	0.0957		1,510.9911	1,510.9911	0.0290	0.0277	1,519.9702
Total		**0.1385**	**1.2592**	**1.0577**	**7.5500e-003**		**0.0957**	**0.0957**		**0.0957**	**0.0957**		**1,510.9911**	**1,510.9911**	**0.0290**	**0.0277**	**1,519.9702**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.3345	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338
Unmitigated	3.3345	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338

TNRE Harris Road Facility - Phase 1-A - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2302					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.1030					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3600e-003	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338
Total	**3.3345**	**1.3000e-004**	**0.0148**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0317**	**0.0317**	**8.0000e-005**		**0.0338**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2302					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.1030					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3600e-003	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0317	0.0317	8.0000e-005		0.0338
Total	**3.3345**	**1.3000e-004**	**0.0148**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0317**	**0.0317**	**8.0000e-005**		**0.0338**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

TNRE Harris Road Facility - Phase 1-A

Imperial County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	145.00	1000sqft	3.33	145,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2026
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Imperial Water District is not on list, chose SCE for proxy

Land Use - For construction purposes only

Construction Phase - Schedule provided by client

On-road Fugitive Dust - All employee trips were on paved roads. 95% of haulers and vendors on paved roads.

Demolition -

Grading -

Architectural Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Construction Off-road Equipment Mitigation - Tier 4 Final equipment willl be used where applicable

Area Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Area Mitigation - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

TNRE Harris Road Facility - Phase 1-A - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	100
tblAreaCoating	Area_EF_Nonresidential_Interior	150	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	150	50
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

TNRE Harris Road Facility - Phase 1-A - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	18.00	62.00
tblConstructionPhase	NumDays	230.00	298.00
tblConstructionPhase	NumDays	20.00	25.00
tblConstructionPhase	NumDays	8.00	9.00
tblConstructionPhase	NumDays	18.00	24.00
tblConstructionPhase	PhaseEndDate	4/2/2026	8/23/2026
tblConstructionPhase	PhaseEndDate	2/11/2026	5/27/2026
tblConstructionPhase	PhaseEndDate	3/7/2025	3/15/2025
tblConstructionPhase	PhaseEndDate	3/26/2025	4/5/2025
tblConstructionPhase	PhaseEndDate	3/9/2026	6/30/2026
tblConstructionPhase	PhaseEndDate	3/14/2025	3/23/2025
tblConstructionPhase	PhaseStartDate	3/10/2026	5/28/2026
tblConstructionPhase	PhaseStartDate	3/27/2025	4/6/2025
tblConstructionPhase	PhaseStartDate	3/15/2025	3/25/2025
tblConstructionPhase	PhaseStartDate	2/12/2026	5/28/2026
tblConstructionPhase	PhaseStartDate	3/8/2025	3/16/2025
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.1941	1.6841	2.0629	4.1400e-003	1.7107	0.0682	1.7789	0.2161	0.0639	0.2800	0.0000	363.8188	363.8188	0.0721	8.0300e-003	368.0141
2026	0.5199	0.8356	1.1343	2.1700e-003	0.8291	0.0341	0.8631	0.0881	0.0321	0.1202	0.0000	190.6147	190.6147	0.0359	4.0400e-003	192.7156
Maximum	**0.5199**	**1.6841**	**2.0629**	**4.1400e-003**	**1.7107**	**0.0682**	**1.7789**	**0.2161**	**0.0639**	**0.2800**	**0.0000**	**363.8188**	**363.8188**	**0.0721**	**8.0300e-003**	**368.0141**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.0631	0.3616	2.2658	4.1400e-003	1.6489	6.1700e-003	1.6550	0.1879	6.1100e-003	0.1940	0.0000	363.8185	363.8185	0.0721	8.0300e-003	368.0138
2026	0.4537	0.1878	1.2235	2.1700e-003	0.8291	3.1700e-003	0.8322	0.0881	3.1400e-003	0.0913	0.0000	190.6145	190.6145	0.0359	4.0400e-003	192.7154
Maximum	**0.4537**	**0.3616**	**2.2658**	**4.1400e-003**	**1.6489**	**6.1700e-003**	**1.6550**	**0.1879**	**6.1100e-003**	**0.1940**	**0.0000**	**363.8185**	**363.8185**	**0.0721**	**8.0300e-003**	**368.0138**

TNRE Harris Road Facility - Phase 1-A - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**27.61**	**78.20**	**-9.13**	**0.00**	**2.43**	**90.87**	**5.86**	**9.25**	**90.36**	**28.71**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**2-10-2025**	**5-9-2025**	0.6009	0.0995
2	**5-10-2025**	**8-9-2025**	0.4961	0.1257
3	**8-10-2025**	**11-9-2025**	0.4965	0.1261
4	**11-10-2025**	**2-9-2026**	0.4965	0.1261
5	**2-10-2026**	**5-9-2026**	0.4793	0.1209
6	**5-10-2026**	**8-9-2026**	0.5938	0.4035
7	**8-10-2026**	**9-30-2026**	0.0746	0.0688
		Highest	0.6009	0.4035

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6084	1.0000e-005	1.3300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5900e-003	2.5900e-003	1.0000e-005	0.0000	2.7600e-003
Energy	0.0253	0.2298	0.1930	1.3800e-003		0.0175	0.0175		0.0175	0.0175	0.0000	374.1135	374.1135	0.0263	7.2000e-003	376.9160
Mobile	0.3313	0.3733	2.5157	5.2100e-003	265.8194	3.9800e-003	265.8233	26.5269	3.7200e-003	26.5306	0.0000	480.8354	480.8354	0.0269	0.0253	489.0514
Waste						0.0000	0.0000		0.0000	0.0000	36.4978	0.0000	36.4978	2.1570	0.0000	90.4217
Water						0.0000	0.0000		0.0000	0.0000	10.6379	37.6242	48.2622	1.0992	0.0266	83.6651
Total	**0.9650**	**0.6031**	**2.7101**	**6.5900e-003**	**265.8194**	**0.0214**	**265.8408**	**26.5269**	**0.0212**	**26.5480**	**47.1357**	**892.5757**	**939.7114**	**3.3094**	**0.0591**	**1,040.0570**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6084	1.0000e-005	1.3300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5900e-003	2.5900e-003	1.0000e-005	0.0000	2.7600e-003
Energy	0.0253	0.2298	0.1930	1.3800e-003		0.0175	0.0175		0.0175	0.0175	0.0000	374.1135	374.1135	0.0263	7.2000e-003	376.9160
Mobile	0.3313	0.3733	2.5157	5.2100e-003	265.8194	3.9800e-003	265.8233	26.5269	3.7200e-003	26.5306	0.0000	480.8354	480.8354	0.0269	0.0253	489.0514
Waste						0.0000	0.0000		0.0000	0.0000	36.4978	0.0000	36.4978	2.1570	0.0000	90.4217
Water						0.0000	0.0000		0.0000	0.0000	10.6379	37.6242	48.2622	1.0992	0.0266	83.6651
Total	**0.9650**	**0.6031**	**2.7101**	**6.5900e-003**	**265.8194**	**0.0214**	**265.8408**	**26.5269**	**0.0212**	**26.5480**	**47.1357**	**892.5757**	**939.7114**	**3.3094**	**0.0591**	**1,040.0570**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/10/2025	3/15/2025	5	25	
2	Site Preparation	Site Preparation	3/16/2025	3/23/2025	5	5	
3	Grading	Grading	3/25/2025	4/5/2025	5	9	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Building Construction	Building Construction	4/6/2025	5/27/2026	5	298	
5	Paving	Paving	5/28/2026	6/30/2026	5	24	
6	Architectural Coating	Architectural Coating	5/28/2026	8/23/2026	5	62	

Acres of Grading (Site Preparation Phase): 9

Acres of Grading (Grading Phase): 8

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 217,500; Non-Residential Outdoor: 72,500; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	125.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	61.00	24.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0140	0.0000	0.0140	2.1200e-003	0.0000	2.1200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0262	0.2400	0.2427	4.9000e-004		0.0107	0.0107		9.9000e-003	9.9000e-003	0.0000	42.4971	42.4971	0.0119	0.0000	42.7937
Total	**0.0262**	**0.2400**	**0.2427**	**4.9000e-004**	**0.0140**	**0.0107**	**0.0247**	**2.1200e-003**	**9.9000e-003**	**0.0120**	**0.0000**	**42.4971**	**42.4971**	**0.0119**	**0.0000**	**42.7937**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	6.3900e-003	1.8300e-003	3.0000e-005	0.0900	8.0000e-005	0.0901	9.1700e-003	7.0000e-005	9.2400e-003	0.0000	3.1179	3.1179	1.0000e-005	4.9000e-004	3.2642
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.6000e-004	2.8000e-004	3.4400e-003	1.0000e-005	1.0300e-003	0.0000	1.0400e-003	2.7000e-004	0.0000	2.8000e-004	0.0000	0.7662	0.7662	3.0000e-005	3.0000e-005	0.7744
Total	**7.0000e-004**	**6.6700e-003**	**5.2700e-003**	**4.0000e-005**	**0.0910**	**8.0000e-005**	**0.0911**	**9.4400e-003**	**7.0000e-005**	**9.5200e-003**	**0.0000**	**3.8841**	**3.8841**	**4.0000e-005**	**5.2000e-004**	**4.0386**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.4700e-003	0.0000	5.4700e-003	8.3000e-004	0.0000	8.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.7800e-003	0.0250	0.2910	4.9000e-004		7.7000e-004	7.7000e-004		7.7000e-004	7.7000e-004	0.0000	42.4970	42.4970	0.0119	0.0000	42.7937
Total	**5.7800e-003**	**0.0250**	**0.2910**	**4.9000e-004**	**5.4700e-003**	**7.7000e-004**	**6.2400e-003**	**8.3000e-004**	**7.7000e-004**	**1.6000e-003**	**0.0000**	**42.4970**	**42.4970**	**0.0119**	**0.0000**	**42.7937**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	6.3900e-003	1.8300e-003	3.0000e-005	0.0900	8.0000e-005	0.0901	9.1700e-003	7.0000e-005	9.2400e-003	0.0000	3.1179	3.1179	1.0000e-005	4.9000e-004	3.2642
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.6000e-004	2.8000e-004	3.4400e-003	1.0000e-005	1.0300e-003	0.0000	1.0400e-003	2.7000e-004	0.0000	2.8000e-004	0.0000	0.7662	0.7662	3.0000e-005	3.0000e-005	0.7744
Total	**7.0000e-004**	**6.6700e-003**	**5.2700e-003**	**4.0000e-005**	**0.0910**	**8.0000e-005**	**0.0911**	**9.4400e-003**	**7.0000e-005**	**9.5200e-003**	**0.0000**	**3.8841**	**3.8841**	**4.0000e-005**	**5.2000e-004**	**4.0386**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0590	0.0000	0.0590	0.0303	0.0000	0.0303	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1800e-003	0.0631	0.0448	1.0000e-004		2.7200e-003	2.7200e-003		2.5000e-003	2.5000e-003	0.0000	8.3668	8.3668	2.7100e-003	0.0000	8.4344
Total	**6.1800e-003**	**0.0631**	**0.0448**	**1.0000e-004**	**0.0590**	**2.7200e-003**	**0.0617**	**0.0303**	**2.5000e-003**	**0.0328**	**0.0000**	**8.3668**	**8.3668**	**2.7100e-003**	**0.0000**	**8.4344**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	7.0000e-005	8.3000e-004	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.1839	0.1839	1.0000e-005	1.0000e-005	0.1859
Total	**1.3000e-004**	**7.0000e-005**	**8.3000e-004**	**0.0000**	**2.5000e-004**	**0.0000**	**2.5000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.1839**	**0.1839**	**1.0000e-005**	**1.0000e-005**	**0.1859**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0230	0.0000	0.0230	0.0118	0.0000	0.0118	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1600e-003	5.0400e-003	0.0522	1.0000e-004		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	8.3667	8.3667	2.7100e-003	0.0000	8.4344
Total	**1.1600e-003**	**5.0400e-003**	**0.0522**	**1.0000e-004**	**0.0230**	**1.6000e-004**	**0.0232**	**0.0118**	**1.6000e-004**	**0.0120**	**0.0000**	**8.3667**	**8.3667**	**2.7100e-003**	**0.0000**	**8.4344**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	7.0000e-005	8.3000e-004	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.1839	0.1839	1.0000e-005	1.0000e-005	0.1859
Total	**1.3000e-004**	**7.0000e-005**	**8.3000e-004**	**0.0000**	**2.5000e-004**	**0.0000**	**2.5000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.1839**	**0.1839**	**1.0000e-005**	**1.0000e-005**	**0.1859**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0283	0.0000	0.0283	0.0137	0.0000	0.0137	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.8500e-003	0.0689	0.0654	1.3000e-004		2.8100e-003	2.8100e-003		2.5800e-003	2.5800e-003	0.0000	11.7314	11.7314	3.7900e-003	0.0000	11.8263
Total	**6.8500e-003**	**0.0689**	**0.0654**	**1.3000e-004**	**0.0283**	**2.8100e-003**	**0.0311**	**0.0137**	**2.5800e-003**	**0.0163**	**0.0000**	**11.7314**	**11.7314**	**3.7900e-003**	**0.0000**	**11.8263**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.0000e-004	1.2400e-003	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2758	0.2758	1.0000e-005	1.0000e-005	0.2788
Total	**2.0000e-004**	**1.0000e-004**	**1.2400e-003**	**0.0000**	**3.7000e-004**	**0.0000**	**3.7000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2758**	**0.2758**	**1.0000e-005**	**1.0000e-005**	**0.2788**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0111	0.0000	0.0111	5.3400e-003	0.0000	5.3400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	7.0800e-003	0.0799	1.3000e-004		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	11.7314	11.7314	3.7900e-003	0.0000	11.8263
Total	**1.6300e-003**	**7.0800e-003**	**0.0799**	**1.3000e-004**	**0.0111**	**2.2000e-004**	**0.0113**	**5.3400e-003**	**2.2000e-004**	**5.5600e-003**	**0.0000**	**11.7314**	**11.7314**	**3.7900e-003**	**0.0000**	**11.8263**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.0000e-004	1.2400e-003	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2758	0.2758	1.0000e-005	1.0000e-005	0.2788
Total	**2.0000e-004**	**1.0000e-004**	**1.2400e-003**	**0.0000**	**3.7000e-004**	**0.0000**	**3.7000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2758**	**0.2758**	**1.0000e-005**	**1.0000e-005**	**0.2788**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1320	1.2033	1.5522	2.6000e-003		0.0509	0.0509		0.0479	0.0479	0.0000	223.8023	223.8023	0.0526	0.0000	225.1175
Total	**0.1320**	**1.2033**	**1.5522**	**2.6000e-003**		**0.0509**	**0.0509**		**0.0479**	**0.0479**	**0.0000**	**223.8023**	**223.8023**	**0.0526**	**0.0000**	**225.1175**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.4600e-003	0.0933	0.0424	5.1000e-004	1.4852	8.5000e-004	1.4861	0.1517	8.1000e-004	0.1525	0.0000	49.0224	49.0224	2.1000e-004	6.7100e-003	51.0259
Worker	0.0174	8.6500e-003	0.1081	2.6000e-004	0.0325	1.5000e-004	0.0326	8.6200e-003	1.4000e-004	8.7600e-003	0.0000	24.0551	24.0551	8.6000e-004	7.9000e-004	24.3131
Total	**0.0219**	**0.1020**	**0.1505**	**7.7000e-004**	**1.5177**	**1.0000e-003**	**1.5187**	**0.1603**	**9.5000e-004**	**0.1613**	**0.0000**	**73.0775**	**73.0775**	**1.0700e-003**	**7.5000e-003**	**75.3389**

TNRE Harris Road Facility - Phase 1-A - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0316	0.2157	1.6849	2.6000e-003		3.9400e-003	3.9400e-003		3.9400e-003	3.9400e-003	0.0000	223.8020	223.8020	0.0526	0.0000	225.1172
Total	**0.0316**	**0.2157**	**1.6849**	**2.6000e-003**		**3.9400e-003**	**3.9400e-003**		**3.9400e-003**	**3.9400e-003**	**0.0000**	**223.8020**	**223.8020**	**0.0526**	**0.0000**	**225.1172**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.4600e-003	0.0933	0.0424	5.1000e-004	1.4852	8.5000e-004	1.4861	0.1517	8.1000e-004	0.1525	0.0000	49.0224	49.0224	2.1000e-004	6.7100e-003	51.0259
Worker	0.0174	8.6500e-003	0.1081	2.6000e-004	0.0325	1.5000e-004	0.0326	8.6200e-003	1.4000e-004	8.7600e-003	0.0000	24.0551	24.0551	8.6000e-004	7.9000e-004	24.3131
Total	**0.0219**	**0.1020**	**0.1505**	**7.7000e-004**	**1.5177**	**1.0000e-003**	**1.5187**	**0.1603**	**9.5000e-004**	**0.1613**	**0.0000**	**73.0775**	**73.0775**	**1.0700e-003**	**7.5000e-003**	**75.3389**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0718	0.6547	0.8444	1.4200e-003		0.0277	0.0277		0.0261	0.0261	0.0000	121.7577	121.7577	0.0286	0.0000	122.4733
Total	**0.0718**	**0.6547**	**0.8444**	**1.4200e-003**		**0.0277**	**0.0277**		**0.0261**	**0.0261**	**0.0000**	**121.7577**	**121.7577**	**0.0286**	**0.0000**	**122.4733**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3700e-003	0.0500	0.0225	2.7000e-004	0.8080	4.6000e-004	0.8085	0.0825	4.4000e-004	0.0830	0.0000	26.1895	26.1895	1.1000e-004	3.5600e-003	27.2535
Worker	8.8400e-003	4.2400e-003	0.0547	1.4000e-004	0.0177	8.0000e-005	0.0177	4.6900e-003	7.0000e-005	4.7600e-003	0.0000	12.6761	12.6761	4.2000e-004	4.0000e-004	12.8072
Total	**0.0112**	**0.0543**	**0.0772**	**4.1000e-004**	**0.8257**	**5.4000e-004**	**0.8262**	**0.0872**	**5.1000e-004**	**0.0877**	**0.0000**	**38.8656**	**38.8656**	**5.3000e-004**	**3.9600e-003**	**40.0607**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0172	0.1173	0.9167	1.4200e-003		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003	0.0000	121.7576	121.7576	0.0286	0.0000	122.4731
Total	**0.0172**	**0.1173**	**0.9167**	**1.4200e-003**		**2.1400e-003**	**2.1400e-003**		**2.1400e-003**	**2.1400e-003**	**0.0000**	**121.7576**	**121.7576**	**0.0286**	**0.0000**	**122.4731**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3700e-003	0.0500	0.0225	2.7000e-004	0.8080	4.6000e-004	0.8085	0.0825	4.4000e-004	0.0830	0.0000	26.1895	26.1895	1.1000e-004	3.5600e-003	27.2535
Worker	8.8400e-003	4.2400e-003	0.0547	1.4000e-004	0.0177	8.0000e-005	0.0177	4.6900e-003	7.0000e-005	4.7600e-003	0.0000	12.6761	12.6761	4.2000e-004	4.0000e-004	12.8072
Total	**0.0112**	**0.0543**	**0.0772**	**4.1000e-004**	**0.8257**	**5.4000e-004**	**0.8262**	**0.0872**	**5.1000e-004**	**0.0877**	**0.0000**	**38.8656**	**38.8656**	**5.3000e-004**	**3.9600e-003**	**40.0607**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8400e-003	0.0904	0.1461	2.3000e-004		4.2300e-003	4.2300e-003		3.9100e-003	3.9100e-003	0.0000	19.6539	19.6539	6.1800e-003	0.0000	19.8083
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.8400e-003**	**0.0904**	**0.1461**	**2.3000e-004**		**4.2300e-003**	**4.2300e-003**		**3.9100e-003**	**3.9100e-003**	**0.0000**	**19.6539**	**19.6539**	**6.1800e-003**	**0.0000**	**19.8083**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6000e-004	3.2000e-004	4.1000e-003	1.0000e-005	1.3200e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	0.9500	0.9500	3.0000e-005	3.0000e-005	0.9598
Total	**6.6000e-004**	**3.2000e-004**	**4.1000e-003**	**1.0000e-005**	**1.3200e-003**	**1.0000e-005**	**1.3300e-003**	**3.5000e-004**	**1.0000e-005**	**3.6000e-004**	**0.0000**	**0.9500**	**0.9500**	**3.0000e-005**	**3.0000e-005**	**0.9598**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.6300e-003	0.0114	0.1624	2.3000e-004		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	19.6539	19.6539	6.1800e-003	0.0000	19.8083
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.6300e-003**	**0.0114**	**0.1624**	**2.3000e-004**		**3.5000e-004**	**3.5000e-004**		**3.5000e-004**	**3.5000e-004**	**0.0000**	**19.6539**	**19.6539**	**6.1800e-003**	**0.0000**	**19.8083**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6000e-004	3.2000e-004	4.1000e-003	1.0000e-005	1.3200e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	0.9500	0.9500	3.0000e-005	3.0000e-005	0.9598
Total	**6.6000e-004**	**3.2000e-004**	**4.1000e-003**	**1.0000e-005**	**1.3200e-003**	**1.0000e-005**	**1.3300e-003**	**3.5000e-004**	**1.0000e-005**	**3.6000e-004**	**0.0000**	**0.9500**	**0.9500**	**3.0000e-005**	**3.0000e-005**	**0.9598**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4201					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3000e-003	0.0355	0.0561	9.0000e-005		1.6000e-003	1.6000e-003		1.6000e-003	1.6000e-003	0.0000	7.9151	7.9151	4.3000e-004	0.0000	7.9259
Total	**0.4254**	**0.0355**	**0.0561**	**9.0000e-005**		**1.6000e-003**	**1.6000e-003**		**1.6000e-003**	**1.6000e-003**	**0.0000**	**7.9151**	**7.9151**	**4.3000e-004**	**0.0000**	**7.9259**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0300e-003	4.9000e-004	6.3500e-003	2.0000e-005	2.0500e-003	1.0000e-005	2.0600e-003	5.4000e-004	1.0000e-005	5.5000e-004	0.0000	1.4725	1.4725	5.0000e-005	5.0000e-005	1.4877
Total	**1.0300e-003**	**4.9000e-004**	**6.3500e-003**	**2.0000e-005**	**2.0500e-003**	**1.0000e-005**	**2.0600e-003**	**5.4000e-004**	**1.0000e-005**	**5.5000e-004**	**0.0000**	**1.4725**	**1.4725**	**5.0000e-005**	**5.0000e-005**	**1.4877**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4201					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.2000e-004	3.9900e-003	0.0568	9.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	7.9151	7.9151	4.3000e-004	0.0000	7.9259
Total	**0.4210**	**3.9900e-003**	**0.0568**	**9.0000e-005**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**	**0.0000**	**7.9151**	**7.9151**	**4.3000e-004**	**0.0000**	**7.9259**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0300e-003	4.9000e-004	6.3500e-003	2.0000e-005	2.0500e-003	1.0000e-005	2.0600e-003	5.4000e-004	1.0000e-005	5.5000e-004	0.0000	1.4725	1.4725	5.0000e-005	5.0000e-005	1.4877
Total	**1.0300e-003**	**4.9000e-004**	**6.3500e-003**	**2.0000e-005**	**2.0500e-003**	**1.0000e-005**	**2.0600e-003**	**5.4000e-004**	**1.0000e-005**	**5.5000e-004**	**0.0000**	**1.4725**	**1.4725**	**5.0000e-005**	**5.0000e-005**	**1.4877**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3313	0.3733	2.5157	5.2100e-003	265.8194	3.9800e-003	265.8233	26.5269	3.7200e-003	26.5306	0.0000	480.8354	480.8354	0.0269	0.0253	489.0514
Unmitigated	0.3313	0.3733	2.5157	5.2100e-003	265.8194	3.9800e-003	265.8233	26.5269	3.7200e-003	26.5306	0.0000	480.8354	480.8354	0.0269	0.0253	489.0514

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	569.85	930.90	738.05	1,426,965	1,426,965
Total	569.85	930.90	738.05	1,426,965	1,426,965

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	6.70	5.00	8.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.526464	0.059349	0.179786	0.147621	0.026929	0.006851	0.008316	0.016412	0.000925	0.000120	0.022958	0.000766	0.003504

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	123.9519	123.9519	0.0215	2.6100e-003	125.2679
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	123.9519	123.9519	0.0215	2.6100e-003	125.2679
NaturalGas Mitigated	0.0253	0.2298	0.1930	1.3800e-003		0.0175	0.0175		0.0175	0.0175	0.0000	250.1615	250.1615	4.7900e-003	4.5900e-003	251.6481
NaturalGas Unmitigated	0.0253	0.2298	0.1930	1.3800e-003		0.0175	0.0175		0.0175	0.0175	0.0000	250.1615	250.1615	4.7900e-003	4.5900e-003	251.6481

TNRE Harris Road Facility - Phase 1-A - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	4.68785e+006	0.0253	0.2298	0.1930	1.3800e-003		0.0175	0.0175		0.0175	0.0175	0.0000	250.1615	250.1615	4.7900e-003	4.5900e-003	251.6481
Total		**0.0253**	**0.2298**	**0.1930**	**1.3800e-003**		**0.0175**	**0.0175**		**0.0175**	**0.0175**	**0.0000**	**250.1615**	**250.1615**	**4.7900e-003**	**4.5900e-003**	**251.6481**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	4.68785e+006	0.0253	0.2298	0.1930	1.3800e-003		0.0175	0.0175		0.0175	0.0175	0.0000	250.1615	250.1615	4.7900e-003	4.5900e-003	251.6481
Total		**0.0253**	**0.2298**	**0.1930**	**1.3800e-003**		**0.0175**	**0.0175**		**0.0175**	**0.0175**	**0.0000**	**250.1615**	**250.1615**	**4.7900e-003**	**4.5900e-003**	**251.6481**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	1.4384e+006	123.9519	0.0215	2.6100e-003	125.2679
Total		**123.9519**	**0.0215**	**2.6100e-003**	**125.2679**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	1.4384e+006	123.9519	0.0215	2.6100e-003	125.2679
Total		**123.9519**	**0.0215**	**2.6100e-003**	**125.2679**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6084	1.0000e-005	1.3300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5900e-003	2.5900e-003	1.0000e-005	0.0000	2.7600e-003
Unmitigated	0.6084	1.0000e-005	1.3300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5900e-003	2.5900e-003	1.0000e-005	0.0000	2.7600e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0420					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5663					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.3300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5900e-003	2.5900e-003	1.0000e-005	0.0000	2.7600e-003
Total	**0.6084**	**1.0000e-005**	**1.3300e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.5900e-003**	**2.5900e-003**	**1.0000e-005**	**0.0000**	**2.7600e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0420					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5663					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.3300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5900e-003	2.5900e-003	1.0000e-005	0.0000	2.7600e-003
Total	**0.6084**	**1.0000e-005**	**1.3300e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.5900e-003**	**2.5900e-003**	**1.0000e-005**	**0.0000**	**2.7600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	48.2622	1.0992	0.0266	83.6651
Unmitigated	48.2622	1.0992	0.0266	83.6651

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	33.5313 / 0	48.2622	1.0992	0.0266	83.6651
Total		**48.2622**	**1.0992**	**0.0266**	**83.6651**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	33.5313 / 0	48.2622	1.0992	0.0266	83.6651
Total		**48.2622**	**1.0992**	**0.0266**	**83.6651**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	36.4978	2.1570	0.0000	90.4217
Unmitigated	36.4978	2.1570	0.0000	90.4217

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	179.8	36.4978	2.1570	0.0000	90.4217
Total		**36.4978**	**2.1570**	**0.0000**	**90.4217**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	179.8	36.4978	2.1570	0.0000	90.4217
Total		**36.4978**	**2.1570**	**0.0000**	**90.4217**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

TNRE Harris Road Facility - Phase 1-B

Imperial County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	165.12	1000sqft	3.79	165,121.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2028
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Imperial Water District is not on list, chose SCE for proxy

Land Use - For construction purposes only

Construction Phase - Schedule provided by client

On-road Fugitive Dust - All employee trips were on paved roads. 95% of haulers and vendors on paved roads.

Grading -

Architectural Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Construction Off-road Equipment Mitigation - Tier 4 Final equipment will be used where applicable

Area Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Area Mitigation - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

TNRE Harris Road Facility - Phase 1-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	100
tblAreaCoating	Area_EF_Nonresidential_Interior	150	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	150	50
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

TNRE Harris Road Facility - Phase 1-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	18.00	17.00
tblConstructionPhase	NumDays	230.00	111.00
tblConstructionPhase	NumDays	8.00	5.00
tblConstructionPhase	NumDays	18.00	8.00
tblConstructionPhase	NumDays	5.00	2.00
tblConstructionPhase	PhaseEndDate	8/24/2028	2/6/2028
tblConstructionPhase	PhaseEndDate	7/5/2028	1/12/2028
tblConstructionPhase	PhaseEndDate	8/18/2027	8/10/2027
tblConstructionPhase	PhaseEndDate	7/31/2028	1/24/2028
tblConstructionPhase	PhaseEndDate	8/6/2027	8/3/2027
tblConstructionPhase	PhaseStartDate	8/1/2028	1/13/2028
tblConstructionPhase	PhaseStartDate	8/19/2027	8/11/2027
tblConstructionPhase	PhaseStartDate	8/7/2027	8/4/2027
tblConstructionPhase	PhaseStartDate	7/6/2028	1/13/2028
tblLandUse	LandUseSquareFeet	165,120.00	165,121.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00

2.0 Emissions Summary

TNRE Harris Road Facility - Phase 1-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2027	2.5312	25.2553	18.2652	0.0389	18.2807	1.0872	18.8196	5.0778	1.0002	6.0780	0.0000	3,772.6404	3,772.6404	1.1955	0.0909	3,803.2336
2028	57.3693	13.5142	17.8194	0.0357	18.2807	0.5387	18.8194	1.9285	0.5068	2.4353	0.0000	3,462.5308	3,462.5308	0.6121	0.0884	3,504.1750
Maximum	**57.3693**	**25.2553**	**18.2652**	**0.0389**	**18.2807**	**1.0872**	**18.8196**	**5.0778**	**1.0002**	**6.0780**	**0.0000**	**3,772.6404**	**3,772.6404**	**1.1955**	**0.0909**	**3,803.2336**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2027	0.6041	3.2978	21.2224	0.0389	18.2807	0.0625	18.3328	1.9965	0.0625	2.0590	0.0000	3,772.6404	3,772.6404	1.1955	0.0909	3,803.2336
2028	56.6279	3.2792	19.1950	0.0357	18.2807	0.0519	18.3326	1.9285	0.0513	1.9798	0.0000	3,462.5308	3,462.5308	0.6121	0.0884	3,504.1750
Maximum	**56.6279**	**3.2978**	**21.2224**	**0.0389**	**18.2807**	**0.0625**	**18.3328**	**1.9965**	**0.0625**	**2.0590**	**0.0000**	**3,772.6404**	**3,772.6404**	**1.1955**	**0.0909**	**3,803.2336**

TNRE Harris Road Facility - Phase 1-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	4.46	83.04	-12.01	0.00	0.00	92.97	2.59	43.98	92.45	52.56	0.00	0.00	0.00	0.00	0.00	0.00

TNRE Harris Road Facility - Phase 1-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.7972	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385
Energy	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897
Mobile	3.5842	2.7593	24.0003	0.0473	2,398.7522	0.0328	2,398.7850	239.3802	0.0307	239.4108		4,809.4709	4,809.4709	0.2402	0.2277	4,883.3391
Total	**7.5392**	**4.1934**	**25.2216**	**0.0559**	**2,398.7522**	**0.1418**	**2,398.8940**	**239.3802**	**0.1397**	**239.5199**		**6,530.1717**	**6,530.1717**	**0.2732**	**0.2593**	**6,614.2672**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.7972	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385
Energy	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897
Mobile	3.5842	2.7593	24.0003	0.0473	2,398.7522	0.0328	2,398.7850	239.3802	0.0307	239.4108		4,809.4709	4,809.4709	0.2402	0.2277	4,883.3391
Total	**7.5392**	**4.1934**	**25.2216**	**0.0559**	**2,398.7522**	**0.1418**	**2,398.8940**	**239.3802**	**0.1397**	**239.5199**		**6,530.1717**	**6,530.1717**	**0.2732**	**0.2593**	**6,614.2672**

TNRE Harris Road Facility - Phase 1-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	8/2/2027	8/3/2027	5	2	
2	Grading	Grading	8/4/2027	8/10/2027	5	5	
3	Building Construction	Building Construction	8/11/2027	1/12/2028	5	111	
4	Paving	Paving	1/13/2028	1/24/2028	5	8	
5	Architectural Coating	Architectural Coating	1/13/2028	2/6/2028	5	17	

Acres of Grading (Site Preparation Phase): 1.5

Acres of Grading (Grading Phase): 5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 247,682; Non-Residential Outdoor: 82,561; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	69.00	27.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.8285	0.0000	9.8285	5.0512	0.0000	5.0512			0.0000			0.0000
Off-Road	2.4727	25.2339	17.9118	0.0381		1.0868	1.0868		0.9999	0.9999		3,689.1037	3,689.1037	1.1931		3,718.9320
Total	**2.4727**	**25.2339**	**17.9118**	**0.0381**	**9.8285**	**1.0868**	**10.9153**	**5.0512**	**0.9999**	**6.0511**		**3,689.1037**	**3,689.1037**	**1.1931**		**3,718.9320**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0585	0.0214	0.3534	8.3000e-004	0.1000	4.1000e-004	0.1004	0.0265	3.8000e-004	0.0269		83.5367	83.5367	2.4100e-003	2.3700e-003	84.3016
Total	**0.0585**	**0.0214**	**0.3534**	**8.3000e-004**	**0.1000**	**4.1000e-004**	**0.1004**	**0.0265**	**3.8000e-004**	**0.0269**		**83.5367**	**83.5367**	**2.4100e-003**	**2.3700e-003**	**84.3016**

TNRE Harris Road Facility - Phase 1-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.8331	0.0000	3.8331	1.9700	0.0000	1.9700			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0381		0.0621	0.0621		0.0621	0.0621	0.0000	3,689.1037	3,689.1037	1.1931		3,718.9320
Total	**0.4656**	**2.0175**	**20.8690**	**0.0381**	**3.8331**	**0.0621**	**3.8952**	**1.9700**	**0.0621**	**2.0321**	**0.0000**	**3,689.1037**	**3,689.1037**	**1.1931**		**3,718.9320**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0585	0.0214	0.3534	8.3000e-004	0.1000	4.1000e-004	0.1004	0.0265	3.8000e-004	0.0269		83.5367	83.5367	2.4100e-003	2.3700e-003	84.3016
Total	**0.0585**	**0.0214**	**0.3534**	**8.3000e-004**	**0.1000**	**4.1000e-004**	**0.1004**	**0.0265**	**3.8000e-004**	**0.0269**		**83.5367**	**83.5367**	**2.4100e-003**	**2.3700e-003**	**84.3016**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.5227	15.3148	14.5402	0.0297		0.6236	0.6236		0.5737	0.5737		2,873.7052	2,873.7052	0.9294		2,896.9405
Total	**1.5227**	**15.3148**	**14.5402**	**0.0297**	**7.0826**	**0.6236**	**7.7062**	**3.4247**	**0.5737**	**3.9984**		**2,873.7052**	**2,873.7052**	**0.9294**		**2,896.9405**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0488	0.0178	0.2945	6.9000e-004	0.0833	3.4000e-004	0.0837	0.0221	3.1000e-004	0.0224		69.6139	69.6139	2.0000e-003	1.9700e-003	70.2513
Total	**0.0488**	**0.0178**	**0.2945**	**6.9000e-004**	**0.0833**	**3.4000e-004**	**0.0837**	**0.0221**	**3.1000e-004**	**0.0224**		**69.6139**	**69.6139**	**2.0000e-003**	**1.9700e-003**	**70.2513**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7622	0.0000	2.7622	1.3357	0.0000	1.3357			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0297		0.0484	0.0484		0.0484	0.0484	0.0000	2,873.7052	2,873.7052	0.9294		2,896.9405
Total	**0.3632**	**1.5737**	**17.7527**	**0.0297**	**2.7622**	**0.0484**	**2.8106**	**1.3357**	**0.0484**	**1.3841**	**0.0000**	**2,873.7052**	**2,873.7052**	**0.9294**		**2,896.9405**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0488	0.0178	0.2945	6.9000e-004	0.0833	3.4000e-004	0.0837	0.0221	3.1000e-004	0.0224		69.6139	69.6139	2.0000e-003	1.9700e-003	70.2513
Total	**0.0488**	**0.0178**	**0.2945**	**6.9000e-004**	**0.0833**	**3.4000e-004**	**0.0837**	**0.0221**	**3.1000e-004**	**0.0224**		**69.6139**	**69.6139**	**2.0000e-003**	**1.9700e-003**	**70.2513**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0519	0.9811	0.4647	5.7600e-003	17.8974	9.7100e-003	17.9071	1.8267	9.2900e-003	1.8360		605.9609	605.9609	2.7200e-003	0.0818	630.4043
Worker	0.2244	0.0819	1.3545	3.1700e-003	0.3834	1.5700e-003	0.3849	0.1017	1.4400e-003	0.1032		320.2240	320.2240	9.2200e-003	9.0700e-003	323.1562
Total	**0.2763**	**1.0631**	**1.8192**	**8.9300e-003**	**18.2807**	**0.0113**	**18.2920**	**1.9285**	**0.0107**	**1.9392**		**926.1848**	**926.1848**	**0.0119**	**0.0909**	**953.5605**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0519	0.9811	0.4647	5.7600e-003	17.8974	9.7100e-003	17.9071	1.8267	9.2900e-003	1.8360		605.9609	605.9609	2.7200e-003	0.0818	630.4043
Worker	0.2244	0.0819	1.3545	3.1700e-003	0.3834	1.5700e-003	0.3849	0.1017	1.4400e-003	0.1032		320.2240	320.2240	9.2200e-003	9.0700e-003	323.1562
Total	**0.2763**	**1.0631**	**1.8192**	**8.9300e-003**	**18.2807**	**0.0113**	**18.2920**	**1.9285**	**0.0107**	**1.9392**		**926.1848**	**926.1848**	**0.0119**	**0.0909**	**953.5605**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0510	0.9695	0.4567	5.6500e-003	17.8974	9.6300e-003	17.9070	1.8267	9.2100e-003	1.8360		594.4111	594.4111	2.7000e-003	0.0798	618.2541
Worker	0.2107	0.0750	1.2780	3.0800e-003	0.3834	1.4600e-003	0.3848	0.1017	1.3400e-003	0.1031		311.6454	311.6454	8.4600e-003	8.6100e-003	314.4228
Total	**0.2617**	**1.0445**	**1.7347**	**8.7300e-003**	**18.2807**	**0.0111**	**18.2918**	**1.9285**	**0.0106**	**1.9390**		**906.0564**	**906.0564**	**0.0112**	**0.0884**	**932.6769**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0510	0.9695	0.4567	5.6500e-003	17.8974	9.6300e-003	17.9070	1.8267	9.2100e-003	1.8360		594.4111	594.4111	2.7000e-003	0.0798	618.2541
Worker	0.2107	0.0750	1.2780	3.0800e-003	0.3834	1.4600e-003	0.3848	0.1017	1.3400e-003	0.1031		311.6454	311.6454	8.4600e-003	8.6100e-003	314.4228
Total	**0.2617**	**1.0445**	**1.7347**	**8.7300e-003**	**18.2807**	**0.0111**	**18.2918**	**1.9285**	**0.0106**	**1.9390**		**906.0564**	**906.0564**	**0.0112**	**0.0884**	**932.6769**

TNRE Harris Road Facility - Phase 1-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8197	7.5321	12.1778	0.0189		0.3524	0.3524		0.3259	0.3259		1,805.3926	1,805.3926	0.5673		1,819.5741
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8197**	**7.5321**	**12.1778**	**0.0189**		**0.3524**	**0.3524**		**0.3259**	**0.3259**		**1,805.3926**	**1,805.3926**	**0.5673**		**1,819.5741**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0611	0.0217	0.3704	8.9000e-004	0.1111	4.2000e-004	0.1115	0.0295	3.9000e-004	0.0299		90.3320	90.3320	2.4500e-003	2.5000e-003	91.1371
Total	**0.0611**	**0.0217**	**0.3704**	**8.9000e-004**	**0.1111**	**4.2000e-004**	**0.1115**	**0.0295**	**3.9000e-004**	**0.0299**		**90.3320**	**90.3320**	**2.4500e-003**	**2.5000e-003**	**91.1371**

TNRE Harris Road Facility - Phase 1-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2194	0.9509	13.5323	0.0189		0.0293	0.0293		0.0293	0.0293	0.0000	1,805.3926	1,805.3926	0.5673		1,819.5741
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2194**	**0.9509**	**13.5323**	**0.0189**		**0.0293**	**0.0293**		**0.0293**	**0.0293**	**0.0000**	**1,805.3926**	**1,805.3926**	**0.5673**		**1,819.5741**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0611	0.0217	0.3704	8.9000e-004	0.1111	4.2000e-004	0.1115	0.0295	3.9000e-004	0.0299		90.3320	90.3320	2.4500e-003	2.5000e-003	91.1371
Total	**0.0611**	**0.0217**	**0.3704**	**8.9000e-004**	**0.1111**	**4.2000e-004**	**0.1115**	**0.0295**	**3.9000e-004**	**0.0299**		**90.3320**	**90.3320**	**2.4500e-003**	**2.5000e-003**	**91.1371**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	56.2749					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**56.4458**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0428	0.0152	0.2593	6.3000e-004	0.0778	3.0000e-004	0.0781	0.0206	2.7000e-004	0.0209		63.2324	63.2324	1.7200e-003	1.7500e-003	63.7959
Total	**0.0428**	**0.0152**	**0.2593**	**6.3000e-004**	**0.0778**	**3.0000e-004**	**0.0781**	**0.0206**	**2.7000e-004**	**0.0209**		**63.2324**	**63.2324**	**1.7200e-003**	**1.7500e-003**	**63.7959**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	56.2749					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**56.3046**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0428	0.0152	0.2593	6.3000e-004	0.0778	3.0000e-004	0.0781	0.0206	2.7000e-004	0.0209		63.2324	63.2324	1.7200e-003	1.7500e-003	63.7959
Total	**0.0428**	**0.0152**	**0.2593**	**6.3000e-004**	**0.0778**	**3.0000e-004**	**0.0781**	**0.0206**	**2.7000e-004**	**0.0209**		**63.2324**	**63.2324**	**1.7200e-003**	**1.7500e-003**	**63.7959**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.5842	2.7593	24.0003	0.0473	2,398.7522	0.0328	2,398.7850	239.3802	0.0307	239.4108		4,809.4709	4,809.4709	0.2402	0.2277	4,883.3391
Unmitigated	3.5842	2.7593	24.0003	0.0473	2,398.7522	0.0328	2,398.7850	239.3802	0.0307	239.4108		4,809.4709	4,809.4709	0.2402	0.2277	4,883.3391

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	648.92	1,060.07	840.46	1,624,968	1,624,968
Total	648.92	1,060.07	840.46	1,624,968	1,624,968

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	6.70	5.00	8.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.534506	0.059297	0.179652	0.141644	0.025634	0.006729	0.008348	0.016161	0.000956	0.000117	0.022945	0.000739	0.003273

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897
NaturalGas Unmitigated	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	14625.6	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897
Total		**0.1577**	**1.4339**	**1.2045**	**8.6000e-003**		**0.1090**	**0.1090**		**0.1090**	**0.1090**		**1,720.6646**	**1,720.6646**	**0.0330**	**0.0316**	**1,730.8897**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	14.6256	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897
Total		**0.1577**	**1.4339**	**1.2045**	**8.6000e-003**		**0.1090**	**0.1090**		**0.1090**	**0.1090**		**1,720.6646**	**1,720.6646**	**0.0330**	**0.0316**	**1,730.8897**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.7972	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385
Unmitigated	3.7972	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385

TNRE Harris Road Facility - Phase 1-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2621					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5500e-003	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385
Total	**3.7972**	**1.5000e-004**	**0.0168**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0361**	**0.0361**	**9.0000e-005**		**0.0385**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2621					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5500e-003	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385
Total	**3.7972**	**1.5000e-004**	**0.0168**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0361**	**0.0361**	**9.0000e-005**		**0.0385**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

TNRE Harris Road Facility - Phase 1-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

TNRE Harris Road Facility - Phase 1-B

Imperial County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	165.12	1000sqft	3.79	165,121.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2028
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Imperial Water District is not on list, chose SCE for proxy

Land Use - For construction purposes only

Construction Phase - Schedule provided by client

On-road Fugitive Dust - All employee trips were on paved roads. 95% of haulers and vendors on paved roads.

Grading -

Architectural Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Construction Off-road Equipment Mitigation - Tier 4 Final equipment will be used where applicable

Area Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Area Mitigation - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

TNRE Harris Road Facility - Phase 1-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	100
tblAreaCoating	Area_EF_Nonresidential_Interior	150	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	150	50
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

TNRE Harris Road Facility - Phase 1-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	18.00	17.00
tblConstructionPhase	NumDays	230.00	111.00
tblConstructionPhase	NumDays	8.00	5.00
tblConstructionPhase	NumDays	18.00	8.00
tblConstructionPhase	NumDays	5.00	2.00
tblConstructionPhase	PhaseEndDate	8/24/2028	2/6/2028
tblConstructionPhase	PhaseEndDate	7/5/2028	1/12/2028
tblConstructionPhase	PhaseEndDate	8/18/2027	8/10/2027
tblConstructionPhase	PhaseEndDate	7/31/2028	1/24/2028
tblConstructionPhase	PhaseEndDate	8/6/2027	8/3/2027
tblConstructionPhase	PhaseStartDate	8/1/2028	1/13/2028
tblConstructionPhase	PhaseStartDate	8/19/2027	8/11/2027
tblConstructionPhase	PhaseStartDate	8/7/2027	8/4/2027
tblConstructionPhase	PhaseStartDate	7/6/2028	1/13/2028
tblLandUse	LandUseSquareFeet	165,120.00	165,121.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00

2.0 Emissions Summary

TNRE Harris Road Facility - Phase 1-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2027	2.5149	25.2560	18.1752	0.0388	18.2807	1.0872	18.8196	5.0778	1.0002	6.0780	0.0000	3,760.2972	3,760.2972	1.1957	0.0914	3,790.9053
2028	57.3405	13.6148	17.5149	0.0353	18.2807	0.5387	18.8194	1.9285	0.5068	2.4353	0.0000	3,417.9587	3,417.9587	0.6126	0.0889	3,459.7702
Maximum	**57.3405**	**25.2560**	**18.1752**	**0.0388**	**18.2807**	**1.0872**	**18.8196**	**5.0778**	**1.0002**	**6.0780**	**0.0000**	**3,760.2972**	**3,760.2972**	**1.1957**	**0.0914**	**3,790.9053**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2027	0.5383	3.4001	21.1324	0.0388	18.2807	0.0625	18.3328	1.9965	0.0625	2.0590	0.0000	3,760.2972	3,760.2972	1.1957	0.0914	3,790.9053
2028	56.5990	3.3798	18.8905	0.0353	18.2807	0.0519	18.3326	1.9285	0.0514	1.9798	0.0000	3,417.9587	3,417.9587	0.6126	0.0889	3,459.7702
Maximum	**56.5990**	**3.4001**	**21.1324**	**0.0388**	**18.2807**	**0.0625**	**18.3328**	**1.9965**	**0.0625**	**2.0590**	**0.0000**	**3,760.2972**	**3,760.2972**	**1.1957**	**0.0914**	**3,790.9053**

TNRE Harris Road Facility - Phase 1-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	4.54	82.56	-12.14	0.00	0.00	92.96	2.59	43.98	92.45	52.56	0.00	0.00	0.00	0.00	0.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.7972	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385
Energy	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897
Mobile	2.2652	3.0267	19.7847	0.0418	2,398.7522	0.0328	2,398.7850	239.3802	0.0307	239.4109		4,249.9928	4,249.9928	0.2548	0.2336	4,325.9870
Total	**6.2201**	**4.4607**	**21.0060**	**0.0504**	**2,398.7522**	**0.1419**	**2,398.8941**	**239.3802**	**0.1397**	**239.5199**		**5,970.6936**	**5,970.6936**	**0.2879**	**0.2652**	**6,056.9151**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.7972	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385
Energy	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897
Mobile	2.2652	3.0267	19.7847	0.0418	2,398.7522	0.0328	2,398.7850	239.3802	0.0307	239.4109		4,249.9928	4,249.9928	0.2548	0.2336	4,325.9870
Total	**6.2201**	**4.4607**	**21.0060**	**0.0504**	**2,398.7522**	**0.1419**	**2,398.8941**	**239.3802**	**0.1397**	**239.5199**		**5,970.6936**	**5,970.6936**	**0.2879**	**0.2652**	**6,056.9151**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	8/2/2027	8/3/2027	5	2	
2	Grading	Grading	8/4/2027	8/10/2027	5	5	
3	Building Construction	Building Construction	8/11/2027	1/12/2028	5	111	
4	Paving	Paving	1/13/2028	1/24/2028	5	8	
5	Architectural Coating	Architectural Coating	1/13/2028	2/6/2028	5	17	

Acres of Grading (Site Preparation Phase): 1.5

Acres of Grading (Grading Phase): 5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 247,682; Non-Residential Outdoor: 82,561; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	69.00	27.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

TNRE Harris Road Facility - Phase 1-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.8285	0.0000	9.8285	5.0512	0.0000	5.0512			0.0000			0.0000
Off-Road	2.4727	25.2339	17.9118	0.0381		1.0868	1.0868		0.9999	0.9999		3,689.1037	3,689.1037	1.1931		3,718.9320
Total	**2.4727**	**25.2339**	**17.9118**	**0.0381**	**9.8285**	**1.0868**	**10.9153**	**5.0512**	**0.9999**	**6.0511**		**3,689.1037**	**3,689.1037**	**1.1931**		**3,718.9320**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0422	0.0221	0.2634	7.0000e-004	0.1000	4.1000e-004	0.1004	0.0265	3.8000e-004	0.0269		71.1935	71.1935	2.5700e-003	2.4000e-003	71.9733
Total	**0.0422**	**0.0221**	**0.2634**	**7.0000e-004**	**0.1000**	**4.1000e-004**	**0.1004**	**0.0265**	**3.8000e-004**	**0.0269**		**71.1935**	**71.1935**	**2.5700e-003**	**2.4000e-003**	**71.9733**

TNRE Harris Road Facility - Phase 1-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.8331	0.0000	3.8331	1.9700	0.0000	1.9700			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0381		0.0621	0.0621		0.0621	0.0621	0.0000	3,689.1037	3,689.1037	1.1931		3,718.9320
Total	**0.4656**	**2.0175**	**20.8690**	**0.0381**	**3.8331**	**0.0621**	**3.8952**	**1.9700**	**0.0621**	**2.0321**	**0.0000**	**3,689.1037**	**3,689.1037**	**1.1931**		**3,718.9320**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0422	0.0221	0.2634	7.0000e-004	0.1000	4.1000e-004	0.1004	0.0265	3.8000e-004	0.0269		71.1935	71.1935	2.5700e-003	2.4000e-003	71.9733
Total	**0.0422**	**0.0221**	**0.2634**	**7.0000e-004**	**0.1000**	**4.1000e-004**	**0.1004**	**0.0265**	**3.8000e-004**	**0.0269**		**71.1935**	**71.1935**	**2.5700e-003**	**2.4000e-003**	**71.9733**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.5227	15.3148	14.5402	0.0297		0.6236	0.6236		0.5737	0.5737		2,873.7052	2,873.7052	0.9294		2,896.9405
Total	**1.5227**	**15.3148**	**14.5402**	**0.0297**	**7.0826**	**0.6236**	**7.7062**	**3.4247**	**0.5737**	**3.9984**		**2,873.7052**	**2,873.7052**	**0.9294**		**2,896.9405**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0352	0.0184	0.2195	5.9000e-004	0.0833	3.4000e-004	0.0837	0.0221	3.1000e-004	0.0224		59.3279	59.3279	2.1400e-003	2.0000e-003	59.9777
Total	**0.0352**	**0.0184**	**0.2195**	**5.9000e-004**	**0.0833**	**3.4000e-004**	**0.0837**	**0.0221**	**3.1000e-004**	**0.0224**		**59.3279**	**59.3279**	**2.1400e-003**	**2.0000e-003**	**59.9777**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7622	0.0000	2.7622	1.3357	0.0000	1.3357			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0297		0.0484	0.0484		0.0484	0.0484	0.0000	2,873.7052	2,873.7052	0.9294		2,896.9405
Total	**0.3632**	**1.5737**	**17.7527**	**0.0297**	**2.7622**	**0.0484**	**2.8106**	**1.3357**	**0.0484**	**1.3841**	**0.0000**	**2,873.7052**	**2,873.7052**	**0.9294**		**2,896.9405**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0352	0.0184	0.2195	5.9000e-004	0.0833	3.4000e-004	0.0837	0.0221	3.1000e-004	0.0224		59.3279	59.3279	2.1400e-003	2.0000e-003	59.9777
Total	**0.0352**	**0.0184**	**0.2195**	**5.9000e-004**	**0.0833**	**3.4000e-004**	**0.0837**	**0.0221**	**3.1000e-004**	**0.0224**		**59.3279**	**59.3279**	**2.1400e-003**	**2.0000e-003**	**59.9777**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0488	1.0806	0.4834	5.7800e-003	17.8974	9.7400e-003	17.9071	1.8267	9.3200e-003	1.8361		607.4056	607.4056	2.6200e-003	0.0822	631.9671
Worker	0.1617	0.0847	1.0098	2.7000e-003	0.3834	1.5700e-003	0.3849	0.1017	1.4400e-003	0.1032		272.9082	272.9082	9.8400e-003	9.2100e-003	275.8976
Total	**0.2105**	**1.1654**	**1.4932**	**8.4800e-003**	**18.2807**	**0.0113**	**18.2920**	**1.9285**	**0.0108**	**1.9392**		**880.3138**	**880.3138**	**0.0125**	**0.0914**	**907.8647**

TNRE Harris Road Facility - Phase 1-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0488	1.0806	0.4834	5.7800e-003	17.8974	9.7400e-003	17.9071	1.8267	9.3200e-003	1.8361		607.4056	607.4056	2.6200e-003	0.0822	631.9671
Worker	0.1617	0.0847	1.0098	2.7000e-003	0.3834	1.5700e-003	0.3849	0.1017	1.4400e-003	0.1032		272.9082	272.9082	9.8400e-003	9.2100e-003	275.8976
Total	**0.2105**	**1.1654**	**1.4932**	**8.4800e-003**	**18.2807**	**0.0113**	**18.2920**	**1.9285**	**0.0108**	**1.9392**		**880.3138**	**880.3138**	**0.0125**	**0.0914**	**907.8647**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0479	1.0677	0.4756	5.6700e-003	17.8974	9.6600e-003	17.9070	1.8267	9.2400e-003	1.8360		595.8422	595.8422	2.6000e-003	0.0802	619.7996
Worker	0.1522	0.0774	0.9546	2.6300e-003	0.3834	1.4600e-003	0.3848	0.1017	1.3400e-003	0.1031		265.6422	265.6422	9.0500e-003	8.7400e-003	268.4725
Total	**0.2001**	**1.1451**	**1.4302**	**8.3000e-003**	**18.2807**	**0.0111**	**18.2918**	**1.9285**	**0.0106**	**1.9390**		**861.4844**	**861.4844**	**0.0117**	**0.0889**	**888.2721**

TNRE Harris Road Facility - Phase 1-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0479	1.0677	0.4756	5.6700e-003	17.8974	9.6600e-003	17.9070	1.8267	9.2400e-003	1.8360		595.8422	595.8422	2.6000e-003	0.0802	619.7996
Worker	0.1522	0.0774	0.9546	2.6300e-003	0.3834	1.4600e-003	0.3848	0.1017	1.3400e-003	0.1031		265.6422	265.6422	9.0500e-003	8.7400e-003	268.4725
Total	**0.2001**	**1.1451**	**1.4302**	**8.3000e-003**	**18.2807**	**0.0111**	**18.2918**	**1.9285**	**0.0106**	**1.9390**		**861.4844**	**861.4844**	**0.0117**	**0.0889**	**888.2721**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8197	7.5321	12.1778	0.0189		0.3524	0.3524		0.3259	0.3259		1,805.3926	1,805.3926	0.5673		1,819.5741
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8197**	**7.5321**	**12.1778**	**0.0189**		**0.3524**	**0.3524**		**0.3259**	**0.3259**		**1,805.3926**	**1,805.3926**	**0.5673**		**1,819.5741**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0441	0.0224	0.2767	7.6000e-004	0.1111	4.2000e-004	0.1115	0.0295	3.9000e-004	0.0299		76.9977	76.9977	2.6200e-003	2.5300e-003	77.8181
Total	**0.0441**	**0.0224**	**0.2767**	**7.6000e-004**	**0.1111**	**4.2000e-004**	**0.1115**	**0.0295**	**3.9000e-004**	**0.0299**		**76.9977**	**76.9977**	**2.6200e-003**	**2.5300e-003**	**77.8181**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2194	0.9509	13.5323	0.0189		0.0293	0.0293		0.0293	0.0293	0.0000	1,805.3926	1,805.3926	0.5673		1,819.5741
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2194**	**0.9509**	**13.5323**	**0.0189**		**0.0293**	**0.0293**		**0.0293**	**0.0293**	**0.0000**	**1,805.3926**	**1,805.3926**	**0.5673**		**1,819.5741**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0441	0.0224	0.2767	7.6000e-004	0.1111	4.2000e-004	0.1115	0.0295	3.9000e-004	0.0299		76.9977	76.9977	2.6200e-003	2.5300e-003	77.8181
Total	**0.0441**	**0.0224**	**0.2767**	**7.6000e-004**	**0.1111**	**4.2000e-004**	**0.1115**	**0.0295**	**3.9000e-004**	**0.0299**		**76.9977**	**76.9977**	**2.6200e-003**	**2.5300e-003**	**77.8181**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	56.2749					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**56.4458**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0309	0.0157	0.1937	5.3000e-004	0.0778	3.0000e-004	0.0781	0.0206	2.7000e-004	0.0209		53.8984	53.8984	1.8400e-003	1.7700e-003	54.4727
Total	**0.0309**	**0.0157**	**0.1937**	**5.3000e-004**	**0.0778**	**3.0000e-004**	**0.0781**	**0.0206**	**2.7000e-004**	**0.0209**		**53.8984**	**53.8984**	**1.8400e-003**	**1.7700e-003**	**54.4727**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	56.2749					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**56.3046**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0309	0.0157	0.1937	5.3000e-004	0.0778	3.0000e-004	0.0781	0.0206	2.7000e-004	0.0209		53.8984	53.8984	1.8400e-003	1.7700e-003	54.4727
Total	**0.0309**	**0.0157**	**0.1937**	**5.3000e-004**	**0.0778**	**3.0000e-004**	**0.0781**	**0.0206**	**2.7000e-004**	**0.0209**		**53.8984**	**53.8984**	**1.8400e-003**	**1.7700e-003**	**54.4727**

TNRE Harris Road Facility - Phase 1-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.2652	3.0267	19.7847	0.0418	2,398.7522	0.0328	2,398.7850	239.3802	0.0307	239.4109		4,249.9928	4,249.9928	0.2548	0.2336	4,325.9870
Unmitigated	2.2652	3.0267	19.7847	0.0418	2,398.7522	0.0328	2,398.7850	239.3802	0.0307	239.4109		4,249.9928	4,249.9928	0.2548	0.2336	4,325.9870

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	648.92	1,060.07	840.46	1,624,968	1,624,968
Total	648.92	1,060.07	840.46	1,624,968	1,624,968

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	6.70	5.00	8.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.534506	0.059297	0.179652	0.141644	0.025634	0.006729	0.008348	0.016161	0.000956	0.000117	0.022945	0.000739	0.003273

TNRE Harris Road Facility - Phase 1-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897
NaturalGas Unmitigated	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	14625.6	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897
Total		**0.1577**	**1.4339**	**1.2045**	**8.6000e-003**		**0.1090**	**0.1090**		**0.1090**	**0.1090**		**1,720.6646**	**1,720.6646**	**0.0330**	**0.0316**	**1,730.8897**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	14.6256	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897
Total		**0.1577**	**1.4339**	**1.2045**	**8.6000e-003**		**0.1090**	**0.1090**		**0.1090**	**0.1090**		**1,720.6646**	**1,720.6646**	**0.0330**	**0.0316**	**1,730.8897**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.7972	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385
Unmitigated	3.7972	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385

TNRE Harris Road Facility - Phase 1-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2621					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5500e-003	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385
Total	**3.7972**	**1.5000e-004**	**0.0168**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0361**	**0.0361**	**9.0000e-005**		**0.0385**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2621					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5500e-003	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385
Total	**3.7972**	**1.5000e-004**	**0.0168**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0361**	**0.0361**	**9.0000e-005**		**0.0385**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

TNRE Harris Road Facility - Phase 1-B - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

TNRE Harris Road Facility - Phase 1-B

Imperial County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	165.12	1000sqft	3.79	165,121.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2028
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Imperial Water District is not on list, chose SCE for proxy

Land Use - For construction purposes only

Construction Phase - Schedule provided by client

On-road Fugitive Dust - All employee trips were on paved roads. 95% of haulers and vendors on paved roads.

Grading -

Architectural Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Construction Off-road Equipment Mitigation - Tier 4 Final equipment will be used where applicable

Area Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Area Mitigation - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

TNRE Harris Road Facility - Phase 1-B - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	100
tblAreaCoating	Area_EF_Nonresidential_Interior	150	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	150	50
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

TNRE Harris Road Facility - Phase 1-B - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	18.00	17.00
tblConstructionPhase	NumDays	230.00	111.00
tblConstructionPhase	NumDays	8.00	5.00
tblConstructionPhase	NumDays	18.00	8.00
tblConstructionPhase	NumDays	5.00	2.00
tblConstructionPhase	PhaseEndDate	8/24/2028	2/6/2028
tblConstructionPhase	PhaseEndDate	7/5/2028	1/12/2028
tblConstructionPhase	PhaseEndDate	8/18/2027	8/10/2027
tblConstructionPhase	PhaseEndDate	7/31/2028	1/24/2028
tblConstructionPhase	PhaseEndDate	8/6/2027	8/3/2027
tblConstructionPhase	PhaseStartDate	8/1/2028	1/13/2028
tblConstructionPhase	PhaseStartDate	8/19/2027	8/11/2027
tblConstructionPhase	PhaseStartDate	8/7/2027	8/4/2027
tblConstructionPhase	PhaseStartDate	7/6/2028	1/13/2028
tblLandUse	LandUseSquareFeet	165,120.00	165,121.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00

2.0 Emissions Summary

TNRE Harris Road Facility - Phase 1-B - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2027	0.0886	0.7644	0.9646	1.9500e-003	0.9392	0.0304	0.9696	0.1100	0.0286	0.1385	0.0000	171.5104	171.5104	0.0318	4.2600e-003	173.5760
2028	0.4899	0.0944	0.1374	2.5000e-004	0.0719	4.0100e-003	0.0759	7.7700e-003	3.7700e-003	0.0115	0.0000	21.9341	21.9341	4.4200e-003	3.4000e-004	22.1471
Maximum	**0.4899**	**0.7644**	**0.9646**	**1.9500e-003**	**0.9392**	**0.0304**	**0.9696**	**0.1100**	**0.0286**	**0.1385**	**0.0000**	**171.5104**	**171.5104**	**0.0318**	**4.2600e-003**	**173.5760**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2027	0.0301	0.1797	1.0464	1.9500e-003	0.9224	2.8700e-003	0.9252	0.1017	2.8400e-003	0.1045	0.0000	171.5102	171.5102	0.0318	4.2600e-003	173.5758
2028	0.4821	0.0185	0.1486	2.5000e-004	0.0719	3.6000e-004	0.0722	7.7700e-003	3.6000e-004	8.1300e-003	0.0000	21.9341	21.9341	4.4200e-003	3.4000e-004	22.1471
Maximum	**0.4821**	**0.1797**	**1.0464**	**1.9500e-003**	**0.9224**	**2.8700e-003**	**0.9252**	**0.1017**	**2.8400e-003**	**0.1045**	**0.0000**	**171.5102**	**171.5102**	**0.0318**	**4.2600e-003**	**173.5758**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**11.44**	**76.91**	**-8.43**	**0.00**	**1.66**	**90.61**	**4.59**	**7.05**	**90.10**	**24.94**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**8-2-2027**	**11-1-2027**	0.5124	0.1229
2	**11-2-2027**	**2-1-2028**	0.8388	0.5099
3	**2-2-2028**	**5-1-2028**	0.1029	0.1009
		Highest	0.8388	0.5099

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6929	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.9500e-003	2.9500e-003	1.0000e-005	0.0000	3.1400e-003
Energy	0.0288	0.2617	0.2198	1.5700e-003		0.0199	0.0199		0.0199	0.0199	0.0000	426.0275	426.0275	0.0300	8.1900e-003	429.2190
Mobile	0.3434	0.3707	2.5903	5.5500e-003	302.7039	4.1300e-003	302.7080	30.2076	3.8700e-003	30.2115	0.0000	512.0493	512.0493	0.0275	0.0263	520.5775
Waste						0.0000	0.0000		0.0000	0.0000	41.5624	0.0000	41.5624	2.4563	0.0000	102.9691
Water						0.0000	0.0000		0.0000	0.0000	12.1140	42.8449	54.9590	1.2517	0.0303	95.2744
Total	**1.0650**	**0.6324**	**2.8116**	**7.1200e-003**	**302.7039**	**0.0240**	**302.7279**	**30.2076**	**0.0238**	**30.2314**	**53.6764**	**980.9247**	**1,034.6011**	**3.7655**	**0.0648**	**1,148.0431**

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6929	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.9500e-003	2.9500e-003	1.0000e-005	0.0000	3.1400e-003
Energy	0.0288	0.2617	0.2198	1.5700e-003		0.0199	0.0199		0.0199	0.0199	0.0000	426.0275	426.0275	0.0300	8.1900e-003	429.2190
Mobile	0.3434	0.3707	2.5903	5.5500e-003	302.7039	4.1300e-003	302.7080	30.2076	3.8700e-003	30.2115	0.0000	512.0493	512.0493	0.0275	0.0263	520.5775
Waste						0.0000	0.0000		0.0000	0.0000	41.5624	0.0000	41.5624	2.4563	0.0000	102.9691
Water						0.0000	0.0000		0.0000	0.0000	12.1140	42.8449	54.9590	1.2517	0.0303	95.2744
Total	**1.0650**	**0.6324**	**2.8116**	**7.1200e-003**	**302.7039**	**0.0240**	**302.7279**	**30.2076**	**0.0238**	**30.2314**	**53.6764**	**980.9247**	**1,034.6011**	**3.7655**	**0.0648**	**1,148.0431**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	8/2/2027	8/3/2027	5	2	
2	Grading	Grading	8/4/2027	8/10/2027	5	5	
3	Building Construction	Building Construction	8/11/2027	1/12/2028	5	111	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Paving	Paving	1/13/2028	1/24/2028	5	8	
5	Architectural Coating	Architectural Coating	1/13/2028	2/6/2028	5	17	

Acres of Grading (Site Preparation Phase): 1.5

Acres of Grading (Grading Phase): 5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 247,682; Non-Residential Outdoor: 82,561; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

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Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	69.00	27.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.8300e-003	0.0000	9.8300e-003	5.0500e-003	0.0000	5.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4700e-003	0.0252	0.0179	4.0000e-005		1.0900e-003	1.0900e-003		1.0000e-003	1.0000e-003	0.0000	3.3467	3.3467	1.0800e-003	0.0000	3.3738
Total	**2.4700e-003**	**0.0252**	**0.0179**	**4.0000e-005**	**9.8300e-003**	**1.0900e-003**	**0.0109**	**5.0500e-003**	**1.0000e-003**	**6.0500e-003**	**0.0000**	**3.3467**	**3.3467**	**1.0800e-003**	**0.0000**	**3.3738**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	2.0000e-005	2.9000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0692	0.0692	0.0000	0.0000	0.0699
Total	**5.0000e-005**	**2.0000e-005**	**2.9000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0692**	**0.0692**	**0.0000**	**0.0000**	**0.0699**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.8300e-003	0.0000	3.8300e-003	1.9700e-003	0.0000	1.9700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7000e-004	2.0200e-003	0.0209	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.3467	3.3467	1.0800e-003	0.0000	3.3738
Total	**4.7000e-004**	**2.0200e-003**	**0.0209**	**4.0000e-005**	**3.8300e-003**	**6.0000e-005**	**3.8900e-003**	**1.9700e-003**	**6.0000e-005**	**2.0300e-003**	**0.0000**	**3.3467**	**3.3467**	**1.0800e-003**	**0.0000**	**3.3738**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	2.0000e-005	2.9000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0692	0.0692	0.0000	0.0000	0.0699
Total	**5.0000e-005**	**2.0000e-005**	**2.9000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0692**	**0.0692**	**0.0000**	**0.0000**	**0.0699**

3.3 Grading - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0177	0.0000	0.0177	8.5600e-003	0.0000	8.5600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8100e-003	0.0383	0.0364	7.0000e-005		1.5600e-003	1.5600e-003		1.4300e-003	1.4300e-003	0.0000	6.5175	6.5175	2.1100e-003	0.0000	6.5702
Total	**3.8100e-003**	**0.0383**	**0.0364**	**7.0000e-005**	**0.0177**	**1.5600e-003**	**0.0193**	**8.5600e-003**	**1.4300e-003**	**9.9900e-003**	**0.0000**	**6.5175**	**6.5175**	**2.1100e-003**	**0.0000**	**6.5702**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	4.0000e-005	6.0000e-004	0.0000	2.1000e-004	0.0000	2.1000e-004	5.0000e-005	0.0000	6.0000e-005	0.0000	0.1441	0.1441	0.0000	0.0000	0.1456
Total	**1.0000e-004**	**4.0000e-005**	**6.0000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**2.1000e-004**	**5.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1441**	**0.1441**	**0.0000**	**0.0000**	**0.1456**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.9100e-003	0.0000	6.9100e-003	3.3400e-003	0.0000	3.3400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.1000e-004	3.9300e-003	0.0444	7.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	6.5175	6.5175	2.1100e-003	0.0000	6.5701
Total	**9.1000e-004**	**3.9300e-003**	**0.0444**	**7.0000e-005**	**6.9100e-003**	**1.2000e-004**	**7.0300e-003**	**3.3400e-003**	**1.2000e-004**	**3.4600e-003**	**0.0000**	**6.5175**	**6.5175**	**2.1100e-003**	**0.0000**	**6.5701**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	4.0000e-005	6.0000e-004	0.0000	2.1000e-004	0.0000	2.1000e-004	5.0000e-005	0.0000	6.0000e-005	0.0000	0.1441	0.1441	0.0000	0.0000	0.1456
Total	**1.0000e-004**	**4.0000e-005**	**6.0000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**2.1000e-004**	**5.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1441**	**0.1441**	**0.0000**	**0.0000**	**0.1456**

3.4 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0704	0.6422	0.8284	1.3900e-003		0.0272	0.0272		0.0256	0.0256	0.0000	119.4385	119.4385	0.0281	0.0000	120.1404
Total	**0.0704**	**0.6422**	**0.8284**	**1.3900e-003**		**0.0272**	**0.0272**		**0.0256**	**0.0256**	**0.0000**	**119.4385**	**119.4385**	**0.0281**	**0.0000**	**120.1404**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5500e-003	0.0544	0.0243	3.0000e-004	0.8917	5.0000e-004	0.8922	0.0911	4.8000e-004	0.0916	0.0000	28.3388	28.3388	1.3000e-004	3.8300e-003	29.4838
Worker	9.1800e-003	4.2600e-003	0.0567	1.5000e-004	0.0196	8.0000e-005	0.0197	5.2000e-003	7.0000e-005	5.2800e-003	0.0000	13.6556	13.6556	4.3000e-004	4.2000e-004	13.7924
Total	**0.0117**	**0.0586**	**0.0811**	**4.5000e-004**	**0.9113**	**5.8000e-004**	**0.9119**	**0.0963**	**5.5000e-004**	**0.0968**	**0.0000**	**41.9944**	**41.9944**	**5.6000e-004**	**4.2500e-003**	**43.2762**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0169	0.1151	0.8992	1.3900e-003		2.1000e-003	2.1000e-003		2.1000e-003	2.1000e-003	0.0000	119.4384	119.4384	0.0281	0.0000	120.1403
Total	**0.0169**	**0.1151**	**0.8992**	**1.3900e-003**		**2.1000e-003**	**2.1000e-003**		**2.1000e-003**	**2.1000e-003**	**0.0000**	**119.4384**	**119.4384**	**0.0281**	**0.0000**	**120.1403**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5500e-003	0.0544	0.0243	3.0000e-004	0.8917	5.0000e-004	0.8922	0.0911	4.8000e-004	0.0916	0.0000	28.3388	28.3388	1.3000e-004	3.8300e-003	29.4838
Worker	9.1800e-003	4.2600e-003	0.0567	1.5000e-004	0.0196	8.0000e-005	0.0197	5.2000e-003	7.0000e-005	5.2800e-003	0.0000	13.6556	13.6556	4.3000e-004	4.2000e-004	13.7924
Total	**0.0117**	**0.0586**	**0.0811**	**4.5000e-004**	**0.9113**	**5.8000e-004**	**0.9119**	**0.0963**	**5.5000e-004**	**0.0968**	**0.0000**	**41.9944**	**41.9944**	**5.6000e-004**	**4.2500e-003**	**43.2762**

3.4 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.4700e-003	0.0499	0.0643	1.1000e-004		2.1100e-003	2.1100e-003		1.9900e-003	1.9900e-003	0.0000	9.2768	9.2768	2.1800e-003	0.0000	9.3313
Total	**5.4700e-003**	**0.0499**	**0.0643**	**1.1000e-004**		**2.1100e-003**	**2.1100e-003**		**1.9900e-003**	**1.9900e-003**	**0.0000**	**9.2768**	**9.2768**	**2.1800e-003**	**0.0000**	**9.3313**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-004	4.1700e-003	1.8600e-003	2.0000e-005	0.0693	4.0000e-005	0.0693	7.0700e-003	4.0000e-005	7.1100e-003	0.0000	2.1591	2.1591	1.0000e-005	2.9000e-004	2.2459
Worker	6.7000e-004	3.0000e-004	4.1600e-003	1.0000e-005	1.5200e-003	1.0000e-005	1.5300e-003	4.0000e-004	1.0000e-005	4.1000e-004	0.0000	1.0323	1.0323	3.0000e-005	3.0000e-005	1.0424
Total	**8.6000e-004**	**4.4700e-003**	**6.0200e-003**	**3.0000e-005**	**0.0708**	**5.0000e-005**	**0.0708**	**7.4700e-003**	**5.0000e-005**	**7.5200e-003**	**0.0000**	**3.1915**	**3.1915**	**4.0000e-005**	**3.2000e-004**	**3.2883**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.3100e-003	8.9400e-003	0.0698	1.1000e-004		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	9.2768	9.2768	2.1800e-003	0.0000	9.3313
Total	**1.3100e-003**	**8.9400e-003**	**0.0698**	**1.1000e-004**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**	**0.0000**	**9.2768**	**9.2768**	**2.1800e-003**	**0.0000**	**9.3313**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-004	4.1700e-003	1.8600e-003	2.0000e-005	0.0693	4.0000e-005	0.0693	7.0700e-003	4.0000e-005	7.1100e-003	0.0000	2.1591	2.1591	1.0000e-005	2.9000e-004	2.2459
Worker	6.7000e-004	3.0000e-004	4.1600e-003	1.0000e-005	1.5200e-003	1.0000e-005	1.5300e-003	4.0000e-004	1.0000e-005	4.1000e-004	0.0000	1.0323	1.0323	3.0000e-005	3.0000e-005	1.0424
Total	**8.6000e-004**	**4.4700e-003**	**6.0200e-003**	**3.0000e-005**	**0.0708**	**5.0000e-005**	**0.0708**	**7.4700e-003**	**5.0000e-005**	**7.5200e-003**	**0.0000**	**3.1915**	**3.1915**	**4.0000e-005**	**3.2000e-004**	**3.2883**

3.5 Paving - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.2800e-003	0.0301	0.0487	8.0000e-005		1.4100e-003	1.4100e-003		1.3000e-003	1.3000e-003	0.0000	6.5513	6.5513	2.0600e-003	0.0000	6.6028
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.2800e-003**	**0.0301**	**0.0487**	**8.0000e-005**		**1.4100e-003**	**1.4100e-003**		**1.3000e-003**	**1.3000e-003**	**0.0000**	**6.5513**	**6.5513**	**2.0600e-003**	**0.0000**	**6.6028**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	9.0000e-005	1.2100e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.2992	0.2992	1.0000e-005	1.0000e-005	0.3021
Total	**1.9000e-004**	**9.0000e-005**	**1.2100e-003**	**0.0000**	**4.4000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.2992**	**0.2992**	**1.0000e-005**	**1.0000e-005**	**0.3021**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.8000e-004	3.8000e-003	0.0541	8.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	6.5513	6.5513	2.0600e-003	0.0000	6.6028
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.8000e-004**	**3.8000e-003**	**0.0541**	**8.0000e-005**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**	**0.0000**	**6.5513**	**6.5513**	**2.0600e-003**	**0.0000**	**6.6028**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	9.0000e-005	1.2100e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.2992	0.2992	1.0000e-005	1.0000e-005	0.3021
Total	**1.9000e-004**	**9.0000e-005**	**1.2100e-003**	**0.0000**	**4.4000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.2992**	**0.2992**	**1.0000e-005**	**1.0000e-005**	**0.3021**

3.6 Architectural Coating - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4783					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4500e-003	9.7400e-003	0.0154	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	2.1703	2.1703	1.2000e-004	0.0000	2.1732
Total	**0.4798**	**9.7400e-003**	**0.0154**	**3.0000e-005**		**4.4000e-004**	**4.4000e-004**		**4.4000e-004**	**4.4000e-004**	**0.0000**	**2.1703**	**2.1703**	**1.2000e-004**	**0.0000**	**2.1732**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9000e-004	1.3000e-004	1.7900e-003	0.0000	6.6000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.4451	0.4451	1.0000e-005	1.0000e-005	0.4494
Total	**2.9000e-004**	**1.3000e-004**	**1.7900e-003**	**0.0000**	**6.6000e-004**	**0.0000**	**6.6000e-004**	**1.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.4451**	**0.4451**	**1.0000e-005**	**1.0000e-005**	**0.4494**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4783					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5000e-004	1.0900e-003	0.0156	3.0000e-005		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	2.1703	2.1703	1.2000e-004	0.0000	2.1732
Total	**0.4786**	**1.0900e-003**	**0.0156**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**2.1703**	**2.1703**	**1.2000e-004**	**0.0000**	**2.1732**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9000e-004	1.3000e-004	1.7900e-003	0.0000	6.6000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.4451	0.4451	1.0000e-005	1.0000e-005	0.4494
Total	**2.9000e-004**	**1.3000e-004**	**1.7900e-003**	**0.0000**	**6.6000e-004**	**0.0000**	**6.6000e-004**	**1.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.4451**	**0.4451**	**1.0000e-005**	**1.0000e-005**	**0.4494**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3434	0.3707	2.5903	5.5500e-003	302.7039	4.1300e-003	302.7080	30.2076	3.8700e-003	30.2115	0.0000	512.0493	512.0493	0.0275	0.0263	520.5775
Unmitigated	0.3434	0.3707	2.5903	5.5500e-003	302.7039	4.1300e-003	302.7080	30.2076	3.8700e-003	30.2115	0.0000	512.0493	512.0493	0.0275	0.0263	520.5775

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	648.92	1,060.07	840.46	1,624,968	1,624,968
Total	648.92	1,060.07	840.46	1,624,968	1,624,968

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	6.70	5.00	8.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.534506	0.059297	0.179652	0.141644	0.025634	0.006729	0.008348	0.016161	0.000956	0.000117	0.022945	0.000739	0.003273

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	141.1522	141.1522	0.0245	2.9700e-003	142.6508
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	141.1522	141.1522	0.0245	2.9700e-003	142.6508
NaturalGas Mitigated	0.0288	0.2617	0.2198	1.5700e-003		0.0199	0.0199		0.0199	0.0199	0.0000	284.8753	284.8753	5.4600e-003	5.2200e-003	286.5682
NaturalGas Unmitigated	0.0288	0.2617	0.2198	1.5700e-003		0.0199	0.0199		0.0199	0.0199	0.0000	284.8753	284.8753	5.4600e-003	5.2200e-003	286.5682

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	5.33836e+006	0.0288	0.2617	0.2198	1.5700e-003		0.0199	0.0199		0.0199	0.0199	0.0000	284.8753	284.8753	5.4600e-003	5.2200e-003	286.5682
Total		**0.0288**	**0.2617**	**0.2198**	**1.5700e-003**		**0.0199**	**0.0199**		**0.0199**	**0.0199**	**0.0000**	**284.8753**	**284.8753**	**5.4600e-003**	**5.2200e-003**	**286.5682**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	5.33836e+006	0.0288	0.2617	0.2198	1.5700e-003		0.0199	0.0199		0.0199	0.0199	0.0000	284.8753	284.8753	5.4600e-003	5.2200e-003	286.5682
Total		**0.0288**	**0.2617**	**0.2198**	**1.5700e-003**		**0.0199**	**0.0199**		**0.0199**	**0.0199**	**0.0000**	**284.8753**	**284.8753**	**5.4600e-003**	**5.2200e-003**	**286.5682**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	1.638e+006	141.1522	0.0245	2.9700e-003	142.6508
Total		**141.1522**	**0.0245**	**2.9700e-003**	**142.6508**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	1.638e+006	141.1522	0.0245	2.9700e-003	142.6508
Total		**141.1522**	**0.0245**	**2.9700e-003**	**142.6508**

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6929	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.9500e-003	2.9500e-003	1.0000e-005	0.0000	3.1400e-003
Unmitigated	0.6929	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.9500e-003	2.9500e-003	1.0000e-005	0.0000	3.1400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0478					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6449					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.9500e-003	2.9500e-003	1.0000e-005	0.0000	3.1400e-003
Total	**0.6929**	**1.0000e-005**	**1.5100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**2.9500e-003**	**2.9500e-003**	**1.0000e-005**	**0.0000**	**3.1400e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0478					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6449					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.9500e-003	2.9500e-003	1.0000e-005	0.0000	3.1400e-003
Total	**0.6929**	**1.0000e-005**	**1.5100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**2.9500e-003**	**2.9500e-003**	**1.0000e-005**	**0.0000**	**3.1400e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	54.9590	1.2517	0.0303	95.2744
Unmitigated	54.9590	1.2517	0.0303	95.2744

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	38.184 / 0	54.9590	1.2517	0.0303	95.2744
Total		**54.9590**	**1.2517**	**0.0303**	**95.2744**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	38.184 / 0	54.9590	1.2517	0.0303	95.2744
Total		**54.9590**	**1.2517**	**0.0303**	**95.2744**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	41.5624	2.4563	0.0000	102.9691
Unmitigated	41.5624	2.4563	0.0000	102.9691

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	204.75	41.5624	2.4563	0.0000	102.9691
Total		**41.5624**	**2.4563**	**0.0000**	**102.9691**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	204.75	41.5624	2.4563	0.0000	102.9691
Total		**41.5624**	**2.4563**	**0.0000**	**102.9691**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

TNRE Harris Road Facility - Phase 2-A

Imperial County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	79.54	1000sqft	1.83	79,543.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2030
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Imperial Water District is not on list, chose SCE for proxy

Land Use - For construction purposes only

Construction Phase - Schedule provided by client

Grading -

Architectural Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Area Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Construction Off-road Equipment Mitigation - Tier 4 Final equipment willl be used

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Area Mitigation - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Fleet Mix -

On-road Fugitive Dust - All employee trips were on paved roads. 95% of haulers and vendors on paved roads.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	100
tblAreaCoating	Area_EF_Nonresidential_Interior	150	50
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	17.00
tblConstructionPhase	NumDays	200.00	348.00
tblConstructionPhase	NumDays	4.00	5.00
tblConstructionPhase	NumDays	10.00	17.00
tblConstructionPhase	NumDays	2.00	5.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00

2.0 Emissions Summary

TNRE Harris Road Facility - Phase 2-A - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2029	1.4430	12.4342	13.2339	0.0262	8.8006	0.4963	9.1983	3.4395	0.4566	3.8960	0.0000	2,428.5809	2,428.5809	0.6466	0.0415	2,449.2287
2030	27.2586	7.6759	12.8744	0.0279	8.8006	0.1730	8.9328	0.9282	0.1730	1.0601	0.0000	2,571.0878	2,571.0878	0.1011	0.0405	2,585.6697
Maximum	**27.2586**	**12.4342**	**13.2339**	**0.0279**	**8.8006**	**0.4963**	**9.1983**	**3.4395**	**0.4566**	**3.8960**	**0.0000**	**2,571.0878**	**2,571.0878**	**0.6466**	**0.0415**	**2,585.6697**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2029	1.4430	12.4342	13.2339	0.0262	8.8006	0.4963	9.1983	1.3504	0.4566	1.8069	0.0000	2,428.5809	2,428.5809	0.6466	0.0415	2,449.2287
2030	27.2586	7.6759	12.8744	0.0279	8.8006	0.1730	8.9328	0.9282	0.1730	1.0601	0.0000	2,571.0878	2,571.0878	0.1011	0.0405	2,585.6697
Maximum	**27.2586**	**12.4342**	**13.2339**	**0.0279**	**8.8006**	**0.4963**	**9.1983**	**1.3504**	**0.4566**	**1.8069**	**0.0000**	**2,571.0878**	**2,571.0878**	**0.6466**	**0.0415**	**2,585.6697**

TNRE Harris Road Facility - Phase 2-A - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47.83	0.00	42.15	0.00	0.00	0.00	0.00	0.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.8292	7.0000e-005	8.0800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0174	0.0174	4.0000e-005		0.0185
Energy	0.0760	0.6907	0.5802	4.1400e-003		0.0525	0.0525		0.0525	0.0525		828.8881	828.8881	0.0159	0.0152	833.8137
Mobile	1.4779	1.0595	9.9721	0.0204	1,155.5458	0.0128	1,155.5585	115.3157	0.0120	115.3276		2,073.3977	2,073.3977	0.0979	0.0948	2,104.0825
Total	**3.3831**	**1.7504**	**10.5604**	**0.0246**	**1,155.5458**	**0.0653**	**1,155.6111**	**115.3157**	**0.0645**	**115.3802**		**2,902.3032**	**2,902.3032**	**0.1139**	**0.1100**	**2,937.9147**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.8292	7.0000e-005	8.0800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0174	0.0174	4.0000e-005		0.0185
Energy	0.0760	0.6907	0.5802	4.1400e-003		0.0525	0.0525		0.0525	0.0525		828.8881	828.8881	0.0159	0.0152	833.8137
Mobile	1.4779	1.0595	9.9721	0.0204	1,155.5458	0.0128	1,155.5585	115.3157	0.0120	115.3276		2,073.3977	2,073.3977	0.0979	0.0948	2,104.0825
Total	**3.3831**	**1.7504**	**10.5604**	**0.0246**	**1,155.5458**	**0.0653**	**1,155.6111**	**115.3157**	**0.0645**	**115.3802**		**2,902.3032**	**2,902.3032**	**0.1139**	**0.1100**	**2,937.9147**

TNRE Harris Road Facility - Phase 2-A - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2029	1/6/2029	5	5	
2	Grading	Grading	1/7/2029	1/12/2029	5	5	
3	Building Construction	Building Construction	1/13/2029	5/15/2030	5	348	
4	Paving	Paving	5/16/2030	6/8/2030	5	17	
5	Architectural Coating	Architectural Coating	6/9/2030	7/2/2030	5	17	

Acres of Grading (Site Preparation Phase): 4.69

Acres of Grading (Grading Phase): 5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 119,315; Non-Residential Outdoor: 39,772; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	33.00	13.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2641	0.0000	6.2641	3.0039	0.0000	3.0039			0.0000			0.0000
Off-Road	1.0103	10.5940	6.4468	0.0172		0.4192	0.4192		0.3857	0.3857		1,665.8856	1,665.8856	0.5388		1,679.3551
Total	**1.0103**	**10.5940**	**6.4468**	**0.0172**	**6.2641**	**0.4192**	**6.6833**	**3.0039**	**0.3857**	**3.3895**		**1,665.8856**	**1,665.8856**	**0.5388**		**1,679.3551**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0229	7.9600e-003	0.1401	3.5000e-004	0.0445	1.6000e-004	0.0446	0.0118	1.5000e-004	0.0119		35.2418	35.2418	9.0000e-004	9.5000e-004	35.5479
Total	**0.0229**	**7.9600e-003**	**0.1401**	**3.5000e-004**	**0.0445**	**1.6000e-004**	**0.0446**	**0.0118**	**1.5000e-004**	**0.0119**		**35.2418**	**35.2418**	**9.0000e-004**	**9.5000e-004**	**35.5479**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4430	0.0000	2.4430	1.1715	0.0000	1.1715			0.0000			0.0000
Off-Road	1.0103	10.5940	6.4468	0.0172		0.4192	0.4192		0.3857	0.3857	0.0000	1,665.8856	1,665.8856	0.5388		1,679.3551
Total	**1.0103**	**10.5940**	**6.4468**	**0.0172**	**2.4430**	**0.4192**	**2.8622**	**1.1715**	**0.3857**	**1.5572**	**0.0000**	**1,665.8856**	**1,665.8856**	**0.5388**		**1,679.3551**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0229	7.9600e-003	0.1401	3.5000e-004	0.0445	1.6000e-004	0.0446	0.0118	1.5000e-004	0.0119		35.2418	35.2418	9.0000e-004	9.5000e-004	35.5479
Total	**0.0229**	**7.9600e-003**	**0.1401**	**3.5000e-004**	**0.0445**	**1.6000e-004**	**0.0446**	**0.0118**	**1.5000e-004**	**0.0119**		**35.2418**	**35.2418**	**9.0000e-004**	**9.5000e-004**	**35.5479**

TNRE Harris Road Facility - Phase 2-A - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.1904	12.4243	8.4937	0.0206		0.4961	0.4961		0.4564	0.4564		1,995.7975	1,995.7975	0.6455		2,011.9345
Total	**1.1904**	**12.4243**	**8.4937**	**0.0206**	**7.0826**	**0.4961**	**7.5787**	**3.4247**	**0.4564**	**3.8811**		**1,995.7975**	**1,995.7975**	**0.6455**		**2,011.9345**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0286	9.9500e-003	0.1751	4.4000e-004	0.0556	2.0000e-004	0.0558	0.0147	1.8000e-004	0.0149		44.0522	44.0522	1.1300e-003	1.1900e-003	44.4349
Total	**0.0286**	**9.9500e-003**	**0.1751**	**4.4000e-004**	**0.0556**	**2.0000e-004**	**0.0558**	**0.0147**	**1.8000e-004**	**0.0149**		**44.0522**	**44.0522**	**1.1300e-003**	**1.1900e-003**	**44.4349**

TNRE Harris Road Facility - Phase 2-A - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7622	0.0000	2.7622	1.3357	0.0000	1.3357			0.0000			0.0000
Off-Road	1.1904	12.4243	8.4937	0.0206		0.4961	0.4961		0.4564	0.4564	0.0000	1,995.7975	1,995.7975	0.6455		2,011.9345
Total	**1.1904**	**12.4243**	**8.4937**	**0.0206**	**2.7622**	**0.4961**	**3.2583**	**1.3357**	**0.4564**	**1.7920**	**0.0000**	**1,995.7975**	**1,995.7975**	**0.6455**		**2,011.9345**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0286	9.9500e-003	0.1751	4.4000e-004	0.0556	2.0000e-004	0.0558	0.0147	1.8000e-004	0.0149		44.0522	44.0522	1.1300e-003	1.1900e-003	44.4349
Total	**0.0286**	**9.9500e-003**	**0.1751**	**4.4000e-004**	**0.0556**	**2.0000e-004**	**0.0558**	**0.0147**	**1.8000e-004**	**0.0149**		**44.0522**	**44.0522**	**1.1300e-003**	**1.1900e-003**	**44.4349**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3246	10.4128	12.4393	0.0221		0.3925	0.3925		0.3785	0.3785		2,002.1524	2,002.1524	0.3269		2,010.3248
Total	**1.3246**	**10.4128**	**12.4393**	**0.0221**		**0.3925**	**0.3925**		**0.3785**	**0.3785**		**2,002.1524**	**2,002.1524**	**0.3269**		**2,010.3248**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0241	0.4620	0.2166	2.6700e-003	8.6173	4.6000e-003	8.6219	0.8795	4.4000e-003	0.8839		281.0561	281.0561	1.2900e-003	0.0375	292.2687
Worker	0.0942	0.0328	0.5779	1.4400e-003	0.1833	6.5000e-004	0.1840	0.0486	6.0000e-004	0.0492		145.3724	145.3724	3.7100e-003	3.9300e-003	146.6352
Total	**0.1184**	**0.4948**	**0.7945**	**4.1100e-003**	**8.8006**	**5.2500e-003**	**8.8058**	**0.9282**	**5.0000e-003**	**0.9332**		**426.4285**	**426.4285**	**5.0000e-003**	**0.0415**	**438.9040**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3246	10.4128	12.4393	0.0221		0.3925	0.3925		0.3785	0.3785	0.0000	2,002.1524	2,002.1524	0.3269		2,010.3248
Total	**1.3246**	**10.4128**	**12.4393**	**0.0221**		**0.3925**	**0.3925**		**0.3785**	**0.3785**	**0.0000**	**2,002.1524**	**2,002.1524**	**0.3269**		**2,010.3248**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0241	0.4620	0.2166	2.6700e-003	8.6173	4.6000e-003	8.6219	0.8795	4.4000e-003	0.8839		281.0561	281.0561	1.2900e-003	0.0375	292.2687
Worker	0.0942	0.0328	0.5779	1.4400e-003	0.1833	6.5000e-004	0.1840	0.0486	6.0000e-004	0.0492		145.3724	145.3724	3.7100e-003	3.9300e-003	146.6352
Total	**0.1184**	**0.4948**	**0.7945**	**4.1100e-003**	**8.8006**	**5.2500e-003**	**8.8058**	**0.9282**	**5.0000e-003**	**0.9332**		**426.4285**	**426.4285**	**5.0000e-003**	**0.0415**	**438.9040**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0812	7.1882	12.1101	0.0238		0.1270	0.1270		0.1270	0.1270		2,152.6566	2,152.6566	0.0964		2,155.0655
Total	**1.0812**	**7.1882**	**12.1101**	**0.0238**		**0.1270**	**0.1270**		**0.1270**	**0.1270**		**2,152.6566**	**2,152.6566**	**0.0964**		**2,155.0655**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0239	0.4575	0.2144	2.6300e-003	8.6173	4.5700e-003	8.6218	0.8795	4.3700e-003	0.8839		276.3268	276.3268	1.2900e-003	0.0367	287.2929
Worker	0.0882	0.0302	0.5499	1.4100e-003	0.1833	6.1000e-004	0.1840	0.0486	5.6000e-004	0.0492		142.1043	142.1043	3.4200e-003	3.7600e-003	143.3113
Total	**0.1121**	**0.4878**	**0.7643**	**4.0400e-003**	**8.8006**	**5.1800e-003**	**8.8058**	**0.9282**	**4.9300e-003**	**0.9331**		**418.4312**	**418.4312**	**4.7100e-003**	**0.0405**	**430.6042**

TNRE Harris Road Facility - Phase 2-A - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0812	7.1882	12.1101	0.0238		0.1270	0.1270		0.1270	0.1270	0.0000	2,152.6566	2,152.6566	0.0964		2,155.0655
Total	**1.0812**	**7.1882**	**12.1101**	**0.0238**		**0.1270**	**0.1270**		**0.1270**	**0.1270**	**0.0000**	**2,152.6566**	**2,152.6566**	**0.0964**		**2,155.0655**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0239	0.4575	0.2144	2.6300e-003	8.6173	4.5700e-003	8.6218	0.8795	4.3700e-003	0.8839		276.3268	276.3268	1.2900e-003	0.0367	287.2929
Worker	0.0882	0.0302	0.5499	1.4100e-003	0.1833	6.1000e-004	0.1840	0.0486	5.6000e-004	0.0492		142.1043	142.1043	3.4200e-003	3.7600e-003	143.3113
Total	**0.1121**	**0.4878**	**0.7643**	**4.0400e-003**	**8.8006**	**5.1800e-003**	**8.8058**	**0.9282**	**4.9300e-003**	**0.9331**		**418.4312**	**418.4312**	**4.7100e-003**	**0.0405**	**430.6042**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8162	4.3905	9.4567	0.0165		0.1728	0.1728		0.1728	0.1728		1,550.9712	1,550.9712	0.0731		1,552.7983
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8162**	**4.3905**	**9.4567**	**0.0165**		**0.1728**	**0.1728**		**0.1728**	**0.1728**		**1,550.9712**	**1,550.9712**	**0.0731**		**1,552.7983**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0347	0.0119	0.2166	5.5000e-004	0.0722	2.4000e-004	0.0725	0.0192	2.2000e-004	0.0194		55.9805	55.9805	1.3500e-003	1.4800e-003	56.4560
Total	**0.0347**	**0.0119**	**0.2166**	**5.5000e-004**	**0.0722**	**2.4000e-004**	**0.0725**	**0.0192**	**2.2000e-004**	**0.0194**		**55.9805**	**55.9805**	**1.3500e-003**	**1.4800e-003**	**56.4560**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8162	4.3905	9.4567	0.0165		0.1728	0.1728		0.1728	0.1728	0.0000	1,550.9712	1,550.9712	0.0731		1,552.7983
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8162**	**4.3905**	**9.4567**	**0.0165**		**0.1728**	**0.1728**		**0.1728**	**0.1728**	**0.0000**	**1,550.9712**	**1,550.9712**	**0.0731**		**1,552.7983**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0347	0.0119	0.2166	5.5000e-004	0.0722	2.4000e-004	0.0725	0.0192	2.2000e-004	0.0194		55.9805	55.9805	1.3500e-003	1.4800e-003	56.4560
Total	**0.0347**	**0.0119**	**0.2166**	**5.5000e-004**	**0.0722**	**2.4000e-004**	**0.0725**	**0.0192**	**2.2000e-004**	**0.0194**		**55.9805**	**55.9805**	**1.3500e-003**	**1.4800e-003**	**56.4560**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.1092					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
Total	**27.2399**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.7328**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0187	6.4200e-003	0.1166	3.0000e-004	0.0389	1.3000e-004	0.0390	0.0103	1.2000e-004	0.0104		30.1433	30.1433	7.3000e-004	8.0000e-004	30.3994
Total	**0.0187**	**6.4200e-003**	**0.1166**	**3.0000e-004**	**0.0389**	**1.3000e-004**	**0.0390**	**0.0103**	**1.2000e-004**	**0.0104**		**30.1433**	**30.1433**	**7.3000e-004**	**8.0000e-004**	**30.3994**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.1092					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.7328
Total	**27.2399**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.7328**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0187	6.4200e-003	0.1166	3.0000e-004	0.0389	1.3000e-004	0.0390	0.0103	1.2000e-004	0.0104		30.1433	30.1433	7.3000e-004	8.0000e-004	30.3994
Total	**0.0187**	**6.4200e-003**	**0.1166**	**3.0000e-004**	**0.0389**	**1.3000e-004**	**0.0390**	**0.0103**	**1.2000e-004**	**0.0104**		**30.1433**	**30.1433**	**7.3000e-004**	**8.0000e-004**	**30.3994**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.4779	1.0595	9.9721	0.0204	1,155.5458	0.0128	1,155.5585	115.3157	0.0120	115.3276		2,073.3977	2,073.3977	0.0979	0.0948	2,104.0825
Unmitigated	1.4779	1.0595	9.9721	0.0204	1,155.5458	0.0128	1,155.5585	115.3157	0.0120	115.3276		2,073.3977	2,073.3977	0.0979	0.0948	2,104.0825

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	312.60	510.67	404.87	782,793	782,793
Total	312.60	510.67	404.87	782,793	782,793

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	6.70	5.00	8.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.546302	0.059468	0.180165	0.132656	0.023777	0.006524	0.008300	0.015283	0.000975	0.000111	0.022820	0.000686	0.002933

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0760	0.6907	0.5802	4.1400e-003		0.0525	0.0525		0.0525	0.0525		828.8881	828.8881	0.0159	0.0152	833.8137
NaturalGas Unmitigated	0.0760	0.6907	0.5802	4.1400e-003		0.0525	0.0525		0.0525	0.0525		828.8881	828.8881	0.0159	0.0152	833.8137

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	7045.55	0.0760	0.6907	0.5802	4.1400e-003		0.0525	0.0525		0.0525	0.0525		828.8881	828.8881	0.0159	0.0152	833.8137
Total		**0.0760**	**0.6907**	**0.5802**	**4.1400e-003**		**0.0525**	**0.0525**		**0.0525**	**0.0525**		**828.8881**	**828.8881**	**0.0159**	**0.0152**	**833.8137**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	7.04555	0.0760	0.6907	0.5802	4.1400e-003		0.0525	0.0525		0.0525	0.0525		828.8881	828.8881	0.0159	0.0152	833.8137
Total		**0.0760**	**0.6907**	**0.5802**	**4.1400e-003**		**0.0525**	**0.0525**		**0.0525**	**0.0525**		**828.8881**	**828.8881**	**0.0159**	**0.0152**	**833.8137**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.8292	7.0000e-005	8.0800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0174	0.0174	4.0000e-005		0.0185
Unmitigated	1.8292	7.0000e-005	8.0800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0174	0.0174	4.0000e-005		0.0185

TNRE Harris Road Facility - Phase 2-A - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1263					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.7022					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.4000e-004	7.0000e-005	8.0800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0174	0.0174	4.0000e-005		0.0185
Total	**1.8292**	**7.0000e-005**	**8.0800e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0174**	**0.0174**	**4.0000e-005**		**0.0185**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1263					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.7022					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.4000e-004	7.0000e-005	8.0800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0174	0.0174	4.0000e-005		0.0185
Total	**1.8292**	**7.0000e-005**	**8.0800e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0174**	**0.0174**	**4.0000e-005**		**0.0185**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

TNRE Harris Road Facility - Phase 2-A - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

TNRE Harris Road Facility - Phase 2-A

Imperial County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	79.54	1000sqft	1.83	79,543.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2030
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Imperial Water District is not on list, chose SCE for proxy

Land Use - For construction purposes only

Construction Phase - Schedule provided by client

Grading -

Architectural Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Area Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Construction Off-road Equipment Mitigation - Tier 4 Final equipment willl be used

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Area Mitigation - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Fleet Mix -

On-road Fugitive Dust - All employee trips were on paved roads. 95% of haulers and vendors on paved roads.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	100
tblAreaCoating	Area_EF_Nonresidential_Interior	150	50
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	17.00
tblConstructionPhase	NumDays	200.00	348.00
tblConstructionPhase	NumDays	4.00	5.00
tblConstructionPhase	NumDays	10.00	17.00
tblConstructionPhase	NumDays	2.00	5.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00

2.0 Emissions Summary

TNRE Harris Road Facility - Phase 2-A - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2029	1.4155	12.4345	13.0976	0.0260	8.8006	0.4963	9.1983	3.4395	0.4566	3.8960	0.0000	2,407.8160	2,407.8160	0.6467	0.0417	2,428.5407
2030	27.2535	7.7231	12.7458	0.0277	8.8006	0.1730	8.9328	0.9282	0.1730	1.0601	0.0000	2,550.8045	2,550.8045	0.1013	0.0407	2,565.4605
Maximum	**27.2535**	**12.4345**	**13.0976**	**0.0277**	**8.8006**	**0.4963**	**9.1983**	**3.4395**	**0.4566**	**3.8960**	**0.0000**	**2,550.8045**	**2,550.8045**	**0.6467**	**0.0417**	**2,565.4605**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2029	1.4155	12.4345	13.0976	0.0260	8.8006	0.4963	9.1983	1.3504	0.4566	1.8069	0.0000	2,407.8160	2,407.8160	0.6467	0.0417	2,428.5407
2030	27.2535	7.7231	12.7458	0.0277	8.8006	0.1730	8.9328	0.9282	0.1730	1.0601	0.0000	2,550.8045	2,550.8045	0.1013	0.0407	2,565.4605
Maximum	**27.2535**	**12.4345**	**13.0976**	**0.0277**	**8.8006**	**0.4963**	**9.1983**	**1.3504**	**0.4566**	**1.8069**	**0.0000**	**2,550.8045**	**2,550.8045**	**0.6467**	**0.0417**	**2,565.4605**

TNRE Harris Road Facility - Phase 2-A - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47.83	0.00	42.15	0.00	0.00	0.00	0.00	0.00	0.00

TNRE Harris Road Facility - Phase 2-A - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.8292	7.0000e-005	8.0800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0174	0.0174	4.0000e-005		0.0185
Energy	0.0760	0.6907	0.5802	4.1400e-003		0.0525	0.0525		0.0525	0.0525		828.8881	828.8881	0.0159	0.0152	833.8137
Mobile	0.9281	1.1667	8.2996	0.0180	1,155.5458	0.0128	1,155.5586	115.3157	0.0120	115.3276		1,831.6267	1,831.6267	0.1038	0.0973	1,863.2086
Total	**2.8333**	**1.8575**	**8.8879**	**0.0222**	**1,155.5458**	**0.0653**	**1,155.6111**	**115.3157**	**0.0645**	**115.3802**		**2,660.5321**	**2,660.5321**	**0.1197**	**0.1125**	**2,697.0409**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.8292	7.0000e-005	8.0800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0174	0.0174	4.0000e-005		0.0185
Energy	0.0760	0.6907	0.5802	4.1400e-003		0.0525	0.0525		0.0525	0.0525		828.8881	828.8881	0.0159	0.0152	833.8137
Mobile	0.9281	1.1667	8.2996	0.0180	1,155.5458	0.0128	1,155.5586	115.3157	0.0120	115.3276		1,831.6267	1,831.6267	0.1038	0.0973	1,863.2086
Total	**2.8333**	**1.8575**	**8.8879**	**0.0222**	**1,155.5458**	**0.0653**	**1,155.6111**	**115.3157**	**0.0645**	**115.3802**		**2,660.5321**	**2,660.5321**	**0.1197**	**0.1125**	**2,697.0409**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2029	1/6/2029	5	5	
2	Grading	Grading	1/7/2029	1/12/2029	5	5	
3	Building Construction	Building Construction	1/13/2029	5/15/2030	5	348	
4	Paving	Paving	5/16/2030	6/8/2030	5	17	
5	Architectural Coating	Architectural Coating	6/9/2030	7/2/2030	5	17	

Acres of Grading (Site Preparation Phase): 4.69

Acres of Grading (Grading Phase): 5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 119,315; Non-Residential Outdoor: 39,772; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	33.00	13.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2641	0.0000	6.2641	3.0039	0.0000	3.0039			0.0000			0.0000
Off-Road	1.0103	10.5940	6.4468	0.0172		0.4192	0.4192		0.3857	0.3857		1,665.8856	1,665.8856	0.5388		1,679.3551
Total	**1.0103**	**10.5940**	**6.4468**	**0.0172**	**6.2641**	**0.4192**	**6.6833**	**3.0039**	**0.3857**	**3.3895**		**1,665.8856**	**1,665.8856**	**0.5388**		**1,679.3551**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0165	8.2000e-003	0.1048	3.0000e-004	0.0445	1.6000e-004	0.0446	0.0118	1.5000e-004	0.0119		30.0425	30.0425	9.7000e-004	9.7000e-004	30.3543
Total	**0.0165**	**8.2000e-003**	**0.1048**	**3.0000e-004**	**0.0445**	**1.6000e-004**	**0.0446**	**0.0118**	**1.5000e-004**	**0.0119**		**30.0425**	**30.0425**	**9.7000e-004**	**9.7000e-004**	**30.3543**

TNRE Harris Road Facility - Phase 2-A - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4430	0.0000	2.4430	1.1715	0.0000	1.1715			0.0000			0.0000
Off-Road	1.0103	10.5940	6.4468	0.0172		0.4192	0.4192		0.3857	0.3857	0.0000	1,665.8856	1,665.8856	0.5388		1,679.3551
Total	**1.0103**	**10.5940**	**6.4468**	**0.0172**	**2.4430**	**0.4192**	**2.8622**	**1.1715**	**0.3857**	**1.5572**	**0.0000**	**1,665.8856**	**1,665.8856**	**0.5388**		**1,679.3551**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0165	8.2000e-003	0.1048	3.0000e-004	0.0445	1.6000e-004	0.0446	0.0118	1.5000e-004	0.0119		30.0425	30.0425	9.7000e-004	9.7000e-004	30.3543
Total	**0.0165**	**8.2000e-003**	**0.1048**	**3.0000e-004**	**0.0445**	**1.6000e-004**	**0.0446**	**0.0118**	**1.5000e-004**	**0.0119**		**30.0425**	**30.0425**	**9.7000e-004**	**9.7000e-004**	**30.3543**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.1904	12.4243	8.4937	0.0206		0.4961	0.4961		0.4564	0.4564		1,995.7975	1,995.7975	0.6455		2,011.9345
Total	**1.1904**	**12.4243**	**8.4937**	**0.0206**	**7.0826**	**0.4961**	**7.5787**	**3.4247**	**0.4564**	**3.8811**		**1,995.7975**	**1,995.7975**	**0.6455**		**2,011.9345**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0207	0.0103	0.1310	3.7000e-004	0.0556	2.0000e-004	0.0558	0.0147	1.8000e-004	0.0149		37.5531	37.5531	1.2100e-003	1.2100e-003	37.9429
Total	**0.0207**	**0.0103**	**0.1310**	**3.7000e-004**	**0.0556**	**2.0000e-004**	**0.0558**	**0.0147**	**1.8000e-004**	**0.0149**		**37.5531**	**37.5531**	**1.2100e-003**	**1.2100e-003**	**37.9429**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7622	0.0000	2.7622	1.3357	0.0000	1.3357			0.0000			0.0000
Off-Road	1.1904	12.4243	8.4937	0.0206		0.4961	0.4961		0.4564	0.4564	0.0000	1,995.7975	1,995.7975	0.6455		2,011.9345
Total	**1.1904**	**12.4243**	**8.4937**	**0.0206**	**2.7622**	**0.4961**	**3.2583**	**1.3357**	**0.4564**	**1.7920**	**0.0000**	**1,995.7975**	**1,995.7975**	**0.6455**		**2,011.9345**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0207	0.0103	0.1310	3.7000e-004	0.0556	2.0000e-004	0.0558	0.0147	1.8000e-004	0.0149		37.5531	37.5531	1.2100e-003	1.2100e-003	37.9429
Total	**0.0207**	**0.0103**	**0.1310**	**3.7000e-004**	**0.0556**	**2.0000e-004**	**0.0558**	**0.0147**	**1.8000e-004**	**0.0149**		**37.5531**	**37.5531**	**1.2100e-003**	**1.2100e-003**	**37.9429**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3246	10.4128	12.4393	0.0221		0.3925	0.3925		0.3785	0.3785		2,002.1524	2,002.1524	0.3269		2,010.3248
Total	**1.3246**	**10.4128**	**12.4393**	**0.0221**		**0.3925**	**0.3925**		**0.3785**	**0.3785**		**2,002.1524**	**2,002.1524**	**0.3269**		**2,010.3248**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0227	0.5087	0.2258	2.6800e-003	8.6173	4.6100e-003	8.6219	0.8795	4.4100e-003	0.8840		281.7382	281.7382	1.2400e-003	0.0377	293.0044
Worker	0.0682	0.0338	0.4324	1.2300e-003	0.1833	6.5000e-004	0.1840	0.0486	6.0000e-004	0.0492		123.9253	123.9253	3.9900e-003	3.9800e-003	125.2115
Total	**0.0909**	**0.5426**	**0.6582**	**3.9100e-003**	**8.8006**	**5.2600e-003**	**8.8059**	**0.9282**	**5.0100e-003**	**0.9332**		**405.6635**	**405.6635**	**5.2300e-003**	**0.0417**	**418.2159**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3246	10.4128	12.4393	0.0221		0.3925	0.3925		0.3785	0.3785	0.0000	2,002.1524	2,002.1524	0.3269		2,010.3248
Total	**1.3246**	**10.4128**	**12.4393**	**0.0221**		**0.3925**	**0.3925**		**0.3785**	**0.3785**	**0.0000**	**2,002.1524**	**2,002.1524**	**0.3269**		**2,010.3248**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0227	0.5087	0.2258	2.6800e-003	8.6173	4.6100e-003	8.6219	0.8795	4.4100e-003	0.8840		281.7382	281.7382	1.2400e-003	0.0377	293.0044
Worker	0.0682	0.0338	0.4324	1.2300e-003	0.1833	6.5000e-004	0.1840	0.0486	6.0000e-004	0.0492		123.9253	123.9253	3.9900e-003	3.9800e-003	125.2115
Total	**0.0909**	**0.5426**	**0.6582**	**3.9100e-003**	**8.8006**	**5.2600e-003**	**8.8059**	**0.9282**	**5.0100e-003**	**0.9332**		**405.6635**	**405.6635**	**5.2300e-003**	**0.0417**	**418.2159**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0812	7.1882	12.1101	0.0238		0.1270	0.1270		0.1270	0.1270		2,152.6566	2,152.6566	0.0964		2,155.0655
Total	**1.0812**	**7.1882**	**12.1101**	**0.0238**		**0.1270**	**0.1270**		**0.1270**	**0.1270**		**2,152.6566**	**2,152.6566**	**0.0964**		**2,155.0655**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0225	0.5038	0.2236	2.6400e-003	8.6173	4.5800e-003	8.6218	0.8795	4.3800e-003	0.8839		277.0022	277.0022	1.2400e-003	0.0369	288.0208
Worker	0.0640	0.0311	0.4121	1.2000e-003	0.1833	6.1000e-004	0.1840	0.0486	5.6000e-004	0.0492		121.1457	121.1457	3.6900e-003	3.8100e-003	122.3743
Total	**0.0865**	**0.5349**	**0.6358**	**3.8400e-003**	**8.8006**	**5.1900e-003**	**8.8058**	**0.9282**	**4.9400e-003**	**0.9331**		**398.1479**	**398.1479**	**4.9300e-003**	**0.0407**	**410.3950**

TNRE Harris Road Facility - Phase 2-A - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0812	7.1882	12.1101	0.0238		0.1270	0.1270		0.1270	0.1270	0.0000	2,152.6566	2,152.6566	0.0964		2,155.0655
Total	**1.0812**	**7.1882**	**12.1101**	**0.0238**		**0.1270**	**0.1270**		**0.1270**	**0.1270**	**0.0000**	**2,152.6566**	**2,152.6566**	**0.0964**		**2,155.0655**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0225	0.5038	0.2236	2.6400e-003	8.6173	4.5800e-003	8.6218	0.8795	4.3800e-003	0.8839		277.0022	277.0022	1.2400e-003	0.0369	288.0208
Worker	0.0640	0.0311	0.4121	1.2000e-003	0.1833	6.1000e-004	0.1840	0.0486	5.6000e-004	0.0492		121.1457	121.1457	3.6900e-003	3.8100e-003	122.3743
Total	**0.0865**	**0.5349**	**0.6358**	**3.8400e-003**	**8.8006**	**5.1900e-003**	**8.8058**	**0.9282**	**4.9400e-003**	**0.9331**		**398.1479**	**398.1479**	**4.9300e-003**	**0.0407**	**410.3950**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8162	4.3905	9.4567	0.0165		0.1728	0.1728		0.1728	0.1728		1,550.9712	1,550.9712	0.0731		1,552.7983
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8162**	**4.3905**	**9.4567**	**0.0165**		**0.1728**	**0.1728**		**0.1728**	**0.1728**		**1,550.9712**	**1,550.9712**	**0.0731**		**1,552.7983**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0252	0.0123	0.1624	4.7000e-004	0.0722	2.4000e-004	0.0725	0.0192	2.2000e-004	0.0194		47.7241	47.7241	1.4500e-003	1.5000e-003	48.2080
Total	**0.0252**	**0.0123**	**0.1624**	**4.7000e-004**	**0.0722**	**2.4000e-004**	**0.0725**	**0.0192**	**2.2000e-004**	**0.0194**		**47.7241**	**47.7241**	**1.4500e-003**	**1.5000e-003**	**48.2080**

TNRE Harris Road Facility - Phase 2-A - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8162	4.3905	9.4567	0.0165		0.1728	0.1728		0.1728	0.1728	0.0000	1,550.9712	1,550.9712	0.0731		1,552.7983
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8162**	**4.3905**	**9.4567**	**0.0165**		**0.1728**	**0.1728**		**0.1728**	**0.1728**	**0.0000**	**1,550.9712**	**1,550.9712**	**0.0731**		**1,552.7983**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0252	0.0123	0.1624	4.7000e-004	0.0722	2.4000e-004	0.0725	0.0192	2.2000e-004	0.0194		47.7241	47.7241	1.4500e-003	1.5000e-003	48.2080
Total	**0.0252**	**0.0123**	**0.1624**	**4.7000e-004**	**0.0722**	**2.4000e-004**	**0.0725**	**0.0192**	**2.2000e-004**	**0.0194**		**47.7241**	**47.7241**	**1.4500e-003**	**1.5000e-003**	**48.2080**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.1092					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
Total	**27.2399**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.7328**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0136	6.6000e-003	0.0874	2.5000e-004	0.0389	1.3000e-004	0.0390	0.0103	1.2000e-004	0.0104		25.6976	25.6976	7.8000e-004	8.1000e-004	25.9582
Total	**0.0136**	**6.6000e-003**	**0.0874**	**2.5000e-004**	**0.0389**	**1.3000e-004**	**0.0390**	**0.0103**	**1.2000e-004**	**0.0104**		**25.6976**	**25.6976**	**7.8000e-004**	**8.1000e-004**	**25.9582**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.1092					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.7328
Total	**27.2399**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.7328**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0136	6.6000e-003	0.0874	2.5000e-004	0.0389	1.3000e-004	0.0390	0.0103	1.2000e-004	0.0104		25.6976	25.6976	7.8000e-004	8.1000e-004	25.9582
Total	**0.0136**	**6.6000e-003**	**0.0874**	**2.5000e-004**	**0.0389**	**1.3000e-004**	**0.0390**	**0.0103**	**1.2000e-004**	**0.0104**		**25.6976**	**25.6976**	**7.8000e-004**	**8.1000e-004**	**25.9582**

TNRE Harris Road Facility - Phase 2-A - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.9281	1.1667	8.2996	0.0180	1,155.5458	0.0128	1,155.5586	115.3157	0.0120	115.3276		1,831.6267	1,831.6267	0.1038	0.0973	1,863.2086
Unmitigated	0.9281	1.1667	8.2996	0.0180	1,155.5458	0.0128	1,155.5586	115.3157	0.0120	115.3276		1,831.6267	1,831.6267	0.1038	0.0973	1,863.2086

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	312.60	510.67	404.87	782,793	782,793
Total	312.60	510.67	404.87	782,793	782,793

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	6.70	5.00	8.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.546302	0.059468	0.180165	0.132656	0.023777	0.006524	0.008300	0.015283	0.000975	0.000111	0.022820	0.000686	0.002933

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0760	0.6907	0.5802	4.1400e-003		0.0525	0.0525		0.0525	0.0525		828.8881	828.8881	0.0159	0.0152	833.8137
NaturalGas Unmitigated	0.0760	0.6907	0.5802	4.1400e-003		0.0525	0.0525		0.0525	0.0525		828.8881	828.8881	0.0159	0.0152	833.8137

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	7045.55	0.0760	0.6907	0.5802	4.1400e-003		0.0525	0.0525		0.0525	0.0525		828.8881	828.8881	0.0159	0.0152	833.8137
Total		**0.0760**	**0.6907**	**0.5802**	**4.1400e-003**		**0.0525**	**0.0525**		**0.0525**	**0.0525**		**828.8881**	**828.8881**	**0.0159**	**0.0152**	**833.8137**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	7.04555	0.0760	0.6907	0.5802	4.1400e-003		0.0525	0.0525		0.0525	0.0525		828.8881	828.8881	0.0159	0.0152	833.8137
Total		**0.0760**	**0.6907**	**0.5802**	**4.1400e-003**		**0.0525**	**0.0525**		**0.0525**	**0.0525**		**828.8881**	**828.8881**	**0.0159**	**0.0152**	**833.8137**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.8292	7.0000e-005	8.0800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0174	0.0174	4.0000e-005		0.0185
Unmitigated	1.8292	7.0000e-005	8.0800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0174	0.0174	4.0000e-005		0.0185

TNRE Harris Road Facility - Phase 2-A - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1263					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.7022					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.4000e-004	7.0000e-005	8.0800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0174	0.0174	4.0000e-005		0.0185
Total	**1.8292**	**7.0000e-005**	**8.0800e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0174**	**0.0174**	**4.0000e-005**		**0.0185**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1263					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.7022					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.4000e-004	7.0000e-005	8.0800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0174	0.0174	4.0000e-005		0.0185
Total	**1.8292**	**7.0000e-005**	**8.0800e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0174**	**0.0174**	**4.0000e-005**		**0.0185**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

TNRE Harris Road Facility - Phase 2-A - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

TNRE Harris Road Facility - Phase 2-A

Imperial County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	79.54	1000sqft	1.83	79,543.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2030
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Imperial Water District is not on list, chose SCE for proxy

Land Use - For construction purposes only

Construction Phase - Schedule provided by client

Grading -

Architectural Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Area Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Construction Off-road Equipment Mitigation - Tier 4 Final equipment willl be used

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Area Mitigation - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Fleet Mix -

On-road Fugitive Dust - All employee trips were on paved roads. 95% of haulers and vendors on paved roads.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	100
tblAreaCoating	Area_EF_Nonresidential_Interior	150	50
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	17.00
tblConstructionPhase	NumDays	200.00	348.00
tblConstructionPhase	NumDays	4.00	5.00
tblConstructionPhase	NumDays	10.00	17.00
tblConstructionPhase	NumDays	2.00	5.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00

2.0 Emissions Summary

TNRE Harris Road Facility - Phase 2-A - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2029	0.1842	1.4309	1.6858	3.3700e-003	1.1027	0.0522	1.1549	0.1291	0.0502	0.1793	0.0000	283.5578	283.5578	0.0405	4.7300e-003	285.9802
2030	0.2958	0.4187	0.7176	1.5200e-003	0.4141	8.0600e-003	0.4222	0.0439	8.0400e-003	0.0519	0.0000	127.3282	127.3282	5.1100e-003	1.8000e-003	127.9927
Maximum	**0.2958**	**1.4309**	**1.6858**	**3.3700e-003**	**1.1027**	**0.0522**	**1.1549**	**0.1291**	**0.0502**	**0.1793**	**0.0000**	**283.5578**	**283.5578**	**0.0405**	**4.7300e-003**	**285.9802**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2029	0.1842	1.4309	1.6858	3.3700e-003	1.0824	0.0522	1.1346	0.1193	0.0502	0.1695	0.0000	283.5575	283.5575	0.0405	4.7300e-003	285.9799
2030	0.2958	0.4187	0.7176	1.5200e-003	0.4141	8.0600e-003	0.4222	0.0439	8.0400e-003	0.0519	0.0000	127.3281	127.3281	5.1100e-003	1.8000e-003	127.9926
Maximum	**0.2958**	**1.4309**	**1.6858**	**3.3700e-003**	**1.0824**	**0.0522**	**1.1346**	**0.1193**	**0.0502**	**0.1695**	**0.0000**	**283.5575**	**283.5575**	**0.0405**	**4.7300e-003**	**285.9799**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**1.34**	**0.00**	**1.29**	**5.67**	**0.00**	**4.24**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2029**	**3-31-2029**	0.3988	0.3988
2	**4-1-2029**	**6-30-2029**	0.4014	0.4014
3	**7-1-2029**	**9-30-2029**	0.4058	0.4058
4	**10-1-2029**	**12-31-2029**	0.4065	0.4065
5	**1-1-2030**	**3-31-2030**	0.2858	0.2858
6	**4-1-2030**	**6-30-2030**	0.4085	0.4085
7	**7-1-2030**	**9-30-2030**	0.0201	0.0201
		Highest	0.4085	0.4085

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3338	1.0000e-005	7.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4200e-003	1.4200e-003	0.0000	0.0000	1.5100e-003
Energy	0.0139	0.1261	0.1059	7.6000e-004		9.5800e-003	9.5800e-003		9.5800e-003	9.5800e-003	0.0000	205.2283	205.2283	0.0144	3.9500e-003	206.7657
Mobile	0.1415	0.1426	1.0815	2.3900e-003	145.8209	1.6100e-003	145.8225	14.5518	1.5100e-003	14.5533	0.0000	220.7120	220.7120	0.0112	0.0110	224.2565
Waste						0.0000	0.0000		0.0000	0.0000	20.0210	0.0000	20.0210	1.1832	0.0000	49.6012
Water						0.0000	0.0000		0.0000	0.0000	5.8355	20.6388	26.4743	0.6029	0.0146	45.8947
Total	**0.4891**	**0.2686**	**1.1881**	**3.1500e-003**	**145.8209**	**0.0112**	**145.8321**	**14.5518**	**0.0111**	**14.5629**	**25.8565**	**446.5806**	**472.4370**	**1.8118**	**0.0295**	**526.5195**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3338	1.0000e-005	7.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4200e-003	1.4200e-003	0.0000	0.0000	1.5100e-003
Energy	0.0139	0.1261	0.1059	7.6000e-004		9.5800e-003	9.5800e-003		9.5800e-003	9.5800e-003	0.0000	205.2283	205.2283	0.0144	3.9500e-003	206.7657
Mobile	0.1415	0.1426	1.0815	2.3900e-003	145.8209	1.6100e-003	145.8225	14.5518	1.5100e-003	14.5533	0.0000	220.7120	220.7120	0.0112	0.0110	224.2565
Waste						0.0000	0.0000		0.0000	0.0000	20.0210	0.0000	20.0210	1.1832	0.0000	49.6012
Water						0.0000	0.0000		0.0000	0.0000	5.8355	20.6388	26.4743	0.6029	0.0146	45.8947
Total	**0.4891**	**0.2686**	**1.1881**	**3.1500e-003**	**145.8209**	**0.0112**	**145.8321**	**14.5518**	**0.0111**	**14.5629**	**25.8565**	**446.5806**	**472.4370**	**1.8118**	**0.0295**	**526.5195**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2029	1/6/2029	5	5	
2	Grading	Grading	1/7/2029	1/12/2029	5	5	
3	Building Construction	Building Construction	1/13/2029	5/15/2030	5	348	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Paving	Paving	5/16/2030	6/8/2030	5	17	
5	Architectural Coating	Architectural Coating	6/9/2030	7/2/2030	5	17	

Acres of Grading (Site Preparation Phase): 4.69

Acres of Grading (Grading Phase): 5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 119,315; Non-Residential Outdoor: 39,772; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	33.00	13.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0157	0.0000	0.0157	7.5100e-003	0.0000	7.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5300e-003	0.0265	0.0161	4.0000e-005		1.0500e-003	1.0500e-003		9.6000e-004	9.6000e-004	0.0000	3.7782	3.7782	1.2200e-003	0.0000	3.8087
Total	**2.5300e-003**	**0.0265**	**0.0161**	**4.0000e-005**	**0.0157**	**1.0500e-003**	**0.0167**	**7.5100e-003**	**9.6000e-004**	**8.4700e-003**	**0.0000**	**3.7782**	**3.7782**	**1.2200e-003**	**0.0000**	**3.8087**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	2.0000e-005	2.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0730	0.0730	0.0000	0.0000	0.0737
Total	**5.0000e-005**	**2.0000e-005**	**2.9000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0730**	**0.0730**	**0.0000**	**0.0000**	**0.0737**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.1100e-003	0.0000	6.1100e-003	2.9300e-003	0.0000	2.9300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5300e-003	0.0265	0.0161	4.0000e-005		1.0500e-003	1.0500e-003		9.6000e-004	9.6000e-004	0.0000	3.7782	3.7782	1.2200e-003	0.0000	3.8087
Total	**2.5300e-003**	**0.0265**	**0.0161**	**4.0000e-005**	**6.1100e-003**	**1.0500e-003**	**7.1600e-003**	**2.9300e-003**	**9.6000e-004**	**3.8900e-003**	**0.0000**	**3.7782**	**3.7782**	**1.2200e-003**	**0.0000**	**3.8087**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	2.0000e-005	2.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0730	0.0730	0.0000	0.0000	0.0737
Total	**5.0000e-005**	**2.0000e-005**	**2.9000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0730**	**0.0730**	**0.0000**	**0.0000**	**0.0737**

3.3 Grading - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0177	0.0000	0.0177	8.5600e-003	0.0000	8.5600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9800e-003	0.0311	0.0212	5.0000e-005		1.2400e-003	1.2400e-003		1.1400e-003	1.1400e-003	0.0000	4.5264	4.5264	1.4600e-003	0.0000	4.5630
Total	**2.9800e-003**	**0.0311**	**0.0212**	**5.0000e-005**	**0.0177**	**1.2400e-003**	**0.0190**	**8.5600e-003**	**1.1400e-003**	**9.7000e-003**	**0.0000**	**4.5264**	**4.5264**	**1.4600e-003**	**0.0000**	**4.5630**

TNRE Harris Road Facility - Phase 2-A - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	3.0000e-005	3.6000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0912	0.0912	0.0000	0.0000	0.0921
Total	**6.0000e-005**	**3.0000e-005**	**3.6000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.0912**	**0.0912**	**0.0000**	**0.0000**	**0.0921**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.9100e-003	0.0000	6.9100e-003	3.3400e-003	0.0000	3.3400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9800e-003	0.0311	0.0212	5.0000e-005		1.2400e-003	1.2400e-003		1.1400e-003	1.1400e-003	0.0000	4.5264	4.5264	1.4600e-003	0.0000	4.5630
Total	**2.9800e-003**	**0.0311**	**0.0212**	**5.0000e-005**	**6.9100e-003**	**1.2400e-003**	**8.1500e-003**	**3.3400e-003**	**1.1400e-003**	**4.4800e-003**	**0.0000**	**4.5264**	**4.5264**	**1.4600e-003**	**0.0000**	**4.5630**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	3.0000e-005	3.6000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0912	0.0912	0.0000	0.0000	0.0921
Total	**6.0000e-005**	**3.0000e-005**	**3.6000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.0912**	**0.0912**	**0.0000**	**0.0000**	**0.0921**

3.4 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1662	1.3068	1.5611	2.7700e-003		0.0493	0.0493		0.0475	0.0475	0.0000	227.9484	227.9484	0.0372	0.0000	228.8789
Total	**0.1662**	**1.3068**	**1.5611**	**2.7700e-003**		**0.0493**	**0.0493**		**0.0475**	**0.0475**	**0.0000**	**227.9484**	**227.9484**	**0.0372**	**0.0000**	**228.8789**

TNRE Harris Road Facility - Phase 2-A - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.9000e-003	0.0624	0.0276	3.4000e-004	1.0463	5.8000e-004	1.0468	0.1069	5.5000e-004	0.1074	0.0000	32.0313	32.0313	1.4000e-004	4.2800e-003	33.3112
Worker	9.4200e-003	4.1500e-003	0.0590	1.6000e-004	0.0228	8.0000e-005	0.0229	6.0600e-003	8.0000e-005	6.1400e-003	0.0000	15.1093	15.1093	4.2000e-004	4.5000e-004	15.2527
Total	**0.0123**	**0.0665**	**0.0867**	**5.0000e-004**	**1.0691**	**6.6000e-004**	**1.0698**	**0.1129**	**6.3000e-004**	**0.1136**	**0.0000**	**47.1406**	**47.1406**	**5.6000e-004**	**4.7300e-003**	**48.5639**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1662	1.3068	1.5611	2.7700e-003		0.0493	0.0493		0.0475	0.0475	0.0000	227.9482	227.9482	0.0372	0.0000	228.8786
Total	**0.1662**	**1.3068**	**1.5611**	**2.7700e-003**		**0.0493**	**0.0493**		**0.0475**	**0.0475**	**0.0000**	**227.9482**	**227.9482**	**0.0372**	**0.0000**	**228.8786**

TNRE Harris Road Facility - Phase 2-A - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.9000e-003	0.0624	0.0276	3.4000e-004	1.0463	5.8000e-004	1.0468	0.1069	5.5000e-004	0.1074	0.0000	32.0313	32.0313	1.4000e-004	4.2800e-003	33.3112
Worker	9.4200e-003	4.1500e-003	0.0590	1.6000e-004	0.0228	8.0000e-005	0.0229	6.0600e-003	8.0000e-005	6.1400e-003	0.0000	15.1093	15.1093	4.2000e-004	4.5000e-004	15.2527
Total	**0.0123**	**0.0665**	**0.0867**	**5.0000e-004**	**1.0691**	**6.6000e-004**	**1.0698**	**0.1129**	**6.3000e-004**	**0.1136**	**0.0000**	**47.1406**	**47.1406**	**5.6000e-004**	**4.7300e-003**	**48.5639**

3.4 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0524	0.3486	0.5873	1.1600e-003		6.1600e-003	6.1600e-003		6.1600e-003	6.1600e-003	0.0000	94.7136	94.7136	4.2400e-003	0.0000	94.8196
Total	**0.0524**	**0.3486**	**0.5873**	**1.1600e-003**		**6.1600e-003**	**6.1600e-003**		**6.1600e-003**	**6.1600e-003**	**0.0000**	**94.7136**	**94.7136**	**4.2400e-003**	**0.0000**	**94.8196**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2030

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1100e-003	0.0239	0.0106	1.3000e-004	0.4043	2.2000e-004	0.4046	0.0413	2.1000e-004	0.0415	0.0000	12.1704	12.1704	6.0000e-005	1.6200e-003	12.6542
Worker	3.4100e-003	1.4700e-003	0.0217	6.0000e-005	8.8300e-003	3.0000e-005	8.8600e-003	2.3400e-003	3.0000e-005	2.3700e-003	0.0000	5.7080	5.7080	1.5000e-004	1.7000e-004	5.7609
Total	**4.5200e-003**	**0.0253**	**0.0323**	**1.9000e-004**	**0.4132**	**2.5000e-004**	**0.4134**	**0.0436**	**2.4000e-004**	**0.0439**	**0.0000**	**17.8784**	**17.8784**	**2.1000e-004**	**1.7900e-003**	**18.4151**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0524	0.3486	0.5873	1.1600e-003		6.1600e-003	6.1600e-003		6.1600e-003	6.1600e-003	0.0000	94.7135	94.7135	4.2400e-003	0.0000	94.8195
Total	**0.0524**	**0.3486**	**0.5873**	**1.1600e-003**		**6.1600e-003**	**6.1600e-003**		**6.1600e-003**	**6.1600e-003**	**0.0000**	**94.7135**	**94.7135**	**4.2400e-003**	**0.0000**	**94.8195**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2030

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1100e-003	0.0239	0.0106	1.3000e-004	0.4043	2.2000e-004	0.4046	0.0413	2.1000e-004	0.0415	0.0000	12.1704	12.1704	6.0000e-005	1.6200e-003	12.6542
Worker	3.4100e-003	1.4700e-003	0.0217	6.0000e-005	8.8300e-003	3.0000e-005	8.8600e-003	2.3400e-003	3.0000e-005	2.3700e-003	0.0000	5.7080	5.7080	1.5000e-004	1.7000e-004	5.7609
Total	**4.5200e-003**	**0.0253**	**0.0323**	**1.9000e-004**	**0.4132**	**2.5000e-004**	**0.4134**	**0.0436**	**2.4000e-004**	**0.0439**	**0.0000**	**17.8784**	**17.8784**	**2.1000e-004**	**1.7900e-003**	**18.4151**

3.5 Paving - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.9400e-003	0.0373	0.0804	1.4000e-004		1.4700e-003	1.4700e-003		1.4700e-003	1.4700e-003	0.0000	11.9597	11.9597	5.6000e-004	0.0000	11.9737
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.9400e-003**	**0.0373**	**0.0804**	**1.4000e-004**		**1.4700e-003**	**1.4700e-003**		**1.4700e-003**	**1.4700e-003**	**0.0000**	**11.9597**	**11.9597**	**5.6000e-004**	**0.0000**	**11.9737**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2030

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.0000e-004	1.5000e-003	0.0000	6.1000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.3941	0.3941	1.0000e-005	1.0000e-005	0.3977
Total	**2.4000e-004**	**1.0000e-004**	**1.5000e-003**	**0.0000**	**6.1000e-004**	**0.0000**	**6.1000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.3941**	**0.3941**	**1.0000e-005**	**1.0000e-005**	**0.3977**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.9400e-003	0.0373	0.0804	1.4000e-004		1.4700e-003	1.4700e-003		1.4700e-003	1.4700e-003	0.0000	11.9596	11.9596	5.6000e-004	0.0000	11.9737
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.9400e-003**	**0.0373**	**0.0804**	**1.4000e-004**		**1.4700e-003**	**1.4700e-003**		**1.4700e-003**	**1.4700e-003**	**0.0000**	**11.9596**	**11.9596**	**5.6000e-004**	**0.0000**	**11.9737**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2030

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.0000e-004	1.5000e-003	0.0000	6.1000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.3941	0.3941	1.0000e-005	1.0000e-005	0.3977
Total	**2.4000e-004**	**1.0000e-004**	**1.5000e-003**	**0.0000**	**6.1000e-004**	**0.0000**	**6.1000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.3941**	**0.3941**	**1.0000e-005**	**1.0000e-005**	**0.3977**

3.6 Architectural Coating - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2304					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1100e-003	7.2800e-003	0.0153	3.0000e-005		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	2.1703	2.1703	9.0000e-005	0.0000	2.1725
Total	**0.2315**	**7.2800e-003**	**0.0153**	**3.0000e-005**		**1.7000e-004**	**1.7000e-004**		**1.7000e-004**	**1.7000e-004**	**0.0000**	**2.1703**	**2.1703**	**9.0000e-005**	**0.0000**	**2.1725**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2030

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	5.0000e-005	8.1000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2122	0.2122	1.0000e-005	1.0000e-005	0.2142
Total	**1.3000e-004**	**5.0000e-005**	**8.1000e-004**	**0.0000**	**3.3000e-004**	**0.0000**	**3.3000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2122**	**0.2122**	**1.0000e-005**	**1.0000e-005**	**0.2142**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2304					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1100e-003	7.2800e-003	0.0153	3.0000e-005		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	2.1703	2.1703	9.0000e-005	0.0000	2.1725
Total	**0.2315**	**7.2800e-003**	**0.0153**	**3.0000e-005**		**1.7000e-004**	**1.7000e-004**		**1.7000e-004**	**1.7000e-004**	**0.0000**	**2.1703**	**2.1703**	**9.0000e-005**	**0.0000**	**2.1725**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2030

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	5.0000e-005	8.1000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2122	0.2122	1.0000e-005	1.0000e-005	0.2142
Total	**1.3000e-004**	**5.0000e-005**	**8.1000e-004**	**0.0000**	**3.3000e-004**	**0.0000**	**3.3000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2122**	**0.2122**	**1.0000e-005**	**1.0000e-005**	**0.2142**

TNRE Harris Road Facility - Phase 2-A - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1415	0.1426	1.0815	2.3900e-003	145.8209	1.6100e-003	145.8225	14.5518	1.5100e-003	14.5533	0.0000	220.7120	220.7120	0.0112	0.0110	224.2565
Unmitigated	0.1415	0.1426	1.0815	2.3900e-003	145.8209	1.6100e-003	145.8225	14.5518	1.5100e-003	14.5533	0.0000	220.7120	220.7120	0.0112	0.0110	224.2565

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	312.60	510.67	404.87	782,793	782,793
Total	312.60	510.67	404.87	782,793	782,793

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	6.70	5.00	8.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.546302	0.059468	0.180165	0.132656	0.023777	0.006524	0.008300	0.015283	0.000975	0.000111	0.022820	0.000686	0.002933

TNRE Harris Road Facility - Phase 2-A - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	67.9966	67.9966	0.0118	1.4300e-003	68.7185
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	67.9966	67.9966	0.0118	1.4300e-003	68.7185
NaturalGas Mitigated	0.0139	0.1261	0.1059	7.6000e-004		9.5800e-003	9.5800e-003		9.5800e-003	9.5800e-003	0.0000	137.2317	137.2317	2.6300e-003	2.5200e-003	138.0472
NaturalGas Unmitigated	0.0139	0.1261	0.1059	7.6000e-004		9.5800e-003	9.5800e-003		9.5800e-003	9.5800e-003	0.0000	137.2317	137.2317	2.6300e-003	2.5200e-003	138.0472

TNRE Harris Road Facility - Phase 2-A - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	2.57163e+006	0.0139	0.1261	0.1059	7.6000e-004		9.5800e-003	9.5800e-003		9.5800e-003	9.5800e-003	0.0000	137.2317	137.2317	2.6300e-003	2.5200e-003	138.0472
Total		**0.0139**	**0.1261**	**0.1059**	**7.6000e-004**		**9.5800e-003**	**9.5800e-003**		**9.5800e-003**	**9.5800e-003**	**0.0000**	**137.2317**	**137.2317**	**2.6300e-003**	**2.5200e-003**	**138.0472**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	2.57163e+006	0.0139	0.1261	0.1059	7.6000e-004		9.5800e-003	9.5800e-003		9.5800e-003	9.5800e-003	0.0000	137.2317	137.2317	2.6300e-003	2.5200e-003	138.0472
Total		**0.0139**	**0.1261**	**0.1059**	**7.6000e-004**		**9.5800e-003**	**9.5800e-003**		**9.5800e-003**	**9.5800e-003**	**0.0000**	**137.2317**	**137.2317**	**2.6300e-003**	**2.5200e-003**	**138.0472**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	789067	67.9966	0.0118	1.4300e-003	68.7185
Total		**67.9966**	**0.0118**	**1.4300e-003**	**68.7185**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	789067	67.9966	0.0118	1.4300e-003	68.7185
Total		**67.9966**	**0.0118**	**1.4300e-003**	**68.7185**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3338	1.0000e-005	7.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4200e-003	1.4200e-003	0.0000	0.0000	1.5100e-003
Unmitigated	0.3338	1.0000e-005	7.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4200e-003	1.4200e-003	0.0000	0.0000	1.5100e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0230					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3107					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4200e-003	1.4200e-003	0.0000	0.0000	1.5100e-003
Total	**0.3338**	**1.0000e-005**	**7.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.4200e-003**	**1.4200e-003**	**0.0000**	**0.0000**	**1.5100e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0230					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3107					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4200e-003	1.4200e-003	0.0000	0.0000	1.5100e-003
Total	**0.3338**	**1.0000e-005**	**7.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.4200e-003**	**1.4200e-003**	**0.0000**	**0.0000**	**1.5100e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	26.4743	0.6029	0.0146	45.8947
Unmitigated	26.4743	0.6029	0.0146	45.8947

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	18.3936 / 0	26.4743	0.6029	0.0146	45.8947
Total		**26.4743**	**0.6029**	**0.0146**	**45.8947**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	18.3936 / 0	26.4743	0.6029	0.0146	45.8947
Total		**26.4743**	**0.6029**	**0.0146**	**45.8947**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	20.0210	1.1832	0.0000	49.6012
Unmitigated	20.0210	1.1832	0.0000	49.6012

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	98.63	20.0210	1.1832	0.0000	49.6012
Total		**20.0210**	**1.1832**	**0.0000**	**49.6012**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	98.63	20.0210	1.1832	0.0000	49.6012
Total		**20.0210**	**1.1832**	**0.0000**	**49.6012**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

TNRE Harris Road Facility - Phase 2-B

Imperial County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	165.12	1000sqft	3.79	165,121.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2032
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Imperial Water District is not on list, chose SCE for proxy

Land Use - For construction purposes only

Construction Phase - Schedule provided by client

Off-road Equipment - Information supplied

On-road Fugitive Dust - All employee trips were on paved roads. 95% of haulers and vendors on paved roads.

Grading -

Architectural Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Construction Off-road Equipment Mitigation - Tier 4 Final equipment will be used where applicable

Area Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Area Mitigation - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

TNRE Harris Road Facility - Phase 2-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	100
tblAreaCoating	Area_EF_Nonresidential_Interior	150	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	150	50
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

TNRE Harris Road Facility - Phase 2-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	18.00	35.00
tblConstructionPhase	NumDays	8.00	10.00
tblConstructionPhase	NumDays	18.00	19.00
tblConstructionPhase	NumDays	5.00	4.00
tblConstructionPhase	PhaseEndDate	7/23/2032	7/25/2032
tblConstructionPhase	PhaseEndDate	6/3/2032	6/5/2032
tblConstructionPhase	PhaseEndDate	7/17/2031	7/18/2031
tblConstructionPhase	PhaseEndDate	6/29/2032	7/1/2032
tblConstructionPhase	PhaseEndDate	7/7/2031	7/6/2031
tblConstructionPhase	PhaseStartDate	6/30/2032	6/6/2032
tblConstructionPhase	PhaseStartDate	7/18/2031	7/19/2031
tblConstructionPhase	PhaseStartDate	7/8/2031	7/7/2031
tblConstructionPhase	PhaseStartDate	6/4/2032	6/6/2032
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00

2.0 Emissions Summary

TNRE Harris Road Facility - Phase 2-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2031	2.4849	13.6832	17.7034	0.0473	24.6713	0.4370	25.1082	12.6546	0.4370	13.0915	0.0000	4,485.6955	4,485.6955	0.2193	0.0821	4,491.7673
2032	28.6978	8.9217	17.6554	0.0391	18.2807	0.2737	18.4392	1.9285	0.2736	2.0864	0.0000	3,738.8865	3,738.8865	0.1251	0.0806	3,766.0276
Maximum	**28.6978**	**13.6832**	**17.7034**	**0.0473**	**24.6713**	**0.4370**	**25.1082**	**12.6546**	**0.4370**	**13.0915**	**0.0000**	**4,485.6955**	**4,485.6955**	**0.2193**	**0.0821**	**4,491.7673**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2031	0.5491	3.2331	21.1572	0.0473	18.2807	0.0624	18.3320	4.9515	0.0624	5.0138	0.0000	4,485.6955	4,485.6955	0.2193	0.0821	4,491.7673
2032	27.6620	3.2218	18.9587	0.0391	18.2807	0.0511	18.3318	1.9285	0.0506	1.9791	0.0000	3,738.8865	3,738.8865	0.1251	0.0806	3,766.0276
Maximum	**27.6620**	**3.2331**	**21.1572**	**0.0473**	**18.2807**	**0.0624**	**18.3320**	**4.9515**	**0.0624**	**5.0138**	**0.0000**	**4,485.6955**	**4,485.6955**	**0.2193**	**0.0821**	**4,491.7673**

TNRE Harris Road Facility - Phase 2-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	9.53	71.44	-13.45	0.00	14.88	84.03	15.81	52.82	84.10	53.93	0.00	0.00	0.00	0.00	0.00	0.00

TNRE Harris Road Facility - Phase 2-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.7972	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385
Energy	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897
Mobile	3.0679	2.1995	20.7008	0.0424	2,398.7638	0.0265	2,398.7903	239.3804	0.0248	239.4053		4,304.1061	4,304.1061	0.2033	0.1967	4,367.8036
Total	**7.0229**	**3.6335**	**21.9221**	**0.0510**	**2,398.7638**	**0.1356**	**2,398.8994**	**239.3804**	**0.1339**	**239.5143**		**6,024.8068**	**6,024.8068**	**0.2364**	**0.2282**	**6,098.7318**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.7972	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385
Energy	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897
Mobile	3.0679	2.1995	20.7008	0.0424	2,398.7638	0.0265	2,398.7903	239.3804	0.0248	239.4053		4,304.1061	4,304.1061	0.2033	0.1967	4,367.8036
Total	**7.0229**	**3.6335**	**21.9221**	**0.0510**	**2,398.7638**	**0.1356**	**2,398.8994**	**239.3804**	**0.1339**	**239.5143**		**6,024.8068**	**6,024.8068**	**0.2364**	**0.2282**	**6,098.7318**

TNRE Harris Road Facility - Phase 2-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2031	7/6/2031	5	4	
2	Grading	Grading	7/7/2031	7/18/2031	5	10	
3	Building Construction	Building Construction	7/19/2031	6/5/2032	5	230	
4	Paving	Paving	6/6/2032	7/1/2032	5	19	
5	Architectural Coating	Architectural Coating	6/6/2032	7/25/2032	5	35	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 8

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 247,682; Non-Residential Outdoor: 82,561; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	69.00	27.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

TNRE Harris Road Facility - Phase 2-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					24.5713	0.0000	24.5713	12.6281	0.0000	12.6281			0.0000			0.0000
Off-Road	2.4399	13.6680	16.2918	0.0466		0.4367	0.4367		0.4367	0.4367		4,409.7537	4,409.7537	0.2176		4,415.1936
Total	**2.4399**	**13.6680**	**16.2918**	**0.0466**	**24.5713**	**0.4367**	**25.0079**	**12.6281**	**0.4367**	**13.0647**		**4,409.7537**	**4,409.7537**	**0.2176**		**4,415.1936**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0449	0.0152	0.2882	7.5000e-004	0.1000	3.1000e-004	0.1003	0.0265	2.9000e-004	0.0268		75.9418	75.9418	1.7300e-003	1.9800e-003	76.5737
Total	**0.0449**	**0.0152**	**0.2882**	**7.5000e-004**	**0.1000**	**3.1000e-004**	**0.1003**	**0.0265**	**2.9000e-004**	**0.0268**		**75.9418**	**75.9418**	**1.7300e-003**	**1.9800e-003**	**76.5737**

TNRE Harris Road Facility - Phase 2-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2031

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.5828	0.0000	9.5828	4.9249	0.0000	4.9249			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0466		0.0621	0.0621		0.0621	0.0621	0.0000	4,409.7537	4,409.7537	0.2176		4,415.1936
Total	**0.4656**	**2.0175**	**20.8690**	**0.0466**	**9.5828**	**0.0621**	**9.6449**	**4.9249**	**0.0621**	**4.9870**	**0.0000**	**4,409.7537**	**4,409.7537**	**0.2176**		**4,415.1936**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0449	0.0152	0.2882	7.5000e-004	0.1000	3.1000e-004	0.1003	0.0265	2.9000e-004	0.0268		75.9418	75.9418	1.7300e-003	1.9800e-003	76.5737
Total	**0.0449**	**0.0152**	**0.2882**	**7.5000e-004**	**0.1000**	**3.1000e-004**	**0.1003**	**0.0265**	**2.9000e-004**	**0.0268**		**75.9418**	**75.9418**	**1.7300e-003**	**1.9800e-003**	**76.5737**

TNRE Harris Road Facility - Phase 2-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.6661	0.0000	5.6661	2.7398	0.0000	2.7398			0.0000			0.0000
Off-Road	1.6179	7.7501	14.4518	0.0363		0.2340	0.2340		0.2340	0.2340		3,439.7201	3,439.7201	0.1437		3,443.3117
Total	**1.6179**	**7.7501**	**14.4518**	**0.0363**	**5.6661**	**0.2340**	**5.9001**	**2.7398**	**0.2340**	**2.9738**		**3,439.7201**	**3,439.7201**	**0.1437**		**3,443.3117**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0374	0.0127	0.2402	6.3000e-004	0.0833	2.6000e-004	0.0836	0.0221	2.4000e-004	0.0224		63.2848	63.2848	1.4400e-003	1.6500e-003	63.8114
Total	**0.0374**	**0.0127**	**0.2402**	**6.3000e-004**	**0.0833**	**2.6000e-004**	**0.0836**	**0.0221**	**2.4000e-004**	**0.0224**		**63.2848**	**63.2848**	**1.4400e-003**	**1.6500e-003**	**63.8114**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2031

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2098	0.0000	2.2098	1.0685	0.0000	1.0685			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0363		0.0484	0.0484		0.0484	0.0484	0.0000	3,439.7201	3,439.7201	0.1437		3,443.3117
Total	**0.3632**	**1.5737**	**17.7527**	**0.0363**	**2.2098**	**0.0484**	**2.2582**	**1.0685**	**0.0484**	**1.1169**	**0.0000**	**3,439.7201**	**3,439.7201**	**0.1437**		**3,443.3117**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0374	0.0127	0.2402	6.3000e-004	0.0833	2.6000e-004	0.0836	0.0221	2.4000e-004	0.0224		63.2848	63.2848	1.4400e-003	1.6500e-003	63.8114
Total	**0.0374**	**0.0127**	**0.2402**	**6.3000e-004**	**0.0833**	**2.6000e-004**	**0.0836**	**0.0221**	**2.4000e-004**	**0.0224**		**63.2848**	**63.2848**	**1.4400e-003**	**1.6500e-003**	**63.8114**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0491	0.9400	0.4417	5.3600e-003	17.8974	9.2600e-003	17.9066	1.8267	8.8500e-003	1.8356		563.3731	563.3731	2.6900e-003	0.0745	585.6504
Worker	0.1722	0.0584	1.1047	2.8800e-003	0.3834	1.1900e-003	0.3845	0.1017	1.0900e-003	0.1028		291.1101	291.1101	6.6300e-003	7.5700e-003	293.5326
Total	**0.2213**	**0.9984**	**1.5464**	**8.2400e-003**	**18.2807**	**0.0105**	**18.2912**	**1.9285**	**9.9400e-003**	**1.9384**		**854.4832**	**854.4832**	**9.3200e-003**	**0.0821**	**879.1829**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2031

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0310		0.0408	0.0408		0.0408	0.0408	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**0.3278**	**2.2347**	**17.4603**	**0.0310**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0491	0.9400	0.4417	5.3600e-003	17.8974	9.2600e-003	17.9066	1.8267	8.8500e-003	1.8356		563.3731	563.3731	2.6900e-003	0.0745	585.6504
Worker	0.1722	0.0584	1.1047	2.8800e-003	0.3834	1.1900e-003	0.3845	0.1017	1.0900e-003	0.1028		291.1101	291.1101	6.6300e-003	7.5700e-003	293.5326
Total	**0.2213**	**0.9984**	**1.5464**	**8.2400e-003**	**18.2807**	**0.0105**	**18.2912**	**1.9285**	**9.9400e-003**	**1.9384**		**854.4832**	**854.4832**	**9.3200e-003**	**0.0821**	**879.1829**

TNRE Harris Road Facility - Phase 2-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0488	0.9328	0.4396	5.2900e-003	17.8974	9.2100e-003	17.9066	1.8267	8.8100e-003	1.8356		555.6233	555.6233	2.7000e-003	0.0733	577.5233
Worker	0.1610	0.0543	1.0588	2.8300e-003	0.3834	1.1100e-003	0.3845	0.1017	1.0200e-003	0.1027		285.7165	285.7165	6.1500e-003	7.3200e-003	288.0514
Total	**0.2098**	**0.9871**	**1.4984**	**8.1200e-003**	**18.2807**	**0.0103**	**18.2910**	**1.9285**	**9.8300e-003**	**1.9383**		**841.3397**	**841.3397**	**8.8500e-003**	**0.0806**	**865.5747**

TNRE Harris Road Facility - Phase 2-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2032

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0310		0.0408	0.0408		0.0408	0.0408	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**0.3278**	**2.2347**	**17.4603**	**0.0310**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0488	0.9328	0.4396	5.2900e-003	17.8974	9.2100e-003	17.9066	1.8267	8.8100e-003	1.8356		555.6233	555.6233	2.7000e-003	0.0733	577.5233
Worker	0.1610	0.0543	1.0588	2.8300e-003	0.3834	1.1100e-003	0.3845	0.1017	1.0200e-003	0.1027		285.7165	285.7165	6.1500e-003	7.3200e-003	288.0514
Total	**0.2098**	**0.9871**	**1.4984**	**8.1200e-003**	**18.2807**	**0.0103**	**18.2910**	**1.9285**	**9.8300e-003**	**1.9383**		**841.3397**	**841.3397**	**8.8500e-003**	**0.0806**	**865.5747**

TNRE Harris Road Facility - Phase 2-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1543	6.2343	13.0935	0.0230		0.2528	0.2528		0.2528	0.2528		2,154.2603	2,154.2603	0.1035		2,156.8468
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1543**	**6.2343**	**13.0935**	**0.0230**		**0.2528**	**0.2528**		**0.2528**	**0.2528**		**2,154.2603**	**2,154.2603**	**0.1035**		**2,156.8468**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0467	0.0157	0.3069	8.2000e-004	0.1111	3.2000e-004	0.1114	0.0295	3.0000e-004	0.0298		82.8164	82.8164	1.7800e-003	2.1200e-003	83.4932
Total	**0.0467**	**0.0157**	**0.3069**	**8.2000e-004**	**0.1111**	**3.2000e-004**	**0.1114**	**0.0295**	**3.0000e-004**	**0.0298**		**82.8164**	**82.8164**	**1.7800e-003**	**2.1200e-003**	**83.4932**

TNRE Harris Road Facility - Phase 2-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2032

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2194	0.9509	13.5323	0.0230		0.0293	0.0293		0.0293	0.0293	0.0000	2,154.2603	2,154.2603	0.1035		2,156.8468
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2194**	**0.9509**	**13.5323**	**0.0230**		**0.0293**	**0.0293**		**0.0293**	**0.0293**	**0.0000**	**2,154.2603**	**2,154.2603**	**0.1035**		**2,156.8468**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0467	0.0157	0.3069	8.2000e-004	0.1111	3.2000e-004	0.1114	0.0295	3.0000e-004	0.0298		82.8164	82.8164	1.7800e-003	2.1200e-003	83.4932
Total	**0.0467**	**0.0157**	**0.3069**	**8.2000e-004**	**0.1111**	**3.2000e-004**	**0.1114**	**0.0295**	**3.0000e-004**	**0.0298**		**82.8164**	**82.8164**	**1.7800e-003**	**2.1200e-003**	**83.4932**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.3335					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
Total	**27.4643**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.7328**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0327	0.0110	0.2148	5.7000e-004	0.0778	2.2000e-004	0.0780	0.0206	2.1000e-004	0.0208		57.9715	57.9715	1.2500e-003	1.4900e-003	58.4452
Total	**0.0327**	**0.0110**	**0.2148**	**5.7000e-004**	**0.0778**	**2.2000e-004**	**0.0780**	**0.0206**	**2.1000e-004**	**0.0208**		**57.9715**	**57.9715**	**1.2500e-003**	**1.4900e-003**	**58.4452**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2032

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.3335					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0114		281.7328
Total	**27.3632**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.7328**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0327	0.0110	0.2148	5.7000e-004	0.0778	2.2000e-004	0.0780	0.0206	2.1000e-004	0.0208		57.9715	57.9715	1.2500e-003	1.4900e-003	58.4452
Total	**0.0327**	**0.0110**	**0.2148**	**5.7000e-004**	**0.0778**	**2.2000e-004**	**0.0780**	**0.0206**	**2.1000e-004**	**0.0208**		**57.9715**	**57.9715**	**1.2500e-003**	**1.4900e-003**	**58.4452**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.0679	2.1995	20.7008	0.0424	2,398.7638	0.0265	2,398.7903	239.3804	0.0248	239.4053		4,304.1061	4,304.1061	0.2033	0.1967	4,367.8036
Unmitigated	3.0679	2.1995	20.7008	0.0424	2,398.7638	0.0265	2,398.7903	239.3804	0.0248	239.4053		4,304.1061	4,304.1061	0.2033	0.1967	4,367.8036

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	648.93	1,060.08	840.47	1,624,978	1,624,978
Total	648.93	1,060.08	840.47	1,624,978	1,624,978

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	6.70	5.00	8.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.546302	0.059468	0.180165	0.132656	0.023777	0.006524	0.008300	0.015283	0.000975	0.000111	0.022820	0.000686	0.002933

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897
NaturalGas Unmitigated	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	14625.6	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897
Total		**0.1577**	**1.4339**	**1.2045**	**8.6000e-003**		**0.1090**	**0.1090**		**0.1090**	**0.1090**		**1,720.6646**	**1,720.6646**	**0.0330**	**0.0316**	**1,730.8897**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	14.6256	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897
Total		**0.1577**	**1.4339**	**1.2045**	**8.6000e-003**		**0.1090**	**0.1090**		**0.1090**	**0.1090**		**1,720.6646**	**1,720.6646**	**0.0330**	**0.0316**	**1,730.8897**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.7972	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385
Unmitigated	3.7972	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385

TNRE Harris Road Facility - Phase 2-B - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2621					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5300e-003	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385
Total	**3.7972**	**1.5000e-004**	**0.0168**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0361**	**0.0361**	**9.0000e-005**		**0.0385**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2621					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5300e-003	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385
Total	**3.7972**	**1.5000e-004**	**0.0168**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0361**	**0.0361**	**9.0000e-005**		**0.0385**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

TNRE Harris Road Facility - Phase 2-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

TNRE Harris Road Facility - Phase 2-B

Imperial County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	165.12	1000sqft	3.79	165,121.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2032
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Imperial Water District is not on list, chose SCE for proxy

Land Use - For construction purposes only

Construction Phase - Schedule provided by client

Off-road Equipment - Information supplied

On-road Fugitive Dust - All employee trips were on paved roads. 95% of haulers and vendors on paved roads.

Grading -

Architectural Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Construction Off-road Equipment Mitigation - Tier 4 Final equipment will be used where applicable

Area Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Area Mitigation - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

TNRE Harris Road Facility - Phase 2-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	100
tblAreaCoating	Area_EF_Nonresidential_Interior	150	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	150	50
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

TNRE Harris Road Facility - Phase 2-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	18.00	35.00
tblConstructionPhase	NumDays	8.00	10.00
tblConstructionPhase	NumDays	18.00	19.00
tblConstructionPhase	NumDays	5.00	4.00
tblConstructionPhase	PhaseEndDate	7/23/2032	7/25/2032
tblConstructionPhase	PhaseEndDate	6/3/2032	6/5/2032
tblConstructionPhase	PhaseEndDate	7/17/2031	7/18/2031
tblConstructionPhase	PhaseEndDate	6/29/2032	7/1/2032
tblConstructionPhase	PhaseEndDate	7/7/2031	7/6/2031
tblConstructionPhase	PhaseStartDate	6/30/2032	6/6/2032
tblConstructionPhase	PhaseStartDate	7/18/2031	7/19/2031
tblConstructionPhase	PhaseStartDate	7/8/2031	7/7/2031
tblConstructionPhase	PhaseStartDate	6/4/2032	6/6/2032
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00

2.0 Emissions Summary

TNRE Harris Road Facility - Phase 2-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2031	2.4726	13.6836	17.4462	0.0472	24.6713	0.4370	25.1082	12.6546	0.4370	13.0915	0.0000	4,474.4942	4,474.4942	0.2195	0.0826	4,480.5769
2032	28.6764	9.0173	17.4108	0.0387	18.2807	0.2737	18.4392	1.9285	0.2736	2.0865	0.0000	3,698.1222	3,698.1222	0.1255	0.0810	3,725.4072
Maximum	**28.6764**	**13.6836**	**17.4462**	**0.0472**	**24.6713**	**0.4370**	**25.1082**	**12.6546**	**0.4370**	**13.0915**	**0.0000**	**4,474.4942**	**4,474.4942**	**0.2195**	**0.0826**	**4,480.5769**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2031	0.4993	3.3297	21.0851	0.0472	18.2807	0.0624	18.3320	4.9515	0.0624	5.0138	0.0000	4,474.4942	4,474.4942	0.2195	0.0826	4,480.5769
2032	27.6406	3.3174	18.7141	0.0387	18.2807	0.0511	18.3319	1.9285	0.0506	1.9791	0.0000	3,698.1222	3,698.1222	0.1255	0.0810	3,725.4072
Maximum	**27.6406**	**3.3297**	**21.0851**	**0.0472**	**18.2807**	**0.0624**	**18.3320**	**4.9515**	**0.0624**	**5.0138**	**0.0000**	**4,474.4942**	**4,474.4942**	**0.2195**	**0.0826**	**4,480.5769**

TNRE Harris Road Facility - Phase 2-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	9.66	70.72	-14.18	0.00	14.88	84.03	15.81	52.82	84.10	53.93	0.00	0.00	0.00	0.00	0.00	0.00

TNRE Harris Road Facility - Phase 2-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.7972	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385
Energy	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897
Mobile	1.9266	2.4220	17.2289	0.0374	2,398.7638	0.0266	2,398.7904	239.3804	0.0249	239.4053		3,802.2206	3,802.2206	0.2154	0.2019	3,867.7806
Total	**5.8815**	**3.8560**	**18.4501**	**0.0460**	**2,398.7638**	**0.1356**	**2,398.8994**	**239.3804**	**0.1339**	**239.5143**		**5,522.9213**	**5,522.9213**	**0.2485**	**0.2335**	**5,598.7087**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.7972	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385
Energy	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897
Mobile	1.9266	2.4220	17.2289	0.0374	2,398.7638	0.0266	2,398.7904	239.3804	0.0249	239.4053		3,802.2206	3,802.2206	0.2154	0.2019	3,867.7806
Total	**5.8815**	**3.8560**	**18.4501**	**0.0460**	**2,398.7638**	**0.1356**	**2,398.8994**	**239.3804**	**0.1339**	**239.5143**		**5,522.9213**	**5,522.9213**	**0.2485**	**0.2335**	**5,598.7087**

TNRE Harris Road Facility - Phase 2-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2031	7/6/2031	5	4	
2	Grading	Grading	7/7/2031	7/18/2031	5	10	
3	Building Construction	Building Construction	7/19/2031	6/5/2032	5	230	
4	Paving	Paving	6/6/2032	7/1/2032	5	19	
5	Architectural Coating	Architectural Coating	6/6/2032	7/25/2032	5	35	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 8

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 247,682; Non-Residential Outdoor: 82,561; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	69.00	27.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

TNRE Harris Road Facility - Phase 2-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					24.5713	0.0000	24.5713	12.6281	0.0000	12.6281			0.0000			0.0000
Off-Road	2.4399	13.6680	16.2918	0.0466		0.4367	0.4367		0.4367	0.4367		4,409.7537	4,409.7537	0.2176		4,415.1936
Total	**2.4399**	**13.6680**	**16.2918**	**0.0466**	**24.5713**	**0.4367**	**25.0079**	**12.6281**	**0.4367**	**13.0647**		**4,409.7537**	**4,409.7537**	**0.2176**		**4,415.1936**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0327	0.0156	0.2161	6.4000e-004	0.1000	3.1000e-004	0.1003	0.0265	2.9000e-004	0.0268		64.7405	64.7405	1.8700e-003	2.0000e-003	65.3833
Total	**0.0327**	**0.0156**	**0.2161**	**6.4000e-004**	**0.1000**	**3.1000e-004**	**0.1003**	**0.0265**	**2.9000e-004**	**0.0268**		**64.7405**	**64.7405**	**1.8700e-003**	**2.0000e-003**	**65.3833**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2031

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.5828	0.0000	9.5828	4.9249	0.0000	4.9249			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0466		0.0621	0.0621		0.0621	0.0621	0.0000	4,409.7537	4,409.7537	0.2176		4,415.1936
Total	**0.4656**	**2.0175**	**20.8690**	**0.0466**	**9.5828**	**0.0621**	**9.6449**	**4.9249**	**0.0621**	**4.9870**	**0.0000**	**4,409.7537**	**4,409.7537**	**0.2176**		**4,415.1936**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0327	0.0156	0.2161	6.4000e-004	0.1000	3.1000e-004	0.1003	0.0265	2.9000e-004	0.0268		64.7405	64.7405	1.8700e-003	2.0000e-003	65.3833
Total	**0.0327**	**0.0156**	**0.2161**	**6.4000e-004**	**0.1000**	**3.1000e-004**	**0.1003**	**0.0265**	**2.9000e-004**	**0.0268**		**64.7405**	**64.7405**	**1.8700e-003**	**2.0000e-003**	**65.3833**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.6661	0.0000	5.6661	2.7398	0.0000	2.7398			0.0000			0.0000
Off-Road	1.6179	7.7501	14.4518	0.0363		0.2340	0.2340		0.2340	0.2340		3,439.7201	3,439.7201	0.1437		3,443.3117
Total	**1.6179**	**7.7501**	**14.4518**	**0.0363**	**5.6661**	**0.2340**	**5.9001**	**2.7398**	**0.2340**	**2.9738**		**3,439.7201**	**3,439.7201**	**0.1437**		**3,443.3117**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0272	0.0130	0.1801	5.3000e-004	0.0833	2.6000e-004	0.0836	0.0221	2.4000e-004	0.0224		53.9504	53.9504	1.5600e-003	1.6700e-003	54.4861
Total	**0.0272**	**0.0130**	**0.1801**	**5.3000e-004**	**0.0833**	**2.6000e-004**	**0.0836**	**0.0221**	**2.4000e-004**	**0.0224**		**53.9504**	**53.9504**	**1.5600e-003**	**1.6700e-003**	**54.4861**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2031

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2098	0.0000	2.2098	1.0685	0.0000	1.0685			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0363		0.0484	0.0484		0.0484	0.0484	0.0000	3,439.7201	3,439.7201	0.1437		3,443.3117
Total	**0.3632**	**1.5737**	**17.7527**	**0.0363**	**2.2098**	**0.0484**	**2.2582**	**1.0685**	**0.0484**	**1.1169**	**0.0000**	**3,439.7201**	**3,439.7201**	**0.1437**		**3,443.3117**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0272	0.0130	0.1801	5.3000e-004	0.0833	2.6000e-004	0.0836	0.0221	2.4000e-004	0.0224		53.9504	53.9504	1.5600e-003	1.6700e-003	54.4861
Total	**0.0272**	**0.0130**	**0.1801**	**5.3000e-004**	**0.0833**	**2.6000e-004**	**0.0836**	**0.0221**	**2.4000e-004**	**0.0224**		**53.9504**	**53.9504**	**1.5600e-003**	**1.6700e-003**	**54.4861**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0462	1.0350	0.4610	5.3800e-003	17.8974	9.2900e-003	17.9067	1.8267	8.8800e-003	1.8356		564.7641	564.7641	2.5800e-003	0.0749	587.1481
Worker	0.1253	0.0600	0.8282	2.4600e-003	0.3834	1.1900e-003	0.3845	0.1017	1.0900e-003	0.1028		248.1718	248.1718	7.1600e-003	7.6700e-003	250.6360
Total	**0.1715**	**1.0950**	**1.2892**	**7.8400e-003**	**18.2807**	**0.0105**	**18.2912**	**1.9285**	**9.9700e-003**	**1.9384**		**812.9359**	**812.9359**	**9.7400e-003**	**0.0826**	**837.7841**

TNRE Harris Road Facility - Phase 2-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2031

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0310		0.0408	0.0408		0.0408	0.0408	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**0.3278**	**2.2347**	**17.4603**	**0.0310**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0462	1.0350	0.4610	5.3800e-003	17.8974	9.2900e-003	17.9067	1.8267	8.8800e-003	1.8356		564.7641	564.7641	2.5800e-003	0.0749	587.1481
Worker	0.1253	0.0600	0.8282	2.4600e-003	0.3834	1.1900e-003	0.3845	0.1017	1.0900e-003	0.1028		248.1718	248.1718	7.1600e-003	7.6700e-003	250.6360
Total	**0.1715**	**1.0950**	**1.2892**	**7.8400e-003**	**18.2807**	**0.0105**	**18.2912**	**1.9285**	**9.9700e-003**	**1.9384**		**812.9359**	**812.9359**	**9.7400e-003**	**0.0826**	**837.7841**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0459	1.0271	0.4590	5.3000e-003	17.8974	9.2400e-003	17.9066	1.8267	8.8300e-003	1.8356		557.0030	557.0030	2.5900e-003	0.0736	579.0081
Worker	0.1175	0.0556	0.7948	2.4100e-003	0.3834	1.1100e-003	0.3845	0.1017	1.0200e-003	0.1027		243.5725	243.5725	6.6500e-003	7.4100e-003	245.9462
Total	**0.1634**	**1.0827**	**1.2538**	**7.7100e-003**	**18.2807**	**0.0104**	**18.2911**	**1.9285**	**9.8500e-003**	**1.9383**		**800.5754**	**800.5754**	**9.2400e-003**	**0.0810**	**824.9544**

TNRE Harris Road Facility - Phase 2-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2032

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0310		0.0408	0.0408		0.0408	0.0408	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**0.3278**	**2.2347**	**17.4603**	**0.0310**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0459	1.0271	0.4590	5.3000e-003	17.8974	9.2400e-003	17.9066	1.8267	8.8300e-003	1.8356		557.0030	557.0030	2.5900e-003	0.0736	579.0081
Worker	0.1175	0.0556	0.7948	2.4100e-003	0.3834	1.1100e-003	0.3845	0.1017	1.0200e-003	0.1027		243.5725	243.5725	6.6500e-003	7.4100e-003	245.9462
Total	**0.1634**	**1.0827**	**1.2538**	**7.7100e-003**	**18.2807**	**0.0104**	**18.2911**	**1.9285**	**9.8500e-003**	**1.9383**		**800.5754**	**800.5754**	**9.2400e-003**	**0.0810**	**824.9544**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1543	6.2343	13.0935	0.0230		0.2528	0.2528		0.2528	0.2528		2,154.2603	2,154.2603	0.1035		2,156.8468
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1543**	**6.2343**	**13.0935**	**0.0230**		**0.2528**	**0.2528**		**0.2528**	**0.2528**		**2,154.2603**	**2,154.2603**	**0.1035**		**2,156.8468**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0341	0.0161	0.2304	7.0000e-004	0.1111	3.2000e-004	0.1114	0.0295	3.0000e-004	0.0298		70.6007	70.6007	1.9300e-003	2.1500e-003	71.2888
Total	**0.0341**	**0.0161**	**0.2304**	**7.0000e-004**	**0.1111**	**3.2000e-004**	**0.1114**	**0.0295**	**3.0000e-004**	**0.0298**		**70.6007**	**70.6007**	**1.9300e-003**	**2.1500e-003**	**71.2888**

TNRE Harris Road Facility - Phase 2-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2032

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2194	0.9509	13.5323	0.0230		0.0293	0.0293		0.0293	0.0293	0.0000	2,154.2603	2,154.2603	0.1035		2,156.8468
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2194**	**0.9509**	**13.5323**	**0.0230**		**0.0293**	**0.0293**		**0.0293**	**0.0293**	**0.0000**	**2,154.2603**	**2,154.2603**	**0.1035**		**2,156.8468**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0341	0.0161	0.2304	7.0000e-004	0.1111	3.2000e-004	0.1114	0.0295	3.0000e-004	0.0298		70.6007	70.6007	1.9300e-003	2.1500e-003	71.2888
Total	**0.0341**	**0.0161**	**0.2304**	**7.0000e-004**	**0.1111**	**3.2000e-004**	**0.1114**	**0.0295**	**3.0000e-004**	**0.0298**		**70.6007**	**70.6007**	**1.9300e-003**	**2.1500e-003**	**71.2888**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.3335					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
Total	**27.4643**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.7328**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0238	0.0113	0.1613	4.9000e-004	0.0778	2.2000e-004	0.0780	0.0206	2.1000e-004	0.0208		49.4205	49.4205	1.3500e-003	1.5000e-003	49.9021
Total	**0.0238**	**0.0113**	**0.1613**	**4.9000e-004**	**0.0778**	**2.2000e-004**	**0.0780**	**0.0206**	**2.1000e-004**	**0.0208**		**49.4205**	**49.4205**	**1.3500e-003**	**1.5000e-003**	**49.9021**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2032

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.3335					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0114		281.7328
Total	**27.3632**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.7328**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0238	0.0113	0.1613	4.9000e-004	0.0778	2.2000e-004	0.0780	0.0206	2.1000e-004	0.0208		49.4205	49.4205	1.3500e-003	1.5000e-003	49.9021
Total	**0.0238**	**0.0113**	**0.1613**	**4.9000e-004**	**0.0778**	**2.2000e-004**	**0.0780**	**0.0206**	**2.1000e-004**	**0.0208**		**49.4205**	**49.4205**	**1.3500e-003**	**1.5000e-003**	**49.9021**

TNRE Harris Road Facility - Phase 2-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.9266	2.4220	17.2289	0.0374	2,398.7638	0.0266	2,398.7904	239.3804	0.0249	239.4053		3,802.2206	3,802.2206	0.2154	0.2019	3,867.7806
Unmitigated	1.9266	2.4220	17.2289	0.0374	2,398.7638	0.0266	2,398.7904	239.3804	0.0249	239.4053		3,802.2206	3,802.2206	0.2154	0.2019	3,867.7806

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	648.93	1,060.08	840.47	1,624,978	1,624,978
Total	648.93	1,060.08	840.47	1,624,978	1,624,978

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	6.70	5.00	8.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.546302	0.059468	0.180165	0.132656	0.023777	0.006524	0.008300	0.015283	0.000975	0.000111	0.022820	0.000686	0.002933

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897
NaturalGas Unmitigated	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	14625.6	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897
Total		**0.1577**	**1.4339**	**1.2045**	**8.6000e-003**		**0.1090**	**0.1090**		**0.1090**	**0.1090**		**1,720.6646**	**1,720.6646**	**0.0330**	**0.0316**	**1,730.8897**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	14.6256	0.1577	1.4339	1.2045	8.6000e-003		0.1090	0.1090		0.1090	0.1090		1,720.6646	1,720.6646	0.0330	0.0316	1,730.8897
Total		**0.1577**	**1.4339**	**1.2045**	**8.6000e-003**		**0.1090**	**0.1090**		**0.1090**	**0.1090**		**1,720.6646**	**1,720.6646**	**0.0330**	**0.0316**	**1,730.8897**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.7972	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385
Unmitigated	3.7972	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385

TNRE Harris Road Facility - Phase 2-B - Imperial County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2621					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5300e-003	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385
Total	**3.7972**	**1.5000e-004**	**0.0168**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0361**	**0.0361**	**9.0000e-005**		**0.0385**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2621					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5300e-003	1.5000e-004	0.0168	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0361	0.0361	9.0000e-005		0.0385
Total	**3.7972**	**1.5000e-004**	**0.0168**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0361**	**0.0361**	**9.0000e-005**		**0.0385**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

TNRE Harris Road Facility - Phase 2-B - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

TNRE Harris Road Facility - Phase 2-B

Imperial County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	165.12	1000sqft	3.79	165,121.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2032
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Imperial Water District is not on list, chose SCE for proxy

Land Use - For construction purposes only

Construction Phase - Schedule provided by client

Off-road Equipment - Information supplied

On-road Fugitive Dust - All employee trips were on paved roads. 95% of haulers and vendors on paved roads.

Grading -

Architectural Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Construction Off-road Equipment Mitigation - Tier 4 Final equipment will be used where applicable

Area Coating - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

Area Mitigation - Flat coatings for interior and non-flat coatings for exterior - VOCs per Rule 424

TNRE Harris Road Facility - Phase 2-B - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	100
tblAreaCoating	Area_EF_Nonresidential_Interior	150	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	150	50
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

TNRE Harris Road Facility - Phase 2-B - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	18.00	35.00
tblConstructionPhase	NumDays	8.00	10.00
tblConstructionPhase	NumDays	18.00	19.00
tblConstructionPhase	NumDays	5.00	4.00
tblConstructionPhase	PhaseEndDate	7/23/2032	7/25/2032
tblConstructionPhase	PhaseEndDate	6/3/2032	6/5/2032
tblConstructionPhase	PhaseEndDate	7/17/2031	7/18/2031
tblConstructionPhase	PhaseEndDate	6/29/2032	7/1/2032
tblConstructionPhase	PhaseEndDate	7/7/2031	7/6/2031
tblConstructionPhase	PhaseStartDate	6/30/2032	6/6/2032
tblConstructionPhase	PhaseStartDate	7/18/2031	7/19/2031
tblConstructionPhase	PhaseStartDate	7/8/2031	7/7/2031
tblConstructionPhase	PhaseStartDate	6/4/2032	6/6/2032
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	HaulingPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	VendorPercentPave	50.00	95.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOnRoadDust	VendorPercentPave	50.00	95.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00

2.0 Emissions Summary

TNRE Harris Road Facility - Phase 2-B - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2031	0.1013	0.5974	1.1391	2.5800e-003	1.1221	0.0114	1.1335	0.1494	0.0114	0.1608	0.0000	223.4888	223.4888	7.7800e-003	4.4100e-003	224.9986
2032	0.5755	0.5781	1.1394	2.4600e-003	0.9933	0.0116	1.0050	0.1053	0.0116	0.1169	0.0000	213.2356	213.2356	7.4600e-003	4.1400e-003	214.6569
Maximum	**0.5755**	**0.5974**	**1.1394**	**2.5800e-003**	**1.1221**	**0.0116**	**1.1335**	**0.1494**	**0.0116**	**0.1608**	**0.0000**	**223.4888**	**223.4888**	**7.7800e-003**	**4.4100e-003**	**224.9986**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2031	0.0332	0.2069	1.2417	2.5800e-003	1.0749	3.3900e-003	1.0783	0.1257	3.3600e-003	0.1290	0.0000	223.4886	223.4886	7.7800e-003	4.4100e-003	224.9984
2032	0.5099	0.1960	1.2172	2.4600e-003	0.9933	3.2200e-003	0.9966	0.1053	3.1900e-003	0.1085	0.0000	213.2354	213.2354	7.4600e-003	4.1400e-003	214.6567
Maximum	**0.5099**	**0.2069**	**1.2417**	**2.5800e-003**	**1.0749**	**3.3900e-003**	**1.0783**	**0.1257**	**3.3600e-003**	**0.1290**	**0.0000**	**223.4886**	**223.4886**	**7.7800e-003**	**4.4100e-003**	**224.9984**

TNRE Harris Road Facility - Phase 2-B - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**19.76**	**65.73**	**-7.91**	**0.00**	**2.23**	**71.31**	**2.98**	**9.33**	**71.50**	**14.47**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**7-1-2031**	**9-30-2031**	0.3515	0.1139
2	**10-1-2031**	**12-31-2031**	0.3453	0.1258
3	**1-1-2032**	**3-31-2032**	0.3409	0.1238
4	**4-1-2032**	**6-30-2032**	0.5659	0.3455
5	**7-1-2032**	**9-30-2032**	0.2559	0.2463
		Highest	0.5659	0.3455

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6929	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.9500e-003	2.9500e-003	1.0000e-005	0.0000	3.1400e-003
Energy	0.0288	0.2617	0.2198	1.5700e-003		0.0199	0.0199		0.0199	0.0199	0.0000	426.0275	426.0275	0.0300	8.1900e-003	429.2190
Mobile	0.2937	0.2960	2.2450	4.9700e-003	302.7054	3.3500e-003	302.7087	30.2076	3.1300e-003	30.2108	0.0000	458.1696	458.1696	0.0233	0.0227	465.5275
Waste						0.0000	0.0000		0.0000	0.0000	41.5624	0.0000	41.5624	2.4563	0.0000	102.9691
Water						0.0000	0.0000		0.0000	0.0000	12.1140	42.8449	54.9590	1.2517	0.0303	95.2744
Total	**1.0153**	**0.5577**	**2.4664**	**6.5400e-003**	**302.7054**	**0.0233**	**302.7286**	**30.2076**	**0.0230**	**30.2307**	**53.6764**	**927.0450**	**980.7214**	**3.7613**	**0.0612**	**1,092.9931**

TNRE Harris Road Facility - Phase 2-B - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6929	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.9500e-003	2.9500e-003	1.0000e-005	0.0000	3.1400e-003
Energy	0.0288	0.2617	0.2198	1.5700e-003		0.0199	0.0199		0.0199	0.0199	0.0000	426.0275	426.0275	0.0300	8.1900e-003	429.2190
Mobile	0.2937	0.2960	2.2450	4.9700e-003	302.7054	3.3500e-003	302.7087	30.2076	3.1300e-003	30.2108	0.0000	458.1696	458.1696	0.0233	0.0227	465.5275
Waste						0.0000	0.0000		0.0000	0.0000	41.5624	0.0000	41.5624	2.4563	0.0000	102.9691
Water						0.0000	0.0000		0.0000	0.0000	12.1140	42.8449	54.9590	1.2517	0.0303	95.2744
Total	**1.0153**	**0.5577**	**2.4664**	**6.5400e-003**	**302.7054**	**0.0233**	**302.7286**	**30.2076**	**0.0230**	**30.2307**	**53.6764**	**927.0450**	**980.7214**	**3.7613**	**0.0612**	**1,092.9931**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2031	7/6/2031	5	4	
2	Grading	Grading	7/7/2031	7/18/2031	5	10	
3	Building Construction	Building Construction	7/19/2031	6/5/2032	5	230	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Paving	Paving	6/6/2032	7/1/2032	5	19	
5	Architectural Coating	Architectural Coating	6/6/2032	7/25/2032	5	35	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 8

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 247,682; Non-Residential Outdoor: 82,561; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

TNRE Harris Road Facility - Phase 2-B - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	69.00	27.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8800e-003	0.0273	0.0326	9.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004	0.0000	8.0009	8.0009	3.9000e-004	0.0000	8.0108
Total	**4.8800e-003**	**0.0273**	**0.0326**	**9.0000e-005**	**0.0491**	**8.7000e-004**	**0.0500**	**0.0253**	**8.7000e-004**	**0.0261**	**0.0000**	**8.0009**	**8.0009**	**3.9000e-004**	**0.0000**	**8.0108**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2031

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	3.0000e-005	4.7000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1258	0.1258	0.0000	0.0000	0.1269
Total	**7.0000e-005**	**3.0000e-005**	**4.7000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1258**	**0.1258**	**0.0000**	**0.0000**	**0.1269**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0192	0.0000	0.0192	9.8500e-003	0.0000	9.8500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.3000e-004	4.0300e-003	0.0417	9.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	8.0009	8.0009	3.9000e-004	0.0000	8.0108
Total	**9.3000e-004**	**4.0300e-003**	**0.0417**	**9.0000e-005**	**0.0192**	**1.2000e-004**	**0.0193**	**9.8500e-003**	**1.2000e-004**	**9.9700e-003**	**0.0000**	**8.0009**	**8.0009**	**3.9000e-004**	**0.0000**	**8.0108**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2031

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	3.0000e-005	4.7000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1258	0.1258	0.0000	0.0000	0.1269
Total	**7.0000e-005**	**3.0000e-005**	**4.7000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1258**	**0.1258**	**0.0000**	**0.0000**	**0.1269**

3.3 Grading - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0283	0.0000	0.0283	0.0137	0.0000	0.0137	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.0900e-003	0.0388	0.0723	1.8000e-004		1.1700e-003	1.1700e-003		1.1700e-003	1.1700e-003	0.0000	15.6023	15.6023	6.5000e-004	0.0000	15.6186
Total	**8.0900e-003**	**0.0388**	**0.0723**	**1.8000e-004**	**0.0283**	**1.1700e-003**	**0.0295**	**0.0137**	**1.1700e-003**	**0.0149**	**0.0000**	**15.6023**	**15.6023**	**6.5000e-004**	**0.0000**	**15.6186**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2031

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	6.0000e-005	9.8000e-004	0.0000	4.1000e-004	0.0000	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.2621	0.2621	1.0000e-005	1.0000e-005	0.2644
Total	**1.5000e-004**	**6.0000e-005**	**9.8000e-004**	**0.0000**	**4.1000e-004**	**0.0000**	**4.1000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.2621**	**0.2621**	**1.0000e-005**	**1.0000e-005**	**0.2644**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0111	0.0000	0.0111	5.3400e-003	0.0000	5.3400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8200e-003	7.8700e-003	0.0888	1.8000e-004		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	15.6023	15.6023	6.5000e-004	0.0000	15.6186
Total	**1.8200e-003**	**7.8700e-003**	**0.0888**	**1.8000e-004**	**0.0111**	**2.4000e-004**	**0.0113**	**5.3400e-003**	**2.4000e-004**	**5.5800e-003**	**0.0000**	**15.6023**	**15.6023**	**6.5000e-004**	**0.0000**	**15.6186**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2031

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	6.0000e-005	9.8000e-004	0.0000	4.1000e-004	0.0000	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.2621	0.2621	1.0000e-005	1.0000e-005	0.2644
Total	**1.5000e-004**	**6.0000e-005**	**9.8000e-004**	**0.0000**	**4.1000e-004**	**0.0000**	**4.1000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.2621**	**0.2621**	**1.0000e-005**	**1.0000e-005**	**0.2644**

3.4 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0772	0.4681	0.9533	1.8300e-003		8.7400e-003	8.7400e-003		8.7400e-003	8.7400e-003	0.0000	155.0880	155.0880	6.2200e-003	0.0000	155.2436
Total	**0.0772**	**0.4681**	**0.9533**	**1.8300e-003**		**8.7400e-003**	**8.7400e-003**		**8.7400e-003**	**8.7400e-003**	**0.0000**	**155.0880**	**155.0880**	**6.2200e-003**	**0.0000**	**155.2436**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2031

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.7700e-003	0.0596	0.0265	3.2000e-004	1.0216	5.5000e-004	1.0221	0.1043	5.2000e-004	0.1049	0.0000	30.1852	30.1852	1.4000e-004	4.0000e-003	31.3806
Worker	8.1100e-003	3.4600e-003	0.0531	1.6000e-004	0.0225	7.0000e-005	0.0225	5.9600e-003	6.0000e-005	6.0300e-003	0.0000	14.2246	14.2246	3.6000e-004	4.0000e-004	14.3538
Total	**0.0109**	**0.0631**	**0.0796**	**4.8000e-004**	**1.0440**	**6.2000e-004**	**1.0447**	**0.1103**	**5.8000e-004**	**0.1109**	**0.0000**	**44.4097**	**44.4097**	**5.0000e-004**	**4.4000e-003**	**45.7343**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0193	0.1319	1.0302	1.8300e-003		2.4100e-003	2.4100e-003		2.4100e-003	2.4100e-003	0.0000	155.0878	155.0878	6.2200e-003	0.0000	155.2434
Total	**0.0193**	**0.1319**	**1.0302**	**1.8300e-003**		**2.4100e-003**	**2.4100e-003**		**2.4100e-003**	**2.4100e-003**	**0.0000**	**155.0878**	**155.0878**	**6.2200e-003**	**0.0000**	**155.2434**

TNRE Harris Road Facility - Phase 2-B - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2031

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.7700e-003	0.0596	0.0265	3.2000e-004	1.0216	5.5000e-004	1.0221	0.1043	5.2000e-004	0.1049	0.0000	30.1852	30.1852	1.4000e-004	4.0000e-003	31.3806
Worker	8.1100e-003	3.4600e-003	0.0531	1.6000e-004	0.0225	7.0000e-005	0.0225	5.9600e-003	6.0000e-005	6.0300e-003	0.0000	14.2246	14.2246	3.6000e-004	4.0000e-004	14.3538
Total	**0.0109**	**0.0631**	**0.0796**	**4.8000e-004**	**1.0440**	**6.2000e-004**	**1.0447**	**0.1103**	**5.8000e-004**	**0.1109**	**0.0000**	**44.4097**	**44.4097**	**5.0000e-004**	**4.4000e-003**	**45.7343**

3.4 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0733	0.4443	0.9048	1.7300e-003		8.3000e-003	8.3000e-003		8.3000e-003	8.3000e-003	0.0000	147.2022	147.2022	5.9100e-003	0.0000	147.3498
Total	**0.0733**	**0.4443**	**0.9048**	**1.7300e-003**		**8.3000e-003**	**8.3000e-003**		**8.3000e-003**	**8.3000e-003**	**0.0000**	**147.2022**	**147.2022**	**5.9100e-003**	**0.0000**	**147.3498**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2032

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.6200e-003	0.0561	0.0251	3.0000e-004	0.9696	5.2000e-004	0.9701	0.0990	4.9000e-004	0.0995	0.0000	28.2564	28.2564	1.3000e-004	3.7300e-003	29.3718
Worker	7.2100e-003	3.0400e-003	0.0483	1.4000e-004	0.0213	6.0000e-005	0.0214	5.6600e-003	6.0000e-005	5.7200e-003	0.0000	13.2512	13.2512	3.1000e-004	3.7000e-004	13.3693
Total	**9.8300e-003**	**0.0592**	**0.0733**	**4.4000e-004**	**0.9909**	**5.8000e-004**	**0.9915**	**0.1047**	**5.5000e-004**	**0.1053**	**0.0000**	**41.5075**	**41.5075**	**4.4000e-004**	**4.1000e-003**	**42.7411**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0184	0.1251	0.9778	1.7300e-003		2.2800e-003	2.2800e-003		2.2800e-003	2.2800e-003	0.0000	147.2020	147.2020	5.9100e-003	0.0000	147.3496
Total	**0.0184**	**0.1251**	**0.9778**	**1.7300e-003**		**2.2800e-003**	**2.2800e-003**		**2.2800e-003**	**2.2800e-003**	**0.0000**	**147.2020**	**147.2020**	**5.9100e-003**	**0.0000**	**147.3496**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2032

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.6200e-003	0.0561	0.0251	3.0000e-004	0.9696	5.2000e-004	0.9701	0.0990	4.9000e-004	0.0995	0.0000	28.2564	28.2564	1.3000e-004	3.7300e-003	29.3718
Worker	7.2100e-003	3.0400e-003	0.0483	1.4000e-004	0.0213	6.0000e-005	0.0214	5.6600e-003	6.0000e-005	5.7200e-003	0.0000	13.2512	13.2512	3.1000e-004	3.7000e-004	13.3693
Total	**9.8300e-003**	**0.0592**	**0.0733**	**4.4000e-004**	**0.9909**	**5.8000e-004**	**0.9915**	**0.1047**	**5.5000e-004**	**0.1053**	**0.0000**	**41.5075**	**41.5075**	**4.4000e-004**	**4.1000e-003**	**42.7411**

3.5 Paving - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0110	0.0592	0.1244	2.2000e-004		2.4000e-003	2.4000e-003		2.4000e-003	2.4000e-003	0.0000	18.5660	18.5660	8.9000e-004	0.0000	18.5883
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0110**	**0.0592**	**0.1244**	**2.2000e-004**		**2.4000e-003**	**2.4000e-003**		**2.4000e-003**	**2.4000e-003**	**0.0000**	**18.5660**	**18.5660**	**8.9000e-004**	**0.0000**	**18.5883**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2032

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	1.5000e-004	2.3700e-003	1.0000e-005	1.0500e-003	0.0000	1.0500e-003	2.8000e-004	0.0000	2.8000e-004	0.0000	0.6516	0.6516	2.0000e-005	2.0000e-005	0.6574
Total	**3.5000e-004**	**1.5000e-004**	**2.3700e-003**	**1.0000e-005**	**1.0500e-003**	**0.0000**	**1.0500e-003**	**2.8000e-004**	**0.0000**	**2.8000e-004**	**0.0000**	**0.6516**	**0.6516**	**2.0000e-005**	**2.0000e-005**	**0.6574**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.0800e-003	9.0300e-003	0.1286	2.2000e-004		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	18.5659	18.5659	8.9000e-004	0.0000	18.5882
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0800e-003**	**9.0300e-003**	**0.1286**	**2.2000e-004**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**18.5659**	**18.5659**	**8.9000e-004**	**0.0000**	**18.5882**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2032

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	1.5000e-004	2.3700e-003	1.0000e-005	1.0500e-003	0.0000	1.0500e-003	2.8000e-004	0.0000	2.8000e-004	0.0000	0.6516	0.6516	2.0000e-005	2.0000e-005	0.6574
Total	**3.5000e-004**	**1.5000e-004**	**2.3700e-003**	**1.0000e-005**	**1.0500e-003**	**0.0000**	**1.0500e-003**	**2.8000e-004**	**0.0000**	**2.8000e-004**	**0.0000**	**0.6516**	**0.6516**	**2.0000e-005**	**2.0000e-005**	**0.6574**

3.6 Architectural Coating - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4783					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2900e-003	0.0150	0.0315	5.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	4.4682	4.4682	1.8000e-004	0.0000	4.4727
Total	**0.4806**	**0.0150**	**0.0315**	**5.0000e-005**		**3.6000e-004**	**3.6000e-004**		**3.6000e-004**	**3.6000e-004**	**0.0000**	**4.4682**	**4.4682**	**1.8000e-004**	**0.0000**	**4.4727**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2032

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	1.9000e-004	3.0600e-003	1.0000e-005	1.3500e-003	0.0000	1.3600e-003	3.6000e-004	0.0000	3.6000e-004	0.0000	0.8402	0.8402	2.0000e-005	2.0000e-005	0.8477
Total	**4.6000e-004**	**1.9000e-004**	**3.0600e-003**	**1.0000e-005**	**1.3500e-003**	**0.0000**	**1.3600e-003**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**0.0000**	**0.8402**	**0.8402**	**2.0000e-005**	**2.0000e-005**	**0.8477**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4783					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2000e-004	2.2500e-003	0.0321	5.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	4.4682	4.4682	1.8000e-004	0.0000	4.4727
Total	**0.4789**	**2.2500e-003**	**0.0321**	**5.0000e-005**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**4.4682**	**4.4682**	**1.8000e-004**	**0.0000**	**4.4727**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2032

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	1.9000e-004	3.0600e-003	1.0000e-005	1.3500e-003	0.0000	1.3600e-003	3.6000e-004	0.0000	3.6000e-004	0.0000	0.8402	0.8402	2.0000e-005	2.0000e-005	0.8477
Total	**4.6000e-004**	**1.9000e-004**	**3.0600e-003**	**1.0000e-005**	**1.3500e-003**	**0.0000**	**1.3600e-003**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**0.0000**	**0.8402**	**0.8402**	**2.0000e-005**	**2.0000e-005**	**0.8477**

TNRE Harris Road Facility - Phase 2-B - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2937	0.2960	2.2450	4.9700e-003	302.7054	3.3500e-003	302.7087	30.2076	3.1300e-003	30.2108	0.0000	458.1696	458.1696	0.0233	0.0227	465.5275
Unmitigated	0.2937	0.2960	2.2450	4.9700e-003	302.7054	3.3500e-003	302.7087	30.2076	3.1300e-003	30.2108	0.0000	458.1696	458.1696	0.0233	0.0227	465.5275

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	648.93	1,060.08	840.47	1,624,978	1,624,978
Total	648.93	1,060.08	840.47	1,624,978	1,624,978

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	6.70	5.00	8.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.546302	0.059468	0.180165	0.132656	0.023777	0.006524	0.008300	0.015283	0.000975	0.000111	0.022820	0.000686	0.002933

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	141.1522	141.1522	0.0245	2.9700e-003	142.6508
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	141.1522	141.1522	0.0245	2.9700e-003	142.6508
NaturalGas Mitigated	0.0288	0.2617	0.2198	1.5700e-003		0.0199	0.0199		0.0199	0.0199	0.0000	284.8753	284.8753	5.4600e-003	5.2200e-003	286.5682
NaturalGas Unmitigated	0.0288	0.2617	0.2198	1.5700e-003		0.0199	0.0199		0.0199	0.0199	0.0000	284.8753	284.8753	5.4600e-003	5.2200e-003	286.5682

TNRE Harris Road Facility - Phase 2-B - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	5.33836e+006	0.0288	0.2617	0.2198	1.5700e-003		0.0199	0.0199		0.0199	0.0199	0.0000	284.8753	284.8753	5.4600e-003	5.2200e-003	286.5682
Total		**0.0288**	**0.2617**	**0.2198**	**1.5700e-003**		**0.0199**	**0.0199**		**0.0199**	**0.0199**	**0.0000**	**284.8753**	**284.8753**	**5.4600e-003**	**5.2200e-003**	**286.5682**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	5.33836e+006	0.0288	0.2617	0.2198	1.5700e-003		0.0199	0.0199		0.0199	0.0199	0.0000	284.8753	284.8753	5.4600e-003	5.2200e-003	286.5682
Total		**0.0288**	**0.2617**	**0.2198**	**1.5700e-003**		**0.0199**	**0.0199**		**0.0199**	**0.0199**	**0.0000**	**284.8753**	**284.8753**	**5.4600e-003**	**5.2200e-003**	**286.5682**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	1.638e+006	141.1522	0.0245	2.9700e-003	142.6508
Total		**141.1522**	**0.0245**	**2.9700e-003**	**142.6508**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	1.638e+006	141.1522	0.0245	2.9700e-003	142.6508
Total		**141.1522**	**0.0245**	**2.9700e-003**	**142.6508**

6.0 Area Detail

6.1 Mitigation Measures Area

TNRE Harris Road Facility - Phase 2-B - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6929	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.9500e-003	2.9500e-003	1.0000e-005	0.0000	3.1400e-003
Unmitigated	0.6929	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.9500e-003	2.9500e-003	1.0000e-005	0.0000	3.1400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0478					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6449					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.9500e-003	2.9500e-003	1.0000e-005	0.0000	3.1400e-003
Total	**0.6929**	**1.0000e-005**	**1.5100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**2.9500e-003**	**2.9500e-003**	**1.0000e-005**	**0.0000**	**3.1400e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0478					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6449					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.9500e-003	2.9500e-003	1.0000e-005	0.0000	3.1400e-003
Total	**0.6929**	**1.0000e-005**	**1.5100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**2.9500e-003**	**2.9500e-003**	**1.0000e-005**	**0.0000**	**3.1400e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	54.9590	1.2517	0.0303	95.2744
Unmitigated	54.9590	1.2517	0.0303	95.2744

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	38.184 / 0	54.9590	1.2517	0.0303	95.2744
Total		**54.9590**	**1.2517**	**0.0303**	**95.2744**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	38.184 / 0	54.9590	1.2517	0.0303	95.2744
Total		**54.9590**	**1.2517**	**0.0303**	**95.2744**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	41.5624	2.4563	0.0000	102.9691
Unmitigated	41.5624	2.4563	0.0000	102.9691

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	204.75	41.5624	2.4563	0.0000	102.9691
Total		**41.5624**	**2.4563**	**0.0000**	**102.9691**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	204.75	41.5624	2.4563	0.0000	102.9691
Total		**41.5624**	**2.4563**	**0.0000**	**102.9691**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

ATTACHMENT 2
OPERATIONAL EMISSIONS CALCULATION DETAILS

Table 2a - Phase 0-IC On-road Emissions

Truck Activity

Activity	# Vehicles per Day	Trip Length (one-way)		VMT per day	VMT per year
		In County	Total		
Incoming Feedstock	25	53.4	170.0	2,669	1,108,166
Outgoing Compost	9	10.0	10.0	184	48,000
TOTAL	***34***			***2,853***	***1,156,166***

Notes - VMT for trucks are doubled to reflect round trips

VMT per year for inbound are based on annualized trips

Light Duty Vehicle Activity

Activity	# Vehicles per Day	Trip Length (one-way)	VMT per day	VMT per year
Employee Commute	25	7.3	367	95,595

Note - VMT for employees are doubled to reflect round trips

Criteria Emissions

Activity	Pounds per day				
	ROG	CO	NO_X	PM_{10}	$PM_{2.5}$
Incoming Feedstock	0.08	0.63	8.41	0.68	0.31
Outgoing Compost	0.01	0.04	0.58	0.05	0.02
Employee Commute	0.01	0.68	0.05	0.04	0.02
Totals		***1.4***	***9.0***	***0.8***	***0.3***

GHG

Activity	Tonnes per Year			
	CO_2	CH_4	N_2O	CO_2e
Incoming Feedstock	1,459.1	0.0007	0.2293	1,527.4
Outgoing Compost	63.2	0.0000	0.0099	66.2
Employee Commute	26.9	0.0003	0.0005	27.0
Totals	***1,549***	***0.001***	***0.240***	***1,621***

Table 2b - Phase 1 On-road Emissions

Truck Activity

Activity	# Vehicles per Day	Trip Length (one-way)		VMT per day	VMT per year
		In County	Total		
Incoming Feedstock	50	53.4	170.0	5,338	2,216,332
Outgoing Compost	18	10.0	10.0	368	96,000
TOTAL	***68***			***5,706***	***2,312,332***

Notes - VMT for trucks are doubled to reflect round trips

VMT per year for inbound are based on annualized trips

Light Duty Vehicle Activity

Activity	# Vehicles per Day	Trip Length (one-way)	VMT per day	VMT per year
Employee Commute	50	7.3	733	191,190

Note - VMT for employees are doubled to reflect round trips

Criteria Emissions

Activity	Pounds per day				
	ROG	CO	NO_X	PM_{10}	$PM_{2.5}$
Incoming Feedstock	0.16	1.30	17.26	1.37	0.63
Outgoing Compost	0.01	0.09	1.19	0.09	0.04
Employee Commute	0.02	1.29	0.09	0.08	0.03
Totals	***0.2***	***2.7***	***18.5***	***1.5***	***0.7***

GHG

Activity	Tonnes per Year			
	CO_2	CH_4	N_2O	CO_2e
Incoming Feedstock	2,902.5	0.0014	0.4562	3,038.4
Outgoing Compost	125.7	0.0001	0.0198	131.6
Employee Commute	53.0	0.0006	0.0010	53.4
Totals	***3,081***	***0.002***	***0.477***	***3,223***

Table 2c - Phase 2 On-road Emissions

Truck Activity

Activity	# Vehicles per Day	Trip Length (one-way)		VMT per day	VMT per year
		In County	Total		
Incoming Feedstock	100	53.4	170.0	10,676	4,432,664
Outgoing Compost	37	10.0	10.0	736	192,000
TOTAL	***137***			***11,412***	***4,624,664***

Notes - VMT for trucks are doubled to reflect round trips
VMT per year for inbound are based on annualized trips

Light Duty Vehicle Activity

Activity	# Vehicles per Day	Trip Length (one-way)	VMT per day	VMT per year
Employee Commute	50	7.3	733	191,190

Note - VMT for employees are doubled to reflect round trips

Criteria Emissions

Activity	Pounds per day				
	ROG	CO	NO_X	PM_{10}	$PM_{2.5}$
Incoming Feedstock	0.34	2.70	35.49	2.78	1.29
Outgoing Compost	0.02	0.19	2.45	0.19	0.09
Employee Commute	0.01	1.05	0.06	0.08	0.03
Totals	***0.4***	***3.9***	***38.0***	***3.0***	***1.4***

GHG

Activity	Tonnes per Year			
	CO_2	CH_4	N_2O	CO_2e
Incoming Feedstock	5,593.6	0.0030	0.8792	5,855.7
Outgoing Compost	242.3	0.0001	0.0381	253.6
Employee Commute	49.8	0.0004	0.0008	50.1
Totals	***5,886***	***0.003***	***0.918***	***6,159***

Table 3 - Off-Road Diesel Emissions

Criteria Emissions

Equipment Type	Activity				Criteria Emission Factors (g/bhp-hr)					Criteria Emissions (lbs/d)				
	BHP	Load Factor	hrs/ day	Pieces	ROG	CO	NO_X	PM_{10}	$PM_{2.5}$	ROG	CO	NO_X	PM_{10}	$PM_{2.5}$
Loaders - Phase 1	250	0.36	14.00	8	0.197	1.161	1.806	0.060	0.056	4.38	25.79	40.13	1.33	1.24
Loaders - Phase 2	250	0.36	14.00	8	0.210	1.138	0.655	0.022	0.022	4.67	25.29	14.56	0.49	0.49
									Totals	***9.0***	***51.1***	***54.7***	***1.8***	***1.7***

Greenhouse Gas Emissions

Equipment Type	Activity			EmFacs (g/bhp-hr)		GHG Emissions (tonnes/year)		
	BHP	Load Factor	Annual Hours	CO_2	CH_4	CO_2	CH_4	CO_2e
Loaders - Phase 1	250	0.36	29,200	469.8	0.152	1,234.60	0.3995	1,244.59
Loaders - Phase 2	250	0.36	29,200	568.3	0.018	1,493.49	0.0473	1,494.67
					Totals	***2,728.1***	***0.447***	***2,739.3***

Table 4a - Phase 0-IC Entrained Road Dust

Entrained road dust emissions are generated by vehicles traveling on both paved and unpaved roads. These equations are based on the paved and unpaved roads emission factors found in Section 5.3 of Appendix A, CalEEMod Users Guide, version 2016.3.2 and AP-42 Sections 13.2.1 and 13.2.2.

Emission Factors - Paved Roads

EF PM_{10} = 0.00065 lbs PM_{10}/VMT

EF $PM_{2.5}$ = $[k * (sL^{0.91}) * (W^{1.02})] * (1 - P/4N) =$ 0.00016 lbs $PM_{2.5}$/VMT

Constant	Description	Value
k =	*PM_{10} particle size multiplier for particle size range and units of interest*	*0.0022*
	$PM_{2.5}$ particle size multiplier for particle size range and units of interest	*0.00054*
sL =	*road surface silt loading in g/m^2 (allowable range is 0.02 to 400 g/m^2)*	*0.1*
W =	*average weight of the vehicles traveling the road in tons (mean average fleet vehicle weight ranging from 1.5 - 3 tons)*	*2.4*
P =	*number of "wet" days with at least 0.01 inches of precipitation during the averaging period*	*35*
N =	*number of days in the averaging period (e.g., 365 for annual, 91 for seasonal, 30 for monthly)*	*365*

Emission Factors - Unpaved Roads

EF PM_{10} = 0.7321 lbs PM_{10}/VMT

EF $PM_{2.5}$ = $(k * (s/12)^{1} * (S/30)^{0.5} / (M/0.5)^{0.2} - C) * (1 - P/365) =$ 0.0729 lbs $PM_{2.5}$/VMT

Constant	Description	Value
k =	*PM_{10} particle size multiplier for particle size range and units of interest*	*1.8*
	$PM_{2.5}$ particle size multiplier for particle size range and units of interest	*0.18*
s =	*surface material silt content (%) (allowable range 1.8 - 35 %)*	*4.3*
M =	*surface moisture content (%) (allowable range 0.03 – 13 %)*	*0.5*
S =	*the average vehicle speed (mph) (allowable range [10 - 55 mph])*	*40*
C =	*PM_{10} emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear*	*0.00047*
	$PM_{2.5}$ emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear	*0.00036*
P =	*number of "wet" days with at least 0.254 mm (0.01 in) of precipitation during the averaging period **	*6*

** Data from Western Regional Climate Center. El Centro Period of Record General Climate Summary - Precipitation. https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca2713. Accessed January 2020.*

Activity	VMT per day		Emissions in pounds per day					
			Paved Roads		Unpaved Roads		Total Roads	
	Paved	Unpaved	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
Incoming Feedstock	2,669	0	1.722	0.423	0.000	0.000	1.722	0.423
Outgoing Compost	175	9	0.113	0.028	6.739	0.671	6.852	0.699
Employee Commute	367	0	0.237	0.058	0.000	0.000	0.237	0.058
TOTAL	***3,211***	***9***	***2.07***	***0.51***	***6.74***	***0.67***	***8.81***	***1.18***

Note: Since employees use a parking area adjacent to a paved road, all employee trips were on paved roads. Additionally, all incoming haulers were on paved roads. Since compost may be delivered to the fields, 5 percent of the mileage could be on unpaved roads.

Table 4b - Phase 1 Entrained Road Dust

Entrained road dust emissions are generated by vehicles traveling on both paved and unpaved roads. These equations are based on the paved and unpaved roads emission factors found in Section 5.3 of Appendix A, CalEEMod Users Guide, version 2016.3.2 and AP-42 Sections 13.2.1 and 13.2.2.

Emission Factors - Paved Roads

EF PM_{10} = 0.00065 lbs PM_{10}/VMT

EF $PM_{2.5}$ = $[k * (sL^{0.91}) * (W^{1.02})] * (1 - P/4N) =$ 0.00016 lbs $PM_{2.5}$/VMT

Constant	Description	Value
k =	PM_{10} particle size multiplier for particle size range and units of interest	0.0022
	$PM_{2.5}$ particle size multiplier for particle size range and units of interest	0.00054
sL =	road surface silt loading in g/m^2 (allowable range is 0.02 to 400 g/m^2)	0.1
W =	average weight of the vehicles traveling the road in tons (mean average fleet vehicle weight ranging from 1.5 - 3 tons)	2.4
P =	number of "wet" days with at least 0.01 inches of precipitation during the averaging period	35
N =	number of days in the averaging period (e.g., 365 for annual, 91 for seasonal, 30 for monthly)	365

Emission Factors - Unpaved Roads

EF PM_{10} = 0.7321 lbs PM_{10}/VMT

EF $PM_{2.5}$ = $(k * (s/12)^1 * (S/30)^{0.5} / (M/0.5)^{0.2} - C) * (1 - P/365) =$ 0.0729 lbs $PM_{2.5}$/VMT

Constant	Description	Value
k =	PM_{10} particle size multiplier for particle size range and units of interest	1.8
	$PM_{2.5}$ particle size multiplier for particle size range and units of interest	0.18
s =	surface material silt content (%) (allowable range 1.8 - 35 %)	4.3
M =	surface moisture content (%) (allowable range 0.03 – 13 %)	0.5
S =	the average vehicle speed (mph) (allowable range [10 - 55 mph])	40
C =	PM_{10} emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear	0.00047
	$PM_{2.5}$ emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear	0.00036
P =	number of "wet" days with at least 0.254 mm (0.01 in) of precipitation during the averaging period *	6

** Data from Western Regional Climate Center. El Centro Period of Record General Climate Summary - Precipitation. https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca2713. Accessed January 2020.*

Activity	VMT per day		Emissions in pounds per day					
			Paved Roads		Unpaved Roads		Total Roads	
	Paved	Unpaved	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
Incoming Feedstock	5,338	0	3.444	0.845	0.000	0.000	3.444	0.845
Outgoing Compost	350	18	0.226	0.055	13.478	1.342	13.704	1.398
Employee Commute	733	0	0.473	0.116	0.000	0.000	0.473	0.116
TOTAL	***6,421***	***18***	***4.14***	***1.02***	***13.48***	***1.34***	***17.62***	***2.36***

Note: Since employees use a parking area adjacent to a paved road, all employee trips were on paved roads. Additionally, all incoming haulers were on paved roads. Since compost may be delivered to the fields, 5 percent of the mileage could be on unpaved roads.

Table 4c - Phase 2 Entrained Road Dust

Entrained road dust emissions are generated by vehicles traveling on both paved and unpaved roads. These equations are based on the paved and unpaved roads emission factors found in Section 5.3 of Appendix A, CalEEMod Users Guide, version 2016.3.2 and AP-42 Sections 13.2.1 and 13.2.2.

Emission Factors - Paved Roads

EF PM_{10} = 0.00065 lbs PM_{10}/VMT

EF $PM_{2.5}$ = $[k * (sL^{0.91}) * (W^{1.02})] * (1 - P/4N) =$ 0.00016 lbs $PM_{2.5}$/VMT

Constant	Description	Value
$k =$	PM_{10} particle size multiplier for particle size range and units of interest	0.0022
	$PM_{2.5}$ particle size multiplier for particle size range and units of interest	0.00054
$sL =$	road surface silt loading in g/m^2 (allowable range is 0.02 to 400 g/m^2)	0.1
$W =$	average weight of the vehicles traveling the road in tons (mean average fleet vehicle weight ranging from 1.5 - 3 tons)	2.4
$P =$	number of "wet" days with at least 0.01 inches of precipitation during the averaging period	35
$N =$	number of days in the averaging period (e.g., 365 for annual, 91 for seasonal, 30 for monthly)	365

Emission Factors - Unpaved Roads

EF PM_{10} = 0.7321 lbs PM_{10}/VMT

EF $PM_{2.5}$ = $(k * (s/12)^1 * (S/30)^{0.5} / (M/0.5)^{0.2} - C) * (1 - P/365) =$ 0.0729 lbs $PM_{2.5}$/VMT

Constant	Description	Value
$k =$	PM_{10} particle size multiplier for particle size range and units of interest	1.8
	$PM_{2.5}$ particle size multiplier for particle size range and units of interest	0.18
$s =$	surface material silt content (%) (allowable range 1.8 - 35 %)	4.3
$M =$	surface moisture content (%) (allowable range 0.03 – 13 %)	0.5
$S =$	the average vehicle speed (mph) (allowable range [10 - 55 mph])	40
$C =$	PM_{10} emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear	0.00047
	$PM_{2.5}$ emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear	0.00036
$P =$	number of "wet" days with at least 0.254 mm (0.01 in) of precipitation during the averaging period *	6

** Data from Western Regional Climate Center. El Centro Period of Record General Climate Summary - Precipitation. https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca2713. Accessed January 2020.*

Activity	VMT per day		Emissions in pounds per day					
			Paved Roads		Unpaved Roads		Total Roads	
	Paved	Unpaved	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
Incoming Feedstock	10,676	0	6.888	1.691	0.000	0.000	6.888	1.691
Outgoing Compost	700	37	0.451	0.111	26.956	2.684	27.408	2.795
Employee Commute	367	0	0.237	0.058	0.000	0.000	0.237	0.058
TOTAL	***11,742***	***37***	***7.58***	***1.86***	***26.96***	***2.68***	***34.53***	***4.54***

Note: Since employees use a parking area adjacent to a paved road, all employee trips were on paved roads. Additionally, all incoming haulers were on paved roads. Since compost may be delivered to the fields, 5 percent of the mileage could be on unpaved roads.

Table 5 - Hot Water Boilers

Size = 1,000,000 therms/yr or
99,976,129 scf/yr or
99.9761 10^6 scf/yr

Source: *http://www.kylesconverter.com/energy,-work,-and-heat/therms-(u.s.)-to-cubic-feet-of-natural-gas*

Criteria Pollutants

Pollutant	Emfac	Emissions		
	(lb/10^6 scf)	(lb/yr)	lb/d	t/y
NO_X	50	4,998.81	13.70	2.50
CO	84	8,397.99	23.01	4.20
PM total	7.6	759.82	2.08	0.38
SO_2	0.6	59.99	0.16	0.03
VOC	5.5	549.87	1.51	0.27
VOC	5.5	549.87	1.51	0.27

GHG Pollutants

Pollutant	Emfac	Emissions			
	(lb/10^6 scf)	(lb/yr)	lb/d	t/y	MT/yr
CO_2	120,000	11,997,135	32,869	5,999	5,442
N_2O	0.64	64	0.18	0.03	0.03
CH_4	2.3	230	0.63	0.11	0.10
				CO_2e	**5,453**

Emission factor data from AP-42 Section 1.4 Natural Gas Combustion

Note: *Two hot water boilers are proposed. It is assumed that they will be phased in at 1 during Phase 1 and the other during Phase 2.*

Toxic Pollutants

CAS No.	Pollutant	Emfac	Emissions		
		(lb/10^6 scf)	(lb/yr)	lb/d	t/y
91-57-6	2-Methylnapthalene	2.4E-05	2.4E-03	6.6E-06	1.2E-06
56-49-5	3-Methylcholanthrene	1.8E-06	1.8E-04	4.9E-07	9.0E-08
	7,12-Dimethylbenz(a)anthracene	1.6E-05	1.6E-03	4.4E-06	8.0E-07
83-32-9	Acenaphthene	1.8E-06	1.8E-04	4.9E-07	9.0E-08
203-96-8	Acenaphthylene	1.8E-06	1.8E-04	4.9E-07	9.0E-08
120-12-7	Anthracene	2.4E-06	2.4E-04	6.6E-07	1.2E-07
56-55-3	Benz(a)anthracene	1.8E-06	1.8E-04	4.9E-07	9.0E-08
71-43-2	Benzene	2.1E-03	2.1E-01	5.8E-04	1.0E-04
50-32-8	Benzo(a)pyrene	1.2E-06	1.2E-04	3.3E-07	6.0E-08
205-99-2	Benzo(b)fluoranthene	1.8E-06	1.8E-04	4.9E-07	9.0E-08
191-24-2	Benzo(g,h,i)perylene	1.2E-06	1.2E-04	3.3E-07	6.0E-08
207-08-9	Benzo(k)fluorantene	1.8E-06	1.8E-04	4.9E-07	9.0E-08
106-97-8	Butane	2.1E+00	2.1E+02	5.8E-01	1.0E-01
218-01-9	Chrysene	1.8E-06	1.8E-04	4.9E-07	9.0E-08
53-70-3	Dibenzo(a,h)anthracene	1.2E-06	1.2E-04	3.3E-07	6.0E-08
25321-22-6	Dichlorobenzene	1.2E-03	1.2E-01	3.3E-04	6.0E-05
74-84-0	Ethane	3.1E+00	3.1E+02	8.5E-01	1.5E-01
206-44-0	Fluoranthene	3.0E-06	3.0E-04	8.2E-07	1.5E-07
86-73-7	Fluorene	2.8E-06	2.8E-04	7.7E-07	1.4E-07
50-00-0	Formaldehyde	7.5E-02	7.5E+00	2.1E-02	3.7E-03
110-54-3	Hexane	1.8E+00	1.8E+02	4.9E-01	9.0E-02
193-39-5	Indeno(1,2,3-cd)pyrene	1.8E-06	1.8E-04	4.9E-07	9.0E-08
91-20-3	Naphthalene	6.1E-04	6.1E-02	1.7E-04	3.0E-05
109-66-0	Pentane	2.6E+00	2.6E+02	7.1E-01	1.3E-01
85-1-8	Phenanathrene	1.7E-05	1.7E-03	4.7E-06	8.5E-07
74-98-6	Propane	1.6E+00	1.6E+02	4.4E-01	8.0E-02
129-00-0	Pyrene	5.0E-06	5.0E-04	1.4E-06	2.5E-07
108-88-3	Toluene	3.4E-03	3.4E-01	9.3E-04	1.7E-04

Table 6 - Anaerobic Digester

Biogas Process Rate	150	10^6 Btu/hr	or
	3,600	10^6 Btu/d	or
	54,750	10^6 Btu/yr	

Criteria Pollutants

Pollutant	Emfac	Emissions (lb/d)	
	lb/10^6 Btu	Phase 1	Phases 1 + 2
NO_X	0.0051	18.36	36.72
CO	0.0042	15.12	30.24
PM	0.0011	3.96	7.92
VOC	0.0006	2.16	4.32
SO_X	0.0036	12.96	25.92

GHG Pollutants

Pollutant	Emfac	Emissions	
	lb/10^6 Btu	t/yr	MT/yr
CO_2	86.1	2,357	2,138
N_2O	0.00022	0.00602	0.00546
CH_4	0.4358	11.930	10.823
		$MTCO_2e$	**2,508**

* *Biogenic CO_2 emissions*

Notes - *Emission factor data from Evaluating the Air Quality, Climate & Economic Impacts of Biogas Management Technologies.. UC Davis, USEPA Region 9, & National Risk Management Research Lab. Sept 2016.*

- *Based on Upgrade & Pipeline Injection analysis*

Table 7 - Composting

Criteria Contaminant	Max Emission Factor (lb/ton mix)	Cumulative Emission Fact (lb/ton mix)	Phase 0-IC	
			lbs/d	t/y
NH_3	0.0016	0.01	0.66	0.8
VOC	0.0264	0.22	10.8	16.5

Phase 0-IC Feedstock *150,000* *tons*

Emission factors from Air Emissions Assessment: Aerated Static Pile Composting with Surface Biofiltration Layer Air Emissions Control. Charles E. Schmidt, PhD and Thomas R. Card. January 2012

GHG Contaminant	Emission Factor (lb/ton mix)	Phase 0-IC	
		MT/yr	MT CO_2e/yr
CO_2	517	35,176.1	35,176.1
N_2O	0.08	5.4	1,622.0
CH_4	5.6	381.0	9,525.4
		Total	**46,323.6**

Criteria Contaminant	Max Emission Factor (lb/ton mix)	Cumulative Emission Fact (lb/ton mix)	Phase 1 + Phase 2	
			lbs/d	t/y
NH_3	0.0016	0.01	2.63	3.0
VOC	0.0264	0.22	43.4	66.0

GHG Contaminant	Emission Factor (lb/t mix)	GHG (MT/yr)		CO_2e (MT/yr)	
		Phase 1	Phases 1 + 2	Phase 1	Phases 1 + 2
CO_2	517	70,352.18	140,704.35	70,352.18	140,704.35
N_2O	0.08	10.89	21.77	3,244.09	6,488.19
CH_4	5.6	762.04	1,524.07	19,050.88	38,101.76
				Total	185,294.30

Phase 1 stored digestate *300,000* *tons*
Phase 2 stored digestate *600,000* *tons*

Digestate storage emission factors from Schmidt and Card, 2013.

Table 8 - EMFAC2017 (v1.0.3)

EMFAC2011 Vehicle Categories - Imperial County

2023 Estimated Annual Emission Rates

Vehicle Info			Emission Factor (grams/mile)											
Type	Fuel	VMT	ROG	CO	NO_x	PM_{10}			$PM_{2.5}$			CO_2	CH_4	N_2O
						Exhaust	TW+BW	Total	Exhaust	TW+BW	Total			
LDA	GAS	5,843,170	0.0085	0.6735	0.0374	0.0012	0.0448	0.0460	0.0011	0.0178	0.0189	262.8	0.0023	0.0044
LDA	DSL	57,284	0.0127	0.1633	0.0789	0.0078	0.0448	0.0526	0.0075	0.0178	0.0253	185.2	0.0006	0.0291
LDT1	GAS	625,011	0.0352	1.7060	0.1531	0.0020	0.0448	0.0468	0.0019	0.0178	0.0196	311.4	0.0079	0.0106
LDT1	DSL	244	0.2005	1.1959	1.2002	0.1652	0.0448	0.2100	0.1581	0.0178	0.1758	387.0	0.0093	0.0608
LDT2	GAS	1,931,509	0.0198	1.1105	0.1048	0.0014	0.0448	0.0461	0.0013	0.0178	0.0190	329.7	0.0047	0.0078
LDT2	DSL	13,211	0.0126	0.0987	0.0458	0.0059	0.0448	0.0506	0.0056	0.0178	0.0234	248.2	0.0006	0.0390
Weighted Avg for Employees & Visitors			***0.0131***	***0.8450***	***0.0617***	***0.0014***	***0.0448***	***0.0461***	***0.0013***	***0.0178***	***0.0190***	***281.1***	***0.0032***	***0.0056***
T7 Single	DSL	10,609	0.0138	0.1077	1.4285	0.0183	0.0977	0.1160	0.0175	0.0355	0.0530	1,316.6	0.0006	0.2070

2024 Estimated Annual Emission Rates

Vehicle Info			Emission Factor (grams/mile)											
Type	Fuel	VMT	ROG	CO	NO_x	PM_{10}			$PM_{2.5}$			CO_2	CH_4	N_2O
						Exhaust	TW+BW	Total	Exhaust	TW+BW	Total			
LDA	GAS	5,936,319	0.0075	0.6339	0.0335	0.0012	0.0448	0.0459	0.0011	0.0178	0.0188	256.4	0.0020	0.0041
LDA	DSL	60,327	0.0109	0.1568	0.0643	0.0064	0.0448	0.0512	0.0062	0.0178	0.0239	181.4	0.0005	0.0285
LDT1	GAS	632,078	0.0307	1.5294	0.1334	0.0019	0.0448	0.0467	0.0017	0.0178	0.0195	303.9	0.0070	0.0095
LDT1	DSL	225	0.1924	1.1419	1.1323	0.1581	0.0448	0.2029	0.1513	0.0178	0.1690	385.5	0.0089	0.0606
LDT2	GAS	1,945,979	0.0176	1.0263	0.0923	0.0013	0.0448	0.0461	0.0012	0.0178	0.0190	319.3	0.0042	0.0071
LDT2	DSL	14,160	0.0105	0.0956	0.0356	0.0040	0.0448	0.0487	0.0038	0.0178	0.0216	242.4	0.0005	0.0381
Weighted Avg for Employees & Visitors			***0.0117***	***0.7955***	***0.0552***	***0.0013***	***0.0454***	***0.0467***	***0.0012***	***0.0180***	***0.0192***	***277.4***	***0.0029***	***0.0053***
T7 Single	DSL	10,526	0.0140	0.1108	1.4669	0.0187	0.0977	0.1164	0.0179	0.0355	0.0533	1,309.6	0.0007	0.2058

2028 Estimated Annual Emission Rates

Vehicle Info			Emission Factor (grams/mile)											
Type	Fuel	VMT	ROG	CO	NO_x	PM_{10}			$PM_{2.5}$			CO_2	CH_4	N_2O
						Exhaust	TW+BW	Total	Exhaust	TW+BW	Total			
LDA	GAS	6,256,821	0.0047	0.5217	0.0245	0.0010	0.0448	0.0457	0.0009	0.0178	0.0186	231.2	0.0014	0.0034
LDA	DSL	70,064	0.0063	0.1272	0.0265	0.0028	0.0448	0.0476	0.0027	0.0178	0.0205	164.4	0.0003	0.0258
LDT1	GAS	659,615	0.0168	0.9953	0.0781	0.0014	0.0448	0.0461	0.0013	0.0178	0.0190	274.0	0.0040	0.0064
LDT1	DSL	110	0.0768	0.5880	0.3301	0.0477	0.0448	0.0924	0.0456	0.0178	0.0634	336.9	0.0036	0.0530
LDT2	GAS	2,012,819	0.0111	0.7856	0.0598	0.0011	0.0448	0.0458	0.0010	0.0178	0.0187	280.3	0.0028	0.0052
LDT2	DSL	17,417	0.0100	0.0979	0.0278	0.0037	0.0448	0.0484	0.0035	0.0178	0.0213	220.3	0.0005	0.0346
Weighted Avg for Employees & Visitors			***0.0075***	***0.6508***	***0.0386***	***0.0011***	***0.0476***	***0.0488***	***0.0010***	***0.0189***	***0.0199***	***260.5***	***0.0020***	***0.0043***
T7 Single	DSL	10,277	0.0145	0.1148	1.5077	0.0203	0.0977	0.1181	0.0195	0.0355	0.0549	1,261.9	0.0007	0.1984

Notes - Criteria and GHG factors come from EMFAC2017 and represent Estimated Annual Emission Rates for Imperial County
Season was "annual" and Model Year and Speed were "aggregated"
Weighted average emissions factors were generated based on VMT per vehicle/fuel entry

Table 9 - Off-Road Diesel Equipment Emission Factors

Equipment Description	OFFROAD Category	BHP	Load Factor	Emission Factors (g/bhp-hr)						
				ROG	CO	NO_X	PM_{10}	$PM_{2.5}$	CO_2	CH_4
Phase 1 Loaders (2024)	rubber tired loader	250	0.36	0.197	1.161	1.806	0.060	0.056	469.8	0.152
Phase 2 Loaders (2028)	rubber tired loader	250	0.36	0.210	1.138	0.655	0.022	0.022	568.3	0.018

** Data from CalEEMod™ Version 2020.4.0 Users Guide, Appendix D*

Table 10 - Off-Road Diesel Equipment List

Description	Number	hrs/ day	days/ week	hrs/ week	hrs/ year
Rubber Tired Loader - Phase 1	8	14	5	560	29,200
Rubber Tired Loader - Phase 2	8	14	5	560	29,200
Facility Total	***16***	***14***	***5***	***1,120***	***58,400***

Table 11 - Travel Distance Assumptions

Delivering Material to Harris Road Facility

Source of Feedstock		Number of Trucks	1-way mileage	
			In County	Total
1%	Imperial County	7	10	10
24%	San Diego County	23	47	102
12%	Riverside County	11	56	120
63%	Los Angeles County	58	56	208
Weighted average 1-way Mileage		***100***	***53.4***	***170.0***

Notes - Inbound travel was presented as "In County" for criteria calculations and "Total" for GHG calculations

Inbound percentage distribution & total mileages provided by client

Employees & Miscellaneous

Source		1-way mileage
45%	Brawley	8
10%	Imperial	5
45%	El Centro	9
Average 1-way Mileage		***7.33***

Product to Delivery

Source	1-way mileage
Compost to local clients	10

Note - Product to delivery mileage supplied by client

Table 12 - Activities

Feedstock Sources

County	TPY	%
Imperial	47,061	1.1%
San Diego	988,095	23.8%
Riverside	506,660	12.2%
Los Angeles	2,602,429	62.8%
TOTAL	**4,144,245**	100.0%

Incoming Feedstock

Phase	tpy	tpd	trucks/d	tons/truck
0-1C	150,000	575	25	23
P1	300,000	1,151	50	23
P2	600,000	2,301	100	23

Outgoing Compost

Phase	tpy	tpd	trucks/d	tons/truck
0-1C	60,000	230	9	25
P1	120,000	460	18	25
P2	240,000	921	36.8	25

ATTACHMENT 3
ORGANICS BENEFITS CALCULATOR TOOL

California Air Resources Board

Benefits Calculator Tool
Organics Programs

California Climate Investments

Note to applicants:

A step-by-step **user guide**, including **project examples**, for this Benefits Calculator Tool is available here.

Organics Programs applicants must enter the applicable information in the table below before proceeding with the project-specific data on the Inputs tab.

Project Name:	Imperial Organics Renewable Energy Facility (IO-REF)
Applicant ID:	*To be completed by CalRecycle*
Contact Name:	
Contact Phone Number:	
Contact Email:	
Date Calculator Completed:	
Total Organics GGRF Funds Requested ($):	
Other GGRF Leveraged Funds ($):	
Non-GGRF Leveraged Funds ($):	
Total Funds ($):	$ -

Key for color-coded fields:	
Green	Required input field
Blue	Optional input field*
Grey	Output field / not modifiable
Yellow	Helpful hints / important tips
Black	Not applicable

*See "Documentation" tab for additional information

California Air Resources Board

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California Climate Investments

Note to applicants:

A step-by-step **user guide**, including **project examples**, for this Benefits Calculator Tool is available here.

Composting Worksheet

Year (January-December)	Feedstock Diverted for Windrow Composting (Short Tons)	Feedstock Diverted for Aerated Static PIle Composting (Short Tons)	Composition of Food Waste in Feedstock (%)	Composition of Green Waste in Feedstock (%)	Residual Material (Short Tons)	Net GHG Benefit ($MTCO_2e$)
Year 1	0	137,500	10%	90%	0	27,225
Year 2	0	137,500	16%	84%	0	28,710
Year 3	0	120,000	25%	75%	0	27,000
Year 4	0	120,000	25%	75%	0	27,000
Year 5	0	120,000	25%	75%	0	27,000
Year 6	0	180,000	25%	75%	0	40,500
Year 7	0	240,000	25%	75%	0	54,000
Year 8	0	240,000	25%	75%	0	54,000
Year 9	0	240,000	25%	75%	0	54,000
Year 10	0	240,000	25%	75%	0	54,000
SUBTOTAL	0	1,775,000	-	-	0	393,435

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Note to applicants:

A step-by-step **user guide**, including **project examples**, for this Benefits Calculator Tool is available here.

Standalone Anaerobic Digestion (AD) Worksheet

Digestate Handling	Compost
Final Use of Generated Fuel	Injection in Utility Pipeline

Year (January-December)	Feedstock Diverted for Anaerobic Digestion (Short Tons)	Residual Material (Short Tons)	Net GHG Benefit ($MTCO_2e$)
Year 1	0	0	0
Year 2	125,000	12,500	32625
Year 3	300,000	30,000	78300
Year 4	300,000	30,000	78300
Year 5	300,000	30,000	78300
Year 6	450,000	45,000	117450
Year 7	600,000	60,000	156600
Year 8	600,000	60,000	156600
Year 9	600,000	60,000	156600
Year 10	600,000	60,000	156600
SUBTOTAL	3,875,000	387,500	1,011,375

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Project Information		
Project Name		Imperial Organics Renewable Energy Facility (IO-REF)
Total Organics GGRF Funds Requested ($)	$	-
Other GGRF Leveraged Funds ($)	$	-
Non-GGRF Leveraged Funds ($)	$	-
Total Funds ($)	$	-

GHG Summary		
Total Organics GHG Emission Reductions ($MTCO_2e$)		0
Total GHG Emission Reductions ($MTCO_2e$)		1,404,810
Total GHG Emission Reductions per Total Organics GGRF Funds ($MTCO_2e/$)		0.000000
Total GHG Emission Reductions per Total Funds ($MTCO_2e/$)		0.000000
Total Organics GGRF Funds per Total GHG Emission Reductions ($/MTCO_2e$)	$	-

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Fuel and energy co-benefits

Fossil fuel use reductions (onsite reductions) over Quantification Period	-638,910	gallons*	Note: Positive values indicate reductions, while negative values indicate increases
Fossil fuel use reductions (onsite reductions) over Quantification Period	-238,324,186	kWh	Note: Positive values indicate reductions, while negative values indicate increases
Fossil fuel use reductions (onsite reductions) over Quantification Period	0	therms	
Energy and fuel cost savings (onsite) over Quantification Period	-$33,864,542	dollars	Note: Positive values indicate cost savings, while negative values indicate cost increases
Renewable fuel generation over Quantification Period	0	gallons*	
Renewable fuel generation over Quantification Period	8,918,460,843	scf	
Renewable energy generation over Quantification Period	0	kWh	

*diesel gallons equivalent

Air pollutant co-benefits	local	remote	total	
ROG Emission Reductions over Quantification Period	-14,971	420,507	405,536	lbs
NOx Emission Reductions over Quantification Period	-121,295	188,441	67,146	lbs
PM2.5 Emission Reductions over Quantification Period	-5,182	145,627	140,445	lbs
Diesel PM Emission Reductions over Quantification Period	-4,025	4,459	434	lbs

Soil health co-benefits

Compost production	1,797,063	Dry tons
Compost application area	21642	Acres to be treated with compost soil ammendments
Trees Planted	0	Trees
Water savings	0	Gallons

Note: Positive values indicate compost production, while negative values indicate reductions in compost production

Waste reduction co-benefits

Edible Food Rescued & Donated	0	Tons
Source Reduction of Food Waste	0	Tons
Material Diverted from Landfill	5,262,500	Tons
Reduction in Vehicle Miles Traveled	0	Miles

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Benefits Calculator Tool for the Organics Grant Program

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Emission Reduction Factors Worksheet

Additional documentation on how the emission reduction factors used in the calculator were developed is available from:
http://www.arb.ca.gov/cci-resource

Compost			
Compost Process & Feedstock	**Emission Reduction Factor**	**Unit**	**Primary Source**
Windrow food waste	0.32	$MTCO_2e$/short ton feedstock	
Windrow green waste	0.14	$MTCO_2e$/short ton feedstock	
Aerated static pile food waste	0.36	$MTCO_2e$/short ton feedstock	Method for Estimating Greenhouse Gas Emission Reductions from Diversion of Organic Waste from Landfills to Compost Facilities
Aerated static pile green waste	0.18	$MTCO_2e$/short ton feedstock	
Fugitive landfill emission factor food waste	0.39	$MTCO_2e$/short ton feedstock	
Fugitive landfill emission factor green waste	0.21	$MTCO_2e$/short ton feedstock	

Standalone Anaerobic Digestion			
Product	**Emission Reduction Factor**	**Unit**	**Primary Source**
Vehicle fuel - Landfill/Use for ADC	0.32	$MTCO_2e$/short ton feedstock	
Vehicle fuel - Compost	0.39	$MTCO_2e$/short ton feedstock	LCFS Pathway for the Production of Biomethane from High Solids Anaerobic Digestion of Organic (Food and Green) Waste
Vehicle fuel - Land Application	0.36	$MTCO_2e$/short ton feedstock	
Electricity Generation - Landfill/Use for ADC	0.17	$MTCO_2e$/short ton feedstock	
Electricity Generation - Compost	0.24	$MTCO_2e$/short ton feedstock	LCFS Pathway for the Production of Biomethane from High Solids Anaerobic Digestion of Organic (Food and Green) Waste
Electricity Generation - Land Application	0.21	$MTCO_2e$/short ton feedstock	
Injection in Utility Pipeline - Landfill/Use for ADC	0.23	$MTCO_2e$/short ton feedstock	
Injection in Utility Pipeline - Compost	0.29	$MTCO_2e$/short ton feedstock	LCFS Pathway for the Production of Biomethane from High Solids Anaerobic Digestion of Organic (Food and Green) Waste
Injection in Utility Pipeline - Land Application	0.27	$MTCO_2e$/short ton feedstock	
Fugitive landfill emission factor (assumes 40% food waste 60% green waste per LCFS pathway)	0.28	$MTCO_2e$/short ton feedstock	LCFS Pathway for the Production of Biomethane from High Solids Anaerobic Digestion of Organic (Food and Green) Waste Method for Estimating Greenhouse Gas Emission Reductions from Diversion of Organic Waste from Landfills to Compost Facilities

Co-Digestion of Organics at Wastewater Treatment Plants			
Emission Source	**Emission Factor**	**Unit**	**Primary Source**
Fugitive landfill food waste emission factor	0.39	$MTCO_2e$/short ton feedstock	Method for Estimating Greenhouse Gas Emission Reductions from Diversion of Organic Waste from Landfills to Compost Facilities
Small-Medium Facility - Landfill Digestate			
Vehicle Fuel - Small-Medium Facility	0.28	MTCO2e/short ton feedstock	
Electricity Generation - Small-Medium Facility	0.15	MTCO2e/short ton feedstock	LCFS Pathway for the Production of Biomethane from the Mesophilic Anaerobic Digestion of Wastewater Sludge at Publicly-Owned Treatment Works
Injection in Utility Pipeline - Small-Medium Facility	0.23	MTCO2e/short ton feedstock	
Medium-Large Facility - Landfill Digestate			
Vehicle Fuel - Medium-Large Facility	0.26	MTCO2e/short ton feedstock	
Electricity Generation - Medium-Large Facility	0.28	MTCO2e/short ton feedstock	LCFS Pathway for the Production of Biomethane from the Mesophilic Anaerobic Digestion of Wastewater Sludge at Publicly-Owned Treatment Works
Injection in Utility Pipeline - Medium-Large Facility	0.34	MTCO2e/short ton feedstock	
Small-Medium Facility - Compost Digestate			
Vehicle Fuel - Small-Medium Facility	0.30	MTCO2e/short ton feedstock	
Electricity Generation - Small-Medium Facility	0.20	MTCO2e/short ton feedstock	LCFS Pathway for the Production of Biomethane from the Mesophilic Anaerobic Digestion of Wastewater Sludge at Publicly-Owned Treatment Works
Injection in Utility Pipeline - Small-Medium Facility	0.28	MTCO2e/short ton feedstock	
Medium-Large Facility - Compost Digestate			
Vehicle Fuel - Medium-Large Facility	0.27	MTCO2e/short ton feedstock	
Electricity Generation - Medium-Large Facility	0.33	MTCO2e/short ton feedstock	LCFS Pathway for the Production of Biomethane from the Mesophilic Anaerobic Digestion of Wastewater Sludge at Publicly-Owned Treatment Works
Injection in Utility Pipeline - Medium-Large Facility	0.40	MTCO2e/short ton feedstock	
Small-Medium Facility - Land Apply Digestate			
Vehicle Fuel - Small-Medium Facility	0.29	MTCO2e/short ton feedstock	
Electricity Generation - Small-Medium Facility	0.18	MTCO2e/short ton feedstock	LCFS Pathway for the Production of Biomethane from the Mesophilic Anaerobic Digestion of Wastewater Sludge at Publicly-Owned Treatment Works
Injection in Utility Pipeline - Small-Medium Facility	0.26	MTCO2e/short ton feedstock	
Medium-Large Facility - Land Apply Digestate			
Vehicle Fuel - Medium-Large Facility	0.27	MTCO2e/short ton feedstock	
Electricity Generation - Medium-Large Facility	0.31	MTCO2e/short ton feedstock	LCFS Pathway for the Production of Biomethane from the Mesophilic Anaerobic Digestion of Wastewater Sludge at Publicly-Owned Treatment Works
Injection in Utility Pipeline - Medium-Large Facility	0.38	MTCO2e/short ton feedstock	

Food Waste Prevention			
	Emission Reduction Factor	**Unit**	**Primary Source**
Food waste prevention	1.78	$MTCO_2e$/short ton feedstock	The Climate Change and Economic Impacts of Food Waste in the United States
Refrigeration & Freezer Equipment			
Emissions from Energy Consumption			
Residential Refrigerator/Freezer Combination	8.46	kWh/year per ft^3 of volume	
	335.7	kWh/year	
Residential Freezer Only	7.85	kWh/year by ft^3 of volume	
	172.3	kWh/year	
Residential Refrigerator Only	7.28	kWh/year by ft^3 of volume	
	206.7	kWh/year	
Commercial Refrigerator with solid doors	36.5	kWh/year per ft^3 of volume	
	744.6	kWh/year	
Commercial Refrigerator with transparent doors	43.8	kWh/year by ft^3 of volume	10 CFR 431.66 - Energy conservation standards and their effective dates
	1,219.1	kWh/year	
Commercial Freezer with solid doors	146.0	kWh/year by ft^3 of volume	
	503.7	kWh/year	
Commercial Freezer with transparent doors	273.8	kWh/year by ft^3 of volume	
	1,496.5	kWh/year	
Commercial Refrigerator/freezer with solid doors	98.6	kWh/year by ft^3 of volume	
	-259.2	kWh/year	
	255.5	minimum value kWh/year	
Electricity emission factor	0.0002279	$MTCO_2e$/kWh	CARB California grid electricity emission factor for GGRF programs
GWPs of Refrigerants			
Default Value	3328	MTCO2e/metric ton	CARB Refrigerant Management Program (Weighted GWP of 2020 Cold Storage Inventory)
R-134a	1,430	MTCO2e/metric ton	CARB Refrigerant Management Program (Used as default refrigerant for TRUs)
R-22	1,810	MTCO2e/metric ton	
R-404A	3,900	MTCO2e/metric ton	
R-407A	2,107	MTCO2e/metric ton	
R-507	3,985	MTCO2e/metric ton	
R-11	4,750	MTCO2e/metric ton	
R-12	10,900	MTCO2e/metric ton	
R-13	14,400	MTCO2e/metric ton	
R-13b1	7,140	MTCO2e/metric ton	
R-14	7,390	MTCO2e/metric ton	
R-23	14,800	MTCO2e/metric ton	
R-32	675	MTCO2e/metric ton	
R-113	6,130	MTCO2e/metric ton	
R-114	10,000	MTCO2e/metric ton	
R-115	7,370	MTCO2e/metric ton	
R-116	12,200	MTCO2e/metric ton	
R-123	77	MTCO2e/metric ton	
R-124	609	MTCO2e/metric ton	
R-125	3,500	MTCO2e/metric ton	
R-141b	725	MTCO2e/metric ton	
R-142b	2,310	MTCO2e/metric ton	
R-143a	4,470	MTCO2e/metric ton	
R-152a	124	MTCO2e/metric ton	
R-161	12	MTCO2e/metric ton	
R-170	6	MTCO2e/metric ton	
R-218	8,830	MTCO2e/metric ton	
R-225ca	122	MTCO2e/metric ton	
R-225cb	595	MTCO2e/metric ton	
R-227ea	3,220	MTCO2e/metric ton	
R-236fa	9,810	MTCO2e/metric ton	
R-245fa	1,030	MTCO2e/metric ton	
R-290	4	MTCO2e/metric ton	
R-365mfc	794	MTCO2e/metric ton	
R-401A	1,182	MTCO2e/metric ton	
R-401B	1,288	MTCO2e/metric ton	
R-402A	2,788	MTCO2e/metric ton	
R-402B	2,416	MTCO2e/metric ton	
R-403B	4,458	MTCO2e/metric ton	CARB Refrigerant Management Program
R-406A	1,943	MTCO2e/metric ton	
R-407C	1,774	MTCO2e/metric ton	
R-407F	1,825	MTCO2e/metric ton	
R-408A	3,432	MTCO2e/metric ton	
R-409A	1,585	MTCO2e/metric ton	
R-410A	2,088	MTCO2e/metric ton	
R-413A	2,053	MTCO2e/metric ton	
R-414A	1,478	MTCO2e/metric ton	
R-414B	1,362	MTCO2e/metric ton	
R-416A	1,084	MTCO2e/metric ton	
R-417A	2,346	MTCO2e/metric ton	
R-421A	2,631	MTCO2e/metric ton	
R-422A	3,143	MTCO2e/metric ton	
R-422B	2,526	MTCO2e/metric ton	
R-422C	3,085	MTCO2e/metric ton	
R-422D	2,729	MTCO2e/metric ton	
R-423A	2,280	MTCO2e/metric ton	
R-424A	2,440	MTCO2e/metric ton	
R-427A	2,138	MTCO2e/metric ton	
R-434A	2,070	MTCO2e/metric ton	
R-437A	1,805	MTCO2e/metric ton	
R-438A	2,265	MTCO2e/metric ton	
R-448A	1,386	MTCO2e/metric ton	
R-449	1,397	MTCO2e/metric ton	
R-500	8,077	MTCO2e/metric ton	
R-502	4,657	MTCO2e/metric ton	
R-503	14,560	MTCO2e/metric ton	
R-508B	13,396	MTCO2e/metric ton	
R-600a	5	MTCO2e/metric ton	
R-601	11	MTCO2e/metric ton	
R-717	0	MTCO2e/metric ton	
R-744	1	MTCO2e/metric ton	
R-4310mee	1,640	MTCO2e/metric ton	
EP-88	6,427	MTCO2e/metric ton	
Hot Shot 2	1,809	MTCO2e/metric ton	
Isceon MO89	3,805	MTCO2e/metric ton	
Refrigerant Leakage Assumptions			
	Average Annual Leak Rate	**Unit**	**Primary Source**
Residential Refrigerator/Freezer Combination	1%	%	
Residential Freezer Only	1%	%	
Residential Refrigerator Only	1%	%	
Commercial Refrigeration systems with charge < 50 lbs	15.0%	%	
Commercial Refrigeration systems with charge 50 lbs to < 200 lbs	15.0%	%	CARB's California's High Global Warming Potential Gases Emission Inventory Emission Inventory Methodology and Technical Support Document (2016)
Commercial Refrigeration systems with charge 200 lbs to < 2,000 lbs	17.6%	%	
Commercial Refrigeration systems with charge ≥ 2,000 lbs	16.6%	%	
Transportation Vehicle	24.0%	%	
Default Refrigerant Charge Sizes			
Residential refrigerators/freezers and chest freezers	0.34	lbs	
Commercial Refrigerator/Freezers	7.10	lbs	
Small Walk In Refrigerator/Freezer	31.40	lbs	
Large Walk In Refrigerator/Freezer	122.00	lbs	CARB's California's High Global Warming Potential Gases Emission Inventory Emission Inventory Methodology and Technical Support Document (2016)
Refrigerated Van	4.00	lbs	
Refrigerated Box Truck	12.00	lbs	
Refrigerated Heavy Duty Truck	22.00	lbs	
Transportation			
	Emission Factor	**Unit**	**Source**

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Emission Reduction Factors Worksheet

Additional documentation on how the emission reduction factors used in the calculator were developed is available from:
http://www.arb.ca.gov/cci-resources

Avoided Landfill Flare Emissions			
Compost Process & Feedstock	**Emission Reduction Factor**	**Unit**	**Primary Source**
ROG Flare Combustion Emission Factor - Greenwaste	0.049	lbs/wet short ton of greenwaste	California Air Resources Board, Method for Estimating Greenhouse Gas Emission Reductions from Diversion of Organic Waste from Landfills to Compost Facilities (May 2017)
NOx Flare Combustion Emission Factor - Greenwaste	0.018	lbs/wet short ton of greenwaste	
PM2.5 Flare Combustion Emission Factor - Greenwaste	0.007	lbs/wet short ton of greenwaste	
ROG Flare Combustion Emission Factor - Foodwaste	0.092	lbs/wet short ton of foodwaste	EPA AP-42, Compilation of Air Emission Factors, 2.4, Municipal Solid Waste Landfills
NOx Flare Combustion Emission Factor - Foodwaste	0.03	lbs/wet short ton of foodwaste	
PM2.5 Flare Combustion Emission Factor - Foodwaste	0.014	lbs/wet short ton of foodwaste	

Grid Electricity Emission Factors			
Product	**Emission Reduction Factor**	**Unit**	**Primary Source**
ROG Electricity Emission Factor	0.000021	lbs/kWh	Criteria pollutant data is derived from CARB's criteria pollutant emissions inventory for statewide stationary sources of fuel combustion for electric utilities and cogeneration. The latest update is based on 2012 estimated annual average emissions. Criteria pollutant emissions data are available online at: https://www.arb.ca.gov/app/emsinv/2017/emssumcat_query.php?F_YR=2012&F_DIV=-4&F_SEASON=A&SP=SIP105ADJ&F_AREA=CA#0
NOx Electricity Emission Factor	0.000131	lbs/kWh	
PM2.5 Electricity Emission Factor	0.000033	lbs/kWh	

Natural Gas Combustion Emission Factors			
Product	**Emission Reduction Factor**	**Unit**	**Primary Source**
ROG Natural Gas Emission Factor	0.000008	lbs/scf	Natural gas emission factors for criteria pollutants - US EPA - AP-42, col. 1, CH 1.4: Natural Gas Combustion https://www3.epa.gov/ttnchie1/ap42/ch01/final/c01s04.pdf
NOx Natural Gas Emission Factor	0.000123	lbs/scf	
PM2.5 Natural Gas Emission Factor	0.000008	lbs/scf	
LHV of Natural Gas	930	BTU/scf	CA-GREET 3.0

Aggregate Agricultural Sector Emission Factors			
Product	**Emission Reduction Factor**	**Unit**	**Primary Source**
ROG Emission Factor	0.0217	lbs/gallon	OFFROAD2017 (v1.0.1) Emission Inventory www.arb.ca.gov/orion
NOx Emission Factor	0.1653	lbs/gallon	
PM2.5 Emission Factor	0.0058	lbs/gallon	
Diesel PM Emission Factor	0.0063	lbs/gallon	

Standalone Digestion of Organics - Co-benefits Emission Reduction Factors			
Co-benefit	**Factor**	**Unit**	**Primary Source**
Renewable Energy Generation (scf)	2,557	scf/short tons feedstock	California Air Resources Board, Low Carbon Fuel Standard (LCFS) Pathway for the Production of Biomethane from High Solids Anaerobic Digestion (HSAD) of Organic (Food and Green) Wastes (2014)
Renewable Energy Generation (kWh)	216	kWh/short ton of feedstock	
Renewable Fuel Production (gallons)	19	gal of diesel eq/short ton of feedstock	

Standalone Digestion of Organics - Co-benefits Emission Factors			
Co-benefit	**Factor**	**Unit**	**Primary Source**
Digester Heat Loading Requirements (scf)	52	scf/short tons feedstock	California Air Resources Board, Low Carbon Fuel Standard (LCFS) Pathway for the Production of Biomethane from High Solids Anaerobic Digestion (HSAD) of Organic (Food and Green) Wastes (2014)
Electricity Consumption (kWh)	68	kWh/short ton of feedstock	
Fossil Energy Use for Hydrolysis Unit Loading (gallons)	0.18	gal of diesel/short ton of feedstock	

Co-Digestion of Organics at Wastewater Treatment Plants - Small-Medium Facility - Co-benefits Factors			
Emission Source	**Emission Factor**	**Unit**	**Primary Source**
Renewable Energy Generation (scf)	2,765	scf/short tons feedstock	California Air Resources Board, Low Carbon Fuel Standard (LCFS) Pathway for the Production of Biomethane from Mesophilic Anaerobic Digestion of Wastewater Sludge at a Publicly Owned Treatment Works (2014)
Renewable Energy Generation (kWh)	234	kWh/short ton of feedstock	
Renewable Fuel Generation (gallons)	20	gal of diesel eq/short ton of feedstock	
Co-Digestion of Organics at Wastewater Treatment Plants - Medium-Large Facility			
Renewable Energy Generation (scf)	2,214	scf/short tons feedstock	California Air Resources Board, Low Carbon Fuel Standard (LCFS) Pathway for the Production of Biomethane from Mesophilic Anaerobic Digestion of Wastewater Sludge at a Publicly Owned Treatment Works (2014)
Renewable Energy Generation (kWh)	187	kWh/short ton of feedstock	
Renewable Fuel Generation (gallons)	16	gal of diesel eq/short ton of feedstock	

Food Waste Prevention - Avoided Food Transportation			
	Emission Reduction Factor	**Unit**	**Primary Source**
ROG Avoided Transportation Emission Factor	0.016	lbs/short ton of foodwaste	The Climate Change and Economic Impacts of Food Waste in the United States
NOx Avoided Transportation Emission Factor	0.299	lbs/short ton of foodwaste	
PM2.5 Avoided Transportation Emission Factor	0.009	lbs/short ton of foodwaste	
Diesel PM Avoided Transportation Emission Factor	0.001	lbs/short ton of foodwaste	

Compost Application Co-benefits			
Amount of compost to agricultural sources	56%	%	Co-benefit Assessment Methodology for Soil Health and Conservation https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/final_soil_am.pdf
Conversion of wet tons of compost to dry tons of compost for compost with C:N>11	0.6586	ton wet compost/ton dry compost	
Compost Application Rate to Farm Land	4.65	dry tons/acre-year	
Conversion of wet tons of waste to wet tons of compost	0.58	wet tons waste/wet tons compost	
Quantification Period	10	years	

Transportation			
	Emission Factor	**Unit**	**Source**

Emission Reduction Factors for Organics Projects - Composting

Primary Source:

California Air Resources Board, Method for Estimating Greenhouse Gas Emission Reductions from Composting of Commercial Organic Waste (2017) (CERF)
http://www.arb.ca.gov/cc/waste/cerffinal.pdf

Additional sources used as appropriate and noted below

Material and Compost Method	Emission Reduction Factor ($MTCO_2e$/short ton)
Windrow food waste	0.32
Windrow green waste	0.14
Aerated static pile food waste[1]	0.36
Aerated static pile green waste[1]	0.18
Fugitive landfill emission factor food waste	0.39
Fugitive landfill emission factor green waste	0.21

Table 14. Summary of compost emission reduction factor (CERF)

Emissions		
Emission Type		Emission ($MTCO_2e$/ton of feedstock)
Transportation emissions		0
Process emissions		0
Fugitive CH4 emissions		0.049
Fugitive N2O emissions		0.021
	Total	0.070
Emission Reductions		
Emission reduction type		Emission reduction ($MTCO_2e$/ton of feedstock)
Decreased soil erosion[2]		0.15
Decreased fertilizer use[2]		0.15
Decreased herbicide use[2]		0.0
	Total	0.3
Avoided landfill methane	Food Waste	0.39
	Yard Trimmings	0.21
Overall		
Feedstock Type		Emission reduction ($MTCO_2e$/ton of feedstock)
Food Waste		0.62
Yard Trimmings		0.44

Table excerpted from California Air Resources Board, Method for Estimating Greenhouse Gas Emission Reductions from Composting of Commercial Organic Waste (2017) (CERF)
http://www.arb.ca.gov/cc/waste/cerffinal.pdf

[1] The source material assumes windrow composting. ASP composting produces less fugitive emissions. Fugitive emissions have been reduced for the ASP emission reduction factor based on the following sources:

San Joaquin Valley Air Pollution Control District, Greenwaste Compost Site Emissions Reductions from Solar-powered Aeration and Biofilter Layer
http://www.valleyair.org/Grant_Programs/TAP/documents/C-15636-ACP/C-15636_ACP_FinalReport.pdf

Climate Action Reserve Organic Waste Digestion Project Protocol Version 2.1 (2014)
http://www.climateactionreserve.org/wp-content/uploads/2009/10/Organic_Waste_Digestion_Project_Protocol_Version2.1.pdf

[2] Emission reductions resulting from the application of compost are outside of the GHG accounting boundary for this program and are excluded from the emission reduction factor.

Emission Reduction Factors for Organics Projects - Standalone Anaerobic Digestion

Primary Source:

California Air Resources Board, Low Carbon Fuel Standard (LCFS) Pathway for the Production of Biomethane from High Solids Anaerobic Digestion (HSAD) of Organic (Food and Green) Wastes (2014) (LCFS HSAD Pathway)
http://www.arb.ca.gov/fuels/lcfs/121514hsad.pdf

Additional sources used as appropriate and noted below

Product and Digestate Fate	Emission Reduction Factor - Compost Digestate ($MTCO_2e$/short ton)	Emission Reduction Factor - Landfill Digestate ($MTCO_2e$/short ton)	Emission Reduction Factor - Land Apply Digestate ($MTCO_2e$/short ton)
Vehicle Fuel	0.39	0.32	0.36
Electricity Generation	0.24	0.17	0.21
Injecting in Utility Pipeline	0.29	0.23	0.27
Fugitive Landfill Emission Factor	0.28		

Table Addendum-1: Carbon Intensity for Pathway CNG005 (Adjusted)*

Parameter	Output		Producing Vehicle Fuel, Compost Digestate	Producing Vehicle Fuel, Landfill Digestate	Producing Vehicle Fuel, Land Apply Digestate	Producing Electricity, Compost Digestate	Producing Electricity, Landfill Digestate	Producing Electricity, Land Apply Digestate	Pipeline Injection, Compost Digestate	Pipeline Injection, Landfill Digestate	Pipeline Injection, Land Apply Digestate
	Value	Units									
HSAD Process GHG Emissions[1,2]	See columns D-G	g CO_2e/year	7,105,496,393	7,105,496,393	7,105,496,393	4,600,725,837	4,600,725,837	4,600,725,837	7,105,496,393	7,105,496,393	7,105,496,393
HSAD Process Heat Loading Requirements	274,256,342	g CO_2e/year									
HSAD Compost GHG Emissions[3]	See columns D-G	g CO_2e/year	4,153,191,000	0	0	4,153,191,000	0	0	4,153,191,000	0	0
Wastes Loading Fossil Fuel Use & Emissions	174,117,621	g CO_2e/year									
Total Fuel Cycle Electric Emissions	2,469,013,281	g CO_2e/year									
Total No. 2 Diesel WTT Emissions	52,531,393	g CO_2e/year									
Total HSAD Process Emissions	**See columns D-G**	**g CO_2e/year**	**14,228,606,030**	**10,075,415,030**	**10,075,415,030**	**11,723,835,474**	**7,570,644,474**	**7,570,644,474**	**14,228,606,030**	**10,075,415,030**	**10,075,415,030**
GHG Emissions from CNG Combustion[1]	See columns D-G	g CO_2e/year	1,723,512,633	1,723,512,633	1,723,512,633	1,723,512,633	1,723,512,633	1,723,512,633	1,723,512,633	1,723,512,633	1,723,512,633
Total Emissions	See columns D-G	g CO_2e/year	**15,952,118,663**	**11,798,927,663**	**11,798,927,663**	**13,447,348,107**	**9,294,157,107**	**9,294,157,107**	**15,952,118,663**	**11,798,927,663**	11,798,927,663
Carbon Credit from Avoided Landfill Emissions[4]	See columns D-G	g CO_2e/year	31,350,000,000	20,852,857,661	24,782,451,683	31,350,000,000	20,852,857,661	24,782,451,683	31,350,000,000	20,852,857,661	24782451683
Credit for Avoided Grid Electricity[5]	See columns D-G	g CO_2e/year	0	0	0	4,682,880,861	4,682,880,861	4,682,880,861	0	0	0
Credit for Avoided Natural Gas	See columns D-G	g CO_2e/year	0	0	0	0	0	0	12,415,261,347	12,415,261,347	12415261347
Total Emission Reductions	**See columns D-G**	**g CO_2e/year**	**31,350,000,000**	**20,852,857,661**	**24,782,451,683**	**36,032,880,861**	**25,535,738,522**	**29,465,332,544**	**43,765,261,347**	**33,268,119,008**	**37,197,713,030**
Net Annual GHG Emission Reduction	**See columns D-G**	**g CO_2e/year**	**15,397,881,337**	**9,053,929,998**	**12,983,524,020**	**22,585,532,754**	**16,241,581,415**	**20,171,175,437**	**27,813,142,684**	**21,469,191,345**	**25,398,785,367**
Emission Reduction Factor (Electricity or Pipeline)	**See columns F-G**	**$MTCO_2e$/ton**				**0.24**	**0.17**	**0.21**	**0.29**	**0.23**	**0.27**
Carbon Intensity (CI) Value for HSAD Vehicle Fuel)	See columns D-E	g CO_2e/MJ	-62.45	-36.72	-52.66						
Emission Reduction Factor (Vehicle Fuel)	**See columns D-E**	**$MTCO_2e$/ton**	**0.39**	**0.32**	**0.36**						

Table excerpted from California Air Resources Board, Low Carbon Fuel Standard (LCFS) Pathway for the Production of Biomethane from High Solids Anaerobic Digestion (HSAD) of Organic (Food and Green) Wastes (2014)
http://www.arb.ca.gov/fuels/lcfs/121514hsad.pdf

*Values based on LCFS pathway assumptions have been adjusted where appropriate to match expected applicant scenarios under CalRecycle's Greenhouse Gas Reduction Grant and Loan Program and be consistent with emission/emission reduction factors used in other GGRF funded programs. Footnotes are used to explain adjustments.

Parameter	Value	Units	Source
Compostion of feedstock (percent food waste)	40%	percent	LCFS HSAD Pathway p. 3
Compostion of feedstock (percent green waste)	60%	percent	LCFS HSAD Pathway p. 3
Tons feedstock from LCFS HSAD pathway	95,000	short tons	LCFS HSAD Pathway p. 16
Estimated Net Annual Biomethane Production	242,940,152	scf/year	LCFS HSAD Pathway p. 2
Estimated Net Annual Biomethane Production	246,576,412	MJ/year	LCFS HSAD Pathway p. 2
HSAD process CO2e emissions for HSAD to CNG	20,041,942,594	g CO_2e/year	LCFS HSAD Pathway p. 2
HSAD process CO2e emissions for HSAD to electricity	15,944.73	$MTCO_2e$/Year	LCFS HSAD Pathway workbook[6]
Emissions from feed compressor to biogas purification unit	1,592.44	$MTCO_2e$/Year	LCFS HSAD Pathway p. 34
Emissions from product compressor to natural gas pipeline	2,500.07	$MTCO_2e$/Year	LCFS HSAD Pathway p. 34
Combusted CO2 Emissions from Flare	4,863,345,978	g CO_2e/year	LCFS HSAD Pathway p. 36
"Pass Through" CO2 Emissions from Flare	8,073,100,223	g CO_2e/year	LCFS HSAD Pathway p. 36
Percent of diesel fuel used for waste loading	24.2%	percent	LCFS HSAD Pathway p. 20
CNG Combustion Emissions	15,010,051,543	g CO_2e/year	LCFS HSAD Pathway p. 57
Biogenic CO2 Emissions from CNG Combustion	13,286,538,910	g CO_2e/year	LCFS HSAD Pathway p. 57
Avoided grid electricity emission factor[7]	0.0002279	$MTCO_2e$/kWh	ARB GHG Inventory (2013)
Avoided natural gas emission factor	0.005311	MTCO2e/therm	EPA Emission Factors for Greenhouse Gas Inventories (2014)
LHV of biomethane	962	BTU/SCF	LCFS Pathway for the Production of Biomethane from the Mesophilic Anaerobic Digestion of Wastewater Sludge at a Publicly-Owned Treatment Works (POTW) (2014)
Assumed efficiency of microturbine	0.3		INTECH, Micro Gas Turbine Engine: A Review (2014)
Compost fugitive emissions (windrow & ASP avg)	0.05	$MTCO_2e$/short ton	Method for Estimating Greenhouse Gas Emission Reductions from Composting of Commercial Organic Waste (2017)
Avoided landfill emissions for mixed organics	0.33	$MTCO_2e$/short ton	Method for Estimating Greenhouse Gas Emission Reductions from Composting of Commercial Organic Waste (2017)
Yield of digestate per ton of feedstock	0.84	percent	LCFS HSAD Pathway p. 19
Emission factor for landfilling digestate	0.145	$MTCO_2e$/metric ton	Climate Action Reserve Organic Waste Digestion Project Protocol v 2.1 Table B.4 used with equation 5.18
Emission factor for land applying digestate	0.091	MTCO2e/metric ton	Climate Action Reserve Organic Waste Digestion Project Protocol v 2.1 Table 5.2 used with equation 5.18
Carbon Intensity of Diesel	102.8	g CO_2e/MJ	California Air Resources Board, Final Statement of Reasons, Re-Adoption of the Low Carbon Fuel Standard (2015)
Energy Density of CNG	0.98	MJ/scf	Rulemaking to Consider the Proposed Regulation to Implement the Low Carbon Fuel Standard; Table 5
Energy Economy Ratio (CNG relative to diesel)	0.9	miles per diesel gallon equivalent	Low Carbon Fuel Standard Regulation
Conversion factor	1.1023	metric ton/short ton	
Conversion factor	1,000,000	g/metric ton	
Conversion factor	0.0094804	therm/MJ	
Conversion factor	3412.14	BTU/kWh	

[1] Biogenic CO_2 emissions are deducted consistent with the ARB GHG inventory accounting methods.

[2] Projects producing electricity rather than transportation fuel or pipeline quality CNG have been adjusted to remove some compression emissions.

[3] Fossil fuel emissions associated with composting are removed consistent with the emission reduction factor used for compost projects. Projects that do not compost the digestate do not have compost related emissions.

[4] Projects use the mixed organics avoided landfill emission reduction factor consistent with that used for compost projects. Avoided landfill emissions are adjusted to account for the emissions from digestate for projects that landfill the digestate.

[5] Projects producing electricity are credited for the displacement of fossil fuels for electricity production rather than transportation fuels as credited for the production of CNG.

[6] Workbook provided by ARB's Transportation Fuels Branch.

[7] Consistent with other GGRF quantification methodologies, the electricity emission factor is based on total in-state and imported electricity emissions ($MTCO_2e$) divided by total consumption MWh. Emissions from ARB GHG inventory (2013).

APPENDIX B – Biological Resources Reconnaissance Assessment for the Organics Renewable Energy Facility Project, prepared by Chambers Group on December 27, 2022.

December 27, 2022
5 Hutton Centre Drive, Suite 750
Santa Ana, California 92707

Diana Robinson
Planning Division Manager
Imperial County Planning and Development Services Department
801 Main Street
El Centro, CA. 92243

Subject: Biological Resources Reconnaissance Assessment for the Organics Renewable Energy Facility Project

Chambers Group was retained by the Imperial County Planning and Development Services Department to conduct a literature review and biological reconnaissance-level survey for the Organics Renewable Energy Facility Project (Project). The purpose of this survey was to document existing vegetation communities, identify whether the site may support special status species with a potential for occurrence, map habitats that could support special status wildlife species, and delineate jurisdictional water features. This report also evaluates potential impacts of the Project to these resources.

Project Site Location and Description

Project Overview

The Project would include the development of an Organics Renewable Energy Facility, a High Solids Anaerobic Digestion (HSAD) facility with incidental advanced composting for the management and processing of residential, commercial, and industrial organic food and green material. The Project would provide organics processing infrastructure and organic materials diversion from regional landfills. The Project would also generate renewable energy through the HSAD process and may incorporate on-site solar and battery storage as an accessory use for the Project. Renewable energy generated through the HSAD process would be in the form of renewable natural gas, which could be directly injected into an existing pipeline system.

Project Site and Location

The Project is located on approximately 75 acres located 3 miles north of the City of Imperial in Imperial County, California (Survey Area). The Survey Area is located in the *Brawley* United States Geological Survey (USGS) 7.5-min quadrangle. The Survey Area is primarily an old agricultural field with topographical variation and is surrounded by active and inactive agricultural fields. The elevation at the Survey Area ranges from approximately 70 to 90 feet (ft.) below mean sea level (bmsl). The Survey Area lies outside the scope of the Imperial Irrigation District (IID) Habitat Conservation Plan (HCP), according to communication with the County of Imperial. Maps of the Project location and Project vicinity are provided in Attachment 1: Figure 1.

Methods

Literature Review

Prior to performing the biological reconnaissance survey, Chambers Group staff conducted a literature review for soils, jurisdictional water features that contribute to hydrology, and special status species known to occur within the vicinity (approximately 5 miles) of the Survey Area.

Soils

Prior to performing the biological reconnaissance survey, soil maps for the Survey Area were referenced in accordance with categories set forth by the U.S. Department of Agriculture (USDA) Soil Conservation Service and the USDA Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2022).

Hydrology

A general assessment of waters potentially regulated by the U.S. Army Corps of Engineers (USACE), California Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) was conducted for the Survey Area. Pursuant to Section 404 of the Clean Water Act, USACE regulates the discharge of dredged and/or fill material into waters of the United States. The State of California (State) regulates discharge of material into waters of the State pursuant to Section 401 of the Clean Water Act and the California Porter-Cologne Water Quality Control Act (California Water Code, Division 7, §13000 et seq.). Pursuant to Division 2, Chapter 6, Sections 1600-1602 of the California Fish and Game Code, the CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake which supports fish or wildlife. A desktop assessment was conducted of available data prior to the biological reconnaissance survey in the field.

Special Status Habitats and Species

The most recent records of the California Natural Diversity Database (CNDDB) managed by CDFW (2022), the California Native Plant Society's Electronic Inventory (CNPSEI) of Rare and Endangered Vascular Plants of California (CNPS 2022), and the United States Fish and Wildlife (USFWS) Endangered Species Database (USFWS 2022) were reviewed for the following quadrangles containing and surrounding the Project: *Brawley, El Centro, Seeley, Brawley NW, Calipatria SW, Westmorland, Wiest, Alamorio,* and *Holtville West,* California, USGS 7.5-minute quadrangles. These databases contain records of reported occurrences of federally or state listed endangered or threatened species, California Species of Concern (SSC), or otherwise special status species or habitats that may occur within or in the immediate vicinity of the Survey Area (Attachment 1: Figure 2 – CNDDB Occurrences Map).

Biological Reconnaissance Survey

The biological reconnaissance survey was conducted on foot within the Survey Area. During the survey, the biologists identified and mapped all vegetation communities found within the Survey Area onto aerial photographs (Attachment 1: Figure 3 – Vegetation Communities Map). Plant communities were determined in accordance with the *Manual of California Vegetation*, *Second Edition* (Sawyer et al. 2009). Plant nomenclature follows that of *The Jepson Manual*, *Vascular Plants of California, Second Edition* (Baldwin et al. 2012). Site photographs were taken depicting current site conditions (Attachment 2).

Results

Chambers Group biologists Heather Franklin and Jessica Calvillo conducted the biological reconnaissance survey within the Survey Area to identify vegetation communities, the potential for occurrence of special status species, and/or habitats that could support special status wildlife species. The survey was conducted on foot between 1000 and 1430 hours on November 1, 2022. Weather conditions during the survey included temperatures ranging from 71 to 85 degrees Fahrenheit, wind speeds between 3 and 7 mile per hour, with 75 percent cloud cover, and no precipitation.

Biological Site Conditions

Soils

According to the results from the USDA NRCS Web Soil Survey (USDA 2022), the Survey Area is located in the Imperial Valley area, CA683 part of the soil map. One soil type, Imperial Glenbar Silty Clay Loam, is known to occur within and/or adjacent to the site; no hydric soils occur within the Survey Area. This soil type is described below.

The Imperial soils are nearly level to gently sloping and are on flood plains and in old lake beds at elevations of -235 ft. to 300 ft. above mean sea level (amsl). The Glenbar series consists of very deep, well drained soils that formed in stratified stream alluvium. The soil is dry to intermittently moist and is highly dependent on winter and summer monsoonal rains for moisture. The mean annual soil temperature at a depth of 20 inches ranges from 72 to 78 degrees Fahrenheit. Rock fragments or strata of contrasting texture are lacking to a depth of 40 inches or more. Very thin silty

and very fine sandy strata are present in soil that has not been mixed by cultivation with organic matter that decreases irregularly with depth. Tongues ranging from silty clay to loamy sand fill old vertical cracks. The soil has platy or blocky structure and dry fragments may exhibit conchoidal fracture. The soil is dominantly moderately alkaline but can also be strongly alkaline.

Vegetation Communities and Other Areas

Five vegetation communities were observed within the Study Area: Alkali Weed Sinks, Bush Seepweed Scrub, Cattail Marsh, Quailbush Scrub, and Tamarisk Thickets. In addition, two land types were present in the Study Area: Agriculture and Bare Ground. A map showing the vegetation communities observed and land types within the Proposed Survey Area is provided in Attachment 1 Figure 3 and the communities are described in the following subsections.

Alkali Weed Sinks

Alkali Weed Sinks are found within alkaline or saline sinks. Soils within this community are typically saline and seasonally inundated and lose water mostly through evaporation (Sawyer et al. 2009). Alkali weed (*Cressa truxillensis*) is characteristically present and may be dominant or co-dominant with alkali mallow (*Malvella leprosa*) in the herbaceous layer with alkali bulrush (*Bolboschoenus maritimus*), common spikerush (*Eleocharis macrostachya*) and turkey tangle frogfruit (*Phyla nodiflora*). Plants occur from upper salt marshes to alkali playas, and they appear to expand in abundance after disturbance. Herbs and subshrubs in this community are generally less than 4 ft. tall with a cover that is open to continuous (Sawyer et al. 2009).

Areas with Alkali Weed Sink vegetation are present within 0.47 acre of the Survey Area along the southern and western edges adjacent to the agricultural fields on flat ground between the access road and the agricultural field. Native plant species found within the Survey Area typical of this vegetation community included alkali weed, alkali mallow, and occasional Mexican devil-weed (*Chloracantha spinosa* var. *spinosa*).

Bush Seepweed Scrub

Bush Seepweed Scrub is found within flat to gently sloping valley bottoms, playas, and toe slopes adjacent to alluvial fans, and bajadas. Soils within this community are deep, saline or alkaline (Sawyer et al. 2009). According to the Manual of California Vegetation (Second Edition) community membership rules, there must be greater than 2 percent absolute cover of bush seepweed (*Suaeda nigra*) and no other shrubs species greater than or equal to the bush seepweed cover in the shrub canopy. Alkali goldenbush (*Isocoma acradenia*) or bush seepweed is dominant or co-dominant in the shrub layer with iodine bush (*Allenrolfea occidentalis*), four-wing saltbush (*Atriplex canescens*), allscale (*Atriplex polycarpa*), Mojave red sage (*Kochia californica*) and greasewood (*Sarcobatus vermiculatus*). Herbs may include alkali heath (*Frankenia salina*), Mediterranea schismus (*Schismus* spp.) or alkali sacaton (*Sporobolus airoides*). The canopy is open to continuous with an herbaceous layer that is sparse to intermittent (Sawyer et al. 2009).

Areas with Bush Seepweed Scrub vegetation are present within 0.29 acre of the Survey Area within a small patch in the northeastern corner. The Bush Seepweed Scrub vegetation on site is highly disturbed with evidence of past human use and agricultural practices (e.g., disking, irrigation ditches). Native plant species found within the Survey Area typical of this vegetation community included bush seepweed.

Cattail Marsh

Cattail Marshes are found in semi-permanently flooded freshwater or brackish marshes. Soils in this community are typically clayey or silty (Sawyer et al. 2009). Slender cattail (*Typha domingensis*) is dominant or co-dominant in the herbaceous layer with sedge (*Cyperus* spp.), salt grass (*Distichlis spicata*), barnyard grass (*Echinochloa crus-galli*), rushes (*Juncus* spp.), common reed (*Phragmites australis*), Chairmaker's bulrush (*Schoenoplectus americanus*), California bulrush (*Schoenoplectus californicus*), and rough cocklebur (*Xanthium strumarium*). Cover in this community is intermittent to continuous (Sawyer et al. 2009).

Areas with Cattail Marsh vegetation are present within 0.15 acre of the Survey Area along the southern edge withing standing water in a shallow irrigation ditch. Native plant species found within the Survey Area typical of this vegetation community included slender cattail. Non-native species included Bermuda grass (*Cynodon dactylon*).

Quailbush Scrub

Quailbush Scrub is found on gentle to steep southeast- and southwest-facing slopes (Sawyer et al. 2009). Soils in this community are often derived from clay. Stands may be found in a variety of settings, from coastal shrublands to alkali sinks and alkali meadows, to desert washes and oases in southern California, and to saline, intermittently flooded wetlands in the Central Valley. This community especially occurs in disturbed areas, including roadsides and fluvial areas with alkaline soils (Sawyer et al. 2009). Quaibush (*Atriplex lentiformis*) is dominant in the shrub canopy with California sagebrush (*Artemisia californica*), four-wing saltbush, coyote brush (*Baccharis pilularis*), mule fat (*Baccharis salicifolia* subsp. *salicifolia*), salt grass, brittlebush (*Encelia californica*), laurel sumac (*Malosma laurina*), arrow weed (*Pluchea sericea*), lemonadeberry (*Rhus integrifolia*), alkali sacaton, woolly seablite (*Suaeda taxifolia*) and tamarisk species. Emergent trees may be present at low cover, including mousehole tree (*Myoporum laetum*) or honey mesquite (*Prosopis glandulosa*). Shrubs are typically less than 5 meters in height with a canopy that is open to intermittent. The herbaceous layer is variable (Sawyer et al. 2009).

Areas with Quailbush Scrub vegetation are present within 0.89 acre of the Survey Area in strips along the eastern edge and northwestern corner. The Quailbush Scrub vegetation on site is highly disturbed with evidence of past human use and agricultural practices (e.g., disking, irrigation ditches). Only quailbush was observed in this community with no other species present.

Tamarisk Thickets

Tamarisk Thickets are found along arroyo margins, lake margins, ditches, washes, rivers, and other watercourses (Sawyer et al. 2009). Tamarisk species possess eco-physiological characteristics that make them remarkably formidable as invasive plants. They are long-lived shrubs or trees with extensive and deep root systems. They consume large quantities of water, possibly more than any other woody species in similar habitats, because they can obtain water at very low water potentials and have very high water-use efficiencies. They are highly tolerant of alkaline and saline habitats and can concentrate salts in their leaves (Sawyer et al. 2009). Mediterranean tamarisk (*Tamarix ramosissima*) or another *Tamarix* species is dominant in the shrub canopy. Emergent trees may be present at low cover, including Fremont cottonwood (*Populus fremontii* subsp. *fremontii*) or willow species (*Salix* spp.). Shrubs are typically less than 8 meters in height with a canopy that is continuous or open. The herbaceous layer is sparse (Sawyer et al. 2009).

Areas with Tamarisk Thickets are present within 1 acre of the Survey Area along the northern edge and northeastern corner. Non-native species include Mediterranean tamarisk and native species were lacking from within this community.

Agriculture

Agriculture consists of annual crops, vineyards, orchards, dairies, and stockyards (Gray and Bramlet 1992). The agricultural lands on the Survey Area currently include non-native vegetation such as alfalfa (*Medicago sativa*), Bermuda grass, and barnyard grass. Agriculture areas account for approximately 54.71 acres of the Survey Area.

Bare Ground

Bare Ground areas are generally devoid of vegetation, but do not contain any form of desert pavement or former infrastructure. These areas are typically associated with areas that have been previously cleared by earth-moving machinery, are dirt access roads, and/or consist of naturally occurring areas devoid of vegetation. Compared to Developed areas, Bare Ground has higher water permeability and higher fossorial rodent habitat potential. Approximately 17.48 acres of Bare Ground is present in the Survey Area, primarily along the dirt roads and includes a patch of dead vegetation in the northeast corner.

General Plants

A total of 13 plant species were observed during the survey and include the following: rough pigweed (*Amaranthus retroflexus*), big saltbush (*Atriplex lentiformis*), purple nutsedge (*Cyperus rotundus*), alkali weed, alkali mallow, Mexican devil-weed, Bermuda grass, bush seepweed, quailbush, alfalfa, barnyard grass, Mediterranean tamarisk, and slender cattail. Plant species observed or detected during the site survey were representative of the existing Survey Area conditions. No special status plant species were observed during the survey effort.

General Wildlife

A total of six wildlife species were observed within the Survey Area during the biological reconnaissance survey. Wildlife species observed or detected during the survey were characteristic of the existing Survey Area conditions and include red-tailed hawk (*Buteo jamaicensis*), western meadowlark (*Sturnella neglecta*), common raven (*Corvus corax*), black-chinned sparrow (*Spizella atrogularis*), lark sparrow (*Chondestes grammacus*), and white-crowned sparrow (*Zonotrichia leucophrys*). No sensitive wildlife species were observed during the survey.

Sensitive Species

The following information is a list of abbreviations used to help determine the significance of biological special status resources potentially occurring on the Survey Area.

CNPS California Rare Plant Rank (CRPR)

1A = Plants presumed extinct in California.
1B = Plants rare and endangered in California and throughout their range.
2 = Plants rare, threatened or endangered in California but more common elsewhere in their range.
2A = Plants presumed extirpated in California, but more common elsewhere.
3 = Plants about which we need more information, a review list.
4 = Plants of limited distribution; a watch list.

CRPR Extensions

0.1 = Seriously endangered in California (greater than 80 percent of occurrences threatened/high degree and immediacy of threat).
0.2 = Fairly endangered in California (20 to 80 percent occurrences threatened).
0.3 = Not very endangered in California (less than 20 percent of occurrences threatened).

The following information was used to determine the significance of biological resources potentially occurring within the Survey Area. The criteria used to evaluate the potential for special status species to occur within the Survey Area are outlined in Table 1.

Table 1: Criteria for Evaluating Special Status Species Potential for Occurrence (PFO)

PFO	CRITERIA
Absent:	Species is restricted to habitats or environmental conditions that do not occur within the Survey Area. Additionally, if the survey was conducted within the blooming period of the species and appropriate habitat was observed in the surrounding area but the species was not observed within the Project impact area it was considered absent.
Low:	Historical records for this species do not exist within the immediate vicinity (approximately 5 miles) of the Survey Area, and/or habitats or environmental conditions needed to support the species are of poor quality.
Moderate:	Either a historical record exists of the species within the immediate vicinity of the Survey Area (approximately 3 miles) and marginal habitat exists on the Survey Area, or the habitat requirements or environmental conditions associated with the species occur within the Survey Area, but no historical records exist within 5 miles of the Survey Area.
High:	Both a historical record exists of the species within the Survey Area or its immediate vicinity (approximately 1 mile), and the habitat requirements and environmental conditions associated with the species occur within the Survey Area.
Present:	Species was detected within the Survey Area at the time of the survey.

* PFO

Special Status Plant Species

Database searches (CDFW 2022) resulted in a list of four federally and/or state listed threatened, endangered, or otherwise special status plant species documented to historically occur within the vicinity (within the 9 quads surrounding the site) of the Survey Area. Of the four plant species that resulted from the database search, it was determined that three species are considered absent from the Survey Area due to lack of habitat and one species is unlikely to occur. No special status plant species were found during the biological reconnaissance survey.

The analysis of the CNDDB, CNPSEI search and field survey resulted in three species considered to be **absent** and one species considered unlikely to occur on the Survey Area:

chaparral sand-verbena (*Abronia villosa* var. *aurita*) – CRPR 1B.1

Although historic records for this species occur within the Seeley quadrangle, chaparral sand-verbena is considered **absent** from the Survey Area as the species is restricted to chaparral, coastal scrub, and desert dune habitat which does not occur within the Survey Area.

mud nama (*Nama stenocarpa*) – CRPR 2B.2

Although historic records for this species occur within the Seeley quadrangle, mud nama is considered **absent** from the Survey Area as the species is restricted to marshes and swamps that are found along lake margins and riverbanks which do not occur within the Survey Area.

sand food (*Pholisma sonorae*) – CRPR 1B.2

Although historic records for this species occur within the Holtville West quadrangle, sand food is considered **absent** from the Survey Area as the species is restricted to desert dunes and sandy Sonoran desert scrub which do not occur within the Survey Area.

The analysis of the CNDDB, CNPSEI search and field survey resulted in one species considered unlikely to occur on the Survey Area:

Abram's spurge (*Chamaesyce abramsiana*) – CRPR 2B.2

Although historic records for this species occur within the Brawley quadrangle, Abram's spurge is considered unlikely to occur in the Survey Area despite the presence of Sonoran desert scrub. The Quailbush Scrub and Bush Seepweed Scrub on site are highly disturbed with evidence of past human use and agricultural practices (e.g., disking, irrigation ditches) which is not conducive to the long-term survival Abram's spurge.

Special Status Wildlife Species

Database searches (CDFW 2022; USFWS 2022) resulted in a list of 19 federally and/or state listed endangered or threatened, State Species of Concern, or otherwise special status wildlife species documented to occur within the Survey Area. After a literature review and the assessment of the habitat type within the Survey Area, it was determined that 18 special status wildlife species are considered absent from the Survey Area and one species has a high potential to occur.

The analysis of the CNDDB search, and field survey resulted in 18 species considered **absent** since suitable habitat and environmental conditions do not exist on the Survey Area:

- American badger (*Taxidea taxus*) – SSC
- big free-tailed bat (*Nyctinomops macrotis*) – SSC
- California black rail (*Laterallus jamaicensis coturniculus*) – **ST**
- Colorado Desert fringe-toed lizard (*Uma notata*) – SSC
- Crissal thrasher (*Toxostoma crissale*) – SSC
- flat-tailed horned lizard (*Phrynosoma mcallii*) – SSC
- Gila woodpecker (*Melanerpes uropygialis*) – **SE**
- lowland leopard frog (*Lithobates yavapaiensis*) – SSC
- mountain plover (*Charadrius montanus*) – SSC
- northern leopard frog (*Lithobates pipiens*) – SSC
- Palm Springs pocket mouse (*Perognathus longimembris bangsi*) – SSC
- razorback sucker (*Xyrauchen texanus*) – **FE**, **SE**
- short-eared owl (*Asio flammeus*) – SSC
- Sonoran Desert toad (*Incilius alvarius*) – SSC
- vermilion flycatcher (*Pyrocephalus rubinus*) – SSC
- western yellow bat (*Lasiurus xanthinus*) – SSC
- Yuma ridgeway's rail (*Rallus obsoletus yumanensis*) – **FE**, **ST**
- Yuma hispid cotton rat (*Sigmodon hispidus eremicus*) – SSC

The analysis of the CNDDB search and field survey resulted in one species with a **high** potential to occur on the Survey Area as described below:

burrowing owl – SSC

The burrowing owl (*Athene cunicularia*) is a California Species of Special Concern. It is broadly distributed across the western United States, with populations in Florida and Central and South America. The burrowing owl breeds in open plains from western Canada and the western United States, Mexico through Central America

and into South America to Argentina (Klute 2003). This species inhabits dry, open, native, or non-native grasslands, deserts, and other arid environments with low-growing and low-density vegetation (Ehrlich 1988). It may occupy golf courses, cemeteries, road rights-of way, airstrips, abandoned buildings, irrigation ditches, and vacant lots with holes or cracks suitable for use as burrows (TLMA 2006). Burrowing owls typically use burrows made by mammals such as California ground squirrels (*Spermophilus beecheyi*), foxes, or badgers (Trulio 1997). When burrows are scarce, the burrowing owl may use man-made structures such as openings beneath cement or asphalt pavement, pipes, culverts, and nest boxes (TLMA 2006). Burrowing owls often are found within, under, or in close proximity to man-made structures. Prey sources for this species include small rodents; arthropods such as spiders, crickets, centipedes, and grasshoppers; smaller birds; amphibians; reptiles; and carrion. While no sign of burrowing owl was observed during the survey, high quality habitat for occurs throughout the Survey Area. In addition, this species has been recorded within 0.18 mile of the site. Therefore, the burrowing owl has a high potential to occur within the Survey Area.

Hydrology and Hydrologic Connectivity

The Survey Area is located within the Salton Sea Watershed and Alamo River Watershed outside the Federal Emergency Management Agency (FEMA) 100-year flood zone, within the USACE Hydrological Unit Code (HUC) 12: 181002040801 – Town of El Centro Sub-Watershed (Attachment 1: Figure 4 and Figure 5). This sub-watershed contains an area of approximately 158 square miles (CWIP 2022). Many agricultural drainages and canals within this sub-watershed connect to the Alamo River and flow northward towards the Salton Sea. The Alamo River originates approximately 2 miles south of the U.S. border with Mexico, flows northward across the border for approximately 50 miles until it terminates into the Salton Sea.

Several man-made agricultural ditches occur along the borders of the Survey Area. Two historically National Wetlands Inventory (NWI) mapped agricultural canals are shown to occur along the northern and western bounaries of the site (Attachment 1: Figure 6); however, no water was observed within these features during the survey. In addition, both features are outside of the proposed impact areas and are directly adjacent to the access road and no impacts are anticipated to occur as a result of Project activities. Another man-made agricultural ditch occurs along the southern boundary of the Survey Area. Water was observed within the ditch and some riparian species including cattails were observed along the banks of the ditch. However, this area is outside of the proposed impact area and impacts from Project activities can be avoided with the use of best management practices.

Wetlands

A small area composed of bush seepweed occurs in the northeast corner of the Survey Area. This species is a wetland indicator species. Evidence of hydrology including cracked soils and salt crust were observed throughout the area; therefore, a wetland delineation survey was conducted. Two formal soil pits were taken within the area. Soil pit 1 consisted of sandy loam from 0 to 5 inches and had a color matrix of 7.5yr 4/3 with no redox features. From 6 to 18 inches the soil consisted of clay loam with a color matrix of 7.5yr 4/3 with no redox features observed. Soil pit 2 had similar characteristics with sandy loam occurring from 0 to 5 inches with a color matrix of 7.5yr 5/3 and no evidence of redox, and sandy clay from 6 to 18 inches with a color matrix of 7.5yr 5/3 and no redox features. While this area contains hydrophytic vegetation and evidence of hydrology, it lacks hydric soils and therefore is not considered a wetland.

One additional area composed of alkali weed sinks occurs along a small portion on the western boundary and a small portion along the agricultural ditch along the southern boundary. Alkali weed sinks are classified as hydrophytic vegetation. In addition, evidence of hydrology including soil cracks were observed in the area; therefore, a wetland delineation survey was conducted. One formal soil pit was investigated and showed a color matrix of 7.5yr 6/2 from 0 to 12 inches. The soil was composed of sandy loam and lacked any redox features. While this area contains hydrophytic vegetation and evidence of hydrology, it lacks hydric soils and therefore is not considered a wetland.

Conclusions and Recommendations

Special Status Plant Species

Following the literature review and after the assessment of the habitat type in the Survey Area, it was determined that of the four special status plant species known to historically occur within the Survey Area and surrounding quads, three species were considered absent within the Survey Area due to lack suitable habitat. One special status plant species, Abram's spurge, which is known to occur within the *Brawley* quad, is considered unlikely to occur within the Survey Area as the site was highly disturbed with evidence of past human use and agricultural activity (e.g., disking, irrigation ditches) which is not conducive to the long-term survival for Abram's spurge. No special status species were observed during the biological reconnaissance survey. Therefore, no impacts to special status plants are anticipated to occur as a result of Project activities.

Special Status Wildlife Species

Following the literature review and the assessment of the habitat type in the Survey Area, it was determined that of the 19 special status wildlife species known to occur within the Survey Area and surrounding quads, 18 species are considered absent from the Survey Area and one species, burrowing owl, has a high potential to occur within the site. No special status wildlife species were observed during the survey.

In order to minimize potential impacts to sensitive species with the potential to occur within the Survey Area, the following mitigation measures should be implemented prior to and during construction activities:

- The construction footprint will be clearly defined with flagging and/or fencing and will be removed upon completion.
- Prior to the start of construction activities, an environmental education program will be provided for all project personnel. The education program will include the following: (1) the potential presence of covered species and their habitats, (2) the requirements and boundaries of the project, (3) the importance of complying with avoidance and minimization measures, (4) environmentally responsible construction practices, (5) identification of sensitive resource areas in the field, and (6) problem reporting and resolution methods.
- Preconstruction surveys will be conducted for the burrowing owl within 30 days of construction in all suitable habitat within the proposed Project Impact Areas.
- If any ground disturbing activities are planned during the burrowing owl nesting season (approximately February 1 through August 31), avoidance measures shall include a no construction buffer zone of a minimum distance of 250 feet, consistent with the Staff Report on Burrowing Owl Mitigation (CDFG, 2012). Compliance shall be maintained with CDFW burrowing owl mitigation guidelines as detailed in the Staff Report on Burrowing Owl Mitigation (CDFG, 2012) or more recent updates, if available.
- If vegetation clearing must occur during the bird breeding season (February 15-August 31), a pre-construction nest survey will be conducted.
- If project activities will occur during the bird breeding season (February 15-August 31), a qualified biologist shall conduct a preconstruction nesting survey to ensure that no active nests are present within or adjacent to the project areas. If an active nest is observed that may be impacted by project-related activities, avoidance measures shall be implemented to avoid impacting the nest. Avoidance measures include delaying construction within the immediate vicinity of the active nest until the young have fledged or naturally failed, or instituting a buffer around the nest that prohibits construction activities to occur, but allows construction to continue

outside the buffer. The appropriate avoidance buffer is to be determined by the qualified biologist based on vegetative cover, topography, stage of nest or young development, and species type.

Jurisdictional Waters and Wetlands

Two NWI mapped agricultural canals are shown to occur along the northern and western portions of the Survey Area, just outside the Project impact area. In addition, one man-made agricultural ditch occurs along the southern boundary of the site. However, all of these features are outside of the proposed impact area and any impacts from Project activities can be avoided with the use of best management practices including straw waddles. Therefore, no impacts to jurisdictional waters are anticipated to occur as a result of Project activities. Soil pits taken in potential wetland areas did not show evidence of hydric soils; therefore, no impacts to wetlands are anticipated to occur as a result of Project activities.

Please contact me at (949) 261-5414 ext. 7232 if you have any questions.

Sincerely,

CHAMBERS GROUP, INC.

Heather Franklin

Senior Biologist
hfranklin@chambersgroupinc.com
(949) 261-5414 ext. 7232

Attachments

Attachment 1: Figure 1: Project Location and Vicinity
Figure 2: Sensitive Species Occurrences Within 5 Miles
Figure 3: Vegetation Communities
Figure 4: Watersheds
Figure 5: FEMA Flood Hazard Zones
Figure 6: Jurisdictional Waters NWI and NHD

Attachment 2: Site Photographs

Attachment 3: Wetland Determination Data Forms

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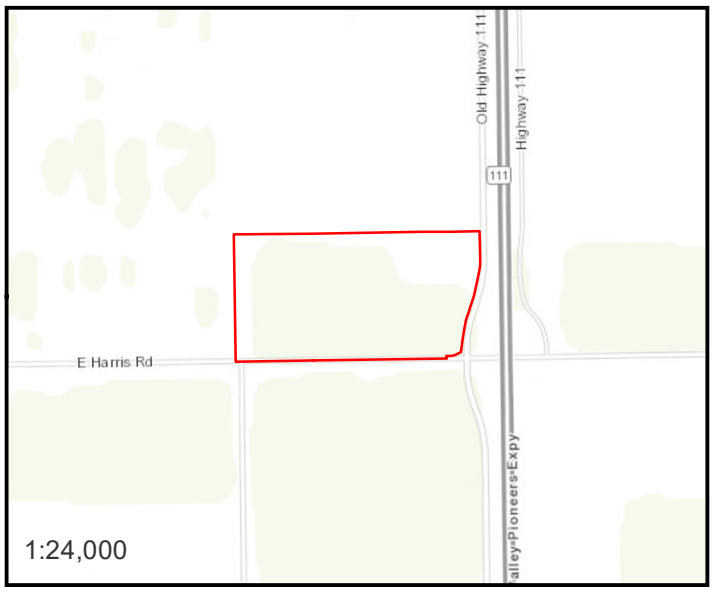
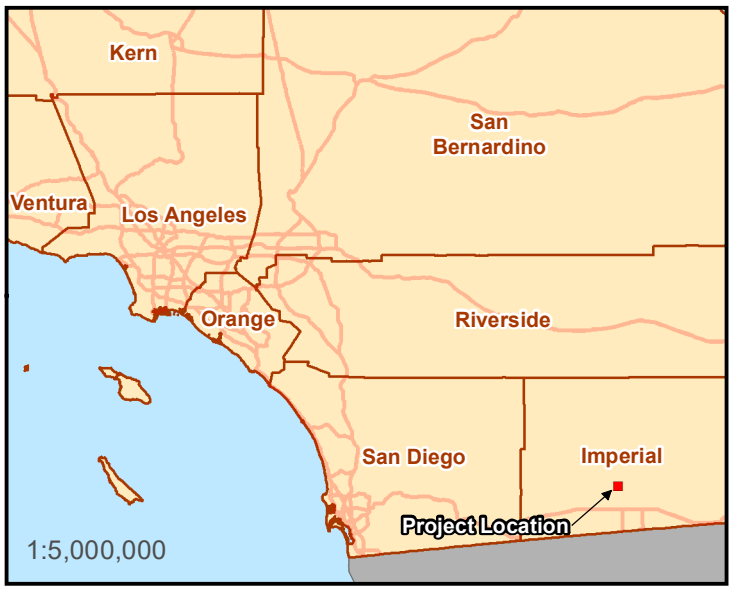
ATTACHMENT 1 – FIGURES





Project Location

N

0 150 300 600

Feet

Figure 1
True North Organics Renewable Energy
Project Location and Vicinity

Name: 21377 BIO Fig 1 Project Location and Vicinity.Mxd
Print Date: 11/14/2022 4:17:26 PM Author: pcarlos

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Project Location

CNDDB Occurrences

Animals

1. burrowing owl
2. mountain plover
3. western yellow bat
4. Yuma hispid cotton rat

N

0 0.5 1 2

Miles

Figure 2

True North Organics Renewable Energy
Sensitive Species Occurrecnes Within 5 Miles

Name: 21377 BIO Fig 2 Sensitive Species Occurrences Within 5 Miles.Mxd
Print Date: 12/7/2022 3:23:51 PM Author: pcarlos

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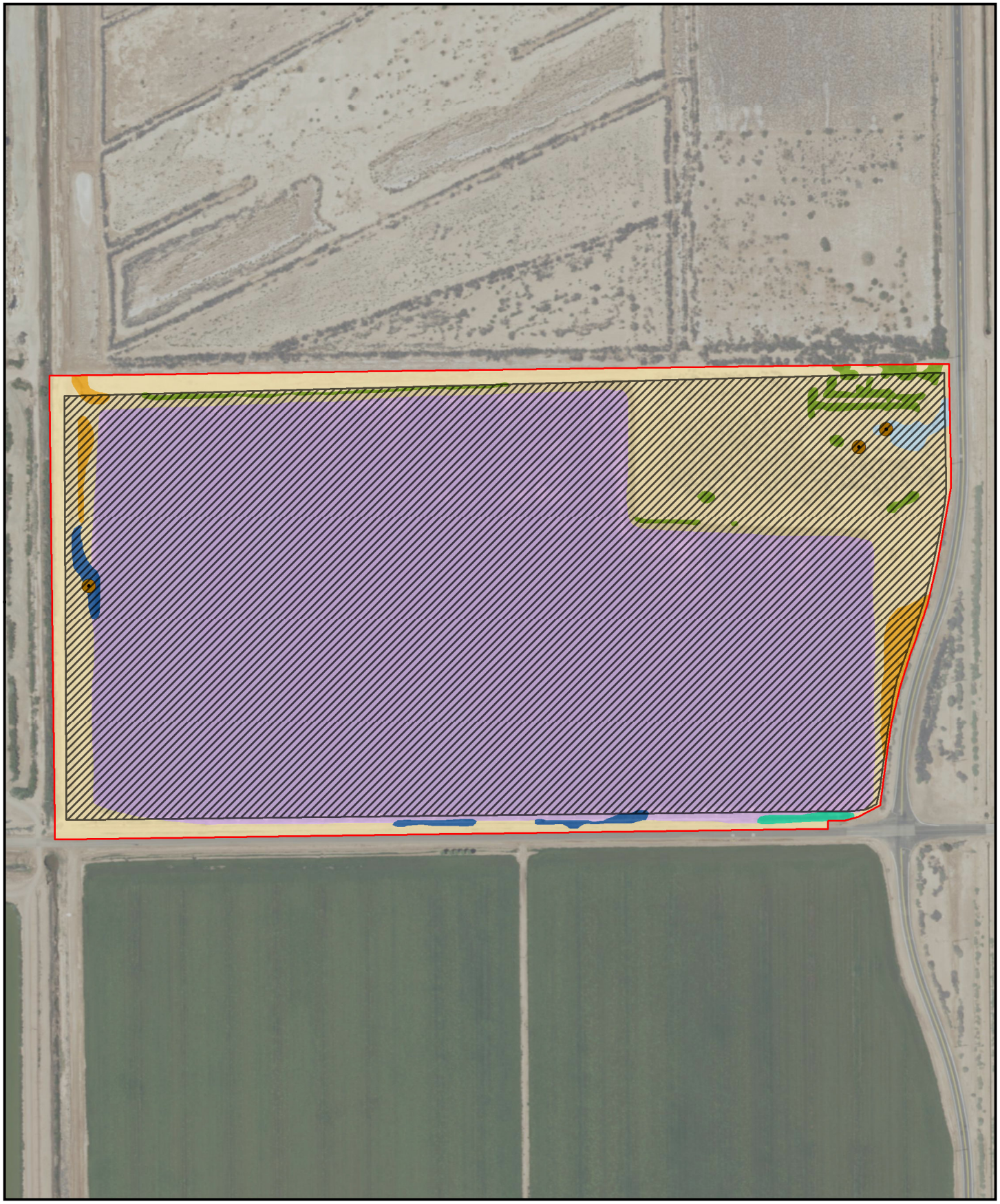

Figure 3
True North Organics Renewable Energy
Vegetation Communities

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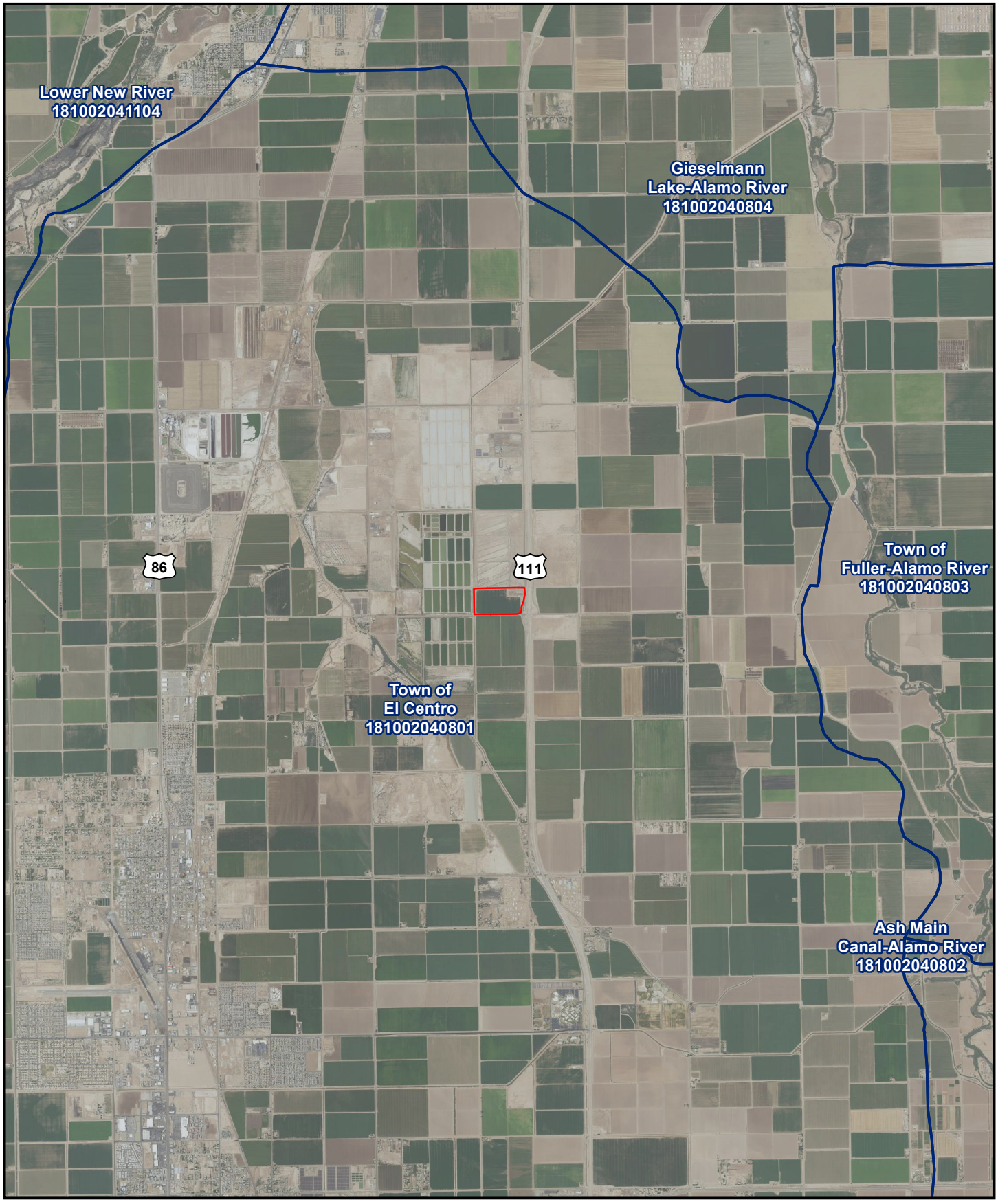

Project Location

Watershed (HUC 12)

N

0 0.5 1 2

Miles

Figure 4

True North Organics Renewable Energy
Watersheds

Name: 21377 BIO Fig 4 Watersheds.Mxd
Print Date: 12/7/2022 3:25:24 PM Author: pcarlos

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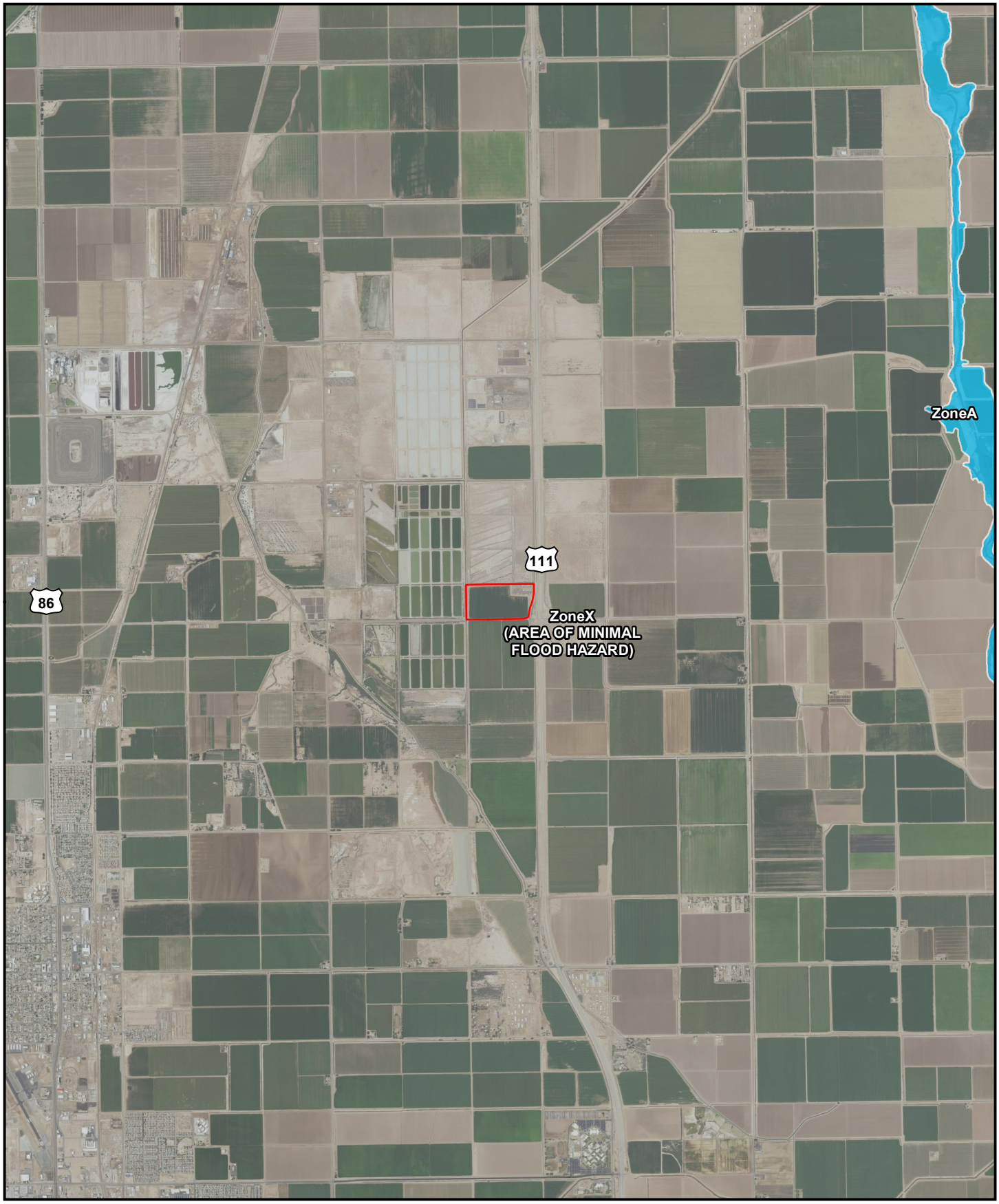

Project Location

FEMA Flood Hazard Zones

1% Annual Chance Flood Hazard

N

0 2,000 4,000 8,000

Feet

Figure 5
True North Organics Renewable Energy
FEMA Flood Hazard Zones

Name: 21377 BIO Fig 5 FEMA Flood Hazard Zones.Mxd
Print Date: 12/7/2022 3:32:45 PM Author: pcarlos

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Project Location
Impact Area
Non-Jurisdictional Man-Made Agricultural Ditch

NHD

Canal/Ditch

NWI

Freshwater Forested/Shrub Wetland
Freshwater Pond
Lake
Riverine

N

0 500 1,000 2,000

Feet

Figure 6
True North Organics Renewable Energy
Jurisdictional Waters
NWI and NHD

Name: 21377 BIO Fig 6 Jurisdictional Waters NWI and NHD.Mxd
Print Date: 12/7/2022 3:40:51 PM Author: pcarlos

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ATTACHMENT 2 – SITE PHOTOGRAPHS

ATTACHMENT 2 – SITE PHOTOGRAPHS

	**Photo 1** Photo showing Bare Ground and Tamarisk Thickets near northeast corner of Project site. Photo facing northeast.
	**Photo 2** Photo showing a large area of dead vegetation near the northeast corner of the site. Photo facing west.
	**Photo 3** Eastern portion of the Project site. Area is composed of dead vegetation and bare ground. Photo facing south.

	**Photo 4** Photo Seep Weed Scrub located in the northeast section of the site.
	**Photo 5** Location of soil pit 1. Soil cracks and salt crust were present in the area.
	**Photo 6** Soil pit 1 taken within the seep weed community. While soil cracks and salt crust were observed in the area, no hydric soils were observed.

	**Photo 7** Location of soil pit 2 within the seep weed community. Soil cracks and salt crust were observed; however, no hydric soils were present within the area.
	**Photo 8** Overview of Project site from northeast corner. Photo facing southwest.
	**Photo 9** Photo showing agricultural area from northeast corner of site. Photo facing southwest.

	**Photo 10** Overview of Project site from northern section of the site, showing small section of tamarisk thickets. Photo facing west.
	**Photo 11** Photo showing northwestern portion of the site. This area contains a dry drainage ditch that appears to have been used in the past for irrigation and is no longer in use. Area is composed of Bare Ground and Quailbush Scrub. Photo facing south.
	**Photo 12** Photo showing a small patch of Alkali Weed Sink adjacent to agricultural fields along the western boundary. Photo facing south.

	**Photo 13** Soil pit 3 taken in Alkali Weed Sink community. While soil cracks were present, no hydric soils were observed within the area.
	**Photo 14** Photo showing shallow irrigation ditch located along the southern edge of Project boundary. No work is anticipated to occur in this area. Photo facing east.
	**Photo 15** Overview of Project site from southern portion of site. Photo facing northeast.

	**Photo 16** Overview of site from southeast corner of the site. Photo facing northwest.
	**Station 18, Photo 1** Photo showing Disturbed Cattail Marsh located along the southern boundary of the site. This site can be avoided with the use of BMP's. Photo facing east.

ATTACHMENT 3 – WETLAND DETERMINATION DATA SHEETS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: True North Organics Renewable Energy Facility City/County: Imperial Coutny Sampling Date: 11/1/22

Applicant/Owner: Imperial County Planning and Developement State: CA Sampling Point: 1

Investigator(s): Heather Franklin Section, Township, Range:

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): Lat: -115.511 Long: 32.887 Datum: NAD 83

Soil Map Unit Name: Imperial Valley CA683 NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No ☐	**Is the Sampled Area within a Wetland?** Yes ☐ No ✔
Hydric Soil Present?	Yes ☐	No ✔	
Wetland Hydrology Present?	Yes ✔	No ☐	

Remarks:

Site looks to have been regularly tilled at one time. First 6 inches was very soft and fluffy and then turned to hard and compacted.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1. Bush Seepweed	30	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	30 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 70 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 30	x 1 = 30
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: 30 (A)	30 (B)

Prevalence Index = B/A = 1

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No ☐

Remarks:

Sparsely vegetated with only bush seepweed present.

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	7.5YR 4/3	100					Sandy Loa	
6-18	7.5YR 4/3	100					clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☑

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☑ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☑ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches): _____

Water Table Present? Yes ☐ No ☑ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches): _____

Wetland Hydrology Present? Yes ☑ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: True North Organics Renewable Energy Facility City/County: Imperial Coutny Sampling Date: 11/1/22

Applicant/Owner: Imperial County Planning and Developement State: CA Sampling Point: 1

Investigator(s): Heather Franklin Section, Township, Range:

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): Lat: -115.511 Long: 32.887 Datum: NAD 83

Soil Map Unit Name: Imperial Valley CA683 NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No ☐	**Is the Sampled Area within a Wetland?** Yes ☐ No ✔
Hydric Soil Present?	Yes ☐	No ✔	
Wetland Hydrology Present?	Yes ✔	No ☐	

Remarks:

Site looks to have been regularly tilled at one time. First 6 inches was very soft and fluffy and then turned to hard and compacted.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1. Bush Seepweed	30	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	30 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 70 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 30	x 1 = 30
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: 30 (A)	30 (B)

Prevalence Index = B/A = 1

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No ☐

Remarks:

Sparsely vegetated with only bush seepweed present.

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	7.5YR 4/3	100					Sandy Loa	
6-18	7.5YR 4/3	100					clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☑

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☑ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☑ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches): _____

Water Table Present? Yes ☐ No ☑ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches): _____

Wetland Hydrology Present? Yes ☑ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: True North Organics Renewable Energy Facility City/County: Imperial Coutny Sampling Date: 11/1/22

Applicant/Owner: Imperial County Planning and Developement State: CA Sampling Point: 1

Investigator(s): Heather Franklin Section, Township, Range:

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): Lat: -115.511 Long: 32.887 Datum: NAD 83

Soil Map Unit Name: Imperial Valley CA683 NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No ☐	**Is the Sampled Area within a Wetland?** Yes ☐ No ✔
Hydric Soil Present?	Yes ☐	No ✔	
Wetland Hydrology Present?	Yes ✔	No ☐	

Remarks:

Site looks to have been regularly tilled at one time. First 6 inches was very soft and fluffy and then turned to hard and compacted.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1. Bush Seepweed	30	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	30 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 70 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 30	x 1 = 30
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: 30 (A)	30 (B)

Prevalence Index = B/A = 1

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No ☐

Remarks:

Sparsely vegetated with only bush seepweed present.

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	7.5YR 4/3	100					Sandy Loa	
6-18	7.5YR 4/3	100					clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☑

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☑ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☑ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches): _____

Water Table Present? Yes ☐ No ☑ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches): _____

Wetland Hydrology Present? Yes ☑ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

APPENDIX C – True Norths Organic Renewable Energy Facility Project Cultural Resources Site Visit Results Memo, prepared by Chambers Group on December 1, 2022.

Cultural Resources Site Visit Results Memo for the Organics Renewable Energy Facility Project

December 1, 2022

Diana Robinson
Planning Division Manager
Imperial County Planning and Development Services Department
801 Main Street
El Centro, CA. 92243

Subject: True North's Organic Renewable Energy Facility Project Cultural Resources Site Visit Results Memo

Dear Ms. Robinson,

Please be advised that a cultural resources site visit has been conducted for the above referenced Project. The Project is located within the Imperial County Mesquite Lake Specific Plan area, with the following locational data.

County: Imperial County

USGS 7.5' Quad: Brawley; Date: 1979; Township: 14S Range: 14E

Assessor Parcel Number(s): 040-360-036, 040-360-037, 040-360-038, and 040-360-038

Owner and Address: True North Renewable Energy LLC, 2390 East Camelback Road, Suite 203 Phoenix, Arizona 85016

A site visit was conducted by Chambers Group staff as follows.

Site Visit: October 26, 2022

Field Crew: Cultural Resource Specialist Eduvijes Davis-Mullens

Description: The site visit was conducted by Chambers Group on October 26, 2022, in accordance with the conditions set forth in the Mesquite Specific Plan Environmental Impact Report (MEIR); particularly, two Specific Plan related general Mitigation Measures (MM) 4.6.1 and 4.6.2, which are related to archaeological resources. Additionally, the current proposed Project site is located within the same parcels that were assessed on a project level within the MEIR as the previously proposed Palo Verde Valley Disposal Facility. The result of that assessment determined that the Palo Verde Valley Disposal Service Project site, and therefore the current Project site, is "within an area of very low probability for presence of archaeological materials and no significant project impacts are anticipated". Further, the MEIR concluded that "No archaeological mitigation measures are required for the Liberty X Biofuels Power, Palo Verde Valley Disposal, or NEAC Compressed Hay Facility". Still, the current site visit and photographic documentation was completed to assess the overall conditions and confirm that they are in accordance with the conditions regarding archaeological resources outlined in MEIR.

The current Project proposes the development of the Organics Renewable Energy Facility (Project or Proposed Project), a High Solids Anaerobic Digestion ("HSAD") facility with incidental advanced composting for the management and processing of residential, commercial, and industrial organic food and green material. The Proposed Project would be located on approximately 75 acres of vacant land in unincorporated Imperial County (County), California. The Proposed Project would provide organics processing infrastructure and organic materials diversion from regional landfills. The Project consists of four parcels, of which three are proposed to undergo a Zone Change to accommodate the Proposed Project's activities under a proposed Conditional Use Permit (CUP). Parcels will be merged by way of a Lot Merger to meet the Project's acreage requirements; in addition, a Variance will be requested to accommodate the height of a digester necessary for the Project's activity.

The Project site contains approximately 75.21 acres of land previously and currently utilized for agriculture, as evident in historic aerials, and observable by Chambers Group archaeologist during the site visit. Upon initial review of the Project site and publicly available historic maps and aerial imagery, Chambers Group observed that there is evidence

of previous agricultural activity and some evidence of associated built environment within the site. Specifically, historic topographic maps and aerial imagery displays the current Project site within the Mesquite Lake dry basin. Chambers Group observed evidence of previous agricultural land use in aerial photographs dating to 1953 through 2020 (NETR 2022). Additionally, 1953 aerial imagery displays two parallel rectangular structures in the northeastern corner of the Project site. These structures are no longer visible in aerial imagery by 1984. Based on the structures overall footprint and orientation observed in aerial imagery, it is interpreted that they were likely temporary storage in the form of a pole barn, or similar structure, to store material harvested from the adjacent agricultural activity. Additionally, there is no supporting evidence of any residential buildings or other historic period development in this area. The evidence observed during the site visit further supports this conclusion.

Chambers Group requested a Sacred Lands File (SLF) records search from the Native American Heritage Commission (NAHC), on September 7, 2022. The purpose of the request is to determine if any sacred lands or other resources important to local tribal groups have been recorded within the Project site or adjacent areas. The results of the SLF search, provided by the NAHC on November 04, 2022, were positive, and included a list of 23 tribal government contacts were provided to seek additional information.

During the site visit, Chambers Group observed that the overall condition of the Project site was largely unchanged from the conditions cited in the MEIR. Evidence of historic agricultural activity was observed throughout the Project site and current agricultural activity was observed as well. The northeastern corner section contained construction debris that may be related to previous structures, which can be seen in historic aerial imagery dating to 1953. Based on the general form and footprint displayed in available imagery, the structures are assumed to have been utilized to store harvested material from the adjacent agricultural activity. They have since been destroyed and no evidence was observed through research or the site visit that indicate the previous structures would qualify as significant historic resources. The potentially related construction debris observed during the site visit included repurposed railroad ties, milled lumber, concrete, and concrete ruble (Photos 8 through 11). No diagnostic material, artifacts, or markings were identified with the construction debris. The site visit included photographic documentation of the current conditions of the overall Project site. The eastern margin of the Project site is bound by old Highway 111 (Photo 3). The western margin is bound by the canal system and parcel boundary. The northern margin is bound by fenced property boundary. The southern margin is bound by Harris Road (Photo 12).

While surface manifestations of significant historic or cultural resources were not observed during the previous cultural resources study in support of the MEIR, and the current site visit, it should be noted that the landscape has been under historic-period use and settlement. This historic utilization may have resulted in unrecognized buried features such as footings and foundations or refuse area such as trash pits or outhouses. Similarly, ethnographic data and historic-period maps indicate that Native American groups such as the Kamia occupied and utilized major and minor drainages within the Salton Basin, as is documented on the 1856 General Land Office map, which depicted an “Indian Village” in the northeast quarter of Section 36 (Township 14S, Range 14E). The understanding that the area is important to Native American groups is further supported by the positive NAHC SLF records search results.

With this understanding, Chambers Group recommends that the Project be subject to the following mitigation from the MEIR to ensure potential impacts to cultural resources would be less than significant:

MM 4.6.1 No pre-construction archaeological surveys shall be required in areas previously developed. However, if during grading or construction, evidence of potential archaeological resources is encountered, grading and construction shall be halted, the [South Coastal Information Center (located at California State University, San Diego)] and the County Planning and Development Services Director shall be notified, and a qualified archaeologist shall be contracted by the developer to inspect the site. Resumption of grading or construction shall not be commenced until the archaeologist has advised the Planning and Development Services Director regarding the potential for cultural resources at the site and the Planning and Development Services

Director notifies the developer that grading, or construction may proceed. If further archaeological investigation is required by the Planning and Development Services Director, the procedures in Mitigation Measure 4.6.2 shall be followed.

If an unanticipated discovery of potential cultural resources is encountered during the Project, it would be subject to the protocols outlined in the following mitigation from the MEIR:

MM 4.6.2 Prior to approval of a CUP, tentative map, site plan, grading plan, or building permit for any phase or unit of development on lands not previously disturbed by agricultural use that are within the portion of the Specific Plan shown as the Cultural Resource Survey Area in Figure 4-5, field surveys shall be conducted to determine the presence/absence of archaeological resources and a report of the surveys provided to the Planning and Development Services Director. A testing program shall be approved by the Planning and Development Services Director for any identified resources to determine their significance and proper mitigation. Mitigation may include preservation in place, documentation, including recordation of findings at the Southeastern Information Center (located at the Imperial Valley College Desert Museum), and curation of materials at an appropriate local facility for long-term preservation and study. If a testing and/or excavation program is required, local Native American groups shall be notified, and a Native American monitor shall be present during excavation.

Legal Requirements - **Unanticipated discovery of Human Remains:** In the event that the discovery of human remains occurs during ground-disturbing activities, the following regulations must be followed. California State law (California Health and Safety Code 7050.5) and federal law and regulations (Archaeological Resources Protection Act [ARPA], 16 United States Code [U.S.C.] 470 and 43 Code of Federal Regulations, [CFR] 7, Native American Graves Protection and Repatriation Act [NAGPRA] 25 U.S.C. 3001 and 43 CFR 10, and Public Lands, Interior 43 CFR 8365.1-7) require a defined protocol if human remains are discovered in the state of California regardless if the remains are modern or archaeological. Upon discovery of human remains, all work within a minimum of 200 feet of the remains must cease immediately, and the County Coroner must be notified. The appropriate land manager/owner or the site shall also be notified of the discovery. If the remains are located on federal lands, the federal land manager(s), federal law enforcement, and/or federal archaeologist should also be notified. If the human remains are determined by the Coroner to be prehistoric, the appropriate federal archaeologist must be called. The archaeologist will initiate the proper procedures under ARPA and/or NAGPRA. If the remains can be determined to be Native American, the steps as outlined in NAGPRA 43 CFR 10.6 Inadvertent Discoveries must be followed.

Chambers Group is available to assist with any further support or document preparation related to Cultural Resources, including tribal consultation. Please contact Victoria Boyd, Senior Project Manager, at 760-685-4838, or the cultural resources staff at the contact information below if you have any questions or comments regarding this report.

Sincerely,

CHAMBERS GROUP, INC.

Eduvijes Davis-Mullens

Cultural Resources Specialist
emullens@chambersgroupinc.com
9620 Chesapeake Drive, Suite 202
San Diego, CA 92123

Lucas Tutschulte

Cultural Department Lead
ltutschulte@chambersgroupinc.com
9620 Chesapeake Drive, Suite 202
San Diego, CA 92123

Attachment I: Site Visit Photographs
Attachment II: NAHC SLF Results

Attachment 1: Site Visit Photographs

Photo 1: Northeast corner of Project site. View to the west.

Photo 2: Northeast corner of Project site. Overview to the west.

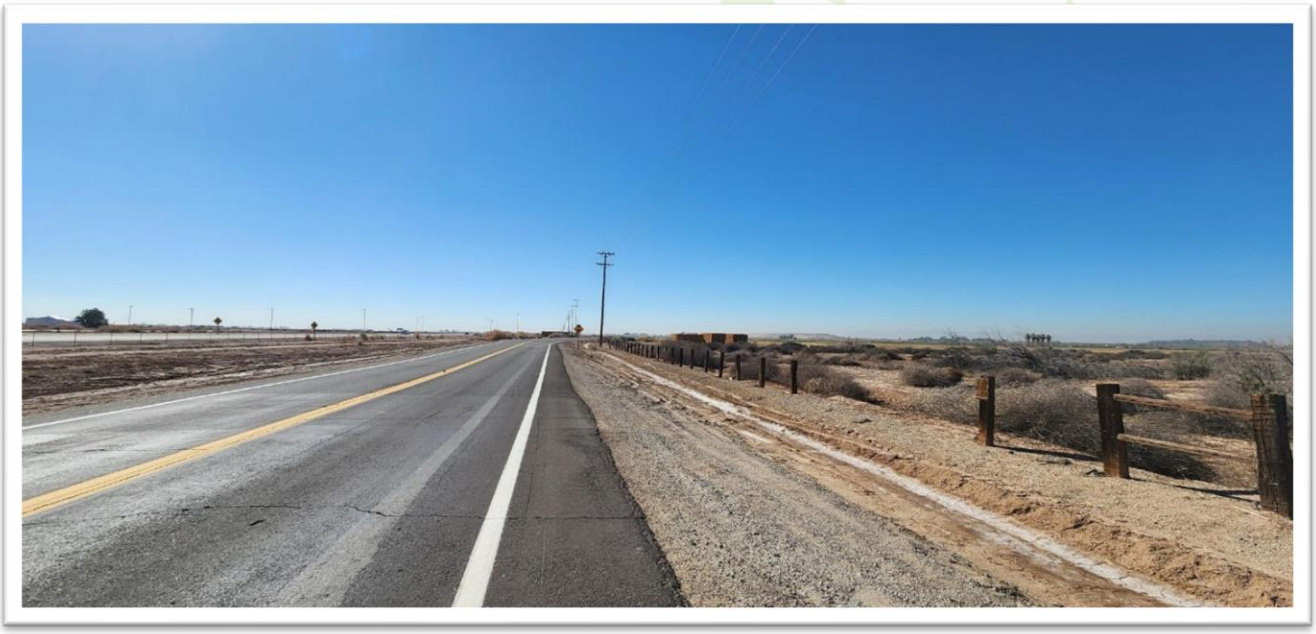

Photo 3: Old Highway 111, east boundary of Project site. View to the south.

Photo 4: Southeastern corner of Project site. Overview to the northwest.

Photo 5: Existing access road along eastern margin of Project site. Overview to the north.

Photo 6: Southeast corner of Project site. Overview to the west.

Photo 7: Central point along eastern margin of Project site. Overview to the west.

Photo 8: Northeast portion of the Project site with concrete rubble. View to the north.

Photo 9: Northeast portion of the Project site with construction debris. View to the south.

Photo 10: Northeast section of the Project site with concrete pad evident. View to the southwest.

Photo 11: Northeast section of the Project site with repurposed railroad ties evident. View to the southeast.

Photo 12: Harris Road (east/west), Southeastern margin access road entrance. View to the North.

Attachment II: NAHC Results Letter

STATE OF CALIFORNIA — Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

November 4, 2022

Eduvijes Davis-Mullens
Chambers Group, Inc.

Via Email to: emullens@chambersgroupinc.com

Re: True North Organics (21377) Project, Imperial County

Dear Mr. Davis-Mullens:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were positive. Please contact the tribes on the attached list for more information. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Pricilla.Torres-Fuentes@nahc.ca.gov.

Sincerely,

Pricilla Torres-Fuentes

Pricilla Torres-Fuentes
Cultural Resources Analyst

Attachment

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

Native American Heritage Commission
Native American Contact List
Imperial County
11/4/2022

Barona Group of the Capitan Grande
Raymond Welch, Chairperson
1095 Barona Road Diegueno
Lakeside, CA, 92040
Phone: (619) 443 - 6612
Fax: (619) 443-0681
counciloffice@barona-nsn.gov

Campo Band of Diegueno Mission Indians
Ralph Goff, Chairperson
36190 Church Road, Suite 1 Diegueno
Campo, CA, 91906
Phone: (619) 478 - 9046
Fax: (619) 478-5818
rgoff@campo-nsn.gov

Ewiiaapaayp Band of Kumeyaay Indians
Robert Pinto, Chairperson
4054 Willows Road Diegueno
Alpine, CA, 91901
Phone: (619) 368 - 4382
Fax: (619) 445-9126
ceo@ebki-nsn.gov

Ewiiaapaayp Band of Kumeyaay Indians
Michael Garcia, Vice Chairperson
4054 Willows Road Diegueno
Alpine, CA, 91901
Phone: (619) 933 - 2200
Fax: (619) 445-9126
michaelg@leaningrock.net

Iipay Nation of Santa Ysabel
Clint Linton, Director of Cultural Resources
P.O. Box 507 Diegueno
Santa Ysabel, CA, 92070
Phone: (760) 803 - 5694
clint@redtailenvironmental.com

Iipay Nation of Santa Ysabel
Virgil Perez, Chairperson
P.O. Box 130 Diegueno
Santa Ysabel, CA, 92070
Phone: (760) 765 - 0845
Fax: (760) 765-0320

Inaja-Cosmit Band of Indians
Rebecca Osuna, Chairperson
2005 S. Escondido Blvd. Diegueno
Escondido, CA, 92025
Phone: (760) 737 - 7628
Fax: (760) 747-8568

Jamul Indian Village
Erica Pinto, Chairperson
P.O. Box 612 Diegueno
Jamul, CA, 91935
Phone: (619) 669 - 4785
Fax: (619) 669-4817
epinto@jiv-nsn.gov

Jamul Indian Village
Lisa Cumper, Tribal Historic Preservation Officer
P.O. Box 612 Diegueno
Jamul, CA, 91935
Phone: (619) 669 - 4855
lcumper@jiv-nsn.gov

Kwaaymii Laguna Band of Mission Indians
Carmen Lucas,
P.O. Box 775 Kwaaymii
Pine Valley, CA, 91962 Diegueno
Phone: (619) 709 - 4207

La Posta Band of Diegueno Mission Indians
Gwendolyn Parada, Chairperson
8 Crestwood Road Diegueno
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
LP13boots@aol.com

La Posta Band of Diegueno Mission Indians
Javaughn Miller, Tribal Administrator
8 Crestwood Road Diegueno
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
jmiller@LPtribe.net

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed True North Organics (21377) Project, Imperial County.

PROJ-2022-006438 11/04/2022 10:11 AM 1 of 2

Native American Heritage Commission
Native American Contact List
Imperial County
11/4/2022

Manzanita Band of Kumeyaay Nation
Angela Elliott Santos, Chairperson
P.O. Box 1302 Diegueno
Boulevard, CA, 91905
Phone: (619) 766 - 4930
Fax: (619) 766-4957

Mesa Grande Band of Diegueno Mission Indians
Michael Linton, Chairperson
P.O Box 270 Diegueno
Santa Ysabel, CA, 92070
Phone: (760) 782 - 3818
Fax: (760) 782-9092
mesagrandeband@msn.com

Quechan Tribe of the Fort Yuma Reservation
Jill McCormick, Historic Preservation Officer
P.O. Box 1899 Quechan
Yuma, AZ, 85366
Phone: (760) 572 - 2423
historicpreservation@quechantribe.com

Quechan Tribe of the Fort Yuma Reservation
Manfred Scott, Acting Chairman
Kw'ts'an Cultural Committee
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This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed True North Organics (21377) Project, Imperial County.

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APPENDIX D – Preliminary Geotechnical Report Proposed Harris Road Recycling Facility NWC Harris Road and Hwy 111 Imperial, California, prepared by LandMark Consultants, Inc. in May 2021.

Preliminary Geotechnical Report

Proposed Harris Road Recycling Facility
NWC Harris Road and Hwy 111
Imperial, California

Prepared for:

True North Renewable Energy, LLC
2390 E. Camelback Road, Suite 203
Phoenix, AA 85016

Prepared by:

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May 2021

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May 21, 2021

Mr. Frank Lauro, PE
True North Renewable Energy, LLC
2390 E. Camelback Road, Suite 203
Phoenix, AZ 85016

Preliminary Geotechnical Report
Proposed Harris Road Recycling Facility
NWC Harris Road and Hwy 111
Imperial, California
LCI Report No. LE21077

Dear Mr. Lauro:

This preliminary geotechnical report is provided for design and construction of the proposed Harris Road Recycling Facility located at the northwest corner of Harris Road and Hwy 111 east of Imperial, California. The preparation of this report was conducted in response to your request for our services.

Landmark conducted a geotechnical investigation at the project site in March 2008 (LCI Project No. LE08033, dated March 12, 2008). The enclosed report describes our review of the geotechnical conditions encountered during the 2008 investigation and presents our professional opinions regarding geotechnical conditions at the site to be considered in the design and construction of the project.

Based on the geotechnical conditions encountered at the points of exploration in 2008, the project site appears suitable for the proposed construction provided the professional opinions contained in this report are considered in the design and construction of this project.

We appreciate the opportunity to provide our findings and professional opinions regarding geotechnical conditions at the site. Please provide our office with a set of the foundation plans and civil plans for review to insure that the geotechnical site constraints have been included in the design documents. If you have any questions or comments regarding our findings, please call our office at (760) 370-3000.

Respectfully Submitted,
Landmark Consultants, Inc.

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APPENDIX A: Vicinity and Site Maps
APPENDIX B: Liquefaction Analysis
APPENDIX C: 2008 Geotechnical Report

EXECUTIVE SUMMARY

This executive summary presents ***selected*** elements of our findings and professional opinions. This summary ***may not*** present all details needed for the proper application of our findings and professional opinions. Our findings, professional opinions, and application options are ***best related through reading the full report***, and are best evaluated with the active participation of the engineer of record who developed them. The findings of this study are summarized below:

- Clay soils (CL) of medium expansion (EI = 50 to 90) predominate the near surface soils at the project site.

- Foundation designs should mitigate expansive soil conditions by either the removal and replacement of the upper 3.0 feet of clay soils with non-expansive soil or design of foundations to resist expansive forces, such as flat plate structural mats, grade-beam stiffened floor slabs, or post-tensioned floor slabs. A combination of the methods described above may also be used.

- Design soil bearing pressure = 1,500 psf for foundations placed on native clay soils with standard increases allowed by the California Building Code. Differential movement of 1.0 to 1.5 inches can be expected for slab on grade foundations placed on clay soils. Bearing pressures may be increased to 2,000 psf when a minimum of 2.0 feet of granular soil (imported sand, crusher fines, or Class 2 aggregate base) is placed below the footings.

- The risk of liquefaction induced settlement is low. Liquefaction may occur in isolated silt and sand layers encountered at depths of 8.5 to 48 feet below ground surface. Potential liquefaction induced settlements of ¼ to 1¼ inches have been estimated for the project site.

- The native soils are aggressive to concrete and steel. Concrete mixes for concrete placed in contact with native soils shall have a maximum water cement ratio of 0.45 and a minimum compressive strength of 4,500 psi (minimum of 6 sacks Type V cement per cubic yard). All concrete should be thoroughly vibrated to remove rock pockets and minimize air voids.

- All reinforcing bars, anchor bolts and hold down bolts shall have a minimum concrete cover of 3.0 inches unless epoxy coated (ASTM D3963/A934). Hold-down straps at the foundation perimeter and pressurized water lines below or within the foundations are not allowed.

- The clay soils are non-absorptive and are not suitable for onsite sewage disposal systems or for infiltration at stormwater basins.

- Pavement structural sections should be designed for clay subgrade soils (R-Value = 5) and an appropriate Traffic Index (TI) selected by the civil designer.

Section 1
INTRODUCTION

1.1 Project Description

This report presents the findings of our review of the previous geotechnical exploration and soil testing for the proposed Harris Road Recycling Facility located at the northwest corner of Harris Road and Hwy 111 east of Imperial, California (See Vicinity Map, Plate A-1). The proposed development be constructed in phases and will consist of a receiving building, O&M and administration building, anaerobic digesters, post-processing buildings, biofilters, composting buildings and composting area. A preliminary site plan for the proposed development was provided by the client at the time that this report was prepared.

The structures are planned to consist of slabs-on-grade foundations and steel-frame construction. Footing loads at exterior bearing walls are estimated at 1 to 5 kips per lineal foot. Column loads are estimated to range from 10 to 50 kips. If structural loads exceed those stated above, we should be notified so we may evaluate their impact on foundation settlement and bearing capacity. Site development will include building pad preparation, underground utility installation including trench backfill, concrete foundation construction, roadway and parking lot construction, and concrete hardscape placement.

1.2 Purpose and Scope of Work

The purpose of this geotechnical study was to investigate the subsurface soil at selected locations within the site for evaluation of physical/engineering properties and liquefaction potential during seismic events. Professional opinions were developed from field and laboratory test data and are provided in this report regarding geotechnical conditions at this site and the effect on design and construction. The scope of our services consisted of the following:

- Review of the 2008 Landmark geotechnical report for this project site and available literature and publications pertaining to local geology, faulting, and seismicity.
- Engineering analysis and evaluation of the data provided in the 2008 report.
- Preparation of this report presenting our findings and professional opinions regarding the geotechnical aspects of project design and construction.

This report addresses the following geotechnical parameters:

- Subsurface soil and groundwater conditions
- Site geology, regional faulting and seismicity, near source factors, and site seismic accelerations
- Liquefaction potential and its mitigation
- Expansive soil and methods of mitigation
- Aggressive soil conditions to metals and concrete

Professional opinions with regard to the above parameters are provided for the following:

- Site grading and earthwork
- Building pad and foundation subgrade preparation
- Allowable soil bearing pressures and estimated settlements
- Concrete slabs-on-grade
- Lateral earth pressures
- Excavation conditions and buried utility installations
- Mitigation of the potential effects of salt concentrations in native soil to concrete mixes and steel reinforcement
- Seismic design parameters
- Pavement structural sections

Our scope of work for this report did not include an evaluation of the site for the presence of environmentally hazardous materials or conditions, storm water infiltration, groundwater mounding, or landscape suitability of the soil.

1.3 Authorization

Mr. Bernard Fenner, VP of Energy Services for True North Renewable Energy, LLC, provided authorization by written agreement to proceed with our work on April 16, 2021. We conducted our work in general accordance with our written proposal dated January 28, 2021.

Section 2
METHODS OF INVESTIGATION

2.1 Field Exploration

No subsurface exploration was conducted for this preliminary geotechnical report. All subsurface exploration was performed in 2008 by Landmark Consultants and is presented in Appendix 3 of this report.

2.2 Laboratory Testing

No laboratory testing of the site soils was conducted for this preliminary geotechnical report. The laboratory test results are presented on the subsurface logs (Appendix B) and in Appendix C of the 2008 geotechnical report (Appendix 3 of this report).

Section 3
DISCUSSION

3.1 Site Conditions

The project site is vacant, flat-lying with very little, if any, vegetation covering the site and consists of approximately 23-acres of agricultural land which have been fallow for approximately 5 years. The project site is rectangular in plan view, elongated in the north-south direction.

Adjacent properties are flat-lying and are approximately at the same elevation with this site. The site is bounded on the south by Harris Road, a paved two-lane rural road (planned for a 6-lane major arterial) and the west by the Rose Drain, an earthen agricultural runoff water drainage ditch. The Rose Drain is approximately 10 to 15 feet deep. Several earthen fish ponds are located to the west side of Rose Drain. Fallow agricultural land abuts the eastern property boundary, followed by State Hwy 111, a four lane divided highway. Vacant undeveloped land and duck ponds are located to the north side of the site. Agricultural fields are located to the south side of the proposed project property. The site lies within the Mesquite Basin, which is a subsided area between the Imperial and Brawley Faults. An ephemeral lake (Mesquite Lake) once covered this area shortly after the turn of the century.

The project site lies at an elevation of approximately 135 feet below mean sea level (El. 865 local datum) in the Imperial Valley region of the California low desert. The surrounding properties lie on terrain which is flat (planar), part of a large agricultural valley, which was previously an ancient lake bed covered with fresh water to an elevation of 43± feet above MSL. Annual rainfall in this arid region is less than 3 inches per year with four months of average summertime temperatures above 100 ºF. Winter temperatures are mild, seldom reaching freezing.

3.2 Geologic Setting

The project site is located in the Salton Trough region of the Colorado Desert physiographic province of southeastern California. The Salton Trough is a topographic and geologic structural depression resulting extending from the San Gorgonio Pass to the Gulf of California (Norris & Webb, 1990). The Salton Trough is bounded on the northeast by the San Andreas fault and Chocolate Mountains and the southwest by the Peninsular Range and faults of the San Jacinto Fault Zone.

The Salton Trough represents the northward extension of the Gulf of California, containing both marine and non-marine sediments deposited since the Miocene Epoch (Morton, 1977). Tectonic activity that formed the trough continues at a high rate as evidenced by deformed young sedimentary deposits and high levels of seismicity. Figure 1 shows the location of the site in relation to regional faults and physiographic features.

The Imperial Valley is directly underlain by lacustrine deposits, which consist of interbedded lenticular and tabular silt, sand, and clay. The Late Pleistocene to Holocene (present) lake deposits are probably less than 100 feet thick and derived from periodic flooding of the Colorado River which intermittently formed a fresh water lake (Lake Cahuilla). Older deposits consist of Miocene to Pleistocene non-marine and marine sediments deposited during intrusions of the Gulf of California. Basement rock consisting of Mesozoic granite and Paleozoic metamorphic rocks are estimated to exist at depths between 15,000 - 20,000 feet.

3.3 Subsurface Soil

The USDA Natural Resources Conservation Service "Web Soil Survey" website indicates that surficial deposits at the project site consist predominantly of silty clay loams overlying fine sands of the Imperial-Glenbar soil group (see Plate A-3). These loams are formed in sediment and alluvium of mixed origin (Colorado River overflows and fresh-water lake-bed sediments).

Subsurface soils encountered during the field exploration conducted by Landmark on January 30 and March 4, 2008 consist of dominantly stiff to very stiff clay and silty clay to a depth of 10 feet. Medium dense to very dense sands were encountered at a depth of 8 to 18 feet below ground surface. Interbedded layers of silts/clayey silts, silty clays/clays and silty sands were encountered at a depth of 18 to 51.5 feet, the maximum depth of exploration. The subsurface logs (Plates B-1 through B-7 of Appendix 3) depict the stratigraphic relationships of the various soil types. Variations in subsurface stratigraphy may occur between the points of exploration. The stratification lines shown on the subsurface log represent the approximate boundaries between the various strata. However, the transition from one stratum to another may be gradual over some range of depth.

The native surface clays exhibit moderate swell potential (Expansion Index, EI = 54) when tested according to the Standard Test Method for Expansion Index of Soils (ASTM D4829). The clay is expansive when wetted and can shrink with moisture loss (drying). Development of building foundations and concrete flatwork should include provisions for mitigating potential swelling forces and reduction in soil strength, which can occur from saturation of the soil. Causes for soil saturation include landscape irrigation, broken utility lines, or capillary rise in moisture upon sealing the ground surface to evaporation. Moisture losses can occur with lack of landscape watering, close proximity of structures to downslopes and root system moisture extraction from deep rooted shrubs and trees placed near the foundations. The design structural engineer (foundations) should consider the effects of non-uniform moisture conditions around the entire foundation when selecting design criteria for the foundations. Typical measures used for industrial projects to remediate expansive soil include:

- Replacement of expansive silts/clays (3.0 feet) with non-expansive sands or silts.
- Moisture conditioning subgrade soils to a minimum of 5% above optimum moisture (ASTM D1557) within the drying zone of surface soils.
- Capping silt/clay soil with a non-expansive sand layer of sufficient thickness (3.0 feet minimum) to reduce the effects of soil shrink/swell.
- Design of foundations that are resistant to shrink/swell forces of silt/clay soil.
- A combination of the methods described above

3.4 Groundwater

Groundwater was encountered in the piezometer at a depth of 7 feet on February 11, 2008. There is uncertainty in the accuracy of short-term water level measurements, particularly in fine-grained soil. Groundwater levels may fluctuate with precipitation, irrigation of adjacent properties, drainage, and site grading. The referenced groundwater level should not be interpreted to represent an accurate or permanent condition.

Subsurface agricultural tile drainage pipelines (3, 4 and 6-inch diameter plastic or clay perforated pipelines encapsulated by sand/gravel envelope) exist at a depth of 5.0 to 8.0 feet below this site and have assisted in preventing an artificially high groundwater depth. Abandoning and plugging the subsurface drainage pipelines can allow groundwater levels to rise variably across the site. Cutting the subsurface tile drain pipelines with utility trenches will likely result in some localized trench flooding. Base line collectors should be crushed in-place and trench backfill compacted (85-90%).

The 3 and 4-inch lateral pipeline drains are not required to be removed or crushed in-place. The 3 and 4-inch pipelines should be plugged if encountered during site excavations. A copy of the tile drainage system plat as obtained from Imperial Irrigation District records is attached in Appendix A of Appendix 3 of this report.

3.5 Faulting

The project site is located in the seismically active Imperial Valley of southern California with numerous mapped faults of the San Andreas Fault System traversing the region. The San Andreas Fault System is comprised of the San Andreas, San Jacinto, and Elsinore Fault Zones in southern California. The Imperial fault represents a transition from the more continuous San Andreas fault to a more nearly echelon pattern characteristic of the faults under the Gulf of California (USGS, 1990). We have performed a computer-aided search of known faults or seismic zones that lie within a 34 mile radius of the project site (Table 1).

A fault map illustrating known active faults relative to the site is presented on Figure 1, *Regional Fault Map*. Figure 2 shows the project site in relation to local faults. The criterion for fault classification adopted by the California Geological Survey defines Earthquake Fault Zones along Holocene-active or pre-Holocene faults (CGS, 2019b). Earthquake Fault Zones are regulatory zones that address the hazard of surface fault rupture. A Holocene-active fault is one that has ruptured during Holocene time (within the last 11,700 years). A pre-Holocene fault is a fault that has not ruptured in the last 11,700 years. Pre-Holocene faults may still be capable of surface rupture in the future, but are not regulated by the Alquist-Priolo Act (AP). Review of the current Earthquake Fault Zone maps (CGS, 2019a) indicates that the nearest zoned fault is the Imperial fault located approximately 1.0 mile west of the project site.

3.6 General Ground Motion Analysis

The project site is considered likely to be subjected to moderate to strong ground motion from earthquakes in the region. Ground motions are dependent primarily on the earthquake magnitude and distance to the seismogenic (rupture) zone. Acceleration magnitudes also are dependent upon attenuation by rock and soil deposits, direction of rupture and type of fault; therefore, ground motions may vary considerably in the same general area.

2019 CBC General Ground Motion Parameters: The California Building Code (CBC) requires that a site-specific ground motion hazard analysis be performed in accordance with ASCE 7-16 Section 11.4.8 for structures on Soil Site Class D and E sites with S_1 greater than or equal to 0.2 and Site Class E sites with S_s greater than or equal to 1.0. **This project site has been classified as Site Class D and has a S_1 value of 0.81, which would require a site-specific ground motion hazard analysis**. However, ASCE 7-16 Section 11.4.8 provides three exceptions which permit the use of conservative values of design parameters for certain conditions for Site Class D and E sites in lieu of a site specific hazard analysis. The exceptions are:

- Exception 1: Structures on Site Class E sites with S_s greater than or equal to 1.0, provided the site coefficient F_a is taken as equal to that of Site Class C.
- Exception 2: Structures on Site Class D sites with S_1 greater than or equal to 0.2, provided the value of the seismic response coefficient C_s is determined by Equations 12.8-2 for values of $T \leq 1.5T_S$ and taken as equal to 1.5 times the value computed in accordance with either Equation 12.8-3 for $T_L \geq T > 1.5T_S$ or Equation 12.8-4 for $T > T_L$.
- Exception 3: Structures on Site Class E sites with S_1 greater than or equal to 0.2, provided that T is less than or equal to T_S and the equivalent static force procedure is used for design.

The project structural engineer should confirm that an exception applies to the project. If none of the exceptions apply, our office should be consulted to perform a site-specific ground motion hazard analysis.

The 2019 CBC general ground motion parameters are based on the Risk-Targeted Maximum Considered Earthquake (MCE_R). The Structural Engineers Association of California (SEAOC) and Office of Statewide Health Planning and Development (OSHPD) Seismic Design Maps Web Application (SEAOC, 2021) was used to obtain the site coefficients and adjusted maximum considered earthquake spectral response acceleration parameters. Design spectral response acceleration parameters are defined as the earthquake ground motions that are two-thirds (2/3) of the corresponding MCE_R ground motions. The Maximum Considered Earthquake Geometric Mean (MCE_G) peak ground acceleration adjusted for soil site class effects (PGA_M) value to be used for liquefaction and seismic settlement analysis in accordance with 2019 CBC Section 1803.5.12 ($PGA_M = F_{PGA}*PGA$) is estimated at 1.04g for the project site. **Design earthquake ground motion parameters are provided in Table 2.**

3.7 Seismic and Other Hazards

- **Groundshaking.** The primary seismic hazard at the project site is the potential for strong groundshaking during earthquakes along the Imperial, Brawley, and Superstition Hills faults.
- **Surface Rupture.** The California Geological Survey (2019b) has established Earthquake Fault Zones in accordance with the 1972 Alquist-Priolo Earthquake Fault Zone Act. The Earthquake Fault Zones consists of boundary zones surrounding well defined, active faults or fault segments. The project site does not lie within an A-P Earthquake Fault Zone; therefore, surface fault rupture is considered to be low at the project site.
- **Liquefaction and lateral spreading.** Liquefaction is a potential design consideration because of underlying saturated sandy substrata. Although the Imperial Valley has not yet been evaluated for seismic hazards by the California Geological Survey seismic hazards zonation program, liquefaction is well documented in the Imperial Valley after strong seismic events (McCrink, et al, 2011 and Rymer et al, 2011). The potential for liquefaction at the site is discussed in more detail in Section 3.8. Liquefaction induced lateral spreading is not expected to occur at this site due to the planar topography.

Other Potential Geologic Hazards.

- **Landsliding.** The hazard of landsliding is unlikely due to the regional planar topography. No ancient landslides are shown on geologic maps, aerial photographs and topographic maps of the region and no indications of landslides were observed during our site investigation.
- **Volcanic hazards.** The site is not located proximal to any known volcanically active area and the risk of volcanic hazards is considered low. Obsidian Butte and Red Hill, located at the south end of the Salton Sea approximately 21 miles north of the project site, are small remnants of volcanic domes. The domes erupted about 1,800 to 2,500 years ago (Wright et al, 2015). The subsurface brine fluids around the domes have a high heat flow and are currently being utilized to produce geothermal energy.
- **Tsunamis and seiches.** Tsunamis are giant ocean waves created by strong underwater seismic events, asteroid impact, or large landslides. Seiches are large waves generated in enclosed bodies of water in response to strong ground shaking. The site is not located near any large bodies of water, so the threat of tsunami, seiches, or other seismically-induced flooding is considered unlikely.
- **Flooding.** Based on our review of FEMA (2008) FIRM Panel 06025C1375C which encompasses the project site, the project site is located in Flood Zone X, an area determined to be outside the 0.2% annual chance (500-year) floodplain.

- **Collapsible soils.** Collapsible soil generally consists of dry, loose, low-density material that have the potential collapse and compact (decrease in volume) when subjected to the addition of water or excessive loading. Soils found to be most susceptible to collapse include loess (fine grained wind-blown soils), young alluvium fan deposits in semi-arid to arid climates, debris flow deposits and residual soil deposits. Due to the cohesive nature of the subsurface soils and shallow groundwater, the potential for hydro-collapse of the subsurface soils at this project site is considered very low.
- **Expansive soils.** In general, much of the near surface soils in the Imperial Valley consist of silty clays and clays which are moderate to highly expansive. The expansive soil conditions are discussed in more detail in Section 3.3.

3.8 Liquefaction

Liquefaction occurs when granular soils below the water table are subjected to vibratory motions, such as those produced by earthquakes. With strong ground shaking, the pore water pressure increases as the soil tends to reduce in volume. If the increase in pore water pressure is sufficient to reduce the vertical effective stress (suspending the soil particles in water), the soil strength decreases and the soil behaves as a liquid (similar to quicksand). Liquefaction can produce excessive settlement, ground rupture, lateral spreading, or failure of shallow bearing foundations. Four conditions are generally required for liquefaction to occur:

(1) the soil must be saturated (relatively shallow groundwater);
(2) the soil must be loosely packed (low to medium relative density);
(3) the soil must be relatively cohesionless (not clayey); and
(4) groundshaking of sufficient intensity must occur to function as a trigger mechanism.

All of these conditions exist to some degree at this site.

Methods of Analysis: The computer program CLiq (Version 2.2.0.32, Geologismiki, 2017) was utilized for liquefaction assessment at the project site. The estimated settlements have been adjusted for transition zones between layers and the post liquefaction volumetric strain has been weighed with depth (Robertson, 2014 and Cetin et al., 2009). Computer printouts of the liquefaction analyses are provided in Appendix 2.

The liquefaction potential at the project site was evaluated using the 1997 NCEER Liquefaction Workshop and the Idriss and Boulanger (2008) methods. The 1997 NCEER methods utilize CPT cone readings from site exploration and earthquake magnitude/PGA estimates from the seismic hazard analysis. The resistance to liquefaction is plotted on a chart of cyclic shear stress ratio (CSR) versus a corrected tip pressures $Q_{tn,cs}$. The analysis was performed using a PGA_M value of 1.04g was used in the analysis with a 7-foot groundwater depth and a threshold factor of safety (FS) of 1.3.

The fines content of the liquefiable sands and silts increases their liquefaction resistance in that more ground motion cycles are required to fully develop the increased pore pressures. The CPT tip pressures (Qc) were adjusted to an equivalent clean sand pressure ($Q_{tn,cs}$) in accordance with NCEER (1997).

The soils encountered at the points of exploration included saturated silts and silty sands that could liquefy during a Maximum Considered Earthquake. Liquefaction can occur within several isolated silt and sand layers between depths of 8.5 to 48 feet. The likely triggering mechanism for liquefaction appears to be strong groundshaking associated with the rupture of the Imperial fault. The analysis is summarized in the table below.

Summary of Liquefaction Analysis

Boring Location	Depth To First Liquefiable Zone (ft)	Potential Induced Settlement (in)
CPT-1	8.5	1¼
CPT-2	24.0	¼

Liquefaction Induced Settlements: ***Based on empirical relationships, total induced settlements are estimated to be about ¼ to 1¼ inches should liquefaction occur.*** Differential settlement is estimated at be two-thirds of the total potential settlement in accordance with California Special Publication 117. Accordingly, there is a potential for up to 1 inch of liquefaction induced differential settlement at the project site.

The differential settlement based on seismic settlements is estimated at 1 inch over a distance of 100 feet. Foundations should be designed for a maximum deflection of L/720.

Liquefaction Induced Ground Failure: Based on research from Ishihara (1985) and Youd and Garris (1995) small ground fissure or sand boil formation is unlikely because of the thickness of the overlying unliquefiable soil. Sand boils are conical piles of sand derived from the upward flow of groundwater caused by excess porewater pressures created during strong ground shaking. Sand boils are not inherently damaging by themselves, but are an indication that liquefaction occurred at depth (Jones, 2003). Liquefaction induced lateral spreading is not expected to occur at this site due to the planar topography. According to Youd (2005), if the liquefiable layer lies at a depth greater that about twice the height of a free face, lateral spread is not likely to develop. No slopes or free faces currently occur at this site except for the Rose Drain to the west of the project site, which depths are at approximately the first liquefiable layer.

Mitigation: Ground improvement methods are available to mitigate liquefaction such as deep soil mixing (cement), vibro-compaction, vibro-replacement, geopiers, stone columns, compaction grouting, or deep dynamic compaction. Other means to mitigate liquefaction damage include either a deep foundation system or rigid mat foundations and grade-beam reinforced foundations that can withstand the differential movement or tilting, but will not protect fracturing of buried utilities from damage.

Based on an estimate of 1¼ inch of liquefaction induced settlements, no ground improvement or deep foundation mitigation is required at this project site unless settlement sensitive structures are planned for the project. The differential settlement caused by liquefaction is estimated at approximately 1 inch. The designer should utilize foundation designs which mitigate the liquefaction induced settlement.

Because of the potential for differential settlement due to liquefaction, the designer should consider the following options for design of the structure:

1) Foundations that use grade-beam footings to tie floor slabs and isolated columns to continuous footings (conventional or post-tensioned).

2) Structural flat-plate mats, either conventionally reinforced or tied with post-tensioned tendons.

These alternatives reduce the potential effects of liquefaction-induced settlements by making the structures more able to withstand differential settlement.

3.8 On-Site Sewage Disposal

Percolation tests were made at the three (3) separate areas on February 26 and 27, 2008. The tests were made at depth of 1.5 feet and 3.0 feet to provide information for differing sewage disposal systems. All tests yielded percolation rates of greater than 360 minutes per inch; therefore, on-site sewage leach fields and pressure distribution leach field systems are not allowed.

An on-site "alternative system" may be required with a "packaged sewer treatment system" (requiring a California Regional Water Quality Control Board and NPDES Permit) for release to evapo-transpiration beds. Due to changes in State and County ordinance for on-site sewage systems a new percolation test would be required prior to any system design.

Section 4
DESIGN CRITERIA

4.1 Site Preparation

Preconstruction Meeting: A preconstruction conference should be held at the site prior to the beginning of grading operations with, as a minimum, the owner's representative, grading contractor and geotechnical engineer in attendance.

Clearing and Grubbing: All surface improvements, debris or vegetation including grass, crop residue, and weeds on the site at the time of construction should be removed from the construction area. Root balls should be completely excavated. Organic strippings should be stockpiled and not used as engineered fill. All trash, construction debris, concrete slabs, old pavement, landfill, contaminated soil, and buried obstructions such as old foundations and utility lines exposed during rough grading should be traced to the limits of the foreign material by the grading contractor and removed under our supervision. Any excavations resulting from site clearing should be sloped to a bowl shape to the lowest depth of disturbance and backfilled under the observation of the geotechnical engineer's representative.

The site is underlain by tile drain lines at a depth of approximately 5.5 to 6.0 feet below ground surface (see Appendix A). Tile lines should be cut and plugged at the street crossings. The pipelines are likely full of water and may temporarily flood excavations if not capped promptly. Base lines (6 to 8 inch diameter) should be located and crushed in-place with the backfill compacted to a minimum 90% of ASTM D1557 maximum density.

Building Pad Preparation: In areas of the proposed pads for offices, maintenance shops, laboratory, storage and other light structures with slab-on-grade foundations, the aggregate base material should be removed from the building pad area (to 5 feet beyond the building perimeter) and stockpiled onsite. The exposed native soils within the building pad/foundation areas should be removed to 36 inches below the structure pad elevation or existing natural surface grade (whichever is lower). Exposed subgrade should be scarified to a depth of 8 inches, uniformly moisture conditioned to 5 to 10% above optimum moisture content and recompacted to 85 to 90% of the maximum density determined in accordance with ASTM D1557 methods.

The native soil is suitable for use as engineered fill provided it is free from concentrations of organic matter or other deleterious material. The fill soil should be uniformly moisture conditioned by discing and watering to the limits specified above, placed in maximum 8-inch lifts (loose), and compacted to the limits specified above. Clay soil should not be compacted greater than 90% relative compaction because highly compacted soil will result in increased swelling.

If foundation designs are to be utilized which ***do not*** include provisions for expansive soil, an engineered building support pad consisting of 3.0 feet of non-expansive granular soil, placed in maximum 8-inch lifts (loose), compacted to a minimum of 95% of ASTM D1557 maximum density at 2% below to 2% above optimum moisture, should be placed below the bottom of the slab.

For foundations not designed for expansive soil conditions, non-expansive, granular soil meeting the USCS classifications of SM, SP-SM, or SW-SM with a maximum rock size of 3 inches and 5 to 35% passing the No. 200 sieve shall be used. The geotechnical engineer should approve imported fill soil sources before hauling material to the site. Imported granular fill should be placed in lifts no greater than 8 inches in loose thickness and compacted to a minimum of 95% of ASTM D1557 maximum dry density at optimum moisture ±2%.

In areas other than the building pad which are to receive area concrete slabs, the native soils should be removed to a minimum depth of 24 inches and then scarified to 6 inches, uniformly moisture conditioned to 5 to 10% over optimum, and recompacted to 85-90% of ASTM D1557 maximum density just prior to concrete placement.

Lightly Loaded Structures Subgrade Preparation (Mat Foundation): The existing surface soil within mat foundations areas should be removed to 12 inches below the mat foundation elevation or existing grade (whichever is lower) extending five feet beyond the mat foundation. Exposed subgrade should be inspected by the geotechnical engineer and if found to be loose, shall be scarified to a depth of 8 inches, uniformly moisture conditioned to 2 to 8% above optimum and recompacted to at least 90% of the maximum density determined in accordance with ASTM D1557 methods. An engineered support pad consisting of 12 inches of Class 2 aggregate base shall be placed below mat foundations. The aggregate base shall be compacted to a minimum of 95% of ASTM D1557 maximum density at 2% below to 4% above optimum moisture.

***Reinforced Fill Subgrade Preparation*:** Structures that are sensitive to settlements, not heavy loaded, or that can be economically replaced or repaired such as small tanks, pumps and vessels, may be supported on shallow foundations on reinforced structural fill. Also, some heavy loaded structures that are settlement tolerant may be supported by mat foundations placed on reinforced structural fill.

The performance of structural fill with respect to resisting liquefaction failure mechanisms, and reducing some of the static differential settlements can be enhanced by reinforced the structural fill with geogrid fabrics. Geogrids are polymer grid structures that come in rolls (much like wire mesh). When placed in horizontal layers within the compacted structural fill mass, the geogrids provide tensile properties. Geotextile fabric and geogrid reinforced structural fill will enhance spreading of foundation loads and resist soil rupture resulting in the following benefits:

- Reduced static and differential settlement.
- Reduced transient loads to the compressible clay soils.
- Reduced rupture potential of surface soils, thus allowing higher foundation loadings.

Effectiveness of the geogrids to achieve the above results is dependent on its projection beyond the loaded foundation to create a reinforced mass larger than the loaded area. It is especially effective where several loaded areas or individual spread footings are underlain by the continuously reinforced mass projecting beyond the extremities of the loaded areas.

The native soils should be excavated from the designated foundation areas extending 5.0 feet beyond all exterior foundation lines to 3.0 feet below the planned bottom of foundation level. Exposed subgrade should be inspected by the geotechnical engineer and if found to be loose, shall be scarified to a depth of 8 inches, uniformly moisture conditioned to 2 to 8% above optimum and recompacted to a minimum of 90% of the maximum density determined in accordance with ASTM D1557 methods.

If soft conditions are encountered at the bottom of the excavation and subgrade compaction is not achievable, a geotextile separation fabric and geogrid layer should be placed over the graded smooth surface prior to placing the reinforced structural fill. The geotextile shall a 6 oz. non-woven fabric equivalent to Mirafi 160N or equivalent. Geogrids shall be either Tensar TriAx 5 or Greenbook Type S2 biaxial geogrid (ex. Tenax MS330 or equivalent). The geotextile stabilization/separation fabric and the geogrid should be placed in accordance to the manufacturer's recommendations.

Structural fill should consist of crushed Caltrans Class 2 aggregate base. The first lift of aggregate base should be end dumped and spread in a 1.0 foot thick uniform layer, uniformly moisture conditioned to ±2% of optimum moisture and compacted to a minimum of 95% of ASTM D1557 maximum density. After completion of compacting, a geogrid reinforcing mesh (Tensar TriAx 5 or Greenbook Type S2 biaxial geogrid (ex. Tenax MS330 or equivalent)). should be placed over the first layer of base material lapped at sides/ends (1.0 foot minimum) in conformance to the manufacturer's installation instructions.

A second 1.0 foot thick layer of aggregate base should be end dumped and spread uniformly over the geogrid mesh. This layer may be placed in two lifts, uniformly moisture conditioned to ±2% of optimum moisture and compacted to a minimum of 95% of ASTM D1557 maximum density. After compacting the second layer a geogrid mesh should be placed over the aggregate base material and two final 0.5 foot thick aggregate base layers placed and compacted to a minimum of 95% of ASTM D1557 maximum density. The completed reinforced structural fill should be a minimum of 3 feet thick. Following completion of concrete placement for the mat foundation, the remaining excavation area against the foundation should be backfilled with aggregate base in 0.5 foot maximum lifts and compacted to a minimum of 95%.

Observation and Density Testing: All site preparation and fill placement should be continuously observed and tested by a representative of a qualified geotechnical engineering firm. Full-time observation services during the excavation and scarification process is necessary to detect undesirable materials or conditions and soft areas that may be encountered in the construction area. The geotechnical firm that provides observation and testing during construction shall assume the responsibility of "*geotechnical engineer of record*" and, as such, shall perform additional tests and investigation as necessary to satisfy themselves as to the site conditions and the geotechnical parameters for site development.

Auxiliary Structures Foundation Preparation: Auxiliary structures such as free standing or retaining walls should have footings extended to a minimum of 30 inches below grade. The existing soil beneath the structure foundation prepared in the manner described for the building pad except the preparation needed only to extend 18 inches below and beyond the footing.

4.2 Foundations and Settlements

Spread footings: Shallow spread footings and continuous wall footings are suitable to support the structures associated with offices, maintenance shops, laboratory, production packaging, storage and other light structures other light structures with slab-on-grade foundations, etc. Footings shall be founded on a layer of properly prepared and compacted soil as described in Section 4.1. The foundations may be designed using an allowable soil bearing pressure of 1,500 psf for compacted native clay soil and 2,000 psf when foundations are supported on imported sands (extending a minimum of 1.0 feet below footings). The allowable soil pressure may be increased by 20% for each foot of embedment depth in excess of 18 inches and by one-third for short term loads induced by winds or seismic events. The maximum allowable soil pressure at increased embedment depths shall not exceed 3,000 psf.

To mitigate swelling forces from expansive soils, lightly loaded structures such as office building and control rooms can be designed with grade-beam reinforced foundations or mat foundations. Recommendations for these are provided below.

- Flat Plate Structural Mats: Flat plate structural mats may be used to mitigate expansive soils at the project site. The structural mat shall have a double mat of steel (minimum No. 4's @ 12 inches O.C. each way – top and bottom) and a minimum thickness of 10 inches. Mat edges shall have a minimum edge footing of 12 inches width and 24 inches depth (below the building pad surface). Mats may be designed by CBC Chapter 18, Section 1808.6.2 methods (*WRI/CRSI Design of Slab-on-Ground Foundations*).

  Structural mats may be designed for a modulus of subgrade reaction (Ks) of 50 pci when placed on compacted clay or a subgrade modulus of 300 pci when placed on 3.0 feet of granular fill. Mats shall overlay 2 inches of sand and a 10-mil polyethylene vapor retarder. The building support pad shall be moisture conditioned and recompacted as specified in Section 4.1 of this report.

- Grade-beam Reinforced Foundations: Specific soil data for structures with grade-beam reinforced foundations placed on the native clays are presented below in accordance with the design method given in CBC Chapter 18 Section 1808.6.2 (*WRI/CRSI Design of Slab-on-Ground Foundations*):

  Weighted Plasticity Index (PI) = 31
  Slope Coefficient (C_s) = 1.0
  Strength Coefficient (C_o) = 0.8
  Climatic Rating (C_w) = 15
  Effective PI = 25
  Maximum Grade-beam Spacing = 19 feet

Exterior footings shall be founded a minimum of 24 inches below the surface of the building support pad on a layer of properly prepared and compacted native soil as described in Section 4.1. Interior footings shall have a minimum embedment depth of 12 inches.

Resistance to horizontal loads will be developed by passive earth pressure on the sides of footings and frictional resistance developed along the bases of footings and concrete slabs. Passive resistance to lateral earth pressure may be calculated using an equivalent fluid pressure of 250 pcf (300 pcf for sands) to resist lateral loadings. The top one foot of embedment should not be considered in computing passive resistance unless the adjacent area is confined by a slab or pavement. An allowable friction coefficient of 0.25 (0.35 for sands) may also be used at the base of the footings to resist lateral loading.

Foundation movement under the estimated static (non-seismic) loadings and static site conditions are estimated to not exceed ¾ inch with differential movement of about two-thirds of total movement for the loading assumptions stated above when the subgrade preparation guidelines given above are followed. Seismically induced liquefaction settlement may be on the order of less than ¾ inch.

Structural Mat Foundations for Lightly Loaded Structures: Mat foundations for lightly loaded structures like pumps, small tanks, transformers, generators, etc., may be designed using an allowable soil bearing pressure of 2,000 psf when the foundation is supported on 12 inches of compacted Class 2 aggregate base (95% of ASTM D1557 maximum density to ±2% of optimum moisture). The native soils supporting the concrete structural mat and compacted aggregate base shall be moisture conditioned and recompacted as specified in Section 4.1 of this report.

The allowable soil pressure may be increased by one-third for short term loads induced by winds or seismic events. Design criteria for these mat foundations are provided below.

The structural mat should have a double mat of steel and a minimum thickness of 12 inches. Structural mats may be designed for a modulus of subgrade reaction (Ks) of 100 pci when placed on 12 inches of compacted Class 2 aggregate base. Settlement estimates (in inches) for lightly loaded structures (1,000, 1,500 and 2,000 psf) for different footings dimensions and 12 inches of compacted aggregate base follow:

Settlement Estimates (inches)

Load, psf	**Size of Mat (ft.)**						
	5 x 5	**5 x 10**	**10 x10**	**10 x 15**	**15 x 15**	**20 x 25**	**30 x 60**
1,000	0.35	0.45	0.65	0.75	0.85	1.05	1.35
1,500	0.50	0.65	0.90	1.00	1.15	1.40	1.80
2,000	0.60	0.80	1.10	1.20	1.40	1.70	2.20

Differential movements of about two-thirds of total movement are expected for the lightly loaded structures.

Structural Mat Foundations for Heavy Structures: Heavily loaded structures that are settlement tolerant may be supported on structural concrete mat foundations. The mat shall be founded on the ***reinforced structural fill*** which has been properly prepared and compacted as described in the Site Preparation Section. Structural mat foundations placed over reinforced structural fill may be designed using an allowable soil bearing pressure of 4,000 psf. The allowable soil pressure may be increased by one-third for short term loads induced by winds or seismic events.

Structural mats may be designed for a modulus of subgrade reaction (Ks) of 300 pci when placed on 3.0 feet of Class 2 aggregate base material with geogrid layers (reinforced structural fill). The structural fill supported pad shall be moisture conditioned and compacted as specified in Section 4.1 of this report.

Resistance to horizontal loads will be developed by passive earth pressure on the sides of footings and frictional resistance developed along the bases of footings. Passive resistance to lateral earth pressure may be calculated using an equivalent fluid pressure of 350 pcf (for aggregate base) to resist lateral loadings. The top one foot of embedment should not be considered in computing passive resistance unless the adjacent area is confined by a slab or pavement. An allowable friction coefficient of 0.40 may also be used at the base of the mats with aggregate base subgrade to resist lateral loading.

Settlement estimates (in inches) developed for different footing and mat dimensions supported on 3.0 feet of reinforced structural fill and loaded from 2,000 to 4,000 psf follow:

Settlement Estimates (inches)

Load, psf	Size of Footing or Mat (ft.)				
	15 x 15	**20 x 20**	**20 x 30**	**30 x 45**	**30 x 60**
2,000	1.40	1.60	1.75	2.10	2.20
3,000	1.80	2.10	2.30	2.75	2.90
4,000	2.15	2.50	2.70	3.30	3.45

4.3 Deep Foundations

The use of soil improvement (soil mixing with cement, stone columns or geopiers) or by the placement of a deep foundation system, like drilled piers or driven piles, may be needed in order to reduce settlement to tolerable limits.

Structural mat foundations placed over the improved soil (soil mixing with cement, stone columns or geopiers) or placed over a deep foundation system, like piles or drilled piers, may be necessary for specific structures within the facility.

For the full geotechnical report loading information and settlement limits for equipment should be provided to provide more detailed deep foundation options.

4.4 Slabs-On-Grade

Structural Concrete: Structural concrete slabs are those slabs (foundations) that underlie structures or patio covers (shades). These slabs that are placed over native clay soil should be designed in accordance with Chapter 18 of the 2019 CBC and shall be a minimum of 5 inches thick due to expansive soil conditions. No special requirements exist for slabs placed on 3.0 feet of granular fill (with an Expansion Index less than 15). Concrete floor slabs shall be monolithically placed with the footings (no cold joints) unless placed on 3.0 feet of granular fill.

American Concrete Institute (ACI) guidelines (ACI 302.1R-04 Chapter 3, Section 3.2.3) provide recommendations regarding the use of moisture barriers beneath concrete slabs. The concrete floor slabs should be underlain by a 10-mil polyethylene vapor retarder that works as a capillary break to reduce moisture migration into the slab section.

All laps and seams should be overlapped 6-inches or as recommended by the manufacturer. The vapor retarder should be protected from puncture. The joints and penetrations should be sealed with the manufacturer's recommended adhesive, pressure-sensitive tape, or both. The vapor retarder should extend a minimum of 12 inches into the footing excavations. The vapor retarder should be covered by 4 inches of clean sand (Sand Equivalent SE>30) unless placed on 3.0 feet of granular fill, in which case, the vapor retarder may lie directly on the granular fill with 2 inches of clean sand cover.

Placing sand over the vapor retarder may increase moisture transmission through the slab, because it provides a reservoir for bleed water from the concrete to collect. The sand placed over the vapor retarder may also move and mound prior to concrete placement, resulting in an irregular slab thickness. For areas with moisture sensitive flooring materials, ACI recommends that concrete slabs be placed without a sand cover directly over the vapor retarder, provided that the concrete mix uses a low-water cement ratio and concrete curing methods are employed to compensate for release of bleed water through the top of the slab. The vapor retarder should have a minimum thickness of 15-mil (Stego-Wrap or equivalent).

Structural concrete slab reinforcement should consist of chaired rebar slab reinforcement (minimum of No. 4 bars at 18-inch centers, both horizontal directions) placed at slab mid-height to resist potential swell forces and cracking. Slab thickness and steel reinforcement are minimums only and should be verified by the structural engineer/designer knowing the actual project loadings. All steel components of the foundation system should be protected from corrosion by maintaining a 3-inch minimum concrete cover of densely consolidated concrete at footings (by use of a vibrator). The construction joint between the foundation and any mowstrips/sidewalks placed adjacent to foundations should be sealed with a polyurethane based non-hardening sealant to prevent moisture migration between the joint. Epoxy coated embedded steel components (ASTM D3963/A934) or permanent waterproofing membranes placed at the exterior footing sidewall may also be used to mitigate the corrosion potential of concrete placed in contact with native soil.

Control joints should be provided in all concrete slabs-on-grade at a maximum spacing (in feet) of 2 to 3 times the slab thickness (in inches) as recommended by American Concrete Institute (ACI) guidelines. All joints should form approximately square patterns to reduce randomly oriented contraction cracks.

Contraction joints in the slabs should be tooled at the time of the pour or sawcut (¼ of slab depth) within 6 to 8 hours of concrete placement. Construction (cold) joints in foundations and area flatwork should either be thickened butt-joints with dowels or a thickened keyed-joint designed to resist vertical deflection at the joint. All joints in flatwork should be sealed to prevent moisture, vermin, or foreign material intrusion. Precautions should be taken to prevent curling of slabs in this arid desert region (refer to ACI guidelines).

Non-structural Concrete: All non-structural independent flatwork (sidewalks and housekeeping slabs) shall be a minimum of 5 inches thick and should be placed on a minimum of 4 inches of concrete sand or aggregate base, dowelled to the perimeter foundations where adjacent to the building to prevent separation and sloped 2% (sidewalks) or 1 to 2% (housekeeping slabs) away from the building.

Housekeeping slabs with shade structures shall have an 18-inch deep perimeter footing and shall have interior grade beams at 15 feet on center. A minimum of 24 inches of moisture conditioned (5% minimum above optimum) and 8 inches of compacted subgrade (85 to 90%) should underlie all independent flatwork.

Flatwork which contains steel reinforcing (except wire mesh) should be underlain by a 10-mil (minimum) polyethylene separation sheet and at least a 4-inch sand cover. All flatwork should be jointed in square patterns and at irregularities in shape at a maximum spacing of 8 feet or the least width of the sidewalk.

4.5 Concrete Mixes and Corrosivity

Selected chemical analyses for corrosivity were conducted on bulk samples of the near surface soil from the project site (Plate C-7). The native soils were found to have S2 (severe) levels of sulfate ion concentration (4,000 to 4,700 ppm). Sulfate ions in high concentrations can attack the cementitious material in concrete, causing weakening of the cement matrix and eventual deterioration by raveling. The following table provides American Concrete Institute (ACI) recommended cement types, water-cement ratio and minimum compressive strengths for concrete in contact with soils:

Concrete Mix Design Criteria due to Soluble Sulfate Exposure

Sulfate Exposure Class	Water-soluble Sulfate (SO_4) in soil, ppm	Cement Type	Maximum Water-Cement Ratio by weight	Minimum Strength f'c (psi)
S0	0-1,000	–	–	–
S1	1,000-2,000	II	0.50	4,000
S2	2,000-20,000	V	0.45	4,500
S3	Over 20,000	V (plus Pozzolon)	0.45	4,500

Note: From ACI 318-14 Table 19.3.1.1 and Table 19.3.2.1

A minimum of 6.0 sacks per cubic yard of concrete (4,500 psi) of Type V Portland Cement with a maximum water/cement ratio of 0.45 (by weight) should be used for concrete placed in contact with native soil on this project (sitework including streets, sidewalks, driveways, patios, and foundations). Admixtures may be required to allow placement of this low water/cement ratio concrete. Thorough concrete consolidation and hard trowel finishes should be used due to the aggressive soil exposure.

The native soil has moderate to severe levels of chloride ion concentration (370 to 1,150 ppm). Chloride ions can cause corrosion of reinforcing steel, anchor bolts and other buried metallic conduits. Resistivity determinations on the soil indicate very severe potential for metal loss because of electrochemical corrosion processes. Mitigation of the corrosion of steel can be achieved by using steel pipes coated with epoxy corrosion inhibitors, asphaltic and epoxy coatings, cathodic protection or by encapsulating the portion of the pipe lying above groundwater with a minimum of 3 inches of densely consolidated concrete. ***No metallic water pipes or conduits should be placed below foundations.***

Foundation designs shall provide a minimum concrete cover of three (3) inches around steel reinforcing or embedded components (anchor bolts, etc.) exposed to native soil or landscape water (to 18 inches above grade). If the 3-inch concrete edge distance cannot be achieved, all embedded steel components (anchor bolts, etc.) shall be epoxy coated for corrosion protection (in accordance with ASTM D3963/A934) or a corrosion inhibitor and a permanent waterproofing membrane shall be placed along the exterior face of the exterior footings. ***Hold-down straps should not be used at foundation edges due to corrosion of metal at its protrusion from the slab edge.***

Additionally, the concrete should be thoroughly vibrated at footings during placement to decrease the permeability of the concrete. Exterior foundation faces exposed to native soils (without adjacent mowstrips, sidewalks, or patios) should be coated with a permanent waterproofing membrane to prevent salt migration into concrete.

Copper water piping (except for trap primers) should not be placed under floor slabs. All copper piping within 18 inches of ground surface shall be sleeved or wrapped with two layers of 10 mil plumbers tape or sleeved with PVC piping to prevent contact with soil. The trap primer pipe shall be completely encapsulated in a PVC sleeve and Type K copper should be utilized if polyethylene tubing cannot be used. Pressurized waterlines are not allowed under the floor slab. Fire protection piping (risers) should be placed outside of the building foundation.

Landmark does not practice corrosion engineering. We recommend that a qualified corrosion engineer evaluate the corrosion potential on metal construction materials and concrete at the site to obtain final design recommendations.

4.6 Excavations

Shallow, temporary excavations, less than four feet deep, in native clayey/silty soils should stand nearly vertical for short duration. All temporary excavations over four feet in depth will require shoring or slope inclinations in conformance to Cal OSHA standards for Type B soils. These temporary excavations will require slope inclinations no steeper than 1½(H):1(V) unless trench shoring is used. If excavations are planned below groundwater (7 feet below ground surface (bgs), all excavation slopes should be excavated according to OSHA Standards for Type C soils.

Due to an existing silty/sandy layers encountered below 8 feet at the site, the use of a sheet-pile shoring system should be planned for excavations below 8 feet. Dewatering of the excavation site will be required prior to start of excavation. Dewatering systems should provide adequate filters so that fine silts/sands are not pumped from depth. Pumping of the fine soils can result in area settlement.

All discussions in this section regarding stable excavation slopes assumes minimal equipment vibration and adequate setback of excavated material and construction equipment from the top of the excavation. We recommended that the minimum setback distance be equal to the depth of excavation and at least 10 feet from the crown of the slope. If excavated materials are stockpiled adjacent to the excavation, the weight of the material should be considered as a surcharge load for slope stability.

The excavation for the receiving pits (16 feet deep) will encounter the groundwater table. Therefore, seepage and pumping subgrade conditions should be anticipated. If excavations are planned below groundwater an adequately designed dewatering system (well points) will be required to control groundwater seepage and prevent running ground conditions. The bottom of the receiving pits should be underlain by a minimum of 18 inches of 1.5-inch crushed rock (ASTM C33, size 467) encapsulated in a geotextile filter fabric. The responsibility for dewatering and selection of an appropriate system is beyond the scope of this report.

Stormwater Basin: Stormwater basins are planned for the north and west sides of the project site. The basins should be set back a minimum of 15 feet from the property line to allow access of equipment for maintenance. All permanent slopes should not be steeper than 3:1 to reduce wind and rain erosion. Protected slopes with ground cover may be as steep as 2:1. However, maintenance with motorized equipment may not be possible at this inclination.

4.7 Utility Trench Backfill

Utility Trench Backfill: Prior to placement of utility bedding, the exposed subgrade at the bottom of trench excavations should be examined for soft, loose, or unstable soil. Loose materials at trench bottoms resulting from excavation disturbance should be removed to firm material. If extensive soft or unstable areas are encountered, these areas should be over-excavated to a depth of at least 2 feet or to a firm base and be replaced with additional bedding material.

Backfill Materials: Pipe zone backfill (i.e., material beneath and in the immediate vicinity of the pipe) should consist of a 4 to 8 inch bed of ⅜-inch crushed rock, sand/cement slurry (3 sack cement factor), and/or crusher fines (sand) extending to a minimum of 12 inches above the top of pipe. If crushed rock is used for pipe zone backfill for utilities, the crushed rock material should be completed surrounded by a non-woven filter fabric such as Mirafi 140N or equivalent. The filter fabric shall cover the trench bottom, sidewalls and over the top of the crushed rock. The filter fabric is recommended to inhibit the migration of fine material into void spaces in the crushed rock which may create the potential for sinkholes or depressions to develop at the ground surface.
Pipe bedding should be in accordance with pipe manufacturer's recommendations. Recommendations provided above for pipe zone backfill are minimum requirements only. More stringent material specifications may be required to fulfill local codes and/or bedding requirements for specific types of pipes. On-site soil free of debris, vegetation, and other deleterious matter may be suitable for use as utility trench backfill above pipezone, but may be difficult to uniformly maintain at specified moistures and compact to the specified densities. Native backfill should only be placed and compacted after encapsulating buried pipes with suitable bedding and pipe envelope material.

Compaction Criteria: Mechanical compaction is recommended; ponding or jetting should not be allowed, especially in areas supporting structural loads or beneath concrete slabs supported-on-grade, pavements, or other improvements. All trench backfill should be placed and compacted in accordance with recommendations provided above for engineered fill.

The pipe zone material (crusher fines, sand) shall be compacted to a minimum of 95% of ASTM D1557 maximum density. Pipe deflection should be checked to not exceed 2% of pipe diameter. Native clay/silt soils may be used to backfill the remainder of the trench. Soils used for trench backfill shall be placed in maximum 6 inch lifts (loose), compacted to a minimum of 90% of ASTM D1557 maximum density at a minimum of 4% above optimum moisture.

Imported granular material is acceptable for backfill of utility trenches. Granular trench backfill used in building pad areas should be plugged with a solid (no clods or voids) 2-foot width of native clay soils at each end of the building foundation to prevent landscape water migration into the trench below the building.

Backfill soil of utility trenches within paved areas should be uniformly moisture conditioned to a minimum of 4% above optimum moisture, placed in layers not more than 6 inches in thickness and mechanically compacted to a minimum of 90% of the ASTM D1557 maximum dry density, except that the top 12 inches shall be compacted to 95% (if granular trench backfill).

4.8 Lateral Earth Pressures

Earth retaining structures, such as retaining walls, should be designed to resist the soil pressure imposed by the retained soil mass. Walls without granular drained backfill may be designed for an assumed static earth pressure equivalent to that exerted by a fluid weighing 60 pcf for unrestrained (active) conditions (able to rotate 0.1% of wall height), and 100 pcf for restrained (at-rest) conditions. These values should be verified at the actual wall locations during construction.

When applicable (Seismic Design Category D, E or F), retaining wall structures where the backfill is greater than 6 feet high shall be designed in addition to the static loading (active or at-rest condition) with an additional seismic lateral pressure increasing linearly with depth and the resultant acting as a point load at 0.4H above the base of the wall. The term H is the height of the backfill against a retaining wall in feet. The seismic load increment, shall be determined using the following equations for different wall type and backfill conditions:

Basement (restrained) walls with level backfill: $\Delta K_{ae} = \frac{1}{2}\gamma H^2(0.68\ PGA_M/g)$

Cantilever (unrestrained) wall with level backfill: $\Delta K_{ae} = \frac{1}{2}\gamma H^2(0.42\ PGA_M/g)$

Cantilever (unrestrained) wall with sloping backfill*: $\Delta K_{ae} = \frac{1}{2}\gamma H^2(0.70\ PGA_M/g)$

*Applicable for sloping backfill that is no steeper than 2:1 (horizontal:vertical).

Where:

ΔK_{ae} = Seismic Lateral Force (plf) based on seismic pressure
γ = 125 pcf
A PGA_M value of 1.04g has been determined for the project site.
H = Height of retained soil (ft)

Surcharge loads should be considered if loads are applied within a zone between the face of the wall and a plane projected behind the wall 45 degrees upward from the base of the wall. The increase in lateral earth pressure acting uniformly against the back of the wall should be taken as 50% of the surcharge load within this zone. Areas of the retaining wall subjected to traffic loads should be designed for a uniform surcharge load equivalent to two feet of native soil.
Walls should be provided with backdrains to reduce the potential for the buildup of hydrostatic pressure. The drainage system should consist of a composite HDPE drainage panel or a 2-foot wide zone of free draining crushed rock placed adjacent to the wall and extending 2/3 the height of the wall. The gravel should be completely enclosed in an approved filter fabric to separate the gravel and backfill soil. A perforated pipe should be placed perforations down at the base of the permeable material at least six inches below finished floor elevations. The pipe should be sloped to drain to an appropriate outlet that is protected against erosion. Walls should be properly waterproofed. The project geotechnical engineer should approve any alternative drain system.

4.9 Seismic Design

This site is located in the seismically active southern California area and the site structures are subject to strong ground shaking due to potential fault movements along the Brawley, Superstition Hills, and Imperial faults. Engineered design and earthquake-resistant construction are the common solutions to increase safety and development of seismic areas. Designs should comply with the latest edition of the CBC for Site Class D using the seismic coefficients given in Section 3.6 and Table 2 of this report.

4.10 Pavements

Pavements should be designed according to the 2020 Caltrans Highway Design Manual or other acceptable methods. Traffic indices were not provided by the project engineer or owner; therefore, we have provided structural sections for several traffic indices for comparative evaluation. The public agency or design engineer should decide the appropriate traffic index for the site. Maintenance of proper drainage is necessary to prolong the service life of the pavements

Pavement Subgrade Preparation: The native clay soils in roadway areas should be removed and recompacted to 12 inches below the design subgrade elevation. If dry soils are encountered at 12 inches below the design subgrade elevation, an additional 12 inches of native soil shall be uniformly moisture conditioned to 4 to 8% above optimum moisture content. Engineered fill in pavement areas should be uniformly moisture conditioned to a minimum of 4% above optimum moisture, placed in layers not more than 6 inches in thickness and mechanically compacted to a minimum of 90% of the ASTM D1557 maximum dry density.

Based on the current Caltrans method, an estimated R-value of 5 for the subgrade soil and assumed traffic indices, the following table provides our estimates for asphaltic concrete (AC) and Portland Cement Concrete (PCC) pavement sections.

Pavement Structural Sections

R-Value of Subgrade Soil - 5 (estimated) Design Method - Caltrans 2020

Traffic Index	Flexible Pavements		Rigid (PCC) Pavements	
	Asphaltic Concrete Thickness (in.)	Aggregate Base Thickness (in.)	Concrete Thickness (in.)	Aggregate Base Thickness (in.)
4.0	3.0	6.5	5.0	6.0
5.0	3.0	10.0	5.5	6.0
6.0	4.0	11.5	6.0	8.0
6.5	4.0	14.0	7.0	8.0
8.0	5.0	17.5	8.0	11.0
10.0	5.0	23.5	9.0	13.0
11.0	6.0	26.0	10.0	15.0

Notes:

1) Asphaltic concrete shall be Caltrans, Type A HMA (Hot Mix Asphalt), ¾ inch maximum (½ inch maximum for parking areas), with PG70-10 asphalt concrete, compacted to a minimum of 95% of the Hveem density (CAL 308) or a minimum of 92% of the Maximum Theoretical Density (ASTM D2041).
2) Aggregate base shall conform to Caltrans Class 2 (¾ in. maximum), compacted to a minimum of 95% of ASTM D1557 maximum dry density.
3) Place pavements on 12 inches of moisture conditioned (minimum 4% above optimum if clays) native clay soil compacted to a minimum of 90% (95% if sand subgrade) of the maximum dry density determined by ASTM D1557. Prewetting of subgrade soils (to 3.5 feet) may be required depending on moisture of subgrade at time of aggregate base placement.
4) Portland cement concrete for pavements should have Type V cement, a minimum compressive strength of 4,500 psi at 28 days, and a maximum water-cement ratio of 0.45.
5) Typical Street Classifications (Imperial County).

Parking Areas:	TI = 4.0
Cul-de-Sacs:	TI = 5.0
Local Streets:	TI = 6.0
Minor Collectors:	TI = 6.5 (trash truck areas)
Major Collectors:	TI = 8.0
Minor Arterial:	TI = 10.0
Primary Arterial:	TI = 11.0

Section 5
LIMITATIONS AND ADDITIONAL SERVICES

5.1 Limitations

The findings and professional opinions within this preliminary report are based on current information regarding the proposed Harris Road Recycling Facility located at the northwest corner of Harris Road and Hwy 111 east of Imperial, California. The conclusions and professional opinions of this report are invalid if:

- Structural loads change from those stated or the structures are relocated.
- The Additional Services section of this report is not followed.
- This report is used for adjacent or other property.
- Changes of grade or groundwater occur between the issuance of this report and construction other than those anticipated in this report.
- Any other change that materially alters the project from that proposed at the time this report was prepared.

This preliminary report was prepared according to the generally accepted *geotechnical engineering standards of practice* that existed in Imperial County at the time the report was prepared. No express or implied warranties are made in connection with our services.

Findings and professional opinions in this preliminary report are based on selected points of field exploration, geologic literature, limited laboratory testing, and our understanding of the proposed project. Our analysis of data and professional opinions presented herein are based on the assumption that soil conditions do not vary significantly from those found at specific exploratory locations. Variations in soil conditions can exist between and beyond the exploration points or groundwater elevations may change. The nature and extend of such variations may not become evident until, during or after construction. If variations are detected, we should immediately be notified as these conditions may require additional studies, consultation, and possible design revisions.

Environmental or hazardous materials evaluations were not performed by Landmark for this project. Landmark will assume no responsibility or liability whatsoever for any claim, damage, or injury which results from pre-existing hazardous materials being encountered or present on the project site, or from the discovery of such hazardous materials.

The client has responsibility to see that all parties to the project including designer, contractor, and subcontractor are made aware of this entire report within a reasonable time from its issuance. This report should be considered invalid for periods after two years from the date of report issuance without a review of the validity of the findings and professional opinions by our firm, because of potential changes in the Geotechnical Engineering Standards of Practice. This report is based upon government regulations in effect at the time of preparation of this report. Future changes or modifications to these regulations may require modification of this report. Land or facility use, on and off-site conditions, regulations, design criteria, procedures, or other factors may change over time, which may require additional work. Any party other than the client who wishes to use this report shall notify Landmark of such intended use. Based on the intended use of the report, Landmark may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or anyone else will release Landmark from any liability resulting from the use of this report by any unauthorized party and client agrees to defend, indemnify, and hold Landmark harmless from any claim or liability associated with such unauthorized use or non-compliance.

This report contains information that may be useful in the preparation of contract specifications. However, the report is not worded is such a manner that we recommend its use as a construction specification document without proper modification. The use of information contained in this report for bidding purposes should be done at the contractor's option and risk.

5.2 Plan Review

Landmark Consultants, Inc. should be retained during development of design and construction documents to check that the geotechnical professional opinions are appropriate for the proposed project and that the geotechnical professional opinions are properly interpreted and incorporated into the documents. Landmark should have the opportunity to review the final design plans and specifications for the project prior to the issuance of such for bidding.

Governmental agencies may require review of the plans by the geotechnical engineer of record for compliance to the geotechnical report.

5.3 Additional Services

We recommend that Landmark Consultant be retained to provide the tests and observations services during construction. *The geotechnical engineering firm providing such tests and observations shall become the geotechnical engineer of record and assume responsibility for the project.*

Landmark Consultants, Inc. professional opinions for this site are, to a high degree, dependent upon appropriate quality control of subgrade preparation, fill placement, and foundation construction. Accordingly, the findings and professional opinions in this report are made contingent upon the opportunity for Landmark Consultants to observe grading operations and foundation excavations for the proposed construction.

If parties other than Landmark Consultants, Inc. are engaged to provide observation and testing services during construction, such parties must be notified that they will be required to assume complete responsibility as the geotechnical engineer of record for the geotechnical phase of the project by concurring with the professional opinions in this report and/or by providing alternative professional guidance.

Additional information concerning the scope and cost of these services can be obtained from our office.

Section 6
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TABLES

Table 1
Summary of Characteristics of Closest Known Active Faults

Fault Name	Approximate Distance (miles)	Approximate Distance (km)	Maximum Moment Magnitude (Mw)	Fault Length (km)	Slip Rate (mm/yr)
Imperial	1.0	1.6	7	62 ± 6	20 ± 5
Brawley *	2.1	3.4			
Superstition Hills	6.6	10.6	6.6	23 ± 2	4 ± 2
Rico *	8.4	13.4			
Superstition Mountain	9.9	15.8	6.6	24 ± 2	5 ± 3
Unnamed 1*	16.9	27.0			
Unnamed 2*	16.9	27.1			
Yuha*	18.9	30.2			
Shell Beds	20.4	32.6			
Yuha Well *	20.4	32.7			
Elmore Ranch	21.3	34.1	6.6	29 ± 3	1 ± 0.5
Painted Gorge Wash*	22.6	36.2			
Vista de Anza*	23.6	37.7			
Laguna Salada	23.8	38.0	7	67 ± 7	3.5 ± 1.5
Borrego (Mexico)*	24.2	38.7			
Cerro Prieto *	26.5	42.4			
Ocotillo*	27.5	44.1			
San Jacinto - Borrego	28.9	46.2	6.6	29 ± 3	4 ± 2
Pescadores (Mexico)*	29.1	46.6			
Cucapah (Mexico)*	30.2	48.3			
Elsinore - Coyote Mountain	30.6	48.9	6.8	39 ± 4	4 ± 2
Algodones *	33.7	53.9			

* Note: Faults not included in CGS database.

Table 2
2019 California Building Code (CBC) and ASCE 7-16 Seismic Parameters

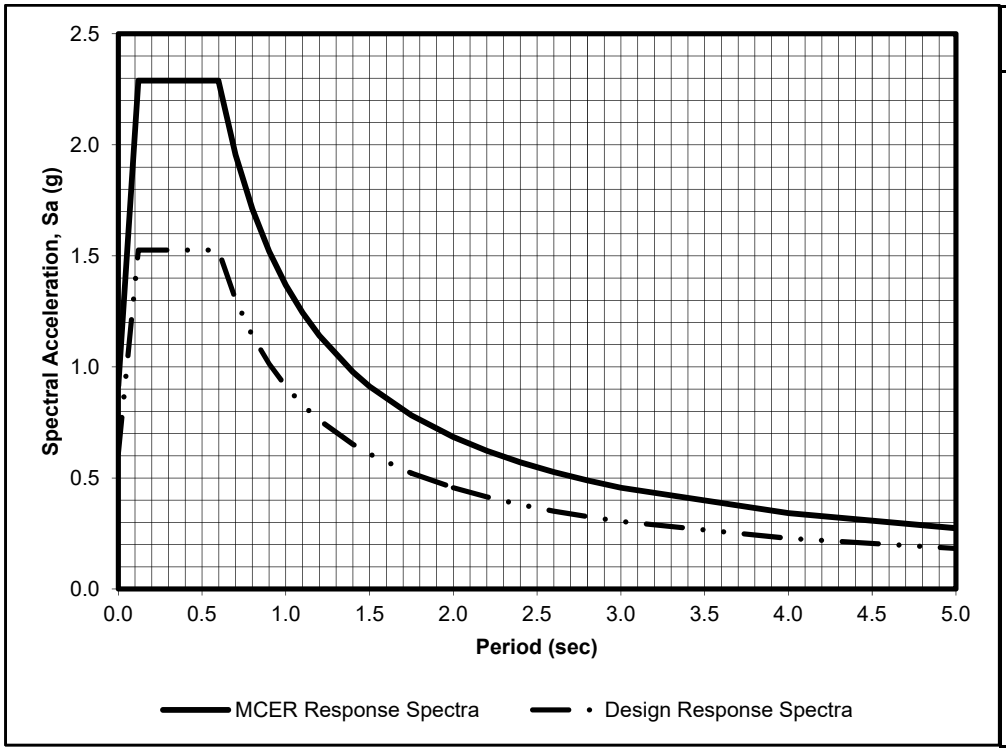
			ASCE 7-16 Reference
Soil Site Class:	**D**		Table 20.3-1
Latitude:	32.8857	N	
Longitude:	-115.5168	W	
Risk Category:	II		
Seismic Design Category:	E		

Maximum Considered Earthquake (MCE) Ground Motion

Mapped MCE_R Short Period Spectral Response	S_s	2.289 g	ASCE Figure 22-1	
Mapped MCE_R 1 second Spectral Response	S_1	0.805 g	ASCE Figure 22-2	
Short Period (0.2 s) Site Coefficient	F_a	1.00	ASCE Table 11.4-1	
Long Period (1.0 s) Site Coefficient	F_v	1.70	ASCE Table 11.4-2	
MCE_R Spectral Response Acceleration Parameter (0.2 s)	S_{MS}	2.289 g	= Fa * S_s	ASCE Equation 11.4-1
MCE_R Spectral Response Acceleration Parameter (1.0 s)	S_{M1}	1.369 g	= Fv * S_1	ASCE Equation 11.4-2

Design Earthquake Ground Motion

Design Spectral Response Acceleration Parameter (0.2 s)	S_{DS}	1.526 g	= 2/3*S_{MS}	ASCE Equation 11.4-3
Design Spectral Response Acceleration Parameter (1.0 s)	S_{D1}	0.912 g	= 2/3*S_{M1}	ASCE Equation 11.4-4
Risk Coefficient at Short Periods (less than 0.2 s)	C_{RS}	0.951		ASCE Figure 22-17
Risk Coefficient at Long Periods (greater than 1.0 s)	C_{R1}	0.921		ASCE Figure 22-18
	T_L	8.00 sec		ASCE Figure 22-12
	T_O	0.12 sec	=0.2*S_{D1}/S_{DS}	
	T_S	0.60 sec	=S_{D1}/S_{DS}	
Peak Ground Acceleration	PGA_M	1.04 g		ASCE Equation 11.8-1



Period T (sec)	Sa (g)	MCE_R Sa (g)
0.00	0.61	0.92
0.12	1.53	2.29
0.60	1.53	2.29
0.70	1.30	1.96
0.80	1.14	1.71
0.90	1.01	1.52
1.00	0.91	1.37
1.10	0.83	1.24
1.20	0.76	1.14
1.20	0.76	1.14
1.40	0.65	0.98
1.50	0.61	0.91
1.75	0.52	0.78
2.00	0.46	0.68
2.20	0.41	0.62
2.40	0.38	0.57
2.60	0.35	0.53
2.80	0.33	0.49
3.00	0.30	0.46
4.00	0.23	0.34
5.00	0.18	0.27

FIGURES

Source: California Geological Survey 2010 Fault Activity Map of California
http://www.quake.ca.gov/gmaps/FAM/faultactivitymap.html#

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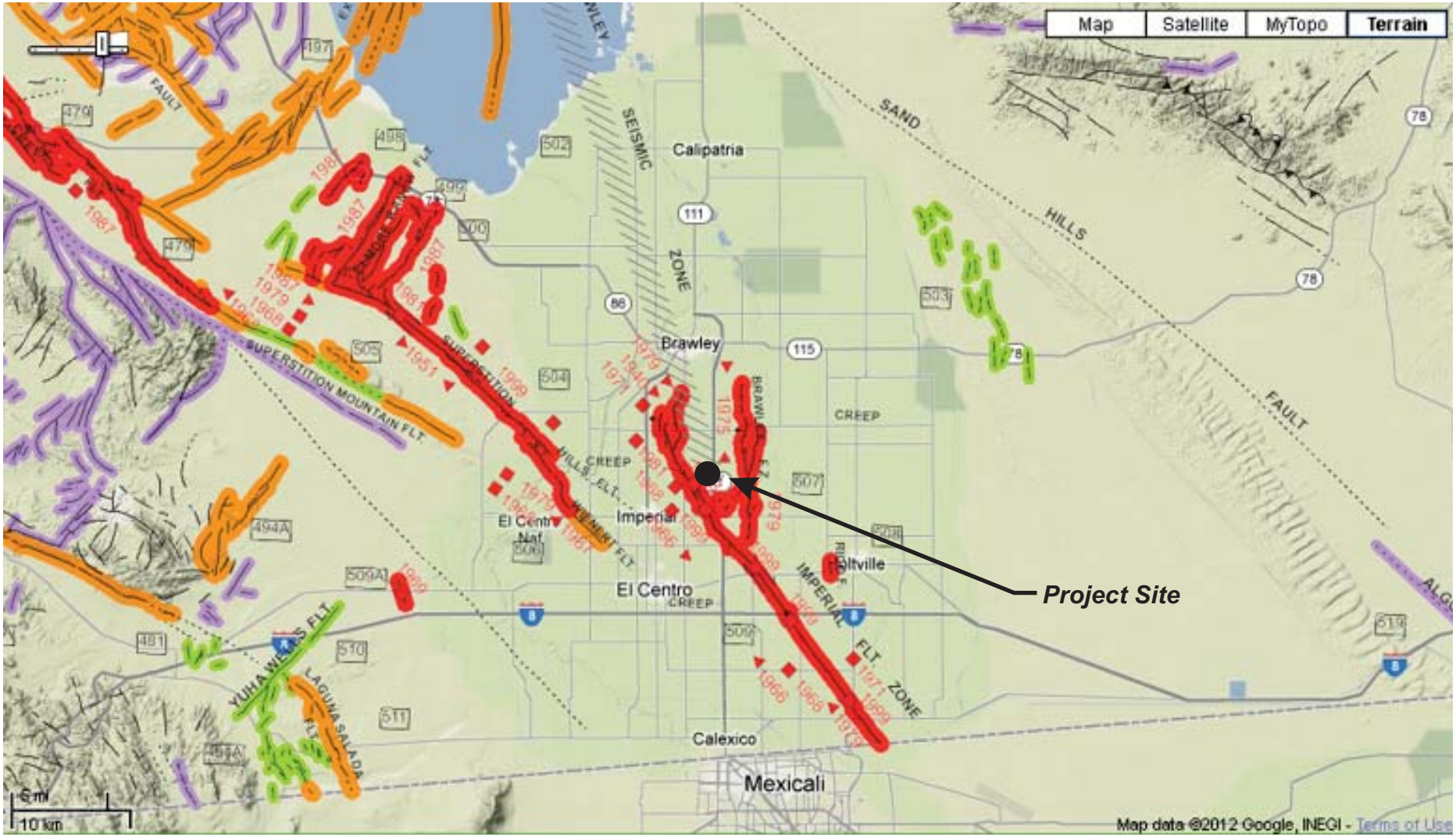
Regional Fault Map

Figure 1



Source: California Geological Survey 2010 Fault Activity Map of California
http://www.quake.ca.gov/gmaps/FAM/faultactivitymap.html#

LANDMARK Geo-Engineers and Geologists **Project No.: LE21077**	**Map of Local Faults**	**Figure 2**

EXPLANATION

Fault traces on land are indicated by solid lines where well located, by dashed lines where approximately located or inferred, and by dotted lines where concealed by younger rocks or by lakes or bays. Fault traces are queried where continuation or existence is uncertain. Concealed faults in the Great Valley are based on maps of selected subsurface horizons, so locations shown are approximate and may indicate structural trend only. All offshore faults based on seismic reflection profile records are shown as solid lines where well defined, dashed where inferred, queried where uncertain.

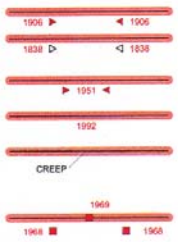
FAULT CLASSIFICATION COLOR CODE
(Indicating Recency of Movement)

Fault along which historic (last 200 years) displacement has occurred and is associated with one or more of the following:

(a) a recorded earthquake with surface rupture. (Also included are some well-defined surface breaks caused by ground shaking during earthquakes, e.g. extensive ground breakage, not on the White Wolf fault, caused by the Arvin-Tehachapi earthquake of 1952). The date of the associated earthquake is indicated. Where repeated surface ruptures on the same fault have occurred, only the date of the latest movement may be indicated, especially if earlier reports are not well documented as to location of ground breaks.

(b) fault creep slippage - slow ground displacement usually without accompanying earthquakes.

(c) displaced survey lines.



A triangle to the right or left of the date indicates termination point of observed surface displacement. Solid red triangle indicates known location of rupture termination point. Open black triangle indicates uncertain or estimated location of rupture termination point.

Date bracketed by triangles indicates local fault break.

No triangle by date indicates an intermediate point along fault break.

Fault that exhibits fault creep slippage. Hachures indicate linear extent of fault creep. Annotation (creep with leader) indicates representative locations where fault creep has been observed and recorded.

Square on fault indicates where fault creep slippage has occured that has been triggered by an earthquake on some other fault. Date of causative earthquake indicated. Squares to right and left of date indicate terminal points between which triggered creep slippage has occurred (creep either continuous or intermittent between these end points).

Holocene fault displacement (during past 11,700 years) without historic record. Geomorphic evidence for Holocene faulting includes sag ponds, scarps showing little erosion, or the following features in Holocene age deposits: offset stream courses, linear scarps, shutter ridges, and triangular faceted spurs. Recency of faulting offshore is based on the interpreted age of the youngest strata displaced by faulting.

Late Quaternary fault displacement (during past 700,000 years). Geomorphic evidence similar to that described for Holocene faults except features are less distinct. Faulting may be younger, but lack of younger overlying deposits precludes more accurate age classification.

Quaternary fault (age undifferentiated). Most faults of this category show evidence of displacement sometime during the past 1.6 million years; possible exceptions are faults which displace rocks of undifferentiated Plio-Pleistocene age. Unnumbered Quaternary faults were based on Fault Map of California, 1975. See Bulletin 201, Appendix D for source data.

Pre-Quaternary fault (older that 1.6 million years) or fault without recognized Quaternary displacement. Some faults are shown in this category because the source of mapping used was of reconnaissnce nature, or was not done with the object of dating fault displacements. Faults in this category are not necessarily inactive.

ADDITIONAL FAULT SYMBOLS

Bar and ball on downthrown side (relative or apparent).

Arrows along fault indicate relative or apparent direction of lateral movement.

Arrow on fault indicates direction of dip.

Low angle fault (barbs on upper plate). Fault surface generally dips less than 45° but locally may have been subsequently steepened. On offshore faults, barbs simply indicate a reverse fault regardless of steepness of dip.

OTHER SYMBOLS

Numbers refer to annotations listed in the appendices of the accompanying report. Annotations include fault name, age of fault displacement, and pertinent references including Earthquake Fault Zone maps where a fault has been zoned by the Alquist-Priolo Earthquake Fault Zoning Act. This Act requires the State Geologist to delineate zones to encompass faults with Holocene displacement.

Structural discontinuity (offshore) separating differing Neogene structural domains. May indicate discontinuities between basement rocks.

Brawley Seismic Zone, a linear zone of seismicity locally up to 10 km wide associated with the releasing step between the Imperial and San Andreas faults.

Geologic Time Scale			Years Before Present (Approx.)	Fault Symbol	Recency of Movement	DESCRIPTION	
						ON LAND	OFFSHORE
Quaternary	Late Quaternary	Historic				Displacement during historic time (e.g. San Andreas fault 1906). Includes areas of known fault creep.	
		Holocene	200			Displacement during Holocene time.	Fault offsets seafloor sediments or strata of Holocene age.
		Pleistocene	11,700			Faults showing evidence of displacement during late Quaternary time.	Fault cuts strata of Late Pleistocene age.
	Early Quaternary		700,000			Undivided Quaternary faults - most faults in this category show evidence of displacement during the last 1,600,000 years; possible exceptions are faults which displace rocks of undifferentiated Plio-Pleistocene age.	Fault cuts strata of Quaternary age.
Pre-Quaternary			1,600,000*			Faults without recognized Quaternary displacement or showing evidence of no displacement during Quaternary time. Not necessarily inactive.	Fault cuts strata of Pliocene or older age.
			4.5 billion (Age of Earth)				

* Quaternary now recognized as extending to 2.6 Ma (Walker and Geissman, 2009). Quaternary faults in this map were established using the previous 1.6 Ma criterion.

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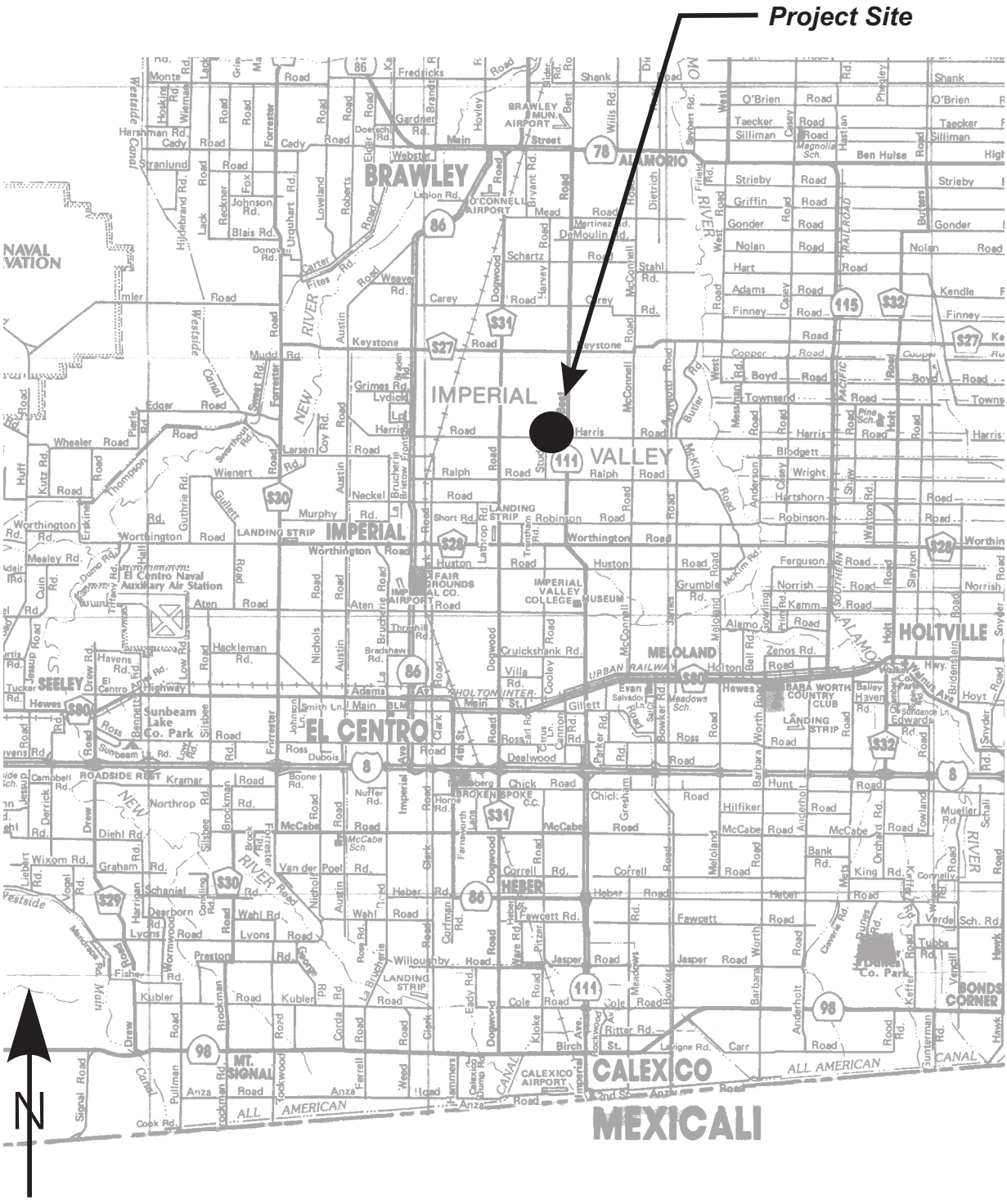
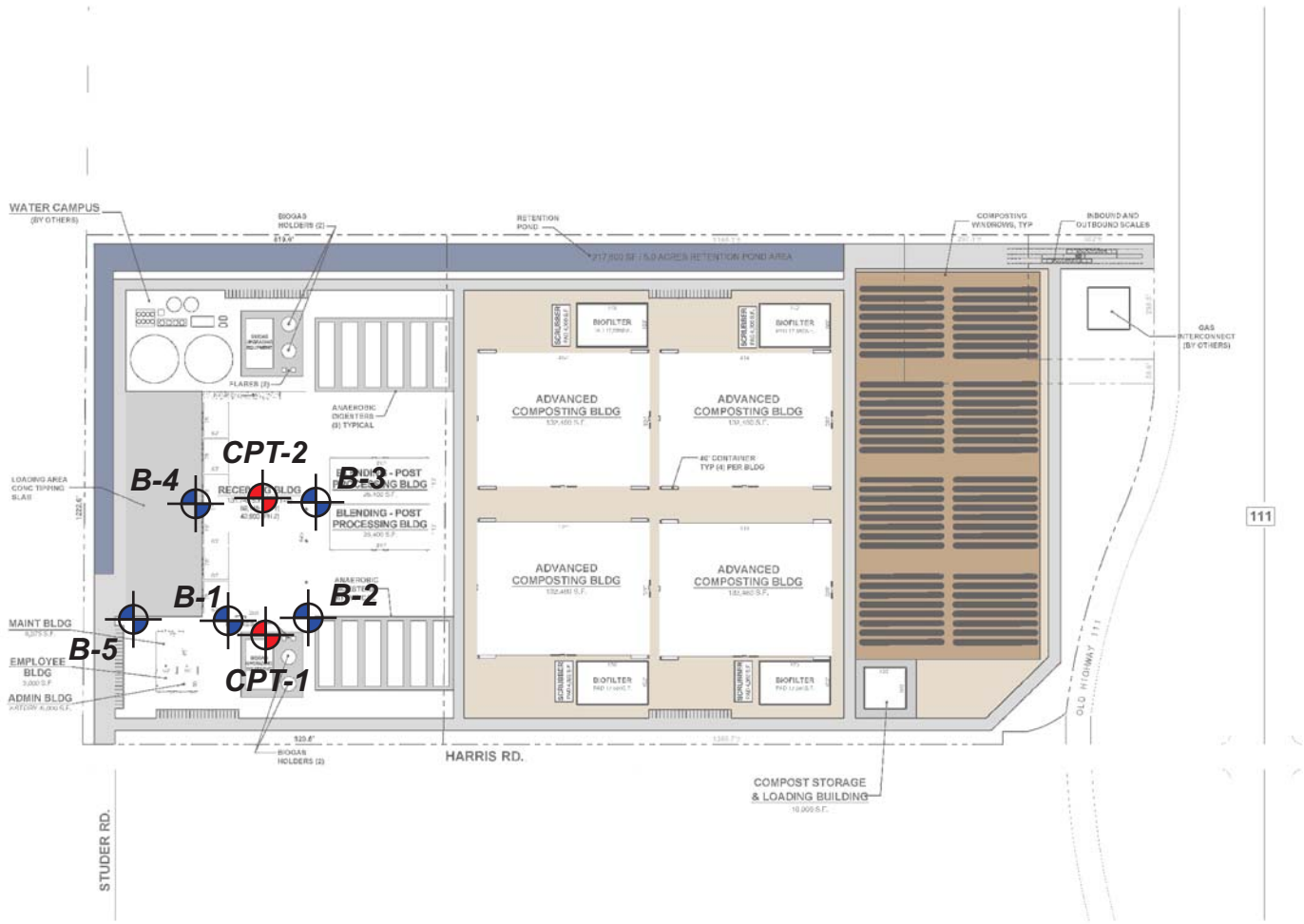
Fault Map Legend

Figure 3

APPENDIX 1



LANDMARK Geo-Engineers and Geologists **Project No.: LE08033**	**Vicinity Map**	**Plate 1**



Legend

Approximate Boring Location (2008)

Approximate CPT Sounding Location (2008)

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Site and Exploration Plan (March 2008)

Plate A-2

APPENDIX 2

Landmark Consultants, Inc.
780 N. 4th Street
El Centro, CA 92243

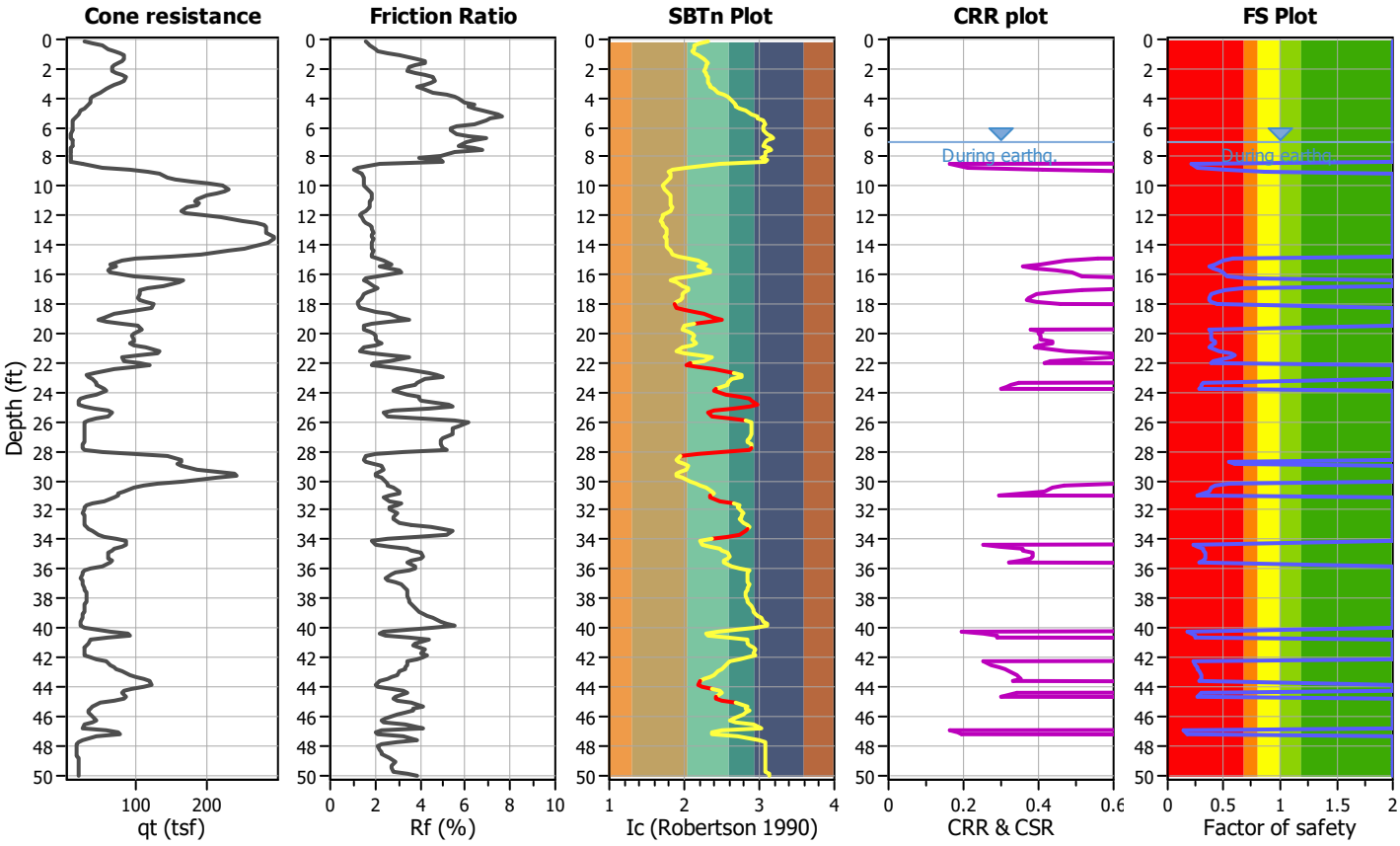
LIQUEFACTION ANALYSIS REPORT

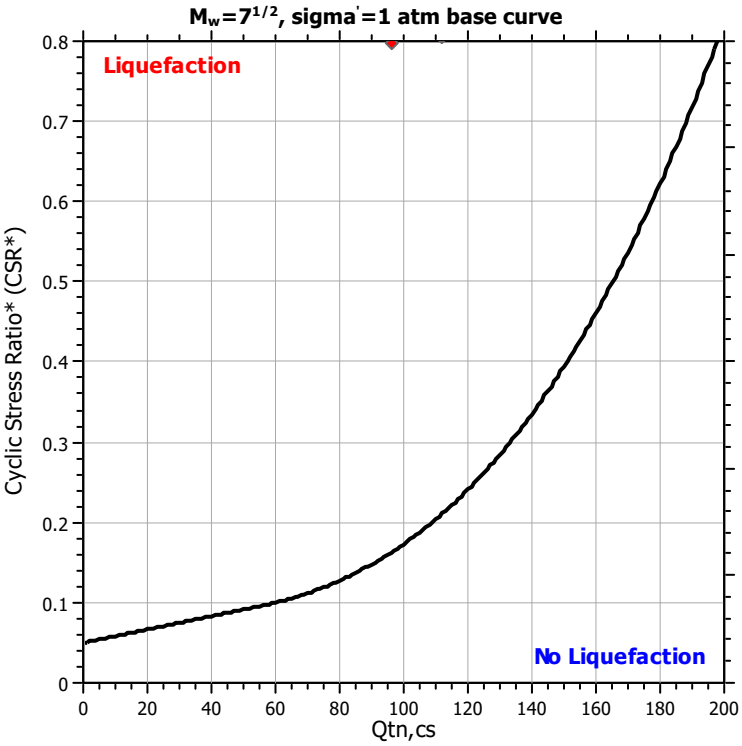
Project title : Harris Road Recycling Facility **Location : Imperial, CA**

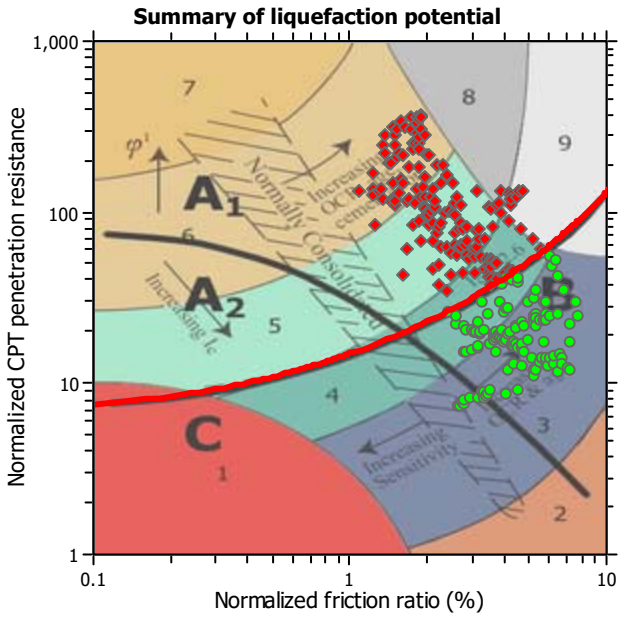
CPT file : CPT-01

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	7.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	7.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.00	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	1.04	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

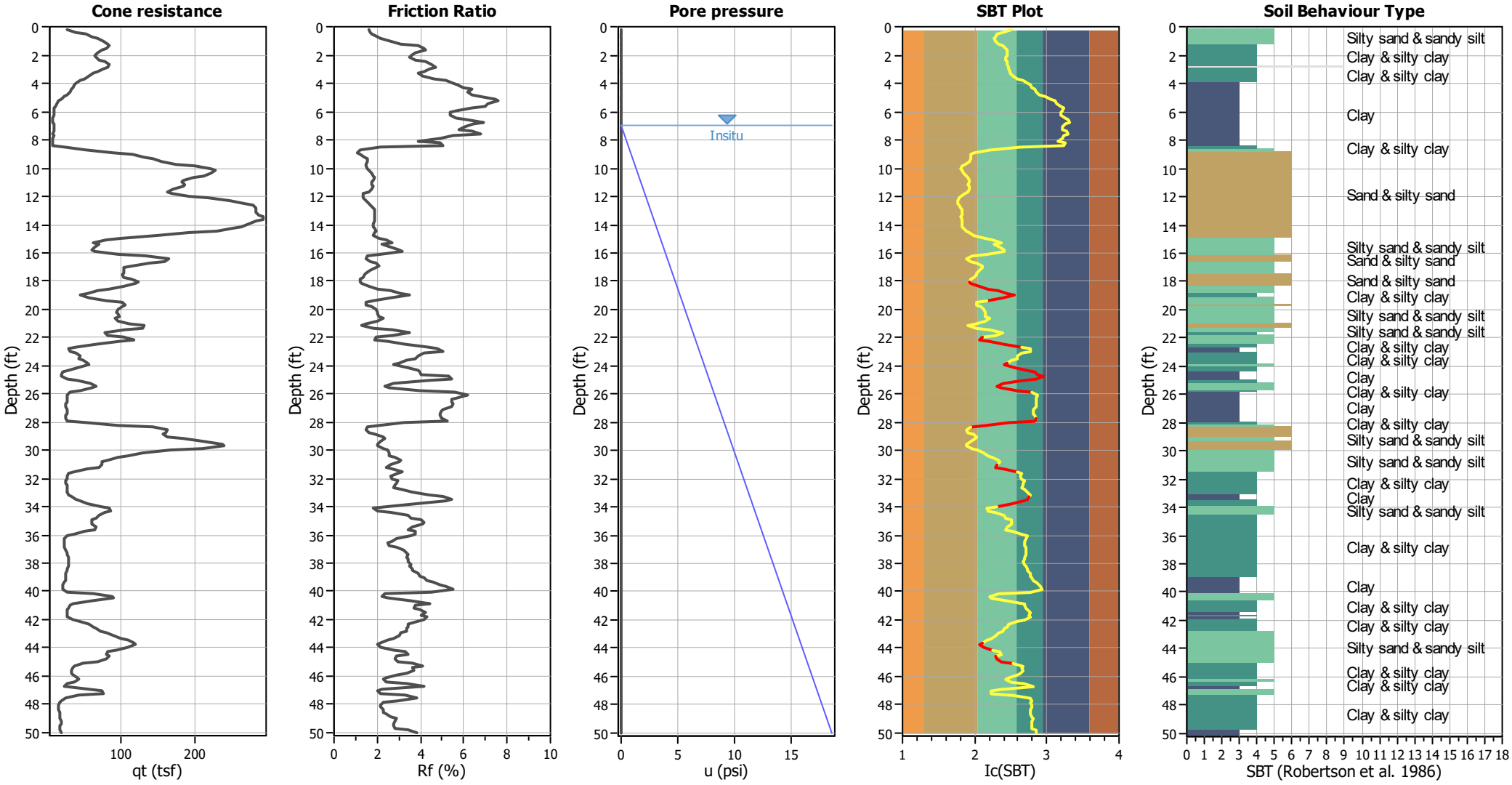






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



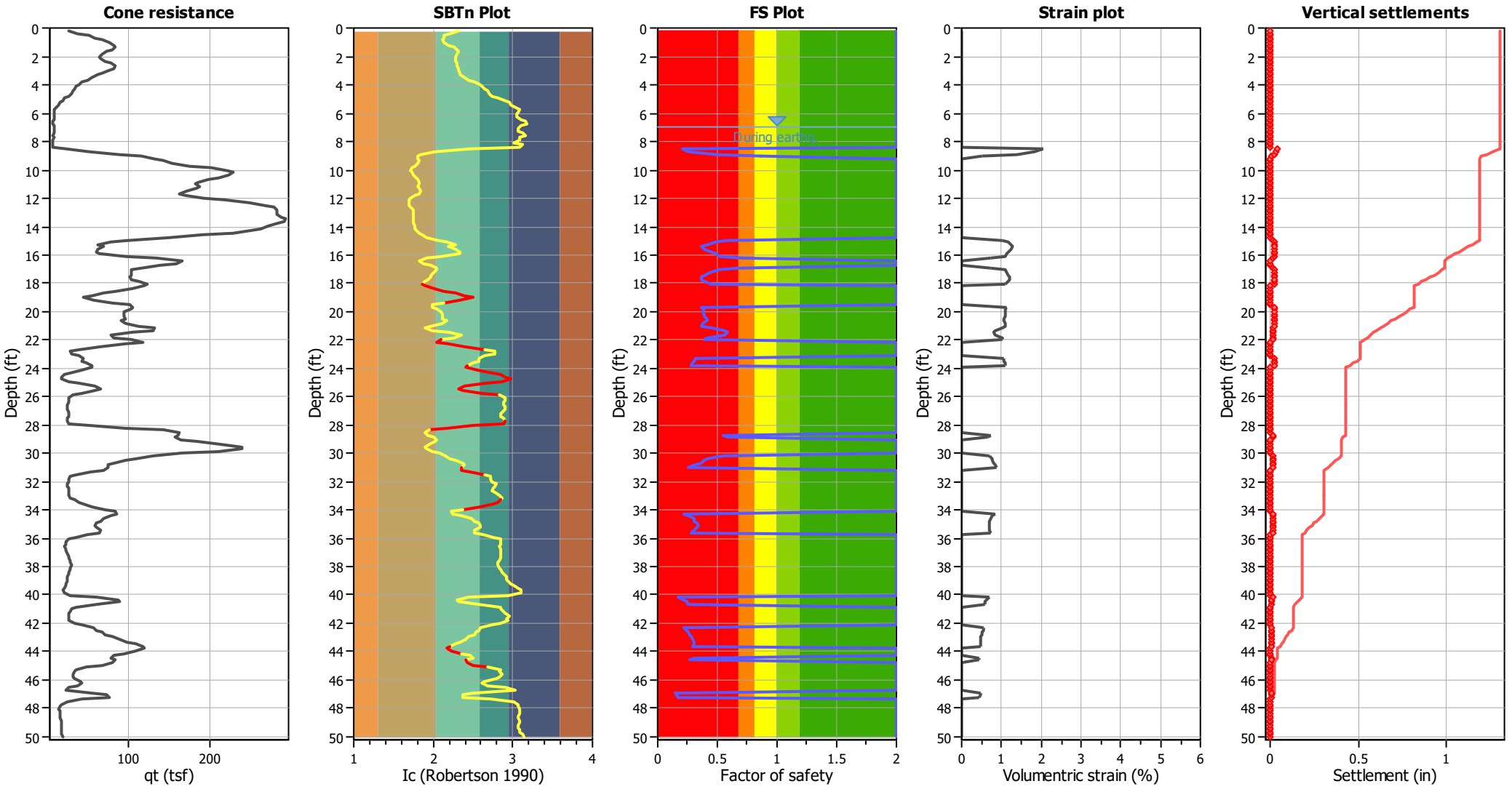
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	7.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	1.04	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	7.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

:: Post-earthquake settlement due to soil liquefaction ::

Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)	Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)
7.05	108.62	2.00	0.00	0.88	0.00	7.22	105.46	2.00	0.00	0.88	0.00
7.38	105.79	2.00	0.00	0.87	0.00	7.55	106.41	2.00	0.00	0.87	0.00
7.71	100.34	2.00	0.00	0.87	0.00	7.87	91.92	2.00	0.00	0.87	0.00
8.04	83.17	2.00	0.00	0.86	0.00	8.20	87.86	2.00	0.00	0.86	0.00
8.37	93.00	2.00	0.00	0.86	0.00	8.53	96.04	0.20	2.07	0.86	0.04
8.69	112.04	0.26	1.82	0.85	0.04	8.86	152.27	0.50	1.41	0.85	0.03
9.02	188.89	0.86	0.52	0.85	0.01	9.19	215.90	2.00	0.00	0.84	0.00
9.35	232.61	2.00	0.00	0.84	0.00	9.51	247.21	2.00	0.00	0.84	0.00
9.68	269.29	2.00	0.00	0.84	0.00	9.84	298.06	2.00	0.00	0.83	0.00
10.01	322.06	2.00	0.00	0.83	0.00	10.17	334.49	2.00	0.00	0.83	0.00
10.33	332.70	2.00	0.00	0.82	0.00	10.50	322.44	2.00	0.00	0.82	0.00
10.66	306.64	2.00	0.00	0.82	0.00	10.83	289.10	2.00	0.00	0.82	0.00
10.99	281.82	2.00	0.00	0.81	0.00	11.15	284.65	2.00	0.00	0.81	0.00
11.32	282.23	2.00	0.00	0.81	0.00	11.48	263.82	2.00	0.00	0.81	0.00
11.65	244.68	2.00	0.00	0.80	0.00	11.81	240.82	2.00	0.00	0.80	0.00
11.98	262.84	2.00	0.00	0.80	0.00	12.14	291.27	2.00	0.00	0.79	0.00
12.30	326.35	2.00	0.00	0.79	0.00	12.47	354.05	2.00	0.00	0.79	0.00
12.63	374.26	2.00	0.00	0.79	0.00	12.80	384.15	2.00	0.00	0.78	0.00
12.96	385.37	2.00	0.00	0.78	0.00	13.12	384.40	2.00	0.00	0.78	0.00
13.29	385.86	2.00	0.00	0.77	0.00	13.45	391.24	2.00	0.00	0.77	0.00
13.62	389.74	2.00	0.00	0.77	0.00	13.78	377.20	2.00	0.00	0.77	0.00
13.94	361.50	2.00	0.00	0.76	0.00	14.11	348.46	2.00	0.00	0.76	0.00
14.27	338.63	2.00	0.00	0.76	0.00	14.44	316.15	2.00	0.00	0.76	0.00
14.60	269.11	2.00	0.00	0.75	0.00	14.76	221.40	2.00	0.00	0.75	0.00
14.93	172.64	0.57	1.03	0.75	0.02	15.09	161.56	0.48	1.17	0.74	0.02
15.26	151.87	0.41	1.23	0.74	0.02	15.42	144.45	0.37	1.28	0.74	0.03
15.58	149.13	0.39	1.24	0.74	0.02	15.75	158.14	0.45	1.18	0.73	0.02
15.91	163.74	0.49	1.14	0.73	0.02	16.08	167.65	0.52	1.11	0.73	0.02
16.24	187.88	0.70	0.73	0.72	0.01	16.40	216.22	2.00	0.00	0.72	0.00
16.57	217.91	2.00	0.00	0.72	0.00	16.73	204.70	2.00	0.00	0.72	0.00
16.90	185.50	0.67	0.73	0.71	0.01	17.06	167.27	0.51	1.09	0.71	0.02
17.22	157.22	0.44	1.14	0.71	0.02	17.39	150.03	0.39	1.18	0.71	0.02
17.55	146.52	0.37	1.20	0.70	0.02	17.72	145.56	0.36	1.20	0.70	0.02
17.88	150.53	0.39	1.16	0.70	0.02	18.04	159.30	0.45	1.11	0.69	0.02
18.21	158.07	2.00	0.00	0.69	0.00	18.37	154.21	2.00	0.00	0.69	0.00
18.54	145.72	2.00	0.00	0.69	0.00	18.70	147.71	2.00	0.00	0.68	0.00
18.86	144.70	2.00	0.00	0.68	0.00	19.03	143.47	2.00	0.00	0.68	0.00
19.19	133.96	2.00	0.00	0.67	0.00	19.36	133.57	2.00	0.00	0.67	0.00
19.52	143.49	2.00	0.00	0.67	0.00	19.69	147.62	0.36	1.13	0.67	0.02
19.85	152.66	0.39	1.10	0.66	0.02	20.01	150.93	0.38	1.10	0.66	0.02
20.18	152.20	0.39	1.09	0.66	0.02	20.34	151.62	0.39	1.09	0.66	0.02
20.51	156.20	0.41	1.06	0.65	0.02	20.67	156.89	0.42	1.05	0.65	0.02
20.83	150.69	0.38	1.08	0.65	0.02	21.00	149.47	0.37	1.08	0.64	0.02
21.16	161.61	0.45	1.01	0.64	0.02	21.33	176.11	0.56	0.85	0.64	0.02
21.49	180.17	0.59	0.82	0.64	0.02	21.65	177.27	0.56	0.84	0.63	0.02
21.82	156.06	0.41	1.02	0.63	0.02	21.98	153.23	0.39	1.03	0.63	0.02
22.15	164.68	2.00	0.00	0.62	0.00	22.31	164.74	2.00	0.00	0.62	0.00
22.47	156.84	2.00	0.00	0.62	0.00	22.64	145.76	2.00	0.00	0.62	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)	Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)
22.80	134.54	2.00	0.00	0.61	0.00	22.97	141.51	2.00	0.00	0.61	0.00
23.13	140.56	2.00	0.00	0.61	0.00	23.29	141.73	0.32	1.06	0.61	0.02
23.46	138.66	0.31	1.08	0.60	0.02	23.62	136.51	0.29	1.09	0.60	0.02
23.79	133.76	0.28	1.10	0.60	0.02	23.95	129.23	2.00	0.00	0.59	0.00
24.11	128.54	2.00	0.00	0.59	0.00	24.28	117.96	2.00	0.00	0.59	0.00
24.44	104.04	2.00	0.00	0.59	0.00	24.61	99.22	2.00	0.00	0.58	0.00
24.77	113.73	2.00	0.00	0.58	0.00	24.93	134.69	2.00	0.00	0.58	0.00
25.10	142.41	2.00	0.00	0.57	0.00	25.26	130.73	2.00	0.00	0.57	0.00
25.43	125.55	2.00	0.00	0.57	0.00	25.59	124.51	2.00	0.00	0.57	0.00
25.75	139.05	2.00	0.00	0.56	0.00	25.92	145.60	2.00	0.00	0.56	0.00
26.08	143.29	2.00	0.00	0.56	0.00	26.25	136.39	2.00	0.00	0.56	0.00
26.41	130.72	2.00	0.00	0.55	0.00	26.57	130.26	2.00	0.00	0.55	0.00
26.74	130.29	2.00	0.00	0.55	0.00	26.90	129.55	2.00	0.00	0.54	0.00
27.07	127.27	2.00	0.00	0.54	0.00	27.23	127.12	2.00	0.00	0.54	0.00
27.40	125.11	2.00	0.00	0.54	0.00	27.56	120.79	2.00	0.00	0.53	0.00
27.72	120.66	2.00	0.00	0.53	0.00	27.89	128.01	2.00	0.00	0.53	0.00
28.05	130.66	2.00	0.00	0.52	0.00	28.22	139.22	2.00	0.00	0.52	0.00
28.38	162.48	2.00	0.00	0.52	0.00	28.54	176.16	2.00	0.00	0.52	0.00
28.71	178.78	0.55	0.75	0.51	0.01	28.87	183.85	0.59	0.64	0.51	0.01
29.04	201.13	2.00	0.00	0.51	0.00	29.20	221.81	2.00	0.00	0.51	0.00
29.36	238.72	2.00	0.00	0.50	0.00	29.53	254.93	2.00	0.00	0.50	0.00
29.69	256.41	2.00	0.00	0.50	0.00	29.86	240.81	2.00	0.00	0.49	0.00
30.02	208.41	2.00	0.00	0.49	0.00	30.18	178.81	0.54	0.71	0.49	0.01
30.35	160.91	0.42	0.77	0.49	0.02	30.51	156.78	0.39	0.78	0.48	0.02
30.68	153.09	0.37	0.79	0.48	0.02	30.84	144.27	0.32	0.83	0.48	0.02
31.00	132.23	0.26	0.88	0.47	0.02	31.17	122.56	2.00	0.00	0.47	0.00
31.33	115.92	2.00	0.00	0.47	0.00	31.50	107.46	2.00	0.00	0.47	0.00
31.66	95.47	2.00	0.00	0.46	0.00	31.82	87.48	2.00	0.00	0.46	0.00
31.99	87.25	2.00	0.00	0.46	0.00	32.15	90.01	2.00	0.00	0.46	0.00
32.32	89.24	2.00	0.00	0.45	0.00	32.48	88.81	2.00	0.00	0.45	0.00
32.64	88.79	2.00	0.00	0.45	0.00	32.81	93.26	2.00	0.00	0.44	0.00
32.97	100.10	2.00	0.00	0.44	0.00	33.14	114.01	2.00	0.00	0.44	0.00
33.30	129.55	2.00	0.00	0.44	0.00	33.46	144.50	2.00	0.00	0.43	0.00
33.63	149.57	2.00	0.00	0.43	0.00	33.79	139.66	2.00	0.00	0.43	0.00
33.96	124.29	2.00	0.00	0.42	0.00	34.12	115.96	2.00	0.00	0.42	0.00
34.28	122.71	0.22	0.83	0.42	0.02	34.45	132.33	0.26	0.77	0.42	0.02
34.61	143.76	0.31	0.72	0.41	0.01	34.78	143.82	0.31	0.71	0.41	0.01
34.94	148.43	0.33	0.69	0.41	0.01	35.10	148.85	0.34	0.68	0.41	0.01
35.27	147.52	0.33	0.68	0.40	0.01	35.43	143.35	0.31	0.69	0.40	0.01
35.60	137.57	0.28	0.71	0.40	0.01	35.76	131.10	2.00	0.00	0.39	0.00
35.93	112.68	2.00	0.00	0.39	0.00	36.09	95.72	2.00	0.00	0.39	0.00
36.25	83.68	2.00	0.00	0.39	0.00	36.42	79.79	2.00	0.00	0.38	0.00
36.58	76.20	2.00	0.00	0.38	0.00	36.75	77.30	2.00	0.00	0.38	0.00
36.91	82.70	2.00	0.00	0.37	0.00	37.07	88.88	2.00	0.00	0.37	0.00
37.24	92.97	2.00	0.00	0.37	0.00	37.40	94.50	2.00	0.00	0.37	0.00
37.57	95.39	2.00	0.00	0.36	0.00	37.73	96.97	2.00	0.00	0.36	0.00
37.89	97.89	2.00	0.00	0.36	0.00	38.06	98.24	2.00	0.00	0.35	0.00
38.22	96.38	2.00	0.00	0.35	0.00	38.39	95.59	2.00	0.00	0.35	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)	Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)
38.55	95.12	2.00	0.00	0.35	0.00	38.71	96.90	2.00	0.00	0.34	0.00
38.88	97.10	2.00	0.00	0.34	0.00	39.04	98.03	2.00	0.00	0.34	0.00
39.21	97.92	2.00	0.00	0.34	0.00	39.37	98.18	2.00	0.00	0.33	0.00
39.53	97.91	2.00	0.00	0.33	0.00	39.70	98.17	2.00	0.00	0.33	0.00
39.86	102.49	2.00	0.00	0.32	0.00	40.03	106.52	2.00	0.00	0.32	0.00
40.19	108.04	0.17	0.70	0.32	0.01	40.35	122.30	0.22	0.63	0.32	0.01
40.52	130.66	0.25	0.59	0.31	0.01	40.68	131.57	0.25	0.58	0.31	0.01
40.85	116.59	2.00	0.00	0.31	0.00	41.01	101.65	2.00	0.00	0.30	0.00
41.17	97.04	2.00	0.00	0.30	0.00	41.34	98.46	2.00	0.00	0.30	0.00
41.50	99.42	2.00	0.00	0.30	0.00	41.67	99.12	2.00	0.00	0.29	0.00
41.83	102.15	2.00	0.00	0.29	0.00	41.99	109.93	2.00	0.00	0.29	0.00
42.16	116.75	2.00	0.00	0.29	0.00	42.32	123.46	0.22	0.56	0.28	0.01
42.49	127.79	0.24	0.53	0.28	0.01	42.65	131.66	0.26	0.52	0.28	0.01
42.81	135.19	0.27	0.50	0.27	0.01	42.98	136.86	0.28	0.49	0.27	0.01
43.14	140.87	0.30	0.47	0.27	0.01	43.31	141.86	0.30	0.47	0.27	0.01
43.47	142.66	0.31	0.46	0.26	0.01	43.64	138.86	0.29	0.46	0.26	0.01
43.80	134.57	2.00	0.00	0.26	0.00	43.96	131.63	2.00	0.00	0.25	0.00
44.13	136.86	2.00	0.00	0.25	0.00	44.29	140.85	2.00	0.00	0.25	0.00
44.46	141.37	0.30	0.43	0.25	0.01	44.62	133.35	0.26	0.45	0.24	0.01
44.78	128.68	2.00	0.00	0.24	0.00	44.95	122.21	2.00	0.00	0.24	0.00
45.11	117.01	2.00	0.00	0.24	0.00	45.28	109.53	2.00	0.00	0.23	0.00
45.44	101.48	2.00	0.00	0.23	0.00	45.60	98.22	2.00	0.00	0.23	0.00
45.77	94.41	2.00	0.00	0.22	0.00	45.93	90.92	2.00	0.00	0.22	0.00
46.10	89.11	2.00	0.00	0.22	0.00	46.26	87.33	2.00	0.00	0.22	0.00
46.42	85.05	2.00	0.00	0.21	0.00	46.59	87.45	2.00	0.00	0.21	0.00
46.75	89.25	2.00	0.00	0.21	0.00	46.92	96.49	0.15	0.49	0.20	0.01
47.08	103.01	0.16	0.46	0.20	0.01	47.24	107.47	0.17	0.44	0.20	0.01
47.41	104.06	2.00	0.00	0.20	0.00	47.57	87.10	2.00	0.00	0.19	0.00
47.74	69.14	2.00	0.00	0.19	0.00	47.90	58.69	2.00	0.00	0.19	0.00
48.06	55.97	2.00	0.00	0.19	0.00	48.23	56.40	2.00	0.00	0.18	0.00
48.39	58.24	2.00	0.00	0.18	0.00	48.56	59.25	2.00	0.00	0.18	0.00
48.72	60.83	2.00	0.00	0.17	0.00	48.88	63.24	2.00	0.00	0.17	0.00
49.05	66.40	2.00	0.00	0.17	0.00	49.21	66.90	2.00	0.00	0.17	0.00
49.38	65.86	2.00	0.00	0.16	0.00	49.54	64.43	2.00	0.00	0.16	0.00
49.70	65.68	2.00	0.00	0.16	0.00	49.87	71.33	2.00	0.00	0.15	0.00
50.03	76.42	2.00	0.00	0.15	0.00						

Total estimated settlement: 1.30

Abbreviations

$Q_{tn,cs}$: Equivalent clean sand normalized cone resistance
FS: Factor of safety against liquefaction
e_v (%): Post-liquefaction volumentric strain
DF: e_v depth weighting factor
Settlement: Calculated settlement

Landmark Consultants, Inc.
780 N. 4th Street
El Centro, CA 92243

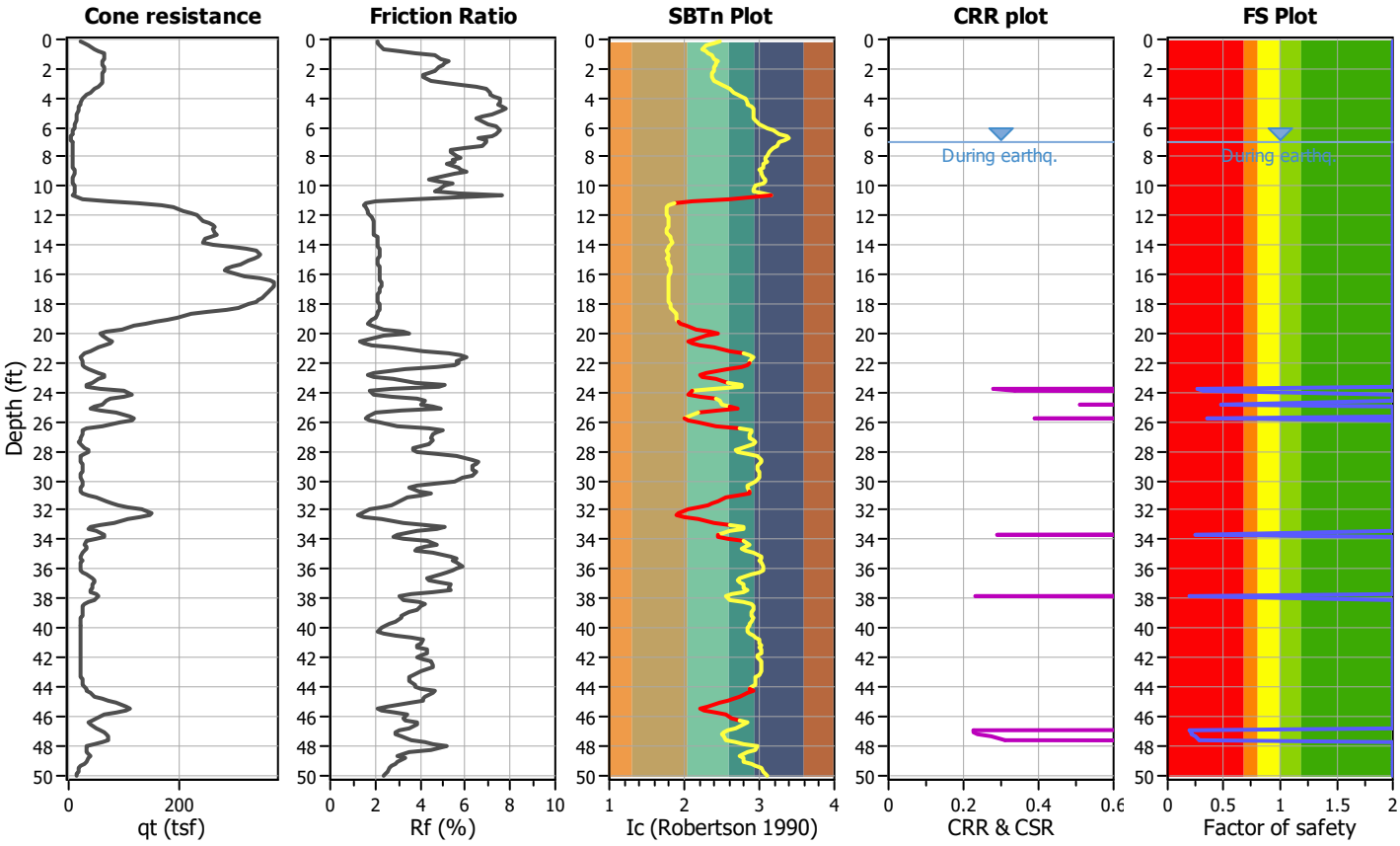
LIQUEFACTION ANALYSIS REPORT

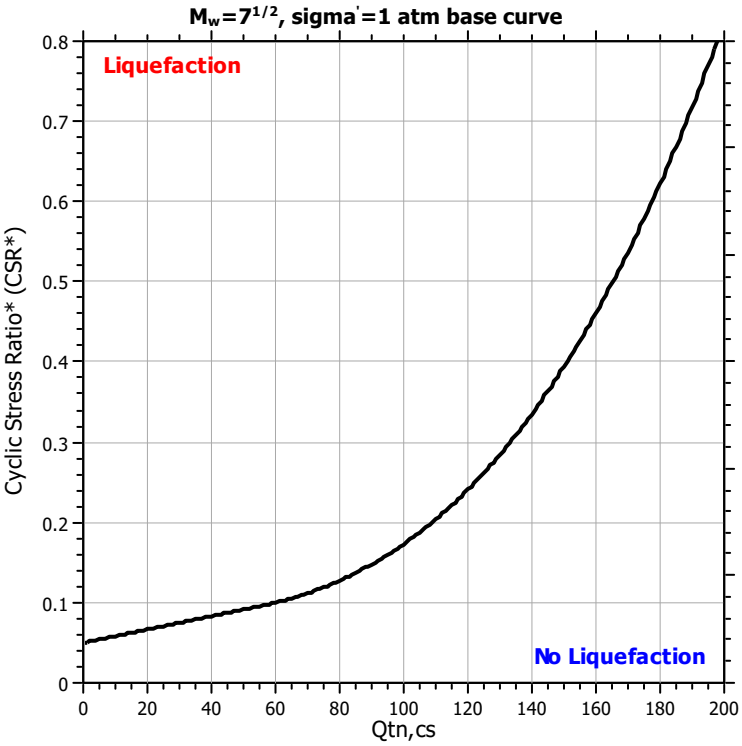
Project title : Harris Road Recycling Facility **Location : Imperial, CA**

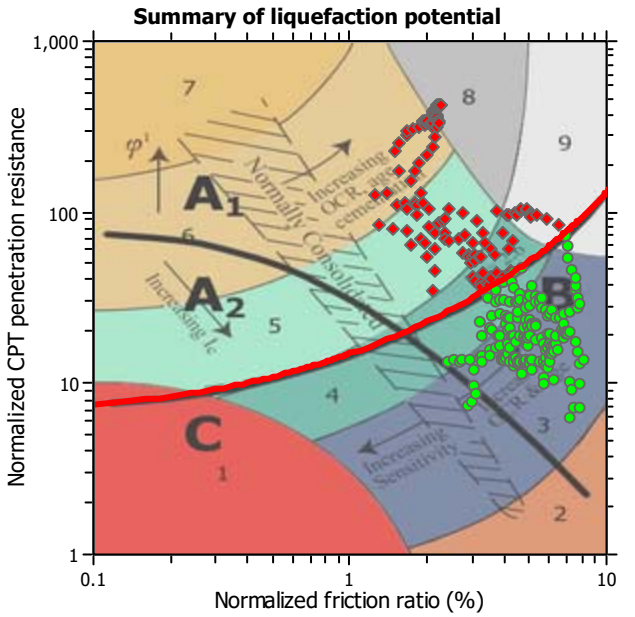
CPT file : CPT-02

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	7.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	7.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.00	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	1.04	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

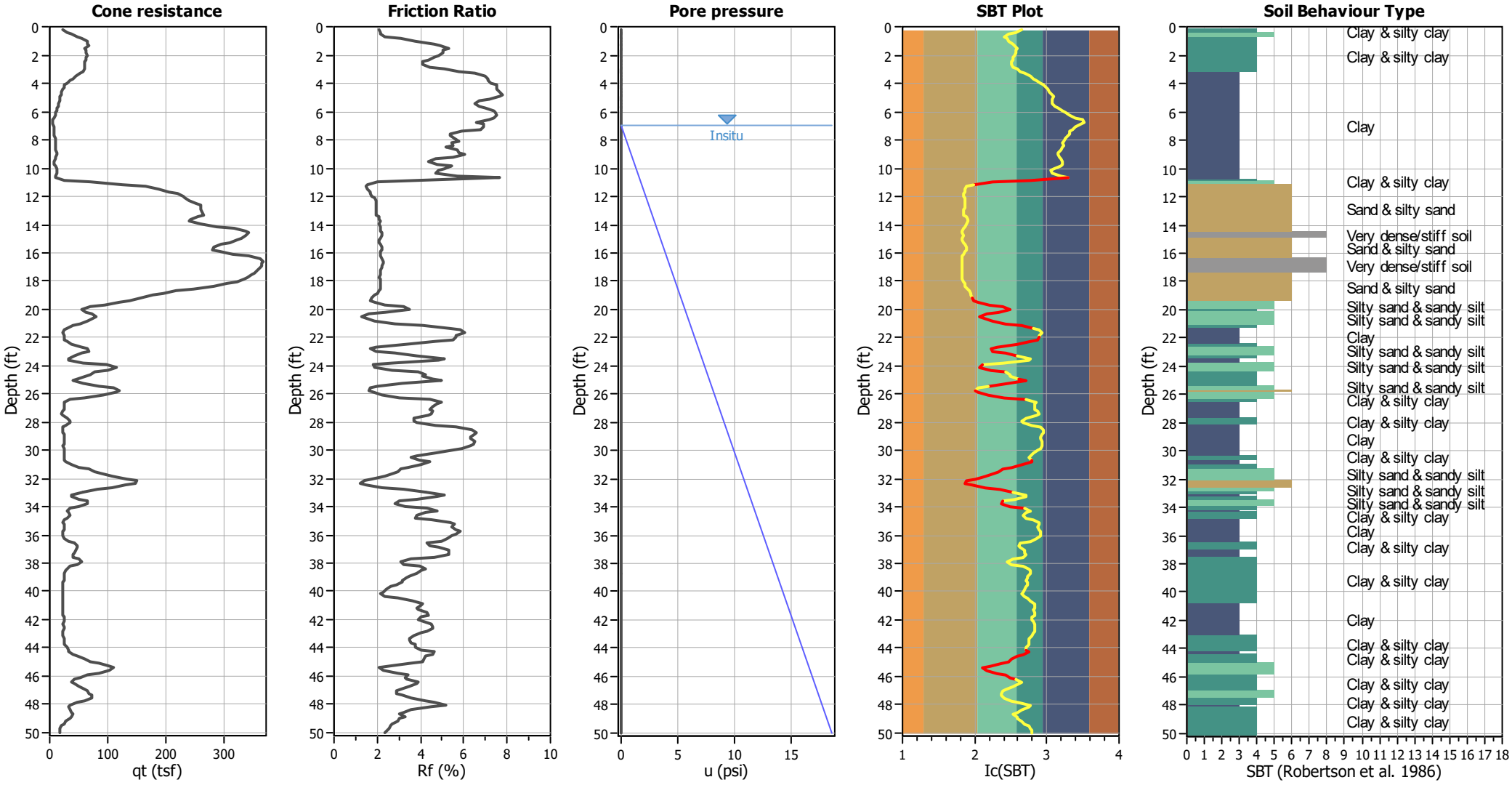






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



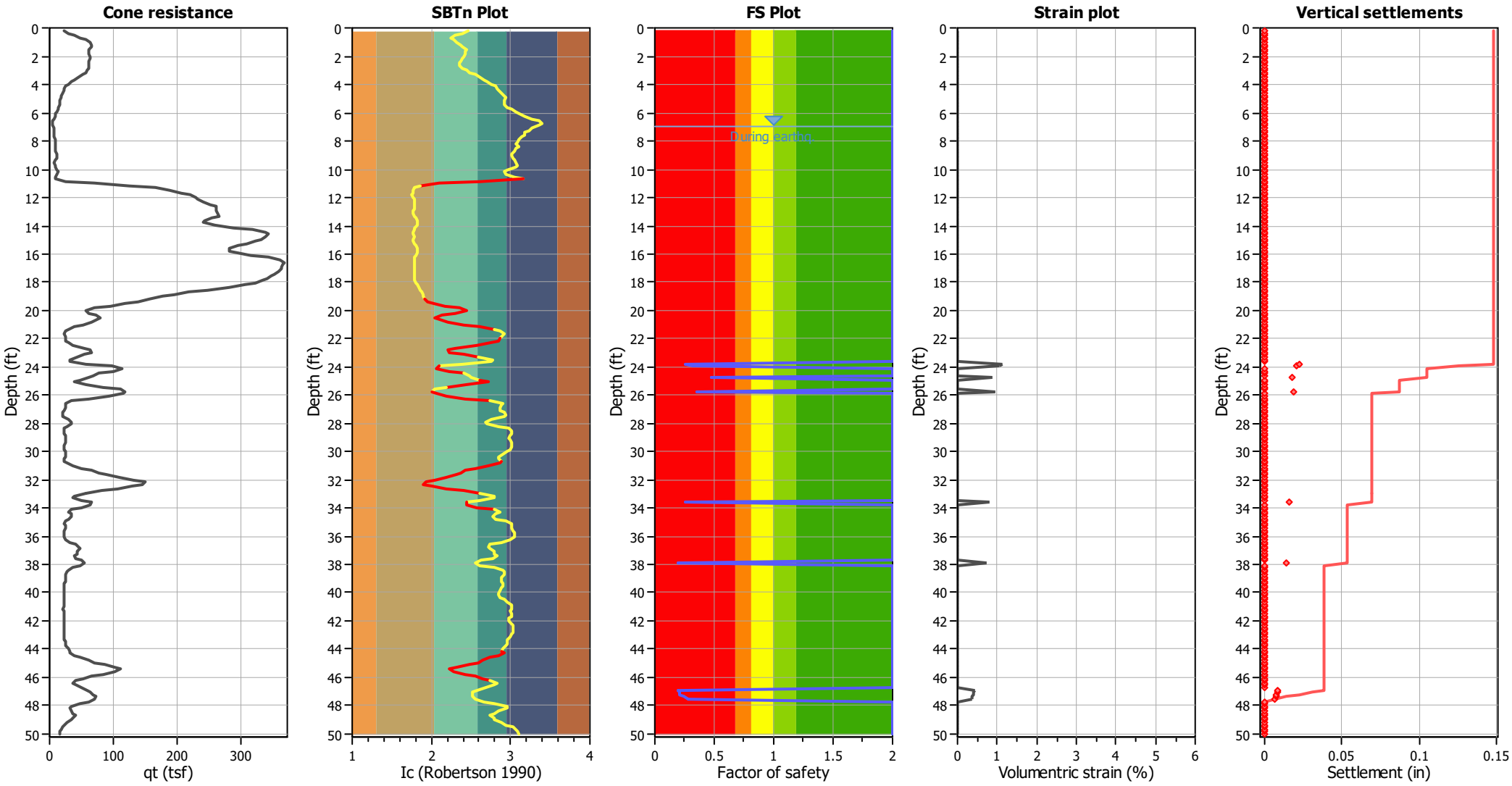
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	7.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	1.04	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	7.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

:: Post-earthquake settlement due to soil liquefaction ::

Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)	Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)
7.05	92.86	2.00	0.00	0.88	0.00	7.22	97.43	2.00	0.00	0.88	0.00
7.38	92.88	2.00	0.00	0.87	0.00	7.55	87.63	2.00	0.00	0.87	0.00
7.71	90.47	2.00	0.00	0.87	0.00	7.87	97.76	2.00	0.00	0.87	0.00
8.04	102.52	2.00	0.00	0.86	0.00	8.20	100.39	2.00	0.00	0.86	0.00
8.37	98.34	2.00	0.00	0.86	0.00	8.53	97.92	2.00	0.00	0.86	0.00
8.69	106.74	2.00	0.00	0.85	0.00	8.86	115.27	2.00	0.00	0.85	0.00
9.02	118.04	2.00	0.00	0.85	0.00	9.19	108.46	2.00	0.00	0.84	0.00
9.35	93.01	2.00	0.00	0.84	0.00	9.51	85.51	2.00	0.00	0.84	0.00
9.68	90.68	2.00	0.00	0.84	0.00	9.84	102.86	2.00	0.00	0.83	0.00
10.01	111.17	2.00	0.00	0.83	0.00	10.17	111.34	2.00	0.00	0.83	0.00
10.33	106.68	2.00	0.00	0.82	0.00	10.50	107.77	2.00	0.00	0.82	0.00
10.66	118.75	2.00	0.00	0.82	0.00	10.83	132.48	2.00	0.00	0.82	0.00
10.99	153.66	2.00	0.00	0.81	0.00	11.15	204.68	2.00	0.00	0.81	0.00
11.32	251.21	2.00	0.00	0.81	0.00	11.48	278.08	2.00	0.00	0.81	0.00
11.65	302.64	2.00	0.00	0.80	0.00	11.81	319.72	2.00	0.00	0.80	0.00
11.98	333.70	2.00	0.00	0.80	0.00	12.14	340.97	2.00	0.00	0.79	0.00
12.30	353.88	2.00	0.00	0.79	0.00	12.47	366.84	2.00	0.00	0.79	0.00
12.63	374.56	2.00	0.00	0.79	0.00	12.80	374.03	2.00	0.00	0.78	0.00
12.96	368.81	2.00	0.00	0.78	0.00	13.12	371.52	2.00	0.00	0.78	0.00
13.29	373.49	2.00	0.00	0.77	0.00	13.45	365.23	2.00	0.00	0.77	0.00
13.62	351.72	2.00	0.00	0.77	0.00	13.78	349.40	2.00	0.00	0.77	0.00
13.94	368.61	2.00	0.00	0.76	0.00	14.11	401.14	2.00	0.00	0.76	0.00
14.27	434.35	2.00	0.00	0.76	0.00	14.44	456.33	2.00	0.00	0.76	0.00
14.60	460.98	2.00	0.00	0.75	0.00	14.76	454.85	2.00	0.00	0.75	0.00
14.93	440.88	2.00	0.00	0.75	0.00	15.09	427.16	2.00	0.00	0.74	0.00
15.26	410.69	2.00	0.00	0.74	0.00	15.42	396.12	2.00	0.00	0.74	0.00
15.58	382.89	2.00	0.00	0.74	0.00	15.75	379.36	2.00	0.00	0.73	0.00
15.91	388.94	2.00	0.00	0.73	0.00	16.08	412.66	2.00	0.00	0.73	0.00
16.24	441.00	2.00	0.00	0.72	0.00	16.40	462.26	2.00	0.00	0.72	0.00
16.57	469.33	2.00	0.00	0.72	0.00	16.73	465.75	2.00	0.00	0.72	0.00
16.90	460.18	2.00	0.00	0.71	0.00	17.06	453.96	2.00	0.00	0.71	0.00
17.22	446.38	2.00	0.00	0.71	0.00	17.39	437.61	2.00	0.00	0.71	0.00
17.55	428.36	2.00	0.00	0.70	0.00	17.72	420.56	2.00	0.00	0.70	0.00
17.88	413.31	2.00	0.00	0.70	0.00	18.04	402.29	2.00	0.00	0.69	0.00
18.21	382.47	2.00	0.00	0.69	0.00	18.37	355.08	2.00	0.00	0.69	0.00
18.54	318.14	2.00	0.00	0.69	0.00	18.70	284.41	2.00	0.00	0.68	0.00
18.86	254.97	2.00	0.00	0.68	0.00	19.03	231.61	2.00	0.00	0.68	0.00
19.19	208.52	2.00	0.00	0.67	0.00	19.36	186.29	2.00	0.00	0.67	0.00
19.52	171.79	2.00	0.00	0.67	0.00	19.69	164.45	2.00	0.00	0.67	0.00
19.85	163.37	2.00	0.00	0.66	0.00	20.01	153.20	2.00	0.00	0.66	0.00
20.18	130.61	2.00	0.00	0.66	0.00	20.34	118.74	2.00	0.00	0.66	0.00
20.51	113.74	2.00	0.00	0.65	0.00	20.67	114.79	2.00	0.00	0.65	0.00
20.83	118.39	2.00	0.00	0.65	0.00	21.00	130.66	2.00	0.00	0.64	0.00
21.16	142.14	2.00	0.00	0.64	0.00	21.33	145.06	2.00	0.00	0.64	0.00
21.49	142.45	2.00	0.00	0.64	0.00	21.65	138.25	2.00	0.00	0.63	0.00
21.82	136.23	2.00	0.00	0.63	0.00	21.98	138.46	2.00	0.00	0.63	0.00
22.15	138.53	2.00	0.00	0.62	0.00	22.31	135.42	2.00	0.00	0.62	0.00
22.47	122.61	2.00	0.00	0.62	0.00	22.64	108.10	2.00	0.00	0.62	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)	Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)
22.80	109.28	2.00	0.00	0.61	0.00	22.97	117.20	2.00	0.00	0.61	0.00
23.13	130.47	2.00	0.00	0.61	0.00	23.29	137.40	2.00	0.00	0.61	0.00
23.46	143.95	2.00	0.00	0.60	0.00	23.62	140.40	2.00	0.00	0.60	0.00
23.79	129.06	0.26	1.13	0.60	0.02	23.95	140.41	0.31	1.05	0.59	0.02
24.11	157.61	2.00	0.00	0.59	0.00	24.28	170.07	2.00	0.00	0.59	0.00
24.44	179.81	2.00	0.00	0.59	0.00	24.61	179.59	2.00	0.00	0.58	0.00
24.77	166.56	0.47	0.89	0.58	0.02	24.93	158.37	2.00	0.00	0.58	0.00
25.10	149.85	2.00	0.00	0.57	0.00	25.26	137.74	2.00	0.00	0.57	0.00
25.43	132.72	2.00	0.00	0.57	0.00	25.59	144.19	2.00	0.00	0.57	0.00
25.75	149.57	0.36	0.95	0.56	0.02	25.92	151.31	2.00	0.00	0.56	0.00
26.08	143.27	2.00	0.00	0.56	0.00	26.25	135.67	2.00	0.00	0.56	0.00
26.41	130.44	2.00	0.00	0.55	0.00	26.57	120.37	2.00	0.00	0.55	0.00
26.74	117.89	2.00	0.00	0.55	0.00	26.90	115.36	2.00	0.00	0.54	0.00
27.07	111.97	2.00	0.00	0.54	0.00	27.23	108.52	2.00	0.00	0.54	0.00
27.40	103.74	2.00	0.00	0.54	0.00	27.56	105.89	2.00	0.00	0.53	0.00
27.72	109.91	2.00	0.00	0.53	0.00	27.89	118.52	2.00	0.00	0.53	0.00
28.05	120.48	2.00	0.00	0.52	0.00	28.22	121.97	2.00	0.00	0.52	0.00
28.38	122.08	2.00	0.00	0.52	0.00	28.54	127.62	2.00	0.00	0.52	0.00
28.71	132.17	2.00	0.00	0.51	0.00	28.87	133.53	2.00	0.00	0.51	0.00
29.04	132.60	2.00	0.00	0.51	0.00	29.20	131.98	2.00	0.00	0.51	0.00
29.36	132.71	2.00	0.00	0.50	0.00	29.53	130.50	2.00	0.00	0.50	0.00
29.69	128.04	2.00	0.00	0.50	0.00	29.86	124.52	2.00	0.00	0.49	0.00
30.02	121.84	2.00	0.00	0.49	0.00	30.18	114.78	2.00	0.00	0.49	0.00
30.35	103.72	2.00	0.00	0.49	0.00	30.51	96.68	2.00	0.00	0.48	0.00
30.68	102.18	2.00	0.00	0.48	0.00	30.84	112.24	2.00	0.00	0.48	0.00
31.00	123.53	2.00	0.00	0.47	0.00	31.17	128.84	2.00	0.00	0.47	0.00
31.33	136.77	2.00	0.00	0.47	0.00	31.50	143.48	2.00	0.00	0.47	0.00
31.66	147.51	2.00	0.00	0.46	0.00	31.82	151.31	2.00	0.00	0.46	0.00
31.99	153.39	2.00	0.00	0.46	0.00	32.15	156.60	2.00	0.00	0.46	0.00
32.32	149.02	2.00	0.00	0.45	0.00	32.48	142.84	2.00	0.00	0.45	0.00
32.64	146.65	2.00	0.00	0.45	0.00	32.81	152.63	2.00	0.00	0.44	0.00
32.97	148.87	2.00	0.00	0.44	0.00	33.14	138.84	2.00	0.00	0.44	0.00
33.30	132.86	2.00	0.00	0.44	0.00	33.46	134.50	2.00	0.00	0.43	0.00
33.63	131.40	0.25	0.80	0.43	0.02	33.79	126.78	2.00	0.00	0.43	0.00
33.96	122.36	2.00	0.00	0.42	0.00	34.12	120.04	2.00	0.00	0.42	0.00
34.28	119.33	2.00	0.00	0.42	0.00	34.45	116.89	2.00	0.00	0.42	0.00
34.61	111.81	2.00	0.00	0.41	0.00	34.78	105.87	2.00	0.00	0.41	0.00
34.94	106.91	2.00	0.00	0.41	0.00	35.10	110.77	2.00	0.00	0.41	0.00
35.27	114.40	2.00	0.00	0.40	0.00	35.43	113.74	2.00	0.00	0.40	0.00
35.60	114.42	2.00	0.00	0.40	0.00	35.76	114.32	2.00	0.00	0.39	0.00
35.93	110.24	2.00	0.00	0.39	0.00	36.09	107.96	2.00	0.00	0.39	0.00
36.25	112.06	2.00	0.00	0.39	0.00	36.42	121.30	2.00	0.00	0.38	0.00
36.58	128.19	2.00	0.00	0.38	0.00	36.75	135.66	2.00	0.00	0.38	0.00
36.91	142.39	2.00	0.00	0.37	0.00	37.07	146.30	2.00	0.00	0.37	0.00
37.24	143.36	2.00	0.00	0.37	0.00	37.40	138.28	2.00	0.00	0.37	0.00
37.57	130.09	2.00	0.00	0.36	0.00	37.73	122.82	2.00	0.00	0.36	0.00
37.89	117.87	0.20	0.73	0.36	0.01	38.06	115.79	2.00	0.00	0.35	0.00
38.22	113.18	2.00	0.00	0.35	0.00	38.39	105.71	2.00	0.00	0.35	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)	Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)
38.55	99.62	2.00	0.00	0.35	0.00	38.71	94.79	2.00	0.00	0.34	0.00
38.88	91.22	2.00	0.00	0.34	0.00	39.04	88.97	2.00	0.00	0.34	0.00
39.21	86.09	2.00	0.00	0.34	0.00	39.37	83.44	2.00	0.00	0.33	0.00
39.53	79.03	2.00	0.00	0.33	0.00	39.70	75.26	2.00	0.00	0.33	0.00
39.86	72.61	2.00	0.00	0.32	0.00	40.03	70.53	2.00	0.00	0.32	0.00
40.19	68.52	2.00	0.00	0.32	0.00	40.35	71.24	2.00	0.00	0.32	0.00
40.52	78.37	2.00	0.00	0.31	0.00	40.68	87.74	2.00	0.00	0.31	0.00
40.85	91.38	2.00	0.00	0.31	0.00	41.01	89.79	2.00	0.00	0.30	0.00
41.17	86.27	2.00	0.00	0.30	0.00	41.34	88.62	2.00	0.00	0.30	0.00
41.50	92.93	2.00	0.00	0.30	0.00	41.67	94.49	2.00	0.00	0.29	0.00
41.83	92.03	2.00	0.00	0.29	0.00	41.99	90.88	2.00	0.00	0.29	0.00
42.16	92.21	2.00	0.00	0.29	0.00	42.32	95.23	2.00	0.00	0.28	0.00
42.49	96.67	2.00	0.00	0.28	0.00	42.65	96.60	2.00	0.00	0.28	0.00
42.81	93.24	2.00	0.00	0.27	0.00	42.98	89.60	2.00	0.00	0.27	0.00
43.14	87.00	2.00	0.00	0.27	0.00	43.31	85.97	2.00	0.00	0.27	0.00
43.47	85.99	2.00	0.00	0.26	0.00	43.64	86.43	2.00	0.00	0.26	0.00
43.80	91.08	2.00	0.00	0.26	0.00	43.96	96.36	2.00	0.00	0.25	0.00
44.13	103.30	2.00	0.00	0.25	0.00	44.29	110.51	2.00	0.00	0.25	0.00
44.46	119.50	2.00	0.00	0.25	0.00	44.62	127.42	2.00	0.00	0.24	0.00
44.78	139.00	2.00	0.00	0.24	0.00	44.95	148.27	2.00	0.00	0.24	0.00
45.11	149.58	2.00	0.00	0.24	0.00	45.28	137.85	2.00	0.00	0.23	0.00
45.44	130.73	2.00	0.00	0.23	0.00	45.60	130.06	2.00	0.00	0.23	0.00
45.77	133.49	2.00	0.00	0.22	0.00	45.93	128.36	2.00	0.00	0.22	0.00
46.10	113.47	2.00	0.00	0.22	0.00	46.26	104.39	2.00	0.00	0.22	0.00
46.42	105.69	2.00	0.00	0.21	0.00	46.59	110.86	2.00	0.00	0.21	0.00
46.75	114.98	2.00	0.00	0.21	0.00	46.92	115.93	0.20	0.42	0.20	0.01
47.08	116.64	0.20	0.42	0.20	0.01	47.24	119.01	0.21	0.40	0.20	0.01
47.41	127.30	0.24	0.38	0.20	0.01	47.57	135.00	0.28	0.35	0.19	0.01
47.74	136.88	2.00	0.00	0.19	0.00	47.90	127.93	2.00	0.00	0.19	0.00
48.06	114.86	2.00	0.00	0.19	0.00	48.23	103.82	2.00	0.00	0.18	0.00
48.39	97.01	2.00	0.00	0.18	0.00	48.56	96.74	2.00	0.00	0.18	0.00
48.72	96.67	2.00	0.00	0.17	0.00	48.88	96.63	2.00	0.00	0.17	0.00
49.05	90.30	2.00	0.00	0.17	0.00	49.21	81.05	2.00	0.00	0.17	0.00
49.38	72.49	2.00	0.00	0.16	0.00	49.54	66.41	2.00	0.00	0.16	0.00
49.70	63.73	2.00	0.00	0.16	0.00	49.87	60.62	2.00	0.00	0.15	0.00
50.03	58.08	2.00	0.00	0.15	0.00						

Total estimated settlement: 0.15

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

APPENDIX 3

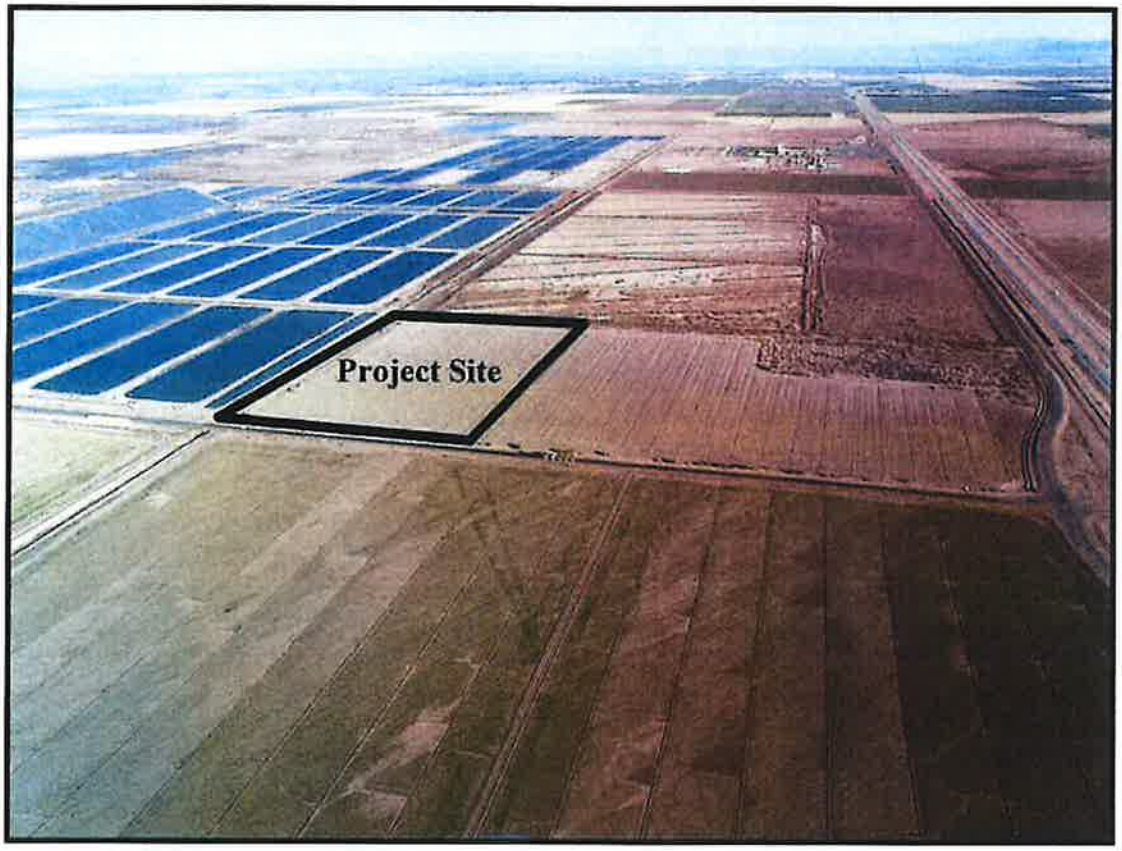
Geotechnical Report

PVVD Material Recovery Facility and Transfer Station – NWC Harris Road and Hwy 111

Imperial, CA

Prepared for:

Palo Verde Valley Disposal Service
14701 S. Broadway
Blythe, CA 92225



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Geo-Engineers and Geologists

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March 2008

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March 12, 2008

Mr. Gordon Beers, President
Palo Verde Valley Disposal Service
14701 S. Broadway
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Geotechnical Investigation
Proposed Material Recovery Facility and Transfer Station
NWC Harris Road and Hwy 111
Imperial, California
LCI Report No. LE08033

Dear Mr. Beers:

This geotechnical report is provided for design and construction of the proposed Material Recovery Facility (MRF) and Municipal Waste Transfer Station located at the northwest corner of Harris Road and Hwy 111 northeast of Imperial, California. Our geotechnical investigation was conducted in response to your request for our services. The enclosed report describes our soil engineering investigation and presents our professional opinions regarding geotechnical conditions at the site to be considered in the design and construction of the project.

This summary presents ***selected*** elements of our findings and recommendations only. It ***does not*** present crucial details needed for the proper application of our findings and recommendations. Our findings, recommendations, and application options are related ***only through reading the full report,*** and are best evaluated with the active participation of the engineer of record who developed them.

The findings of this study indicate that the site is, in general, predominantly underlain by clays of moderate to high expansion potential that will require foundations and slabs-on-grade designed to resist expansive soil heave (2007 California Building Code (CBC) Chapter 18, Section 1805.8). The CBC design method requires grade-beam stiffening of floor slabs at a maximum spacing of 19 feet on center, grade-beam stiffened post-tensioned slabs or flat-plate structural slabs. Design and construction of site improvements (concrete flatwork, curbs, housekeeping slabs, etc.) should include provisions to mitigate clay soil movement. Additionally, the weak clay subgrade soil requires thickened structural sections for pavements.

The soil is highly corrosive to metals and contains sufficient sulfates and chlorides to require special concrete mixes (4,500 psi strength with 0.45 maximum water cement ratio and Type V cement) and protection of embedded steel components when concrete is placed in contact with native soil.

The site is located approximately 0.3 miles from a major fault (Imperial Fault) with potential of a magnitude 7 event. Strong groundshaking will occur at this site and special structural designs will be required.

Evaluation of liquefaction potential at the site indicates that 1 to 4 foot thick, isolated, interbedded layers of silt and silty sand at a depth between 8 to 48 feet may liquefy under seismically induced groundshaking, potentially resulting in an estimated 2 to 3¼ inches of deep seated settlement. There is an 8 to 10-foot layer of non-liquefiable clay soils above any potentially liquefiable soil; therefore, it is unlikely that there will be rapid deformation or punching bearing failures of the surface soils should liquefaction occur.

Soil percolation rates were unsatisfactory for onsite sewage disposal system. A "Packaged Sewage Treatment System" or "Evapo-Transpiration Beds" should be planned until a central sewage treatment plant is built to service this site.

We did not encounter soil conditions that would preclude implementation of the proposed project provided the recommendations contained in this report are implemented in the design and construction of this project.

We appreciate the opportunity to provide our findings and professional opinions regarding geotechnical conditions at the site. If you have any questions or comments regarding our findings, please call our office at (760) 360-0665.

Respectfully Submitted,
Landmark Consultants, Inc.

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Section 1
INTRODUCTION

1.1 Project Description

This report presents the findings of our geotechnical investigation for the proposed Material Recovery Facility (MRF) and Municipal Waste Transfer Station located on the approximately 23 acre portion of a fallowed agricultural field located at the northwest corner of Harris Road and Hwy 111 northeast of Imperial, California (See Vicinity Map, Plate A-1). The proposed development will consist of a 7,980 square feet maintenance building and a 54,000 square feet material recovery facility (MRF) and transfer station building. A transfer truck tunnel is planned at the west end of the transfer station building and is planned for 15 feet depth. There will be 8% grade ramps into and out of the tunnel, requiring about 90 feet retaining walls at each end of the tunnel. Also, the proposed facility will have an administration office, 50,000 gallon steel water tank, truck scales, and associated internal parking areas and roadways. A site plan for the proposed MRF and transfer station facility was provided by the client prior to initiation of the field investigation.

The office building is planned to consist of slab-on-grade foundation with steel and/or wood-frame construction. Footing loads at exterior bearing walls are estimated at 1 to 5 kips per lineal foot. The maintenance, transfer station and MRF buildings are planned to consist of slab-on-grade foundation with steel-frame construction. Footing loads at exterior bearing walls are estimated at 1 to 5 kips per lineal foot. Column loads are estimated to range from 10 to 100 kips. The MRF/Transfer Station building is planned to be elevated about 8 feet above existing grade to allow the truck tunnel floor to be above groundwater. Fill for the building support pad will be excavated from the raw water storage pond and the stormwater detention basin. The upper 1 to 2 feet of the building support pad will consist of crushed aggregate base. The approximate dimension for the proposed steel storage tank for storage treated water is 30 feet in diameter by 20 feet high. The estimated loads imposed at ground surface by the loaded tank have been estimated to be 1,250 pounds per square foot.

If structural loads exceed those stated above, we should be notified so we may evaluate their impact on foundation settlement and bearing capacity. Site development will include building support pad preparation, underground utility installation, roadway and parking lot construction, and concrete flatwork placement. Harris Road is currently a 2-lane paved rural Road. However, the County has planned this Road for a 6-lane major arterial.

1.2 Purpose and Scope of Work

The purpose of this geotechnical study was to investigate the upper 51.5 feet of subsurface soil at selected locations within the site for evaluation of physical/engineering properties. From the subsequent field and laboratory data, professional opinions were developed and are provided in this report regarding geotechnical conditions at this site and the effect on design and construction.

The scope of our services consisted of the following:

- Field exploration and in-situ testing of the site soils at selected locations and depths.
- Percolation testing for on-site sewage disposal.
- Laboratory testing for physical and/or chemical properties of selected samples.
- Review of the available literature and publications pertaining to local geology, faulting, and seismicity.
- Engineering analysis and evaluation of the data collected.
- Preparation of this report presenting our findings, professional opinions, and recommendations for the geotechnical aspects of project design and construction.

This report addresses the following geotechnical issues:

- Subsurface soil and groundwater conditions
- Site geology, regional faulting and seismicity, near source factors, and site seismic accelerations
- Liquefaction potential and its mitigation
- Expansive soil and methods of mitigation
- Aggressive soil conditions to metals and concrete
- On-site sewage disposal systems

Professional opinions with regard to the above issues are presented for the following:

- Site grading and earthwork
- Building pad and foundation subgrade preparation
- Allowable soil bearing pressures and expected settlements
- Soil improvement methods
- Deep foundations (drilled piers/driven piles)
- Concrete slabs-on-grade
- Lateral earth pressures
- Excavation conditions and buried utility installations
- Mitigation of the potential effects of salt concentrations in native soil to concrete mixes and steel reinforcement
- Seismic design parameters
- Pavement structural sections

Our scope of work for this report did not include an evaluation of the site for the presence of environmentally hazardous materials or conditions.

1.3 Authorization

Mr. Gordon W. Beers, President of Palo Verde Valley Disposal Service, provided authorization by written agreement to proceed with our work on January 28, 2008. We conducted our work according to our written proposal dated January 22, 2008.

Section 2
METHODS OF INVESTIGATION

2.1 Field Exploration

Subsurface exploration was performed on January 30, 2008 using 2R Drilling of Ontario, California to advance five (5) borings to depths of 26.5 to 51.5 feet below existing ground surface. The borings were advanced with a truck-mounted, CME 55 drill rig using 8-inch diameter, hollow-stem, continuous-flight augers. The approximate boring locations were established in the field and plotted on the site map by sighting to discernable site features. The boring locations are shown on the Site and Exploration Plan (Plate A-2).

A staff engineer observed the drilling operations and maintained a log of the soil encountered and sampling depths, visually classified the soil encountered during drilling in accordance with the Unified Soil Classification System, and obtained drive tube and bulk samples of the subsurface materials at selected intervals. Relatively undisturbed soil samples were retrieved using a 2-inch outside diameter (OD) split-spoon sampler or a 3-inch OD Modified California Split-Barrel (ring) sampler. The samples were obtained by driving the sampler ahead of the auger tip at selected depths. The drill rig was equipped with a 140-pound CME automatic hammer for conducting Standard Penetration Tests (SPT). The number of blows required to drive the samplers 12 inches into the soil is recorded on the boring logs as "blows per foot". Blow counts reported on the boring logs represent the field blow counts. No corrections have been applied for effects of overburden pressure, automatic hammer drive energy, drill rod lengths, liners, and sampler diameter. Pocket penetrometer readings were also obtained to evaluate the stiffness of cohesive soils retrieved from sampler barrels.

After logging and sampling the soil, the exploratory borings were backfilled with the excavated material. The backfill was loosely placed and was not compacted to the requirements specified for engineered fill.

Additional subsurface exploration was performed on March 4, 2008 using Middle Earth Geo-Testing, Inc. of Orange, California to advance two (2) electric cone penetrometer (CPT) soundings to an approximate depth of 50 feet below existing ground surface.The soundings were made at the locations shown on the Site and Exploration Plan (Plate A-2). The approximate sounding locations were established in the field and plotted on the site map by sighting to discernable site features.

CPT soundings provide a continuous profile of the soil stratigraphy with readings every 2.5cm (1 inch) in depth. Direct sampling for visual and physical confirmation of soil properties has been used by our firm to establish direct correlations with CPT exploration in this geographical region.

The CPT exploration was conducted by hydraulically advancing an instrumented Hogentogler $10cm^2$ conical probe into the ground at a rate of 2cm per second using a 23-ton truck as a reaction mass. An electronic data acquisition system recorded a nearly continuous log of the resistance of the soil against the cone tip (Qc) and soil friction against the cone sleeve (Fs) as the probe was advanced. Empirical relationships (Robertson and Campanella, 1989) were then applied to the data to give a continuous profile of the soil stratigraphy. Interpretation of CPT data provides correlations for SPT blow count, phi (ϕ) angle (soil friction angle), undrained shear strength (S_u) of clays and over-consolidation ratio (OCR). These correlations may then be used to evaluate vertical and lateral soil bearing capacities and consolidation characteristics of the subsurface soil.

The subsurface borings logs and interpretive logs of the CPT soundings are presented on Plates B-1 through B-7 in Appendix B. A key to the interpretation of CPT soundings and the borings logs are presented on Plates B-8 and B-9, respectively. The stratification lines shown on the subsurface logs represent the approximate boundaries between the various strata. However, the transition from one stratum to another may be gradual over some range of depth.

2.2 Laboratory Testing

Laboratory tests were conducted on selected bulk (auger cuttings) and relatively undisturbed soil samples obtained in thin-wall tubes from the soil boring to aid in classification and evaluation of selected engineering properties of the site soils. The tests were conducted in general conformance to the procedures of the American Society for Testing and Materials (ASTM) or other standardized methods as referenced below. The laboratory testing program consisted of the following tests:

- Plasticity Index (ASTM D4318) – used for soil classification, settlement estimates and expansive soil design criteria.
- Particle Size Analyses (ASTM D422) – used for soil classification and liquefaction evaluation
- Unit Dry Densities (ASTM D2937) and Moisture Contents (ASTM D2216) – used for insitu soil parameters.
- Expansion Index (Swell) Test (UBC 18-2 and ASTM D4829) – used for evaluating relative expansion classification.
- One Dimensional Consolidation (ASTM D2435) – used for settlement estimates.
- Unconfined Compression (ASTM D2166) – used for soil strength estimates.
- R Value (ASTM D2844) – used for pavement structural section design
- Chemical Analyses (soluble sulfates & chlorides, pH, and resistivity) (Caltrans Methods) – used for concrete mix evaluations and corrosion protection requirements.

The laboratory test results are presented on the subsurface logs in Appendix B and on Plates C-1 through C-7 in Appendix C.

Engineering parameters of soil strength, compressibility and relative density utilized for developing design criteria provided within this report were either extrapolated from correlations with the subsurface CPT data or from data obtained from the field and laboratory testing program.

Section 3
DISCUSSION

3.1 Site Conditions

The project site is vacant, flat-lying with very little, if any, vegetation covering the site and consists of approximately 23-acres of agricultural land which have been fallow for approximately 5 years. The project site is rectangular in plan view, elongated in the north-south direction.

Adjacent properties are flat-lying and are approximately at the same elevation with this site. The site is bounded on the south by Harris Road, a paved two-lane rural road (planned for a 6-lane major arterial) and the west by the Rose Drain, an earthen agricultural runoff water drainage ditch. The Rose Drain is approximately 10 to 15 feet deep. Several earthen fish ponds are located to the west side of Rose Drain. Fallow agricultural land abuts the eastern property boundary, followed by State Hwy 111, a four lane divided highway. Vacant undeveloped land and duck ponds are located to the north side of the site. Agricultural fields are located to the south side of the proposed project property.

The site lies within the Mesquite Basin, which is a subsided area between the Imperial and Brawley Faults. An ephemeral lake (Mesquite Lake) once covered this area shortly after the turn of the century.

The project site lies at an elevation of approximately 135 feet below mean sea level (El. 865 local datum) in the Imperial Valley region of the California low desert. The surrounding properties lie on terrain which is flat (planar), part of a large agricultural valley, which was previously an ancient lake bed covered with fresh water to an elevation of 43± feet above MSL. Annual rainfall in this arid region is less than 3 inches per year with four months of average summertime temperatures above 100 °F. Winter temperatures are mild, seldom reaching freezing.

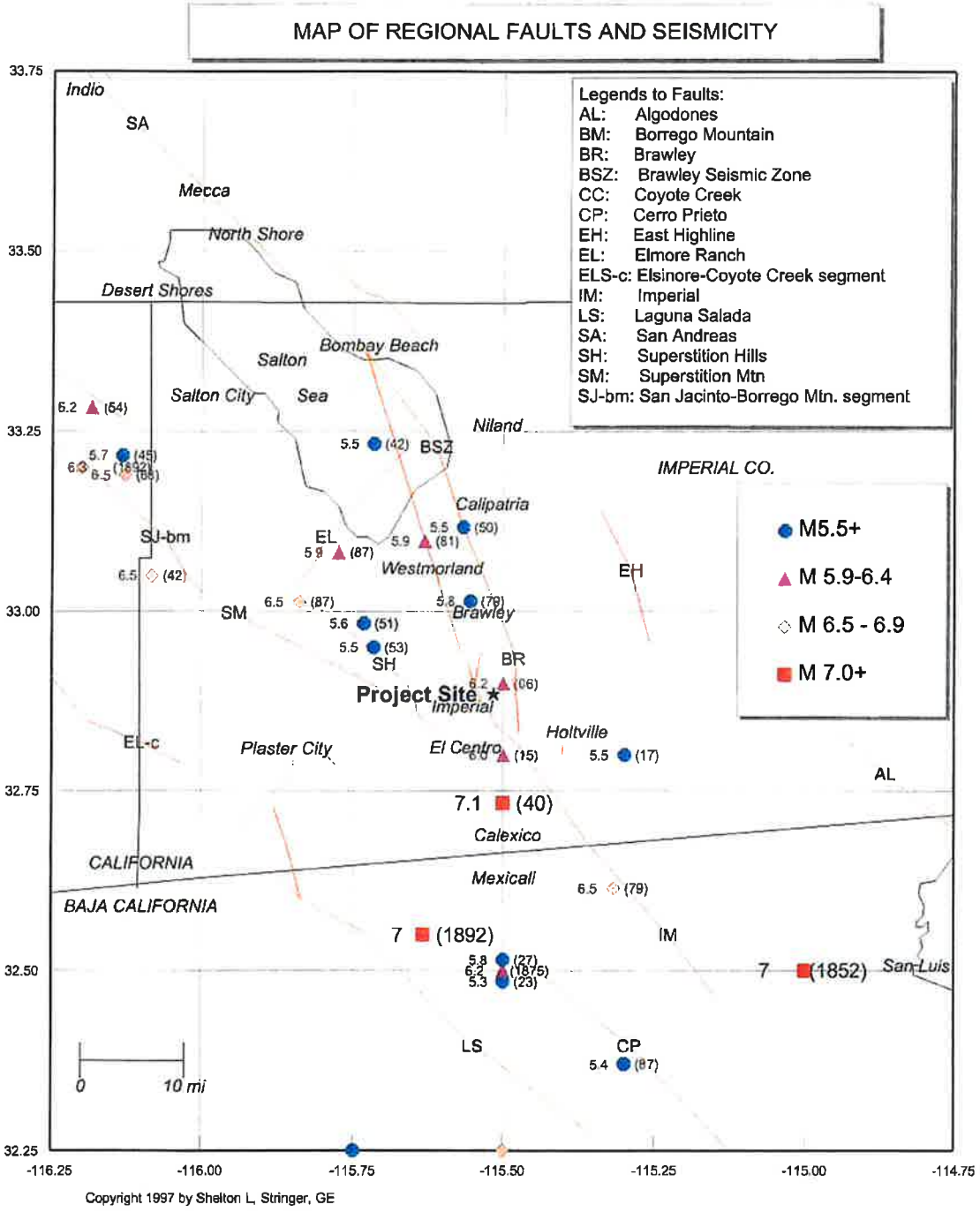
3.2 Geologic Setting

The project site is located in the Imperial Valley portion of the Salton Trough physiographic province. The Salton Trough is a geologic structural depression resulting from large scale regional faulting. The trough is bounded on the northeast by the San Andreas Fault and Chocolate Mountains and the southwest by the Peninsular Range and faults of the San Jacinto Fault Zone. The Salton Trough represents the northward extension of the Gulf of California, containing both marine and non-marine sediments since the Miocene Epoch. Tectonic activity that formed the trough continues at a high rate as evidenced by deformed young sedimentary deposits and high levels of seismicity. Figure 1 shows the location of the site in relation to regional faults and physiographic features.

The Imperial Valley is directly underlain by lacustrine deposits, which consist of interbedded lenticular and tabular silt, sand, and clay. The Late Pleistocene to Holocene lake deposits are probably less than 100 feet thick and derived from periodic flooding of the Colorado River which intermittently formed a fresh water lake (Lake Cahuilla). Older deposits consist of Miocene to Pleistocene non-marine and marine sediments deposited during intrusions of the Gulf of California. Basement rock consisting of Mesozoic granite and Paleozoic metamorphic rocks are estimated to exist at depths between 15,000 - 20,000 feet.

3.3 Seismicity and Faulting

Faulting and Seismic Sources: We have performed a computer-aided search of known faults or seismic zones that lie within a 62 mile (100 kilometers) radius of the project site as shown on Figure 1 and Table 1. The search identifies known faults within this distance and computes deterministic ground accelerations at the site based on the maximum credible earthquake expected on each of the faults and the distance from the fault to the site. The Maximum Magnitude Earthquake (Mmax) listed was taken from published geologic information available for each fault (CDMG OFR 96-08 and Jennings, 1994).



Faults and Seismic Zones from Jennings (1994), Earthquakes modified from Ellsworth (1990) catalog.

Figure 1. Map of Regional Faults and Seismicity

Table 1
FAULT PARAMETERS & DETERMINISTIC
ESTIMATES OF PEAK GROUND ACCELERATION (PGA)

Fault Name or Seismic Zone	Distance (mi) & Direction from Site	Fault Type		Fault Length (km)	Maximum Magnitude Mmax (Mw)	Avg Slip Rate (mm/yr)	Avg Return Period (yrs)	Date of Last Rupture (year)	Largest Historic Event >5.5M	(year)	Est. Site PGA (g)
Reference Notes: (1)		(2)	(3)	(2)	(4)	(3)	(3)	(3)	(5)		(6)
Imperial Valley Faults											
Imperial	0.3 SW	A	B	62	**7.0**	20	79	1979	7.0	1940	**0.61**
Brawley	2.1 ENE	B	B	14	**7.0**	20	—	1979	5.8	1979	**0.55**
Brawley Seismic Zone	4.8 NNE	B	B	42	**6.4**	25	24		5.9	1981	**0.29**
East Highline Canal	16 ENE	C	C	22	**6.3**	1	774				**0.13**
Cerro Prieto	26 S	A	B	116	7.2	34	50	1980	7.1	1934	**0.14**
San Jacinto Fault System											
- Superstition Hills	6.6 SW	A	A	22	**6.6**	4	250	1987	6.5	1987	**0.27**
- Superstition Mtn.	10 W	A	A	23	**6.6**	5	500	1440 +/-			**0.21**
- Elmore Ranch	21 WNW	B	A	29	**6.6**	1	225	1987	5.9	1987	**0.12**
- Borrego Mtn	29 WNW	A	A	29	**6.6**	4	175		6.5	1942	**0.10**
- Anza Segment	43 WNW	A	A	90	**7.2**	12	250	1918	6.8	1918	**0.10**
- Coyote Creek	47 WNW	A	A	40	**6.8**	4	175	1968	6.5	1968	**0.07**
- Hot Spgs-Buck Ridge	59 NW	B	A	70	**6.5**	2	354		6.3	1937	**0.05**
- Whole Zone	10 W	A	A	245	**7.5**	---	---				**0.34**
Elsinore Fault System											
- Laguna Salada	24 WSW	A	B	67	**7.0**	3.5	336		7.0	1891	**0.14**
- Coyote Segment	31 W	A	A	38	**6.8**	4	625				**0.10**
- Julian Segment	53 W	A	A	75	**7.1**	5	340				**0.08**
- Earthquake Valley	54 WNW	B	A	20	**6.5**	2	351				**0.06**
- Whole Zone	31 W	A	A	250	**7.5**	---	---				**0.15**
San Andreas Fault System											
- Coachella Valley	34 NNW	A	A	95	**7.2**	25	220	1690+/-	6.5	1948	**0.11**
- Whole S. Calif. Zone	34 NNW	A	A	458	**7.9**	---	---	1857	7.8	1857	**0.17**
Algodones	34 E	C	C	74	**7.0**	0.1	20,000				**0.10**

Notes:

1. Jennings (1994) and CDMG (1996)
2. CDMG (1996), where Type A faults -- slip rate >5 mm/yr and well constrained paleoseismic data
   Type B faults -- all other faults.
3. WGCEP (1995)
4. CDMG (1996) based on Wells & Coppersmith (1994)
5. Ellsworth Catalog in USGS PP 1515 (1990) and USBR (1976), Mw = moment magnitude,
6. The deterministic estimates of the Site PGA are based on the attenuation relationship of:
   Boore, Joyner, Fumal (1997)

Seismic Risk: The project site is located in the seismically active Imperial Valley of southern California and is considered likely to be subjected to moderate to strong ground motion from earthquakes in the region. The proposed site structures should be designed in accordance with the 2007 California Building Code (CBC) for a "Maximum Considered Earthquake" (MCE) and with the appropriate site coefficients. The MCE is defined as the ground motion having a 2 percent probability of being exceeded in 50 years.

Seismic Hazards.

- **Groundshaking.** The primary seismic hazard at the project site is the potential for strong groundshaking during earthquakes along the Imperial, Brawley, and Superstition Hills Faults. A further discussion of groundshaking follows in Section 3.4.
- **Surface Rupture.** The project site does not lie within a State of California, Alquist-Priolo Earthquake Fault Zone. Surface fault rupture is considered to be unlikely at the project site because of the well-delineated fault lines through the Imperial Valley as shown on USGS and CGS maps. The active Imperial Fault is located approximately 0.5 km southwest of the project site. The Imperial Fault is considered one of the most active faults in California, having experienced magnitude 6.5 and 6.9 earthquakes in 1979 and 1940, respectively. However, because of the high tectonic activity and deep alluvium of the region, we cannot preclude the potential for surface rupture on undiscovered or new faults that may underlie the site.
- **Liquefaction.** Liquefaction is a potential design consideration because of underlying saturated sandy substrata. The potential for liquefaction at the site is discussed in more detail in Section 3.7.

Other Secondary Hazards.

- **Landsliding.** The hazard of landsliding is unlikely due to the regional planar topography. No ancient landslides are shown on geologic maps of the region and no indications of landslides were observed during our site investigation. Small scale, localized slides were noted in the Rose Drain located along the west side of the site.
- **Volcanic hazards.** The site is not located in proximity to any known volcanically active area and the risk of volcanic hazards is considered very low.
- **Tsunamis, sieches, and flooding.** The site does not lie near any large bodies of water, so the threat of tsunami, sieches, or other seismically-induced flooding is unlikely.

▸ **Expansive soil.** In general, much of the near surface soils in the Imperial Valley consist of silty clays and clays which are moderate to highly expansive. The expansive soil conditions are discussed in more detail in Section 3.5.

3.4 Site Acceleration and UBC Seismic Coefficients

Site Acceleration: Deterministic horizontal peak ground accelerations (PGA) from maximum probable earthquakes on regional faults have been estimated and are included in Table 1. Ground motions are dependent primarily on the earthquake magnitude and distance to the seismogenic (rupture) zone. Accelerations also are dependent upon attenuation by rock and soil deposits, direction of rupture and type of fault; therefore, ground motions may vary considerably in the same general area.

We have used the computer program FRISKSP (Blake, 2000) to provide a probabilistic estimate of the site PGA using the attenuation relationship NEHRP D 250 of Boore, Joyner, and Fumal (1997). The PGA estimate for the Design Basis Earthquake (DBE) for the project site having a 10% probability of being exceeded in 50 years (return period of 475 years) is **0.93g**. The PGA estimate for the Maximum Considered Earthquake (MCE) for the project site having a 2% probability of being exceeded in 50 years (return period of 2,500 years) is **1.41g**.

2007 CBC (2006 IBC) Seismic Response Parameters: The 2007 California Building Code (CBC) seismic parameters are based on the Maximum Considered Earthquake with a ground motion that has a 2% probability of occurrence in 50 years. This follows the methodology of the 2006 International Building Code (IBC). Table 2 lists seismic and site coefficients given in Chapter 16 of the CBC. The site soils have been classified as Site Class D (soft soil profile).

Design earthquake ground motions are defined as the earthquake ground motions that are two-thirds (2/3) of the corresponding MCE ground motions. Design earthquake ground motion data are provided in Table 2.

Table 2
2007 California Building Code (CBC) and ASCE 7-05 Seismic Parameters

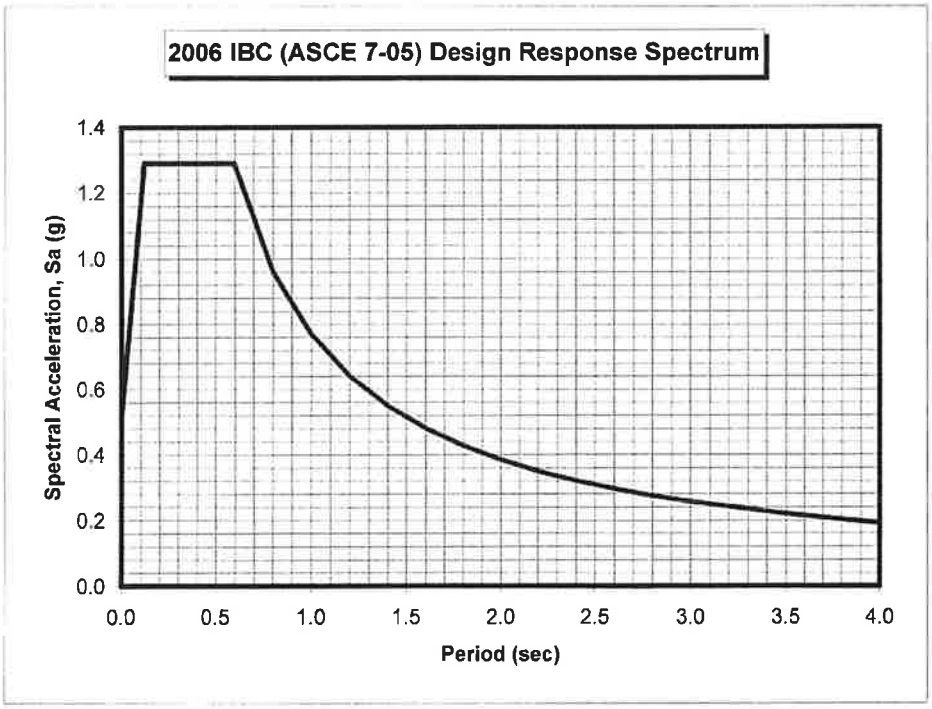
		IBC Reference
Site Class:	**D**	Table 1613.5.2
Latitude:	32.8852 N	
Longitude:	-115.5174 W	

Maximum Considered Earthquake (MCE) Ground Motion

Short Period Spectral Response	S_s	1.94 g	Figure 1613.5(3)
1 second Spectral Response	S_1	0.77 g	Figure 1613.5(4)
Site Coefficient	F_a	1.00	Table 1613.5.3 (1)
Site Coefficient	F_v	1.50	Table 1613.5.3 (2)
Adjusted Short Period Spectral Response	S_{MS}	1.94 g	$= F_a * S_s$
Adjusted 1 second Spectral Response	S_{M1}	1.16 g	$= F_v * S_1$

Design Earthquake Ground Motion

Short Period Spectral Response	S_{DS}	1.29 g	$= 2/3*S_{MS}$
1 second Spectral Response	S_{D1}	0.77 g	$= 2/3*S_{M1}$
	To	0.12 sec	$=0.2*S_{D1}/S_{DS}$
	Ts	0.60 sec	$=S_{D1}/S_{DS}$



Period T (sec)	Sa (g)
0.00	0.52
0.05	0.84
0.12	1.29
0.20	1.29
0.30	1.29
0.60	1.29
0.80	0.96
1.00	0.77
1.20	0.64
1.40	0.55
1.60	0.48
1.80	0.43
2.00	0.39
2.20	0.35
2.40	0.32
2.60	0.30
2.80	0.28
3.00	0.26
3.50	0.22
4.00	0.19

3.5 Subsurface Soil

Subsurface soils encountered during the field exploration conducted on January 30 and March 4, 2008 consist of dominantly stiff to very stiff clay and silty clay to a depth of 10 feet. Medium dense to very dense sands were encountered at a depth of 8 to 18 feet below ground surface. Interbedded layers of silts/clayey silts, silty clays/clays and silty sands were encountered at a depth of 18 to 51.5 feet, the maximum depth of exploration. The subsurface logs (Plates B-1 through B-7) depict the stratigraphic relationships of the various soil types.

The native surface clays exhibit moderate swell potential (Expansion Index, EI = 54) when tested according to Uniform Building Code Standard 18-2 methods and moderate to high swell potential (Expansion Index, EI = 50 to 110) when correlated to Plasticity Index tests (ASTM D4318) performed on the native clays. The clay is expansive when wetted and can shrink with moisture loss (drying). Development of building foundations, concrete flatwork, and asphaltic concrete pavements should include provisions for mitigating potential swelling forces and reduction in soil strength, which can occur from saturation of the soil. Causes for soil saturation include landscape irrigation, broken utility lines, or capillary rise in moisture upon sealing the ground surface to evaporation. Moisture losses can occur with lack of landscape watering, close proximity of structures to downslopes and root system moisture extraction from deep rooted shrubs and trees placed near the foundations.

Typical measures used for commercial/industrial projects to remediate expansive soil include:

- moisture conditioning subgrade soils to a minimum of 5% above optimum moisture (ASTM D1557) within the drying zone of surface soils,
- treatment of silt/clay with lime to mitigate the shrink/swell forces of the clay soils when sulfate content of the soils is generally less than 7,500 ppm (4,700 ppm maximum at this site),
- capping silt/clay soil with a non-expansive sand layer of sufficient thickness (3 feet minimum) to reduce the effects of soil shrink/swell,
- design of foundations that are resistant to shrink/swell forces of silt/clay soil.

3.6 Groundwater

One (2) inch diameter piezometer was installed in Boring B-2 to a depth of 20 feet at the project site. Groundwater was encountered in the piezometer at a depth of 7 feet on February 11, 2008, twelve (12) days after placement of the piezometer. There is uncertainty in the accuracy of short-term water level measurements, particularly in fine-grained soil. Groundwater levels may fluctuate with precipitation, irrigation of adjacent properties, drainage, and site grading. The referenced groundwater level should not be interpreted to represent an accurate or permanent condition.

Subsurface agricultural tile drainage pipelines (3, 4 and 6-inch diameter plastic or clay perforated pipelines encapsulated by sand/gravel envelope) exist at a depth of 5.0 to 8.0 feet below this site and have assisted in preventing an artificially high groundwater depth. Abandoning and plugging the subsurface drainage pipelines can allow groundwater levels to rise variably across the site. Cutting the subsurface tile drain pipelines with utility trenches will likely result in some localized trench flooding. Base line collectors should be crushed in-place and trench backfill compacted (85-90%).

The 3 and 4-inch lateral pipeline drains are not required to be removed or crushed in-place. The 3 and 4-inch pipelines should be plugged if encountered during site excavations. A copy of the tile drainage system plat as obtained from Imperial Irrigation District records is attached in Appendix A.

3.7 Liquefaction

Liquefaction occurs when granular soil below the water table is subjected to vibratory motions, such as produced by earthquakes. With strong ground shaking, an increase in pore water pressure develops as the soil tends to reduce in volume. If the increase in pore water pressure is sufficient to reduce the vertical effective stress (suspending the soil particles in water), the soil strength decreases and the soil behaves as a liquid (similar to quicksand). Liquefaction can produce excessive settlement, ground rupture, lateral spreading, or failure of shallow bearing foundations.

Four conditions are generally required for liquefaction to occur:

(1) the soil must be saturated (relatively shallow groundwater);
(2) the soil must be loosely packed (low to medium relative density);
(3) the soil must be relatively cohesionless (not clayey); and
(4) groundshaking of sufficient intensity must occur to function as a trigger mechanism.

All of these conditions exist to some degree at this site.

Methods of Analysis: Liquefaction potential at the project site was evaluated using the 1997 NCEER Liquefaction Workshop methods. The 1997 NCEER methods utilize direct SPT blow counts or CPT cone readings from site exploration and earthquake magnitude/PGA estimates from the seismic hazard analysis. The resistance to liquefaction is plotted on a chart of cyclic shear stress ratio (CSR) versus a corrected blow count $N_{1(60)}$ or Qc_{1N}. A ground acceleration of 0.93g was used in the analysis with a 7.0 foot groundwater depth.

Liquefaction induced settlements have been estimated using the 1987 Tokimatsu and Seed method. Fines content of liquefiable sands and silt increase the liquefaction resistance in that more cycles of ground motions are required to fully develop pore pressures. The CPT tip pressures (Qc) were adjusted to an equivalent clean sand pressure (Q_{ClNcs}). The adjusted tip pressures were converted to equivalent clean sand blow counts ($N_{1(60)cs}$) prior to calculating settlements. A computed factor of safety less than 1.0 indicates a liquefiable condition.

The soil encountered at the points of exploration included saturated silts and sands/silty sands that could liquefy during a CBC Design Basis Earthquake (7M – 0.93g) for a 10% risk in 50 years. Liquefaction can occur within isolated silts/clayey silts and silty sand layers (1 to 4 feet thick) between depths of 8 to 48 feet. The likely triggering mechanism for liquefaction appears to be strong groundshaking associated with the rupture of the Imperial, Brawley, and Superstition Hills Faults. The analysis is summarized in the table below.

Table 3: SUMMARY OF LIQUEFACTION ANALYSES

Boring Location	Depth To First Liquefiable Zone (ft)	Potential Induced Settlement (in)
CPT-1	8.0	2¾
CPT-2	11.0	2.0
B-1	15.0	3¼

Liquefaction Effects: Based on empirical relationships, total induced settlements are estimated to be about 2 to 3¼ inches should liquefaction occur. The minimum differential settlement could be estimated to be on the order of one-half of the total settlement be used in the design. Based on research from Ishihara (1985) and Youd and Garris (1995) ground rupture or sand boil formation is unlikely because of the thickness of the overlying unliquefiable soil. Because of the depth of the liquefiable layer, wide area subsidence from soil overburden would be the expected effect of liquefaction rather than bearing capacity failure of the proposed structures. The relatively high fines content (>30%) within the potentially liquefiable layer will probably reduce pore water movement significantly, thereby stalling development of a "quick" soil condition. Liquefaction induced lateral spreading is not expected to occur at this site due to the planar topography.

Since the potentially liquefiable sandy soils are overlain by 8 to 11 feet of non-liquefying soil which resist groundwater movement, it is unlikely that the structure loads planned are sufficient to result in liquefaction induced settlement greater than the surrounding land mass.

Mitigation: If the differential settlement (around 1½ inch) caused by liquefaction is considered excessive, the designer may consider the following ground improvements or foundation designs to mitigate the liquefaction induced settlement.

1) Structural flat-plate mats, either conventionally reinforced or tied with post-tensioned tendons.

2) Foundations that use grade-beam footings to tie floor slabs and isolated columns to continuous footings (conventional or post-tensioned).

3) Deep foundations (drilled piers, geopiers, stone columns or piles) founded at a depth below 40 feet.

4) Soil improvement by soil-cement mixing or geopiers to create non-liquefying soils.

These alternatives reduce the potential effects of liquefaction-induced settlements by making the structures more able to withstand differential settlement. The structural engineer is directed to CDMG Special Publication 117 for design on liquefiable sites.

3.8 On-Site Sewage Disposal

Percolation tests were made at the three (3) separate areas on February 26 and 27, 2008. The tests were made at depth of 1.5 feet and 3.0 feet to provide information for differing sewage disposal systems. All tests yielded percolation rates of greater than 360 minutes per inch; therefore, on-site sewage leach fields and pressure distribution leach field systems are not allowed.

On-site sewage shall either be treated with a "packaged sewer treatment system" (requiring a California Regional Water Quality Control Board and NPDES Permit) for release to the Rose Drain or shall be disposed of by septic tanks and evapo-transpiration beds.

Section 4
RECOMMENDATIONS

4.1 Site Preparation

Clearing and Grubbing: All surface improvements, debris or vegetation including grass, crop, and weeds on the site at the time of construction should be removed from the construction area. Root structures of the crop may be disced into the soil. Organic strippings should be hauled from the site and not used as fill. **Any trash, construction debris, and buried obstructions such as subsurface tile drainage pipelines exposed during rough grading should be traced to the limits of the foreign material by the grading contractor and removed under our supervision.** Any excavations resulting from site clearing should be dish-shaped to the lowest depth of disturbance and backfilled under the observation of the geotechnical engineer's representative.

The site is underlain by tile drain lines at a depth of approximately 5.0 to 8.0 feet below ground surface (see Appendix A). Tile lines should be cut and plugged at the street crossings. The pipelines are likely full of water and may temporarily flood excavations if not capped promptly. Base lines (6 inch diameter and larger) should be located and crushed in-place with the backfill compacted to a minimum 85 to 90% of ASTM D1557 maximum density.

Building Pad Preparation: The existing surface soil within the office, maintenance and material recovery and transfer station buildings foundation areas should be removed to 36 inches below the building pad elevation or existing grade (whichever is lower) extending five feet beyond all exterior wall/column lines (including adjacent concreted areas). Exposed subgrade should be scarified to a depth of 8 inches, uniformly moisture conditioned to 5 to 10% above optimum moisture content and recompacted to 85 to 90% of the maximum density determined in accordance with ASTM D1557 methods. Prior to over-excavation of the surface soil, deep moisture penetration may be achieved by bordering the site and applying multiple floodings or by sprinkler application to allow water to permeate to a minimum depth of 3.5 feet (20% minimum moisture content) below existing natural surface. Extended drying times may be required if this method of presaturation is used.

Structural Fill Recommendations: The native soil is suitable for use as engineered fill provided it is free from concentrations of organic matter or other deleterious material. The fill soil should be uniformly moisture conditioned by discing and watering to the limits specified above, placed in maximum 8-inch lifts (loose), and compacted to the limits specified above. Clay soil should not be compacted greater than 90% relative compaction because highly compacted soil will result in increased swelling.

If foundation designs are to be utilized which ***do not*** include provisions for expansive soil, an engineered building support pad consisting of 3.0 feet of granular soil or lime treated soil, placed in maximum 8-inch lifts (loose), compacted to a minimum of 90% of ASTM D1557 maximum density at 2% below to 4% above optimum moisture, should be placed below the bottom of the slab. Lime content in soil (if used) shall be established by the Eads-Grim Method with a resulting maximum Expansion Index of 15 after lime addition.

Imported fill soil (for foundations designed for expansive soil conditions) should have a Plasticity Index less than 25 and sulfates (SO_4) less than 2,000 ppm. For foundations not designed for expansive soil conditions, non-expansive, granular soil meeting the USCS classifications of SM, SP-SM, or SW-SM with a maximum rock size of 3 inches and 5 to 35% passing the No. 200 sieve shall be used. The geotechnical engineer should approve imported fill soil sources before hauling material to the site. Imported granular fill should be placed in lifts no greater than 8 inches in loose thickness and compacted to a minimum of 95% of ASTM D1557 maximum dry density at optimum moisture ±2%.

In areas other than the building pad which are to receive area concrete slabs, the ground surface should be presaturated to a minimum depth of 30 inches and then scarified to 8 inches, moisture conditioned to a minimum of 5% over optimum, and recompacted to 83-87% of ASTM D1557 maximum density just prior to concrete placement.

Trench Backfill: Trench backfill should conform to Regional Standard Drawing S-4, using either Type A, B or C backfill (Appendix D).

Type A backfill for HDPE pipe consists of a 4 to 6 inch bed of ¾-inch crushed rock below the pipe and pipezone backfill (to 12" above top of pipe) that consists of crusher fines (sand). Sewer pipes (SDR-35), water mains, and stormdrain pipes of other that HDPE pipe may use crusher fines for bedding. The crusher fines shall be compaction to a minimum of 90% of ASTM D1557 maximum density. Pipe deflection should be checked to not exceed 2% of pipe diameter. Native clay/silt soils may be used to backfill the remainder of the trench. Clays shall be compacted to a minimum of 85% of ASTM D1557 maximum density and silts shall be compacted to a minimum of 87% of ASTM D1557 maximum density, except that the top 12 inches of the trench shall be compacted to at least 90% of ASTM D1557 maximum density.

Type B backfill for HDPE pipe requires 6 inches of ¾-inch crushed rock as bedding and to springline of the pipe. Thereafter, sand/cement slurry (3 sack cement factor) should be used to 12 inches above the top of the pipe. Native clay and silt soils may be used in the remainder of the trench backfill as specified above.

Type C backfill for HDPE pipe shall consist of a geotextile filter fabric encapsulating ¾-inch crushed rock. The crushed rock thickness shall be 6 inches below and to the sides of the pipe and shall extend to 12 inches above the top of the pipe. The filter fabric shall cover the trench bottom, sidewalls and over the top of the crushed rock. Native clay and silt soils may be used in the remainder of the trench backfill as specified above. **Type C backfill must be used in wet soils and below groundwater for all buried utility pipelines unless dewatered to at least 12 inches below the trench bottom prior to excavation. Type A backfill may be used in the case of a dewatered trench condition.**

On-site soil free of debris, vegetation, and other deleterious matter may be suitable for use as utility trench backfill above pipezone, but may be difficult to uniformly maintain at specified moistures and compact to the specified densities. Native backfill should only be placed and compacted after encapsulating buried pipes with suitable bedding and pipe envelope material.

Imported granular material is acceptable for backfill of utility trenches. Granular trench backfill used in building pad areas should be plugged with a solid (no clods or voids) 2-foot width of native clay soils at each end of the building foundation to prevent landscape water migration into the trench below the building.

Backfill soil of utility trenches within paved areas should be placed in layers not more that 6 inches in thickness and mechanically compacted to a minimum of 87% of the ASTM D1557 maximum dry density except for the top 12 inches of the trench which shall be compacted to at least 90%.

Moisture Control and Drainage: The moisture condition of the building pad should be maintained during trenching and utility installation until concrete is placed or should be rewetted before initiating delayed construction. If soil drying is noted, a 2 to 3 inch depth of water may be used in the bottom of footings to restore footing subgrade moisture and reduce potential edge lift. Adequate site drainage is essential to future performance of the project. Infiltration of excess irrigation water and stormwaters can adversely affect the performance of the subsurface soil at the site. Positive drainage should be maintained away from all structures to prevent ponding and subsequent saturation of the native clay soil. If landscape irrigation is allowed next to the building, drip irrigation systems or lined planter boxes should be used. The subgrade soil should be maintained in a moist, but not saturated state, and not allowed to dry out. Drainage should be maintained without ponding.

Observation and Density Testing: All site preparation and fill placement should be continuously observed and tested by a representative of a qualified geotechnical engineering firm. Full-time observation services during the excavation and scarification process is necessary to detect undesirable materials or conditions and soft areas that may be encountered in the construction area. The geotechnical firm that provides observation and testing during construction shall assume the responsibility of "*geotechnical engineer of record*" and, as such, shall perform additional tests and investigation as necessary to satisfy themselves as to the site conditions and the recommendations for site development.

Auxiliary Structures Foundation Preparation: Auxiliary structures such as free standing or retaining walls should have the existing soil beneath the structure foundation prepared in the manner recommended for the building pad except the preparation needed only to extend 18 inches below and beyond the footing.

4.2 Foundations and Settlements

Shallow spread footings and continuous wall footings are suitable to support the structures associated with the building for offices, maintenance and material recovery and transfer station buildings, etc. Footings shall be founded on a layer of properly prepared and compacted soil as described in Section 4.1. The foundations may be designed using an allowable soil bearing pressure of 1,500 psf for compacted native clay soil and 2,000 psf when foundations are supported on imported sands (extending a minimum of 1.0 feet below footings). The allowable soil pressure may be increased by 20% for each foot of embedment depth in excess of 18 inches and by one-third for short term loads induced by winds or seismic events. The maximum allowable soil pressure at increased embedment depths shall not exceed 3,000 psf.

As an alternative to shallow spread foundations, flat plate structural mats or grade-beam reinforced foundations may be used to mitigate expansive soil heave and/or liquefaction related movement. Recommendations for these are provided below.

Flat Plate Structural Mats: Flat plate structural mats may be used to mitigate expansive soils at the project site. The structural mat shall have a double mat of steel (minimum No. 4's @ 12" O.C. each way – top and bottom) and a minimum thickness of 10 inches. Mat edges shall have a minimum edge footing of 12 inches width and 18 inches depth (below the building pad surface). Mats may be designed by CBC (2007) Chapter 18 Section 1805.8.2 methods using an Effective Plasticity Index of 25.

Structural mats may be designed for a modulus of subgrade reaction (Ks) of 100 pci when placed on compacted clay or a subgrade modulus of 300 pci when placed on 3.0 feet of granular fill. Mats shall overlay 2 inches of sand and a 10-mil polyethylene vapor retarder. The building support pad shall be moisture conditioned and recompacted as specified in Section 4.1 of this report.

Grade-beam Reinforced Foundations: Specific soil data for structures with grade-beam reinforced foundations placed on the native clays (without removal of the surface clay or a minimum of 3.0 feet of underlying granular fill) are presented below in accordance with the design method given in CBC Chapter 18 (2007) Section 1805.8.2 (WRI/CRSI Design of Slab-on-Ground Foundations):

- Weighted Plasticity Index (PI) = 31
- Slope Coefficient (C_s) = 1.0
- Strength Coefficient (C_o) = 0.8
- Climatic Rating (C_w) = 15
- Effective PI = 25
- 1-C Value = 0.11
- Maximum Grade-beam Spacing = 19 feet

Post-tensioned Slabs: If post-tensioned slabs are considered for this project, the following soil criteria shall be used in the Post Tensioning Institute (PTI, 2004) designs:

Depth to Constant Suction:	5.0 ft.
Constant Suction (pF):	4.2
Maximum Edge Moisture Variation Distance, e_m	Center: 6.7 ft. Edge: 3.4 ft.
Differential Swell, y_m	Center: 0.25 in. Edge: 4.28 in.
Estimated Differential Settlement (swell):	1.0 in.
Bearing Capacity:	1,500 psf
Maximum Allowable Slab Deflection	1 inch

Clamping devices and end anchors for post-tensioned tendons are susceptible to corrosion from aggressive soil and landscape water conditions. Therefore, a minimum concrete cover of 3.0 inches, a PVC end cap and epoxy coatings should be specified for the tendon ends with a positive bonding agent used with polymer modified cementitious material to patch the recessed anchor cup. A complete encapsulation system intended for corrosive environments is a suggested protection method for post-tensioning cables and anchoring/clamping devices.

All exterior foundations should be embedded a minimum of 18 inches below the building support pad or lowest adjacent final grade, whichever is deeper. Embedment depth of interior footings should be a minimum of 12 inches deep. Interior footing embedment depths for post-tensioned foundations shall be determined by the structural engineer/designer and should be sufficient to limit differential movement to 1.0 inch or less. Continuous wall footings should have a minimum width of 12 inches. Spread footings should have a minimum width of 24 inches and should not be structurally isolated (shall be tied with grade beams to structure perimeter or interior footings). Recommended concrete reinforcement and sizing for all footings should be provided by the structural engineer.

Resistance to horizontal loads will be developed by passive earth pressure on the sides of footings and frictional resistance developed along the bases of footings and concrete slabs. Passive resistance to lateral earth pressure may be calculated using an equivalent fluid pressure of 250 pcf (300 pcf for sands) to resist lateral loadings. The top one foot of embedment should not be considered in computing passive resistance unless the adjacent area is confined by a slab or pavement. An allowable friction coefficient of 0.25 (0.35 for sands) may also be used at the base of the footings to resist lateral loading.

Settlement estimates (in inches) developed for different columns footing dimensions embedded a minimum of 1.5 feet into native soils and loaded to 10, 25, 50, 75 and 100 kips follow. No settlement value is indicated when soil bearing pressures exceed 1,500 psf.

Table 4: Settlement Estimates (inches)

Load, Kips	Size of Footing (ft.)					
	2.5 x 2.5	3 x 3	4 x 5	5 x 5	7.5 x 7.5	10 x 10
10	0.30	0.25	0.20	0.15	0.10	0.10
25	---	---	0.40	0.35	0.30	0.20
50	---	---	---	---	0.50	0.40
75	---	---	---	---	0.70	0.55
100	---	---	---	---	---	0.70

Exterior bearing wall movement under the estimated static (non-seismic) loadings (1 to 5 klf) and static site conditions is have been determined to not exceed ¾ inch, with differential movement of about two-thirds of total movement in 100 linear feet for the loading assumptions stated above and when the subgrade preparation guidelines given above are followed. Seismically induced liquefaction settlement may be on the order of 2 to 3¼ inches.

4.3 Steel Tank Foundation and Settlements

Site Preparation and Grading: The existing soils underlying the 30-foot diameter tank area should be removed to a depth of 30 inches below ground surface and a minimum of 18 inches below the ring foundation extending to a minimum of 5 feet beyond the perimeter of the tank. The native soil at the subexcavation and footing excavation level should be compacted to 85 - 90 % of ASTM D1557 maximum density for a minimum depth of 8 inches. The area should then be brought to finish grade with engineered fill consisting of the following components:

- 24 inches of crushed aggregate base
- 8 inches of crushed rock

As a minimum, a steel ring should be placed to contain the crushed rock subgrade below the tank. The rock fill should be placed to the top of the ring wall. The fill may be crowned about 1.0 inch to allow for differential movement between the tank perimeter and center.

The engineered fill should be placed in 8-inch maximum loose lifts and compacted to a minimum 90% of ASTM D1557 maximum density within 2% of optimum moisture. The crushed rock tank underlayment should meet the gradation requirements of ASTM C33, size 57 (1" x No. 4 rock). The proposed source of engineered fill and rock should be submitted to the geotechnical engineer for review and testing to verify conformance to these requirements.

Tank Foundations: Flexible steel tanks, which can withstand large settlements, generally require minimal foundations, allowing settlement to occur and using flexible connections to inlet/outlet piping. The tanks should have a perimeter ring wall foundation which supports the tank wall and roof. The minimum depth of the ring wall footing should be 18 inches below the finished ground surface. The minimum footing width should be 12 inches.

Estimated Tank Settlements: The subsurface clays are saturated and overconsolidated in their natural state. Imposed foundations loads can consolidate the soils by reducing the void ratio through pore water expulsion. The amount of vertical settlement that occurs as a result of soil compression varies with applied loads, foundation shape and width.

Moderately loaded structures, such as the flexible steel tanks which can withstand large settlements, will generally require minimal foundations, allowing settlement to occur and using flexible connections to inlet/outlet utility lines. The silts and clays will consolidate fairly slowly because of their low permeability. Flexible connections such a "Flex-Tend" expansion joints should be used to connect exterior piping with the tank. The tank should be preloaded and monitored for settlement prior to making piping connections. It may be necessary to readjust piping connections after the loading sequence.

Estimated settlements were calculated using the consolidation and field data test data for the silt and clay strata and Schmertman's analysis for the granular strata using the CPT engineering properties correlations. The soils to a depth of the diameter of the tank (30 feet) may be significantly stressed so as to contribute to the overall settlement. The estimated settlement for the tank is approximately 1.8 inches in the center of the tank and about 1.0 inch at the edge of the tank. Since the settlements are deep seated, little is gained by further excavation and replacement of compacted granular fill to reduce settlements

4.4 Slabs-On-Grade

Concrete slabs and flatwork for the office building and lightly structures placed over native clay soil should be designed in accordance with Chapter 18 of the 2007 CBC (using an Effective Plasticity Index of 25) and shall be a minimum of 5 inches thick due to expansive soil conditions. Concrete slabs and flatwork for the maintenance and material recovery and transfer station buildings shall be a minimum of 6 inches thick due to equipment loads.

Concrete floor slabs shall be monolithically placed with the footings (no cold joints) unless placed on 3.0 feet of granular fill or lime treated soil. The concrete slabs should be underlain by a 10-mil polyethylene vapor retarder that works as a capillary break to reduce moisture migration into the slab section. The vapor retarder should be properly lapped and continuously sealed and extend a minimum of 12 inches into the footing excavations. The vapor retarder should be sandwiched by 4 inches (2 inches above and 2 inches below) of clean sand (Sand Equivalent SE>30) unless placed on 3.0 feet of granular fill, in which case, the vapor retarder may lie directly on the granular fill with 2 inches of clean sand cover. Concrete slabs may be placed without a sand cover directly over a 15-mil vapor retarder (Stego-Wrap or equivalent).

Concrete slab and flatwork reinforcement should consist of chaired rebar slab reinforcement (minimum of No. 4 bars at 18-inch centers, both horizontal directions) placed at slab mid-height to resist potential swell forces and cracking. Slab thickness and steel reinforcement are minimums only and should be verified by the structural engineer/designer knowing the actual project loadings. All steel components of the foundation system should be protected from corrosion by maintaining a 3-inch minimum concrete cover of densely consolidated concrete at footings (by use of a vibrator). The construction joint between the foundation and any mowstrips/sidewalks placed adjacent to foundations should be sealed with a polyurethane based non-hardening sealant to prevent moisture migration between the joint. Epoxy coated embedded steel components or permanent waterproofing membranes placed at the exterior footing sidewall may also be used to mitigate the corrosion potential of concrete placed in contact with native soil.

Control joints should be provided in all concrete slabs-on-grade at a maximum spacing (in feet) of 2 to 3 times the slab thickness (in inches) as recommended by American Concrete Institute (ACI) guidelines. All joints should form approximately square patterns to reduce randomly oriented contraction cracks. Contraction joints in the slabs should be tooled at the time of the pour or sawcut (¼ of slab depth) within 6 to 8 hours of concrete placement. Construction (cold) joints in foundations and area flatwork should either be thickened butt-joints with dowels or a thickened keyed-joint designed to resist vertical deflection at the joint. All joints in flatwork should be sealed to prevent moisture, vermin, or foreign material intrusion. Precautions should be taken to prevent curling of slabs in this arid desert region (refer to ACI guidelines).

All independent flatwork (sidewalks, housekeeping slabs) should be placed on a minimum of 2 inches of concrete sand or aggregate base, dowelled to the perimeter foundations where adjacent to the building and sloped 2% or more away from the building. A minimum of 24 inches of moisture conditioned (20% moisture content) and 8 inches of compacted subgrade (83 to 87%) and a 10-mil (minimum) polyethylene separation sheet should underlie the flatwork. All flatwork should be jointed in square patterns and at irregularities in shape at a maximum spacing of 10 feet or the least width of the sidewalk.

4.5 Concrete Mixes and Corrosivity

Selected chemical analyses for corrosivity were conducted on bulk samples of the near surface soil from the project site (Plate C-). The native soils were found to have low to severe levels of sulfate ion concentration (4,000 to 4,700 ppm). Sulfate ions in high concentrations can attack the cementitious material in concrete, causing weakening of the cement matrix and eventual deterioration by raveling.

The California Building Code recommends that increased quantities of Type II Portland Cement be used at a low water/cement ratio when concrete is subjected to moderate sulfate concentrations. Type V Portland Cement and/or Type II/V cement with 25% flyash replacement is recommended when the concrete is subjected to soil with severe sulfate concentration.

A minimum of 6.0 sacks per cubic yard of concrete (4,500 psi) of Type V Portland Cement with a maximum water/cement ratio of 0.45 (by weight) should be used for concrete placed in contact with native soil on this project (sitework including sidewalks, driveways, and foundations). Admixtures may be required to allow placement of this low water/cement ratio concrete.

The native soil has a moderate to severe level of chloride ion concentration (400 to 1,200 ppm). Chloride ions can cause corrosion of reinforcing steel, anchor bolts and other buried metallic conduits. Resistivity determinations on the soil indicate very severe potential for metal loss because of electrochemical corrosion processes. Mitigation of the corrosion of steel can be achieved by using steel pipes coated with epoxy corrosion inhibitors, asphaltic and epoxy coatings, cathodic protection or by encapsulating the portion of the pipe lying above groundwater with a minimum of 3 inches of densely consolidated concrete. ***No metallic pipes or conduits should be placed below foundations.***

Foundation designs shall provide a minimum concrete cover of three (3) inches around steel reinforcing or embedded components (anchor bolts, etc.) exposed to native soil or landscape water (to 18 inches above grade). If the 3-inch concrete edge distance cannot be achieved, all embedded steel components (anchor bolts, etc.) shall be epoxy dipped for corrosion protection or a corrosion inhibitor and a permanent waterproofing membrane shall be placed along the exterior face of the exterior footings. Additionally, the concrete should be thoroughly vibrated at footings during placement to decrease the permeability of the concrete.

4.6 Excavations

Shallow, temporary excavations, less than four feet deep, in native clayey/silty soils should stand nearly vertical for short duration. All temporary excavations over four feet in depth will require shoring or slope inclinations in conformance to Cal OSHA standards for Type B soils. These temporary excavations will require slope inclinations no steeper than 1½(H):1(V) unless trench shoring is used. If excavations are planned below groundwater (7 feet below ground surface (bgs), all excavation slopes should be excavated according to OSHA Standards for Type C soils.

Due to an existing silty/sandy layers encountered below 8 feet at the site, the use of a sheet-pile shoring system should be planned. Dewatering of the excavation site will be required prior to start of excavation. Dewatering systems should provide adequate filters so that fine silts/sands are not pumped from depth. Pumping of the fine soils can result in area settlement.

All discussions in this section regarding stable excavation slopes assumes minimal equipment vibration and adequate setback of excavated material and construction equipment from the top of the excavation. We recommended that the minimum setback distance be equal to the depth of excavation and at least 10 feet from the crown of the slope. If excavated materials are stockpiled adjacent to the excavation, the weight of the material should be considered as a surcharge load for slope stability.

The excavation for the transfer truck tunnel (15 feet depth) will encounter the groundwater table. Therefore, seepage and pumping subgrade conditions should be anticipated. If excavations are planned below groundwater an adequately designed dewatering system (well points) will be required to control groundwater seepage and prevent running ground conditions. The bottom of the transfer truck tunnel should be underlain by a minimum of 18 inches of 1.5-inch crushed rock (ASTM C33, size 467) encapsulated in a geotextile filter fabric. The responsibility for dewatering and selection of an appropriate system is beyond the scope of this report.

All permanent slopes should not be steeper than 3:1 to reduce wind and rain erosion. Protected slopes with ground cover may be as steep as 2:1. However, maintenance with motorized equipment may not be possible at this inclination.

4.7 Lateral Earth Pressures

Earth retaining structures (retaining walls) should be designed to resist the soil pressure imposed by the retained soil mass. Walls with native or granular drained backfill may be designed for an assumed static earth pressure equivalent to that exerted by a fluid weighing 55 pcf (native) and 35 pcf (granular) for unrestrained (active) conditions (able to rotate 0.1% of wall height), and 70 pcf (native) and 50 pcf (granular) for restrained (at-rest) conditions. These values should be verified at the actual wall locations during construction.

An allowable friction coefficient of 0.25 (0.35 for imported granular material) may also be used at the base of the retaining wall foundation to resist lateral loading.

When applicable (unbalanced retaining wall greater than 6 feet high), seismic earth pressure on walls may be assumed to exert a uniform pressure distribution of 7.5H psf against the back of the wall. The total seismic load is assumed to act as a point load at 0.6H above the base of the wall. The term H is the height of the backfill against a retaining wall in feet. The recommended value 7.5H was derived from the following formula:

$$P_e = \frac{3}{8} (k_h)\gamma H^2$$

where: $k_h = 0.75a_{max}$ (a_{max} is a pseudo-static maximum of 0.20g)
$\gamma = 125$ pcf

which equates to $P_e = 7.0H^2$ (acting as a point load at 0.6H from base of wall)

A pseudo-static a_{max} is typically used in slope stability analysis.

Surcharge loads should be considered if loads are applied within a zone between the face of the wall and a plane projected behind the wall 45 degrees upward from the base of the wall. The increase in lateral earth pressure acting uniformly against the back of the wall should be taken as 50% of the surcharge load within this zone. Areas of the retaining wall subjected to traffic loads should be designed for a uniform surcharge load equivalent to two feet of native soil.

Walls should be provided with backdrains to reduce the potential for the buildup of hydrostatic pressure. The drainage system should consist of a composite HDPE drainage panel or a 2-foot wide zone of free draining crushed rock placed adjacent to the wall and extending 2/3 the height of the wall. The gravel should be completely enclosed in an approved filter fabric to separate the gravel and backfill soil. A perforated pipe should be placed perforations down at the base of the permeable material at least six inches below finished floor elevations. The pipe should be sloped to drain to an appropriate outlet that is protected against erosion. Walls should be properly waterproofed. The project geotechnical engineer should approve any alternative drain system.

4.8 Seismic Design

This site is located in the seismically active southern California area and the site structures are subject to strong ground shaking due to potential fault movements along the Brawley, Superstition Hills, and Imperial Faults. Engineered design and earthquake-resistant construction are the common solutions to increase safety and development of seismic areas. Designs should comply with the latest edition of the CBC for Seismic Zone 4 using the seismic coefficients given in Section 3.4 of this report.

4.9 Pavements

Pavements should be designed according to CALTRANS or other acceptable methods. Traffic indices were not provided by the project engineer or owner; therefore, we have provided structural sections for several traffic indices for comparative evaluation. The public agency or design engineer should decide the appropriate traffic index for the site. Maintenance of proper drainage is necessary to prolong the service life of the pavements.

Based on the current State of California CALTRANS method, and R-value of 5 for the subgrade soil and assumed traffic indices, the following table provides our estimates for asphaltic concrete (AC) and Portland Cement Concrete (PCC) pavement sections.

Table 5: RECOMMENDED PAVEMENTS SECTIONS

R-Value of Subgrade Soil - 5 (estimated) Design Method - CALTRANS 2006

Traffic Index (assumed)	Flexible Pavements		(*) Flexible Pavements		Rigid (PCC) Pavements	
	Asphaltic Concrete Thickness (in.)	Aggregate Base Thickness (in.)	Asphaltic Concrete Thickness (in.)	Aggregate Base/Lime Thickness (in.)	Concrete Thickness (in.)	Aggregate Base Thickness (in.)
4.0	3.0	6.5	3.0	4.0/14.0	5.0	6.0
5.0	3.0	9.0	3.0	4.0/15.0	5.5	6.0
6.0	3.0	14.0	3.0	6.0/18.0	6.0	8.0
6.5	4.0	14.0	4.0	6.0/18.0	7.0	8.0
8.0	4.0	18.0	4.0	8.0/21.0	8.0	11.0
10.0	4.5	26.0	4.5	13.0/24.0	9.0	13.0
11.0	5.5	28.0	5.5	15.0/24.0	10.0	15.0

(*) Pavement structural section when used with 12 inches of lime-treated subgrade soil (3-6% quicklime by weight) compacted to 95% minimum with minimum Unconfined Compressive Strength of 55 psi.

Notes:

1) Asphaltic concrete shall be Caltrans, Type B, ¾ inch maximum (½ inch maximum for parking areas), medium grading with PG70-10 asphalt cement, compacted to a minimum of 95% of the 75-blow Marshall density (ASTM D1559) or Hveem density (CAL 366).
2) Aggregate base shall conform to Caltrans Class 2 (¾ in. maximum), compacted to a minimum of 95% of ASTM D1557 maximum dry density.
3) Place pavements on 12 inches of moisture conditioned (minimum 4% above optimum if clays) native clay soil compacted to a minimum of 90% (95% if sand subgrade) of the maximum dry density determined by ASTM D1557. No additional subgrade preparation is required for soil-lime mixtures.
4) Portland cement concrete for pavements should have Type V cement, a minimum compressive strength of 4,500 psi at 28 days, and a maximum water-cement ratio of 0.45.
5) Typical Street Classifications (Imperial County)

Parking Areas:	TI = 4.0
Cul-de-Sacs:	TI = 5.0
Local Streets:	TI = 6.0
Minor Collectors:	TI = 6.5
Major Collectors:	TI = 8.0
Minor Arterial:	TI = 10.0
Primary Arterial:	TI = 11.0

Section 5

LIMITATIONS AND ADDITIONAL SERVICES

5.1 Limitations

The recommendations and conclusions within this report are based on current information regarding the proposed Material Recovery Facility (MRF) and Municipal Waste Transfer Station located at the northwest corner of Harris Road and Hwy 111 northeast of Imperial, California. The conclusions and recommendations of this report are invalid if:

- Structural loads change from those stated or the structures are relocated.
- The Additional Services section of this report is not followed.
- This report is used for adjacent or other property.
- Changes of grade or groundwater occur between the issuance of this report and construction other than those anticipated in this report.
- Any other change that materially alters the project from that proposed at the time this report was prepared.

Findings and recommendations in this report are based on selected points of field exploration, geologic literature, laboratory testing, and our understanding of the proposed project. Our analysis of data and recommendations presented herein are based on the assumption that soil conditions do not vary significantly from those found at specific exploratory locations. Variations in soil conditions can exist between and beyond the exploration points or groundwater elevations may change. If detected, these conditions may require additional studies, consultation, and possible design revisions.

This report contains information that may be useful in the preparation of contract specifications. However, the report is not worded is such a manner that we recommend its use as a construction specification document without proper modification. The use of information contained in this report for bidding purposes should be done at the contractor's option and risk.

This report was prepared according to the generally accepted *geotechnical engineering standards of practice* that existed in Imperial County at the time the report was prepared. No express or implied warranties are made in connection with our services. This report should be considered invalid for periods after two years from the report date without a review of the validity of the findings and recommendations by our firm, because of potential changes in the Geotechnical Engineering Standards of Practice.

The client has responsibility to see that all parties to the project including, designer, contractor, and subcontractor are made aware of this entire report. The use of information contained in this report for bidding purposes should be done at the contractor's option and risk.

5.2 Additional Services

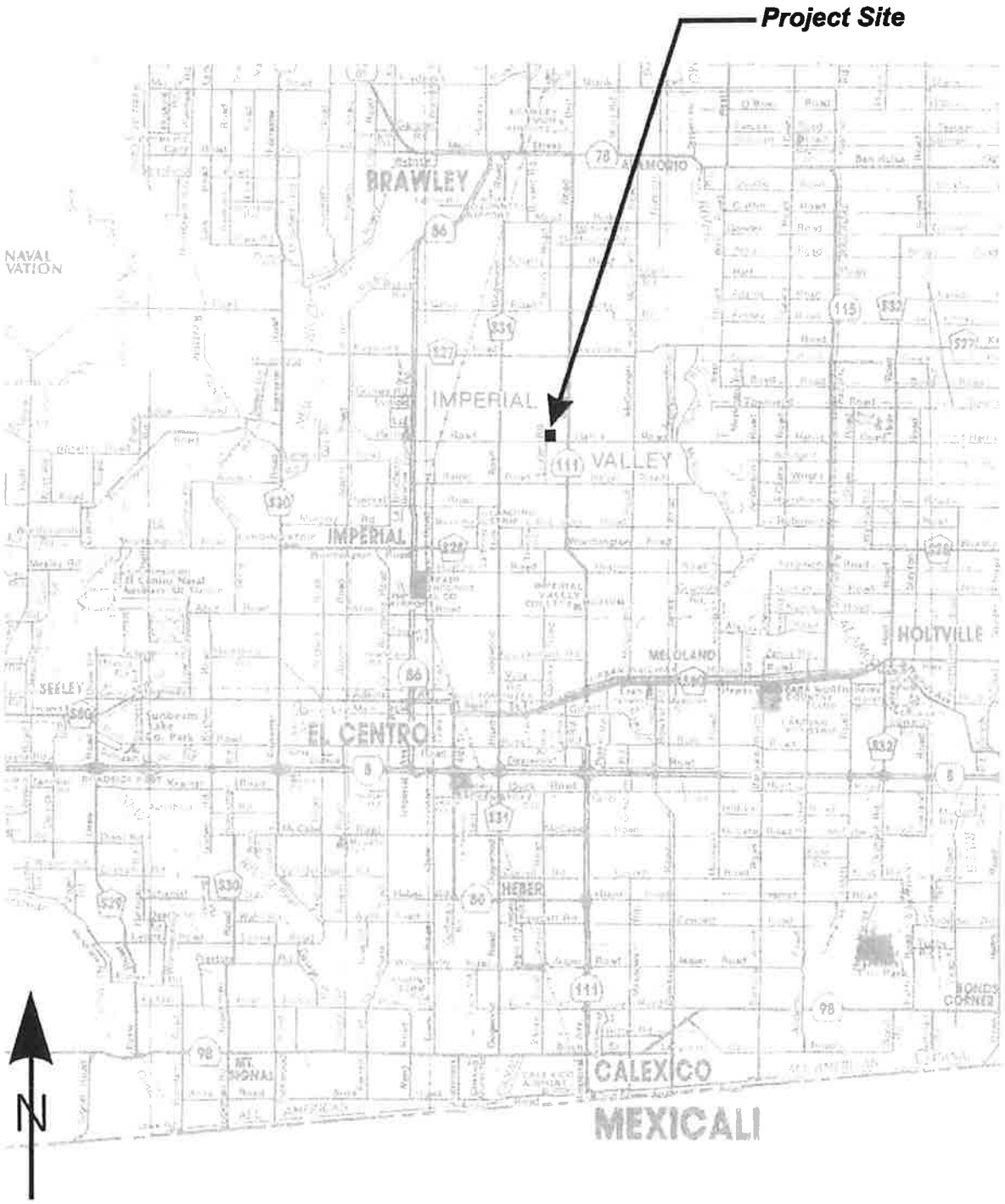
We recommend that Landmark Consultants, Inc. be retained as the geotechnical consultant to provide the tests and observations services during construction. If Landmark Consultants does not provide such services then *the geotechnical engineering firm providing such tests and observations shall become the geotechnical engineer of record and assume responsibility for the project.*

The recommendations presented in this report are based on the assumption that:

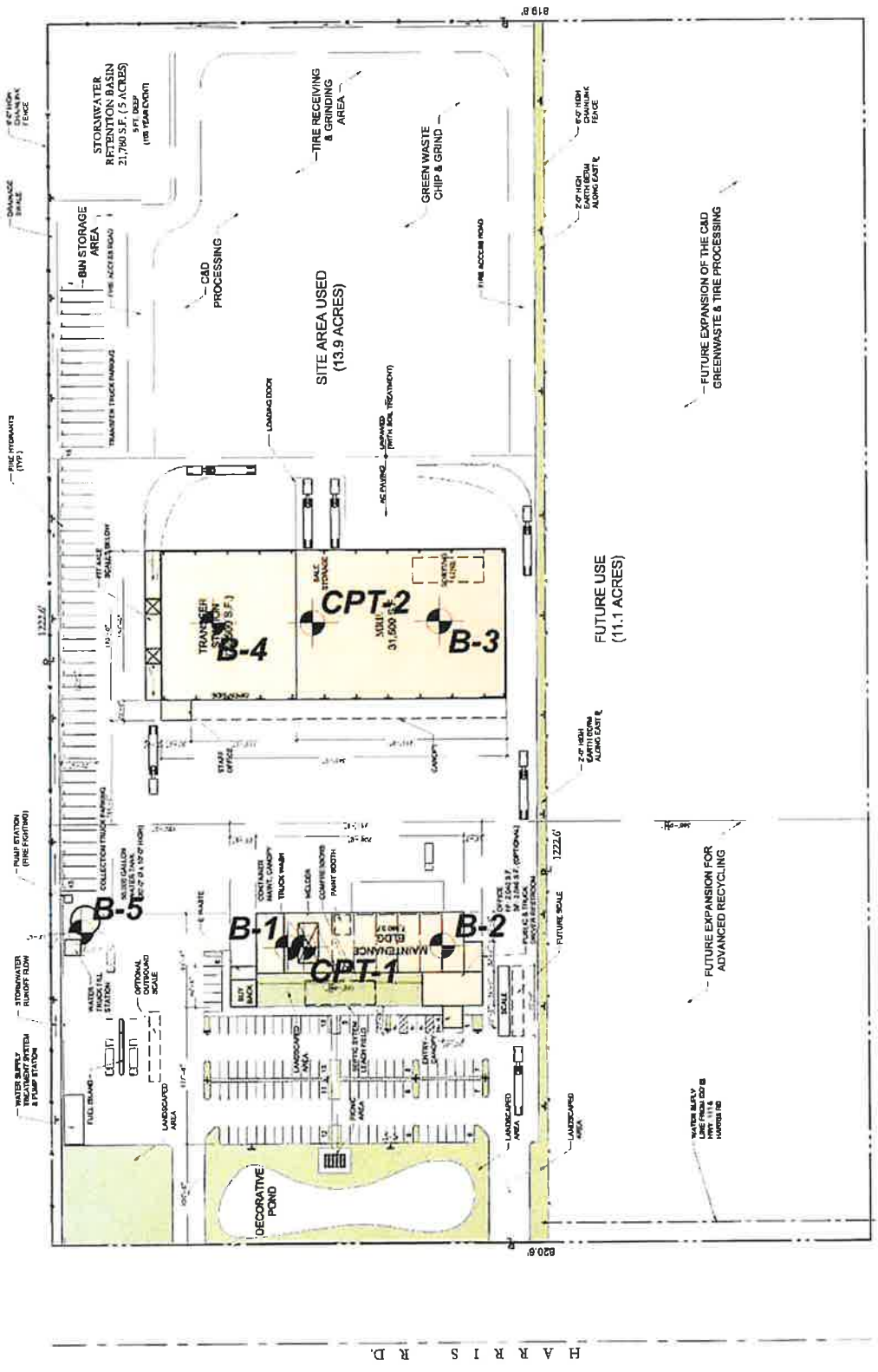
- Consultation during development of design and construction documents to check that the geotechnical recommendations are appropriate for the proposed project and that the geotechnical recommendations are properly interpreted and incorporated into the documents.
- Landmark Consultants will have the opportunity to review and comment on the plans and specifications for the project prior to the issuance of such for bidding.
- Continuous observation, inspection, and testing by the geotechnical consultant of record during site clearing, grading, excavation, placement of fills, building pad and subgrade preparation, and backfilling of utility trenches.
- Observation of foundation excavations and reinforcing steel before concrete placement.
- Other consultation as necessary during design and construction.

We emphasize our review of the project plans and specifications to check for compatibility with our recommendations and conclusions. Additional information concerning the scope and cost of these services can be obtained from our office.

APPENDIX A



LANDMARK Geo-Engineers and Geologists Project No.: LE08033	Vicinity Map	Plate 1

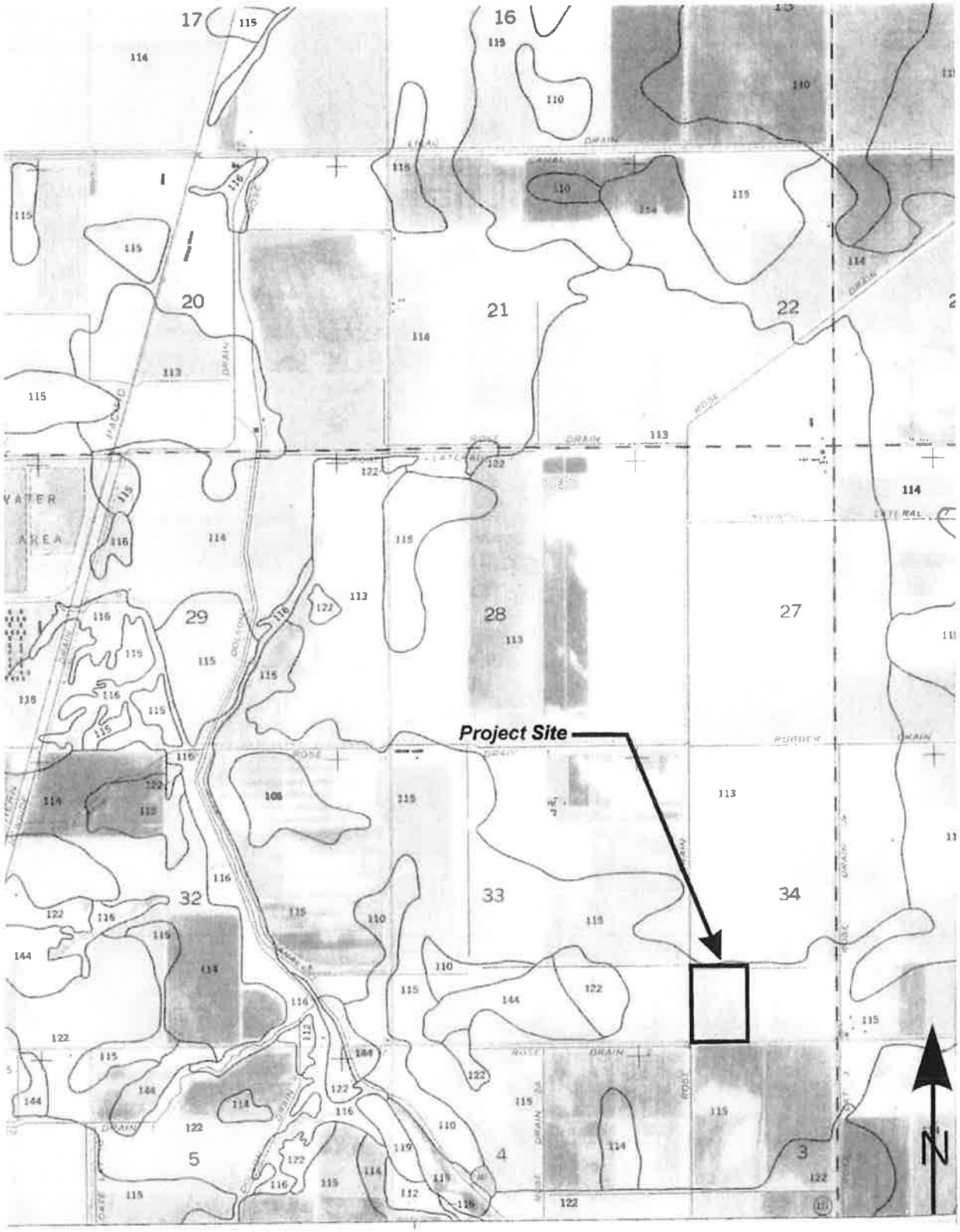


LANDMARK
Geo-Engineers and Geologists

Project No.: LE08033

Site and Exploration Plan

Plate 2



LANDMARK Geo-Engineers and Geologists **Project No.: LE08033**	**Soil Survey Map**	**Plate 3**

Soil Survey of

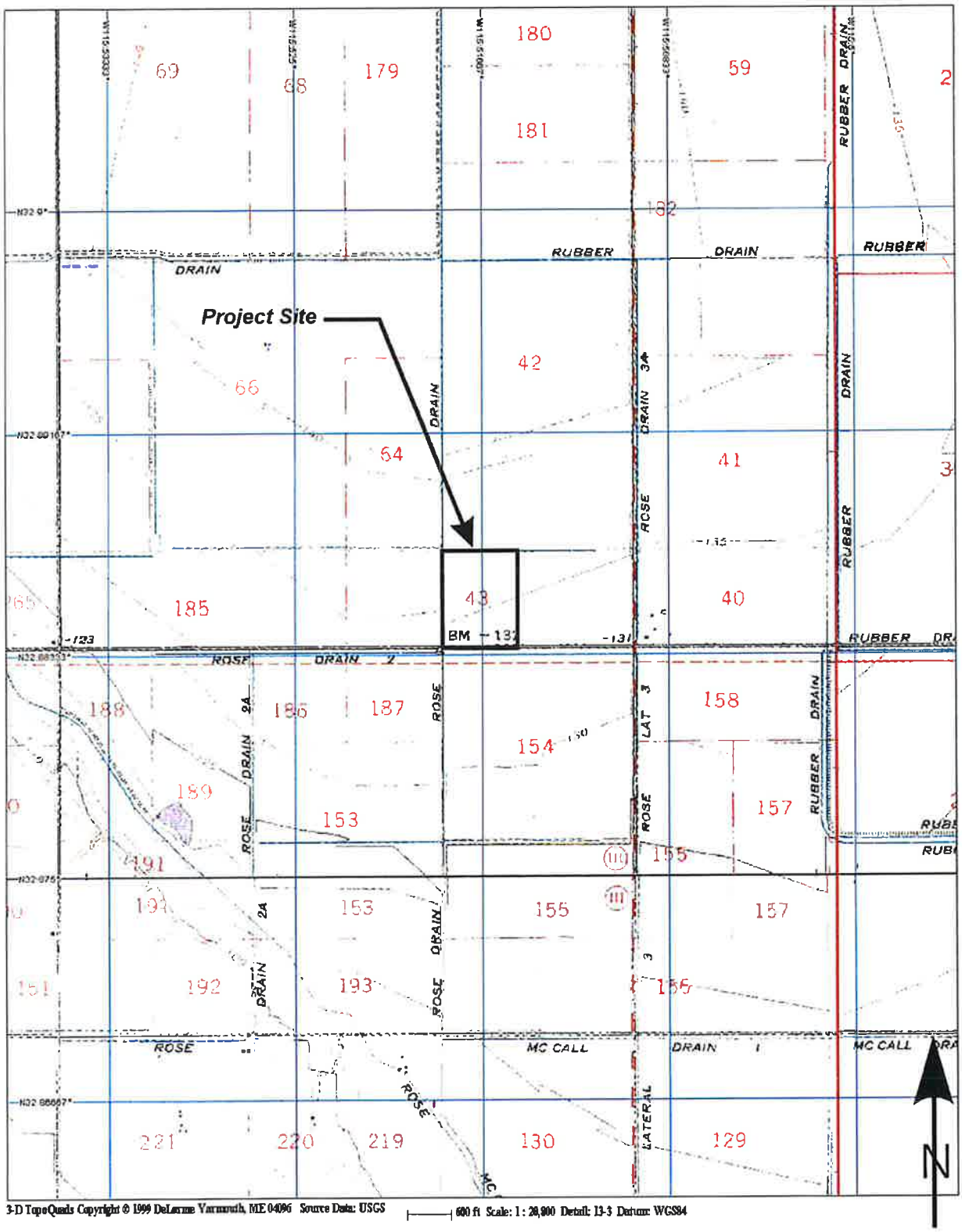
IMPERIAL COUNTY CALIFORNIA IMPERIAL VALLEY AREA

United States Department of Agriculture Soil Conservation Service
in cooperation with
University of California Agricultural Experiment Station
and
Imperial Irrigation District

TABLE 11.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments > 3 inches	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
111*:											
Holtville	0-10	Silty clay loam	CL, CH	A-7	0	100	100	95-100	85-95	40-65	20-35
	10-22	Clay, silty clay	CL, CH	A-7	0	100	100	95-100	85-95	40-65	20-35
	22-60	Silt loam, very fine sandy loam.	ML	A-4	0	100	100	95-100	65-85	25-35	NP-10
Imperial	0-12	Silty clay loam	CL	A-7	0	100	100	100	85-95	40-50	10-20
	12-60	Silty clay loam, silty clay, clay.	CH	A-7	0	100	100	100	85-95	50-70	25-45
112	0-12	Silty clay	CH	A-7	0	100	100	100	85-95	50-70	25-45
Imperial	12-60	Silty clay loam, silty clay, clay.	CH	A-7	0	100	100	100	85-95	50-70	25-45
113	0-12	Silty clay	CH	A-7	0	100	100	100	85-95	50-70	25-45
Imperial	12-60	Silty clay, clay, silty clay loam.	CH	A-7	0	100	100	100	85-95	50-70	25-45
114	0-12	Silty clay	CH	A-7	0	100	100	100	85-95	50-70	25-45
Imperial	12-60	Silty clay loam, silty clay, clay.	CH	A-7	0	100	100	100	85-95	50-70	25-45
115*:											
Imperial	0-12	Silty clay loam	CL	A-7	0	100	100	100	85-95	40-50	10-20
	12-60	Silty clay loam, silty clay, clay.	CH	A-7	0	100	100	100	85-95	50-70	25-45
Glenbar	0-13	Silty clay loam	CL	A-6, A-7	0	100	100	90-100	70-95	35-45	15-25
	13-60	Clay loam, silty clay loam.	CL	A-6, A-7	0	100	100	90-100	70-95	35-45	15-25
116*:											
Imperial	0-13	Silty clay loam	CL	A-7	0	100	100	100	85-95	40-50	10-20
	13-60	Silty clay loam, silty clay, clay.	CH	A-7	0	100	100	100	85-95	50-70	25-45
Glenbar	0-13	Silty clay loam	CL	A-6, A-7	0	100	100	90-100	70-95	35-45	15-25
	13-60	Clay loam, silty clay loam.	CL	A-6	0	100	100	90-100	70-95	35-45	15-30
117, 118	0-12	Loam	ML	A-4	0	95-100	95-100	85-100	75-90	20-30	NP-5
Indio	12-72	Stratified loamy very fine sand to silt loam.	ML	A-4	0	95-100	95-100	85-100	75-90	20-30	NP-5
119*:											
Indio	0-12	Loam	ML	A-4	0	95-100	95-100	85-100	75-90	20-30	NP-5
	12-72	Stratified loamy very fine sand to silt loam.	ML	A-4	0	95-100	95-100	85-100	75-90	20-30	NP-5
Vint	0-10	Loamy fine sand	SM	A-2	0	95-100	95-100	70-80	25-35	---	NP
	10-60	Loamy sand, loamy fine sand.	SM	A-2	0	95-100	95-100	70-80	20-30	---	NP
120*	0-12	Loam	ML, CL-ML	A-4	0	100	95-100	75-85	55-65	20-30	NP-10
Laveen	12-60	Loam, very fine sandy loam.	ML, CL-ML	A-4	0	95-100	85-95	70-80	55-65	15-25	NP-10

See footnote at end of table.



LANDMARK
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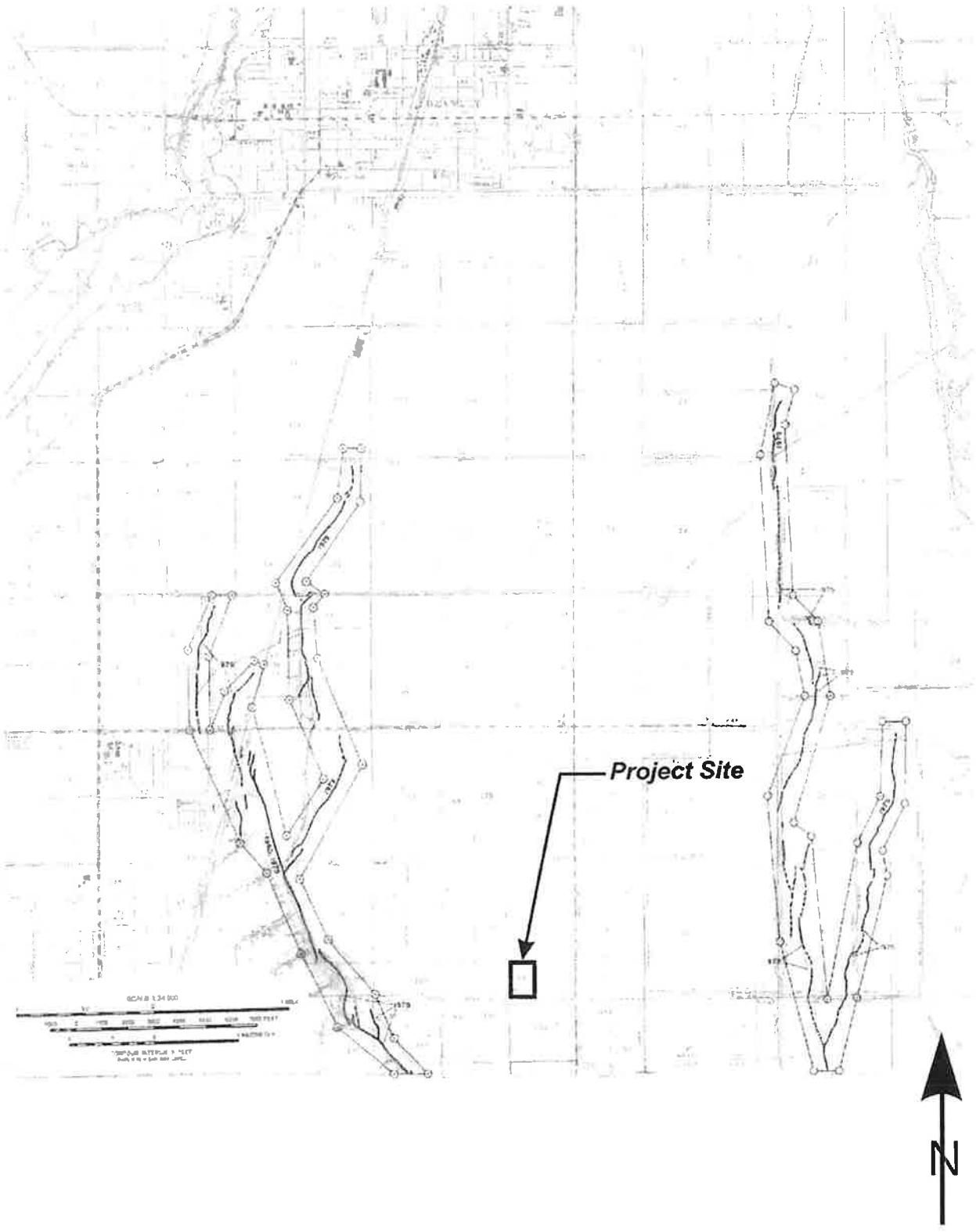
Project No.: LE08033

Topographic Map

Plate 4



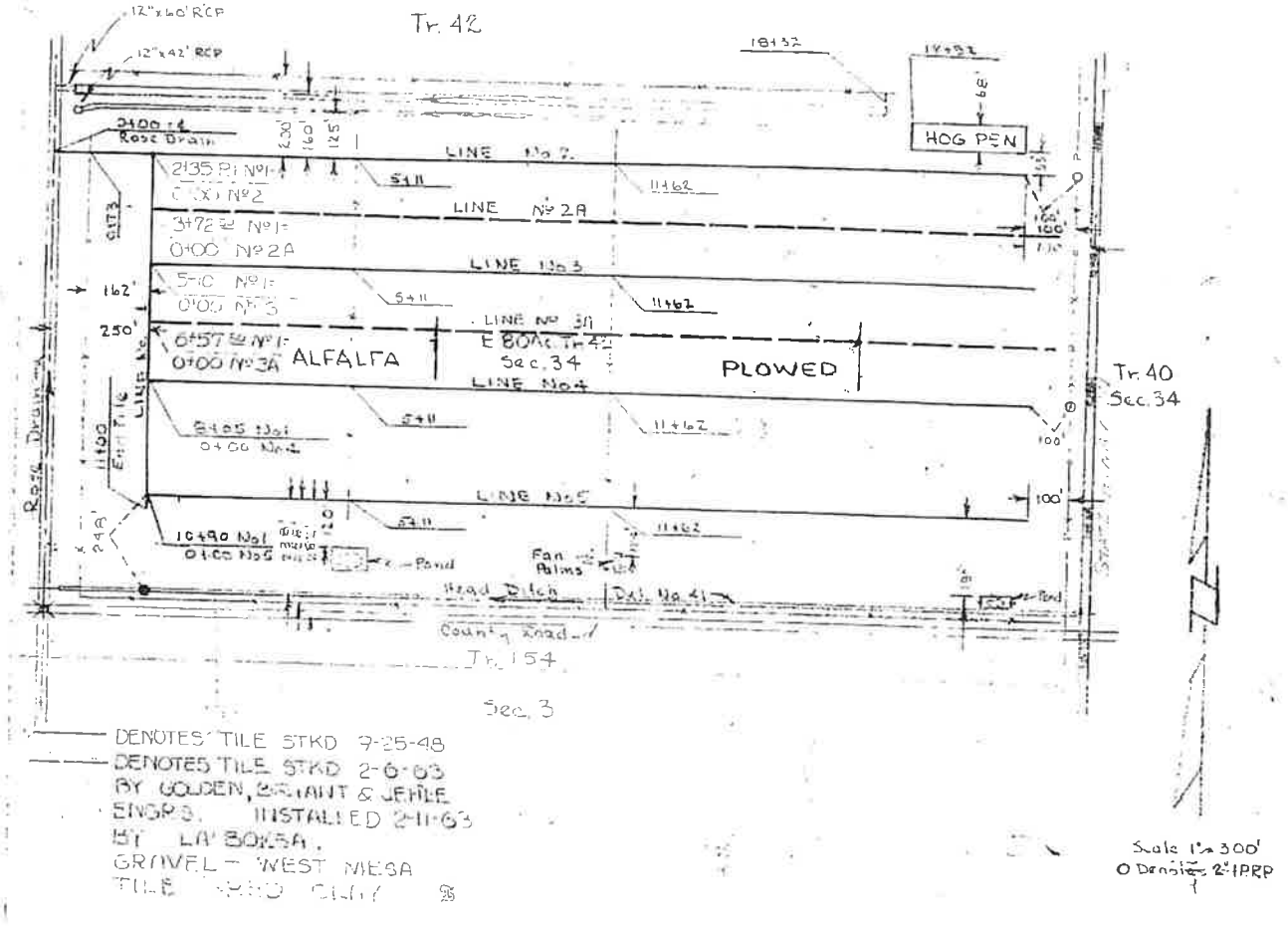
LANDMARK
Geo-Engineers and Geologists

Project No.: LE08033

A-P Earthquake Fault Zone Map

Plate 5

SH. 1 OF 2.



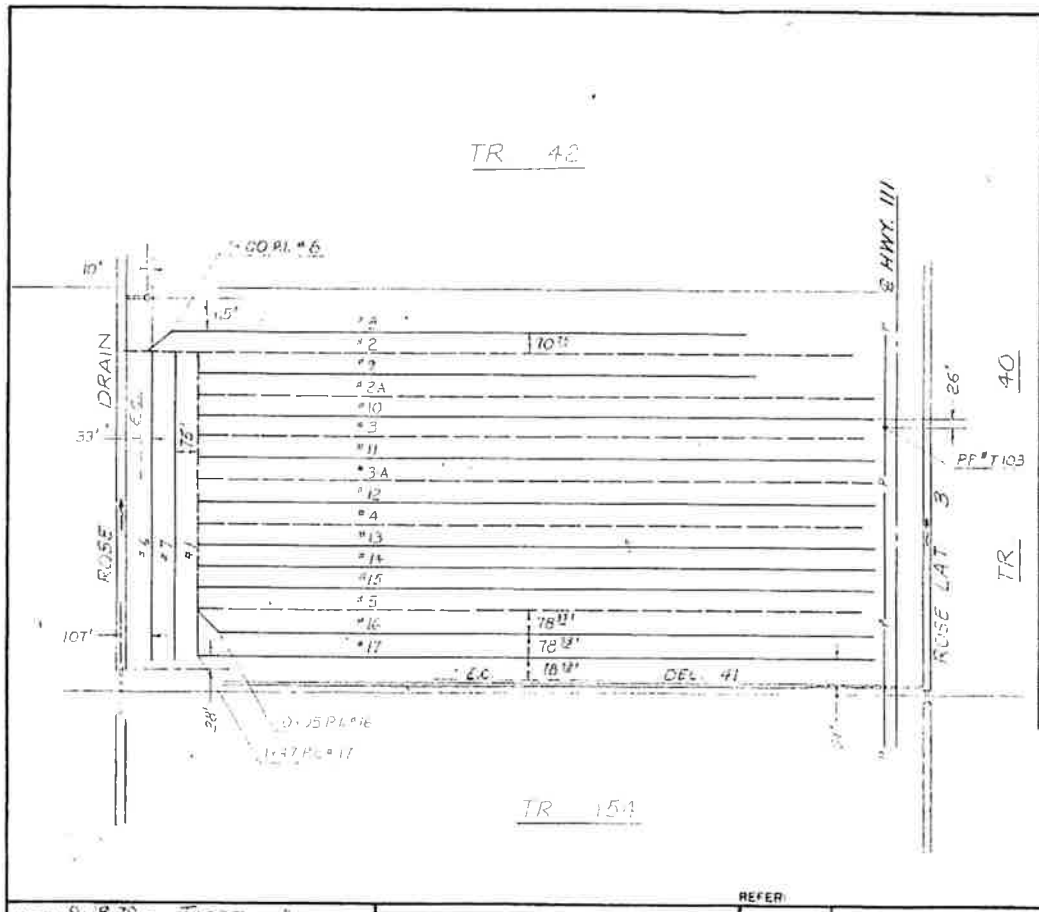
Scale 1"=300'
O Denotes 2" RPP

Ralphs	PROP.	TR. 458	
Line No	Out El	Slope	Sta to Sta
1	856.91	.001	0+00 3+00
		.0025	3+00 11+00
2	857.39	.001	0+00 8+00
3	857.96	.001	0+00 22+21
4	858.70	.001	0+00 22+21
5	859.29	.001	0+00 22+19
2-A	857.50		
3-A	859.20		

Line No.	Footage Staked	Tile Installed 8"	6"	8"	4"
1	11 00		1100		
2	2130				2130
3	2221				2221
4	2221				2221
5	2219				2219
2-A	2271				2255
3-A	2271				2255

Date Staked	Sept 25 1948
Date Installed	Oct 5, 1948
Const. EB	3414 4-17
McElvaney	TILE INSTALLATION

TD-458



LINE NO.	OUTLET ELEV.	SLOPE	TILE DEPTH STA 1+00	TILE DEPTH END TILE	OUTLET STA. 0+00	STAKED FOOTAGE	TILE INSTALLED 3"	4"	6"	8"
6		002	715	729	0+85 #1	1035	1035			
7		002	741	700	1+60 #1	1035	1035			
8		001	690	618	0+75 #1	2021	2021			
9		001	704	632	3+05 #1	1875	1875			
10		001	639	590	4+50 #1	2260	2260			
11		001	705	607	5+75 #1	2260	2260			
12		001	706	590	7+29 #1	2260	2260			
13		001	638	572	8+76 #1	2260	2260			
14		001	670	567	9+47 #1	2260	2260			
15		001	697	594	10+18 #1	2260	2260			
16		001	675	528	11+00 #1	2290	2290			
17		001	681	603	11+00 #1	2407	2407			

BM

Elevation F.B

LEGEND

Exist. Tile

Prop. Tile 9-18-79

IMPERIAL IRRIGATION DISTRICT
ENGINEERING DEPARTMENT
IMPERIAL, CALIFORNIA

TILE DRAIN CONSTRUCTION
E. 80 ACS. TR. 43
PROP. MOJAVE FARMS T 14 S-R 14 E.
SCALE 1"=400' SH 2 OF 2 TD-458

STAKED 9-18-79 BY Tesco	STAKED BY	ISSUE 4	
INSTALLED 10-15-79 BY Lidco	INSTALLED BY	ISSUE 3	
GRAVEL West Mesa TILE Plastic	GRAVEL TILE	ISSUE 2	
PLOTTED SIC CHECKED BS F.B	PLOTTED CHECKED F.B	ISSUE 1	Constr. Blks 1-2580 SIC

REFER

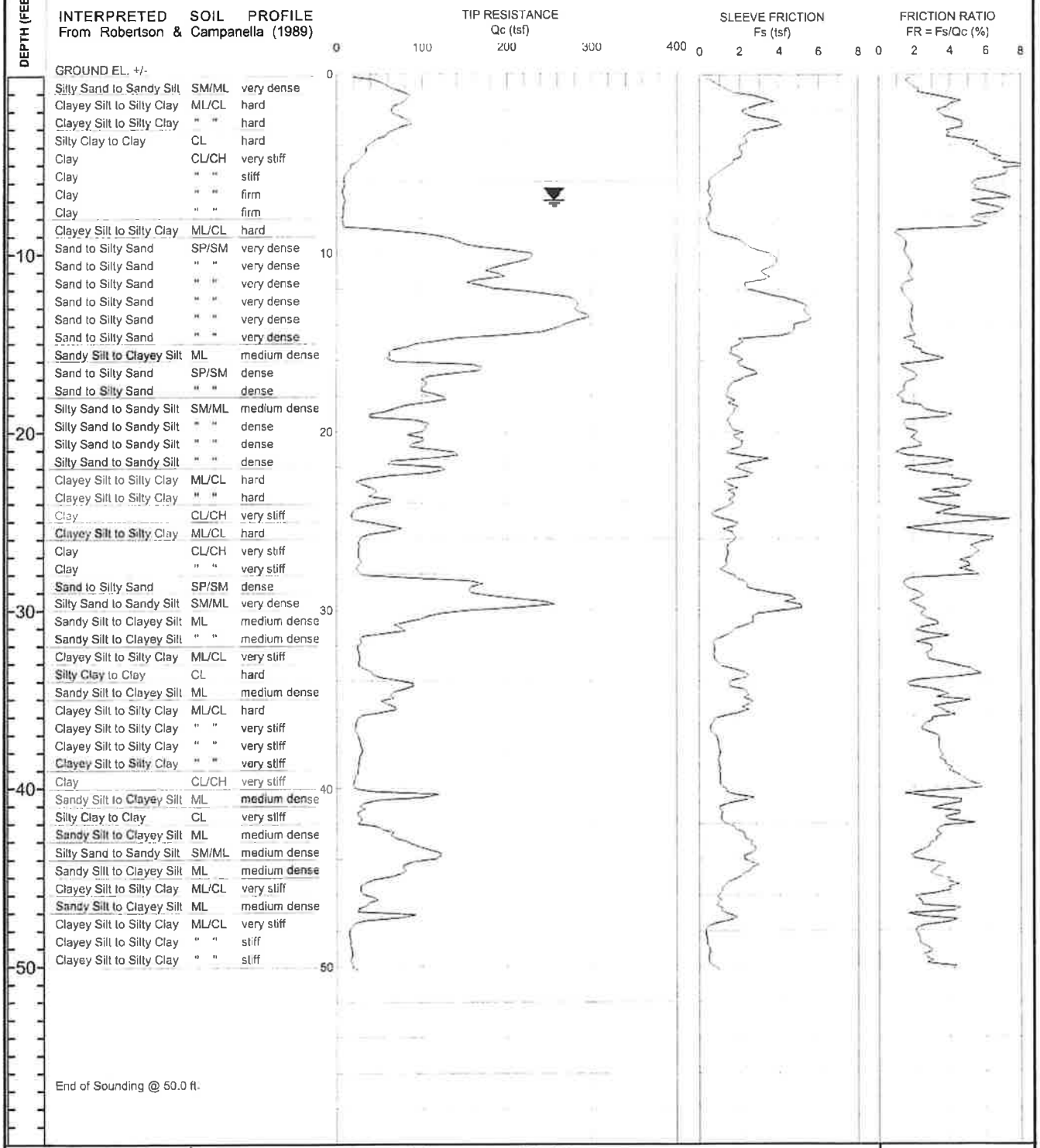
APPENDIX B

CLIENT: Palo Verde Valley Disposal Service **CONE PENETROMETER:** HOLGUIN, FAHAN & ASSC. Truck Mounted Electric

PROJECT: Material Recovery Facility and Transfer Station Cone with 23 ton reaction weight

LOCATION: See Site and Boring Location Plan **DATE:** 03/04/08

LOG OF CONE SOUNDING DATA CPT-1



Project No: LE08033	LANDMARK Geo-Engineers and Geologists a DBE/MBE/SBE Company	Plate B-1

LANDMARK CONSULTANTS, INC.

CONE PENETROMETER INTERPRETATION (based on Robertson & Campanella, 1989, refer to Key to CPT logs)

Project: Material Recovery Facility and Transfer Station Project No: LE08033 Date: 03/04/08

CONE SOUNDING: CPT-1

Est. GWT (ft): 7.0 Phi Correlation: 0 0-Schm(78),1-R&C(83),2-PHT(74)

Base Depth meters	Base Depth feet	Avg Tip Qc, tsf	Avg Friction Ratio, %	1 Soil Type	Soil Classification	USC	Density or Consistency	Est. Density (pcf)	Qc to N	SPT N(60)	Cn or Cq	Norm. Qc1n	Est. % Fines	Rel. Dens. Dr (%)	Nk: Phi (deg.)	17.0 Su (tsf)	OCR
0.15	0.5	38.44	1.67	6 6	Sandy Silt to Clayey Silt	ML	very dense	115	3.5	11	2.00	72.7	40	106	43		
0.30	1.0	67.57	2.13	7 7	Silty Sand to Sandy Silt	SM/ML	very dense	115	4.5	15	2.00	127.7	35	106	43		
0.45	1.5	83.43	3.90	5 5	Clayey Silt to Silty Clay	ML/CL	hard	120	2.5	33	2.00		45			4.90	>10
0.60	2.0	68.73	3.73	5 5	Clayey Silt to Silty Clay	ML/CL	hard	120	2.5	27	2.00		45			4.04	>10
0.75	2.5	71.32	3.75	5 5	Clayey Silt to Silty Clay	ML/CL	hard	120	2.5	29	2.00		45			4.19	>10
0.93	3.0	82.96	4.69	11 11	Overconsolidated Soil	??	very dense	120	1.0	83	2.00	156.8	50	93	41		
1.08	3.5	61.98	3.88	5 5	Clayey Silt to Silty Clay	ML/CL	hard	120	2.5	25	2.00		50			3.63	>10
1.23	4.0	43.77	5.17	3 3	Clay	CL/CH	hard	125	1.3	35	2.00		65			2.56	>10
1.38	4.5	34.35	6.00	3 3	Clay	CL/CH	hard	125	1.3	27	2.00		75			2.01	>10
1.53	5.0	26.71	6.79	3 3	Clay	CL/CH	very stiff	125	1.3	21	1.92		85			1.55	>10
1.68	5.5	14.49	7.48	3 3	Clay	CL/CH	stiff	125	1.3	12	1.83		100			0.83	>10
1.83	6.0	8.92	5.66	3 3	Clay	CL/CH	stiff	125	1.3	7	1.74		100			0.50	>10
1.98	6.5	8.15	5.68	3 3	Clay	CL/CH	firm	125	1.3	7	1.67		100			0.46	8.41
2.13	7.0	8.99	6.53	3 3	Clay	CL/CH	stiff	125	1.3	7	1.61		100			0.50	8.70
2.28	7.5	8.37	6.41	3 3	Clay	CL/CH	firm	125	1.3	7	1.58		100			0.47	7.13
2.45	8.0	7.28	5.80	3 3	Clay	CL/CH	firm	125	1.3	6	1.55		100			0.40	5.31
2.60	8.5	7.97	5.63	3 3	Clay	CL/CH	firm	125	1.3	6	1.52		100			0.44	5.88
2.75	9.0	89.37	1.08	8 8	Sand to Silty Sand	SP/SM	dense	115	5.5	16	1.50	126.5	20	79	39		
2.90	9.5	142.45	1.51	8 8	Sand to Silty Sand	SP/SM	very dense	115	5.5	26	1.48	198.8	15	93	41		
3.05	10.0	201.43	1.49	8 8	Sand to Silty Sand	SP/SM	very dense	115	5.5	37	1.46	277.4	15	103	42		
3.20	10.5	223.21	1.72	8 8	Sand to Silty Sand	SP/SM	very dense	115	5.5	41	1.44	303.4	15	105	43		
3.35	11.0	185.18	1.84	8 8	Sand to Silty Sand	SP/SM	very dense	115	5.5	34	1.42	248.6	20	99	42		
3.50	11.5	184.64	1.80	8 8	Sand to Silty Sand	SP/SM	very dense	115	5.5	34	1.40	244.8	20	99	42		
3.65	12.0	169.18	1.38	8 8	Sand to Silty Sand	SP/SM	very dense	115	5.5	31	1.39	221.6	15	96	41		
3.80	12.5	247.94	1.45	8 8	Sand to Silty Sand	SP/SM	very dense	115	5.5	45	1.37	321.0	10	107	43		
3.95	13.0	283.26	1.83	8 8	Sand to Silty Sand	SP/SM	very dense	115	5.5	52	1.35	362.5	15	111	43		
4.13	13.5	287.06	1.87	8 8	Sand to Silty Sand	SP/SM	very dense	115	5.5	52	1.34	363.2	15	111	43		
4.28	14.0	284.17	1.86	8 8	Sand to Silty Sand	SP/SM	very dense	115	5.5	52	1.32	355.6	15	110	43		
4.43	14.5	252.52	1.87	8 8	Sand to Silty Sand	SP/SM	very dense	115	5.5	46	1.31	312.6	15	106	43		
4.58	15.0	150.22	1.80	8 8	Sand to Silty Sand	SP/SM	very dense	115	5.5	27	1.30	184.0	20	90	41		
4.73	15.5	80.31	2.15	7 7	Silty Sand to Sandy Silt	SM/ML	dense	115	4.5	18	1.28	97.4	35	72	38		
4.88	16.0	63.26	2.98	6 6	Sandy Silt to Clayey Silt	ML	medium dense	115	3.5	18	1.27	75.9	50	64	37		
5.03	16.5	166.01	1.45	8 8	Sand to Silty Sand	SP/SM	very dense	115	5.5	30	1.26	197.3	20	93	41		
5.18	17.0	116.14	2.10	7 7	Silty Sand to Sandy Silt	SM/ML	dense	115	4.5	26	1.25	136.7	30	82	39		
5.33	17.5	103.29	1.47	8 8	Sand to Silty Sand	SP/SM	dense	115	5.5	19	1.23	120.4	25	78	39		
5.48	18.0	113.31	1.23	8 8	Sand to Silty Sand	SP/SM	dense	115	5.5	21	1.22	130.9	20	80	39		
5.65	18.5	104.68	1.72	7 7	Silty Sand to Sandy Silt	SM/ML	dense	115	4.5	23	1.21	119.8	30	78	39		
5.80	19.0	55.44	3.22	6 6	Sandy Silt to Clayey Silt	ML	medium dense	115	3.5	16	1.20	82.9	55	59	36		
5.95	19.5	80.21	2.21	7 7	Silty Sand to Sandy Silt	SM/ML	medium dense	115	4.5	18	1.19	90.2	40	69	38		
6.10	20.0	102.89	1.77	7 7	Silty Sand to Sandy Silt	SM/ML	dense	115	4.5	23	1.18	114.6	30	77	39		
6.25	20.5	95.32	2.00	7 7	Silty Sand to Sandy Silt	SM/ML	dense	115	4.5	21	1.17	105.3	35	74	38		
6.40	21.0	95.88	2.05	7 7	Silty Sand to Sandy Silt	SM/ML	dense	115	4.5	21	1.16	105.0	35	74	38		
6.55	21.5	129.96	1.91	7 7	Silty Sand to Sandy Silt	SM/ML	dense	115	4.5	29	1.15	141.2	30	83	40		
6.70	22.0	82.33	3.03	6 6	Sandy Silt to Clayey Silt	ML	medium dense	115	3.5	24	1.14	88.7	45	69	38		
6.85	22.5	97.38	2.80	6 6	Sandy Silt to Clayey Silt	ML	dense	115	3.5	28	1.13	104.1	40	74	38		
7.00	23.0	29.41	4.83	3 3	Clay	CL/CH	very stiff	125	1.3	24	1.12		90			1.68	>10
7.18	23.5	44.17	3.92	5 5	Clayey Silt to Silty Clay	ML/CL	hard	120	2.5	18	1.11		70			2.55	>10
7.33	24.0	54.90	3.21	6 6	Sandy Silt to Clayey Silt	ML	medium dense	115	3.5	16	1.10	57.2	60	56	36		
7.48	24.5	28.66	3.99	4 4	Silty Clay to Clay	CL	very stiff	125	1.8	16	1.09		85			1.63	>10
7.63	25.0	18.69	5.23	3 3	Clay	CL/CH	very stiff	125	1.3	15	1.08		100			1.05	8.00
7.78	25.5	59.15	3.09	6 6	Sandy Silt to Clayey Silt	ML	medium dense	115	3.5	17	1.08	60.1	60	57	36		
7.93	26.0	43.85	4.45	4 4	Silty Clay to Clay	CL	hard	125	1.8	25	1.07		80			2.52	>10
8.08	26.5	26.38	5.65	3 3	Clay	CL/CH	very stiff	125	1.3	21	1.06		100			1.50	>10
8.23	27.0	25.92	5.40	3 3	Clay	CL/CH	very stiff	125	1.3	21	1.05		100			1.47	>10
8.38	27.5	27.16	4.92	3 3	Clay	CL/CH	very stiff	125	1.3	22	1.04		100			1.54	>10
8.53	28.0	26.99	5.16	3 3	Clay	CL/CH	very stiff	125	1.3	22	1.03		100			1.53	>10
8.68	28.5	142.75	1.59	8 8	Sand to Silty Sand	SP/SM	dense	115	5.5	26	1.03	138.4	25	82	39		
8.85	29.0	156.87	1.89	7 7	Silty Sand to Sandy Silt	SM/ML	dense	115	4.5	35	1.02	151.1	30	85	40		
9.00	29.5	212.67	2.19	7 7	Silty Sand to Sandy Silt	SM/ML	very dense	115	4.5	47	1.01	203.5	25	93	41		
9.15	30.0	211.42	2.35	7 7	Silty Sand to Sandy Silt	SM/ML	very dense	115	4.5	47	1.01	201.0	30	93	41		

LANDMARK CONSULTANTS, INC.

CONE PENETROMETER INTERPRETATION (based on Robertson & Campanella, 1989, refer to Key to CPT logs)

Project: Material Recovery Facility and Transfer Station Project No: LE08033 Date: 03/04/08

CONE SOUNDING: CPT-1

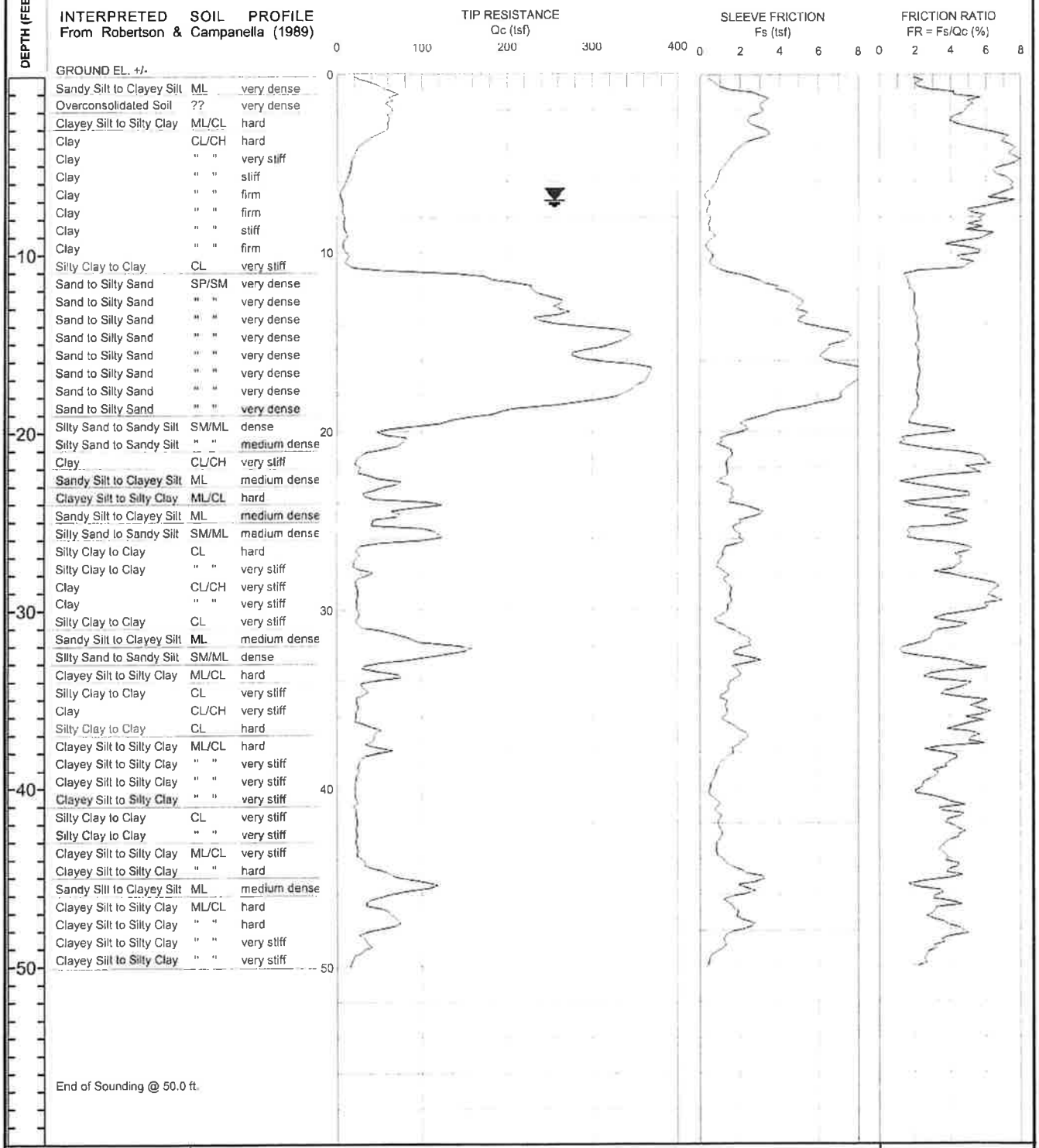
Est. GWT (ft): 7.0

Phi Correlation: 0 0-Schm(78),1-R&C(83),2-PHT(74)

Base Depth meters	Base Depth feet	Avg Tip Qc, tsf	Avg Friction Ratio, %	1 Soil Type	Soil Classification	USC	Density or Consistency	Est. Density (pcf)	Qc to N	SPT N(60)	Cn or Cq	Norm. Qc1n	Est. % Fines	Rel. Dens. Dr (%)	Nk: Phi (deg.)	17.0 Su (tsf)	OCR
9.30	30.5	109.99	2.54	7	Silty Sand to Sandy Silt	SM/ML	dense	115	4.5	24	1.00	103.9	40	74	38		
9.45	31.0	75.17	3.04	6	Sandy Silt to Clayey Silt	ML	medium dense	115	3.5	21	0.99	70.6	55	62	37		
9.60	31.5	54.28	2.96	6	Sandy Silt to Clayey Silt	ML	medium dense	115	3.5	16	0.99	50.7	65	52	35		
9.75	32.0	27.48	2.63	6	Sandy Silt to Clayey Silt	ML	loose	115	3.5	8	0.98	25.5	85	32	32		
9.90	32.5	25.77	2.89	5	Clayey Silt to Silty Clay	ML/CL	very stiff	120	2.5	10	0.98		90			1.45	>10
10.05	33.0	26.67	3.11	5	Clayey Silt to Silty Clay	ML/CL	very stiff	120	2.5	11	0.97		90			1.50	>10
10.20	33.5	33.36	4.94	3	Clay	CL/CH	very stiff	125	1.3	27	0.96		100			1.90	>10
10.38	34.0	55.54	4.16	5	Clayey Silt to Silty Clay	ML/CL	hard	120	2.5	22	0.96		75			3.20	>10
10.53	34.5	85.99	2.08	7	Silty Sand to Sandy Silt	SM/ML	medium dense	115	4.5	19	0.95	77.3	45	65	37		
10.68	35.0	66.07	3.59	5	Clayey Silt to Silty Clay	ML/CL	hard	120	2.5	26	0.95		65			3.82	>10
10.83	35.5	60.22	4.16	5	Clayey Silt to Silty Clay	ML/CL	hard	120	2.5	24	0.94		75			3.47	>10
10.98	36.0	51.01	3.88	5	Clayey Silt to Silty Clay	ML/CL	hard	120	2.5	20	0.93		75			2.93	>10
11.13	36.5	23.46	2.78	5	Clayey Silt to Silty Clay	ML/CL	very stiff	120	2.5	9	0.93		100			1.31	>10
11.28	37.0	23.58	2.85	5	Clayey Silt to Silty Clay	ML/CL	very stiff	120	2.5	9	0.92		100			1.31	>10
11.43	37.5	27.27	3.41	5	Clayey Silt to Silty Clay	ML/CL	very stiff	120	2.5	11	0.92		100			1.53	>10
11.58	38.0	29.70	3.43	5	Clayey Silt to Silty Clay	ML/CL	very stiff	120	2.5	12	0.91		95			1.67	>10
11.73	38.5	26.83	3.61	5	Clayey Silt to Silty Clay	ML/CL	very stiff	120	2.5	11	0.91		100			1.50	>10
11.88	39.0	25.48	3.96	4	Silty Clay to Clay	CL	very stiff	125	1.8	15	0.90		100			1.42	9.79
12.05	39.5	22.62	4.60	3	Clay	CL/CH	very stiff	125	1.3	18	0.90		100			1.25	5.76
12.20	40.0	20.95	5.52	3	Clay	CL/CH	very stiff	125	1.3	17	0.89		100			1.15	5.00
12.35	40.5	87.63	2.47	7	Silty Sand to Sandy Silt	SM/ML	medium dense	115	4.5	19	0.89	73.4	55	63	37		
12.50	41.0	35.61	4.33	4	Silty Clay to Clay	CL	hard	125	1.8	20	0.88		100			2.01	>10
12.65	41.5	27.77	4.04	4	Silty Clay to Clay	CL	very stiff	125	1.8	16	0.88		100			1.55	>10
12.80	42.0	27.76	4.36	4	Silty Clay to Clay	CL	very stiff	125	1.8	16	0.87		100			1.55	>10
12.95	42.5	56.61	3.42	5	Clayey Silt to Silty Clay	ML/CL	hard	120	2.5	23	0.87		75			3.25	>10
13.10	43.0	71.78	3.35	6	Sandy Silt to Clayey Silt	ML	medium dense	115	3.5	21	0.86	58.6	65	57	36		
13.25	43.5	98.99	2.77	6	Sandy Silt to Clayey Silt	ML	medium dense	115	3.5	28	0.86	80.4	55	66	37		
13.40	44.0	119.76	1.98	7	Silty Sand to Sandy Silt	SM/ML	dense	115	4.5	27	0.86	96.8	40	72	38		
13.58	44.5	82.02	3.31	6	Sandy Silt to Clayey Silt	ML	medium dense	115	3.5	23	0.85	66.0	65	60	36		
13.73	45.0	74.18	3.08	6	Sandy Silt to Clayey Silt	ML	medium dense	115	3.5	21	0.85	59.4	65	57	36		
13.88	45.5	36.55	4.13	5	Clayey Silt to Silty Clay	ML/CL	hard	120	2.5	15	0.84		100			2.06	>10
14.03	46.0	29.18	3.76	5	Clayey Silt to Silty Clay	ML/CL	very stiff	120	2.5	12	0.84		100			1.63	>10
14.18	46.5	43.06	2.26	6	Sandy Silt to Clayey Silt	ML	medium dense	115	3.5	12	0.84	34.0	75	41	34		
14.33	47.0	44.69	3.23	5	Clayey Silt to Silty Clay	ML/CL	hard	120	2.5	18	0.83		85			2.54	>10
14.48	47.5	43.42	3.63	5	Clayey Silt to Silty Clay	ML/CL	hard	120	2.5	17	0.83		90			2.46	>10
14.63	48.0	16.12	2.25	5	Clayey Silt to Silty Clay	ML/CL	stiff	120	2.5	6	0.82		100			0.86	4.37
14.78	48.5	15.91	2.26	5	Clayey Silt to Silty Clay	ML/CL	stiff	120	2.5	6	0.82		100			0.84	4.18
14.93	49.0	17.07	2.61	5	Clayey Silt to Silty Clay	ML/CL	stiff	120	2.5	7	0.82		100			0.91	4.68
15.10	49.5	18.11	2.74	5	Clayey Silt to Silty Clay	ML/CL	stiff	120	2.5	7	0.81		100			0.97	5.10
15.25	50.0	18.01	3.40	5	Clayey Silt to Silty Clay	ML/CL	stiff	120	2.5	7	0.81		100			0.96	5.00

CLIENT: Palo Verde Valley Disposal Service
CONE PENETROMETER: HOLGUIN, FAHAN & ASSC. Truck Mounted Electric
PROJECT: Material Recovery Facility and Transfer Station
Cone with 23 ton reaction weight
LOCATION: See Site and Boring Location Plan
DATE: 03/04/08

LOG OF CONE SOUNDING DATA CPT-2



Project No: LE08033	LANDMARK Geo-Engineers and Geologists a DBE/MBE/SBE Company	Plate B-2

LANDMARK CONSULTANTS, INC.

CONE PENETROMETER INTERPRETATION (based on Robertson & Campanella, 1989, refer to Key to CPT logs)

Project: Material Recovery Facility and Transfer Station Project No: LE08033 Date: 03/04/08

CONE SOUNDING: CPT-2

Est. GWT (ft): 7.0 Phi Correlation: 0 0-Schm(78),1-R&C(83),2-PHT(74)

Base Depth meters	Base Depth feet	Avg Tip Qc, tsf	Avg Friction Ratio, %	1 Soil Type	Soil Classification	USC	Density or Consistency	Est. Density (pcf)	Qc to N	SPT N(60)	Cn or Cq	Norm. Qc1n	Est. % Fines	Rel. Dens. Dr (%)	Nk: Phi (deg.)	17.0 Su (tsf)	OCR
0.15	0.5	28.15	2.12	6	Sandy Silt to Clayey Silt	ML	very dense	115	3.5	8	2.00	53.2	50	97	42		
0.30	1.0	55.53	3.00	6	Sandy Silt to Clayey Silt	ML	very dense	115	3.5	16	2.00	105.0	45	101	42		
0.45	1.5	65.88	4.95	11	Overconsolidated Soil	??	very dense	120	1.0	66	2.00	124.5	55	98	42		
0.60	2.0	61.15	5.03	11	Overconsolidated Soil	??	very dense	120	1.0	61	2.00	115.6	55	91	41		
0.75	2.5	61.38	4.34	5	Clayey Silt to Silty Clay	ML/CL	hard	120	2.5	25	2.00		50			3.60	>10
0.93	3.0	60.08	4.46	4	Silty Clay to Clay	CL	hard	125	1.8	34	2.00		55			3.52	>10
1.08	3.5	52.25	6.57	3	Clay	CL/CH	hard	125	1.3	42	2.00		65			3.06	>10
1.23	4.0	33.48	7.12	3	Clay	CL/CH	very stiff	125	1.3	27	2.00		80			1.96	>10
1.38	4.5	23.13	7.50	3	Clay	CL/CH	very stiff	125	1.3	19	2.00		95			1.35	>10
1.53	5.0	18.40	7.77	3	Clay	CL/CH	very stiff	125	1.3	15	1.92		100			1.07	>10
1.68	5.5	15.62	6.69	3	Clay	CL/CH	stiff	125	1.3	12	1.82		100			0.90	>10
1.83	6.0	11.23	7.37	3	Clay	CL/CH	stiff	125	1.3	9	1.74		100			0.64	>10
1.98	6.5	6.49	7.37	3	Clay	CL/CH	firm	125	1.3	5	1.66		100			0.36	5.65
2.13	7.0	4.85	6.81	3	Clay	CL/CH	firm	125	1.3	4	1.60		100			0.26	3.21
2.28	7.5	6.88	5.90	3	Clay	CL/CH	firm	125	1.3	6	1.57		100			0.38	5.10
2.45	8.0	8.05	5.56	3	Clay	CL/CH	firm	125	1.3	6	1.54		100			0.45	6.32
2.60	8.5	8.26	5.51	3	Clay	CL/CH	firm	125	1.3	7	1.52		100			0.46	6.21
2.75	9.0	11.01	5.75	3	Clay	CL/CH	stiff	125	1.3	9	1.49		100			0.62	9.79
2.90	9.5	8.48	4.65	3	Clay	CL/CH	firm	125	1.3	7	1.47		100			0.47	5.76
3.05	10.0	9.21	5.39	3	Clay	CL/CH	stiff	125	1.3	7	1.44		100			0.51	6.32
3.20	10.5	11.67	4.74	3	Clay	CL/CH	stiff	125	1.3	9	1.42		100			0.66	9.00
3.35	11.0	30.03	3.96	4	Silty Clay to Clay	CL	very stiff	125	1.8	17	1.40		70			1.73	>10
3.50	11.5	166.32	1.49	8	Sand to Silty Sand	SP/SM	very dense	115	5.5	30	1.38	217.5	15	95	41		
3.65	12.0	221.29	1.66	8	Sand to Silty Sand	SP/SM	very dense	115	5.5	40	1.37	286.0	15	104	42		
3.80	12.5	240.87	1.95	8	Sand to Silty Sand	SP/SM	very dense	115	5.5	44	1.35	307.7	15	106	43		
3.95	13.0	261.61	1.96	8	Sand to Silty Sand	SP/SM	very dense	115	5.5	48	1.34	330.5	15	108	43		
4.13	13.5	265.26	1.97	8	Sand to Silty Sand	SP/SM	very dense	115	5.5	48	1.32	331.5	15	108	43		
4.28	14.0	241.65	2.12	8	Sand to Silty Sand	SP/SM	very dense	115	5.5	44	1.31	298.7	20	105	43		
4.43	14.5	318.84	2.15	8	Sand to Silty Sand	SP/SM	very dense	115	5.5	58	1.29	390.0	15	113	44		
4.58	15.0	339.52	2.20	8	Sand to Silty Sand	SP/SM	very dense	115	5.5	62	1.28	411.1	15	114	44		
4.73	15.5	309.88	2.11	8	Sand to Silty Sand	SP/SM	very dense	115	5.5	56	1.27	371.4	15	111	44		
4.88	16.0	288.81	2.19	8	Sand to Silty Sand	SP/SM	very dense	115	5.5	53	1.26	342.8	20	109	43		
5.03	16.5	362.58	2.22	8	Sand to Silty Sand	SP/SM	very dense	115	5.5	66	1.24	426.1	15	115	44		
5.18	17.0	365.14	2.23	8	Sand to Silty Sand	SP/SM	very dense	115	5.5	66	1.23	425.1	15	115	44		
5.33	17.5	353.48	2.14	8	Sand to Silty Sand	SP/SM	very dense	115	5.5	64	1.22	407.7	15	114	44		
5.48	18.0	335.09	2.14	8	Sand to Silty Sand	SP/SM	very dense	115	5.5	61	1.21	383.0	20	112	44		
5.65	18.5	281.95	2.15	8	Sand to Silty Sand	SP/SM	very dense	115	5.5	51	1.20	319.3	20	107	43		
5.80	19.0	194.61	1.98	8	Sand to Silty Sand	SP/SM	very dense	115	5.5	35	1.19	218.5	20	96	41		
5.95	19.5	138.21	1.70	8	Sand to Silty Sand	SP/SM	dense	115	5.5	25	1.18	153.8	25	85	40		
6.10	20.0	69.22	3.50	6	Sandy Silt to Clayey Silt	ML	medium dense	115	3.5	20	1.17	76.4	55	65	37		
6.25	20.5	72.68	1.70	7	Silty Sand to Sandy Silt	SM/ML	medium dense	115	4.5	16	1.16	79.5	35	66	37		
6.40	21.0	65.63	1.97	7	Silty Sand to Sandy Silt	SM/ML	medium dense	115	4.5	15	1.15	71.2	40	62	37		
6.55	21.5	29.18	5.37	3	Clay	CL/CH	very stiff	125	1.3	23	1.14		95			1.67	>10
6.70	22.0	23.81	5.68	3	Clay	CL/CH	very stiff	125	1.3	19	1.13		100			1.35	>10
6.85	22.5	30.05	4.77	3	Clay	CL/CH	very stiff	125	1.3	24	1.12		90			1.72	>10
7.00	23.0	64.10	1.75	7	Silty Sand to Sandy Silt	SM/ML	medium dense	115	4.5	14	1.11	67.1	40	61	36		
7.18	23.5	41.92	3.99	5	Clayey Silt to Silty Clay	ML/CL	hard	120	2.5	17	1.10		75			2.41	>10
7.33	24.0	61.00	3.31	6	Sandy Silt to Clayey Silt	ML	medium dense	115	3.5	17	1.09	62.9	60	59	36		
7.48	24.5	93.58	3.24	6	Sandy Silt to Clayey Silt	ML	dense	115	3.5	27	1.08	95.7	50	71	38		
7.63	25.0	62.04	4.14	5	Clayey Silt to Silty Clay	ML/CL	hard	120	2.5	25	1.07		65			3.60	>10
7.78	25.5	60.47	3.57	5	Clayey Silt to Silty Clay	ML/CL	hard	120	2.5	24	1.07		60			3.50	>10
7.93	26.0	119.17	1.61	8	Sand to Silty Sand	SP/SM	dense	115	5.5	22	1.06	119.2	30	78	39		
8.08	26.5	50.84	3.99	5	Clayey Silt to Silty Clay	ML/CL	hard	120	2.5	20	1.05		70			2.93	>10
8.23	27.0	24.09	4.62	3	Clay	CL/CH	very stiff	125	1.3	19	1.04		100			1.36	>10
8.38	27.5	19.68	4.47	3	Clay	CL/CH	very stiff	125	1.3	16	1.03		100			1.10	7.27
8.53	28.0	34.45	3.78	5	Clayey Silt to Silty Clay	ML/CL	very stiff	120	2.5	14	1.03		85			1.97	>10
8.68	28.5	22.69	5.67	3	Clay	CL/CH	very stiff	125	1.3	18	1.02		100			1.27	9.00
8.85	29.0	23.84	6.52	3	Clay	CL/CH	very stiff	125	1.3	19	1.01		100			1.34	9.79
9.00	29.5	23.86	6.52	3	Clay	CL/CH	very stiff	125	1.3	19	1.00		100			1.34	9.39
9.15	30.0	23.37	5.91	3	Clay	CL/CH	very stiff	125	1.3	19	1.00		100			1.31	8.70

LANDMARK CONSULTANTS, INC.

CONE PENETROMETER INTERPRETATION (based on Robertson & Campanella, 1989, refer to Key to CPT logs)

Project: Material Recovery Facility and Transfer Station Project No: LE08033 Date: 03/04/08

CONE SOUNDING: CPT-2

Est. GWT (ft): 7.0 Phi Correlation: 0 0-Schm(78),1-R&C(83),2-PHT(74)

Base Depth meters	Base Depth feet	Avg Tip Qc, tsf	Avg Friction Ratio, %	1 Soil Type	Soil Classification	USC	Density or Consistency	Est. Density (pcf)	Qc to N	SPT N(60)	Cn or Cq	Norm. Qc1n	Est. % Fines	Rel. Dens. Dr (%)	Nk: Phi (deg.)	17.0 Su (tsf)	OCR
9.30	30.5	25.12	3.82	5	Clayey Silt to Silty Clay	ML/CL	very stiff	120	2.5	10	0.99		100			1.41	>10
9.45	31.0	25.93	4.41	4	Silty Clay to Clay	CL	very stiff	125	1.8	15	0.98		100			1.46	>10
9.60	31.5	66.31	3.09	6	Sandy Silt to Clayey Silt	ML	medium dense	115	3.5	19	0.98	61.2	60	58	36		
9.75	32.0	108.11	2.41	7	Silty Sand to Sandy Silt	SM/ML	dense	115	4.5	24	0.97	99.1	45	72	38		
9.90	32.5	146.25	1.23	8	Sand to Silty Sand	SP/SM	dense	115	5.5	27	0.96	133.3	25	81	39		
10.05	33.0	80.90	3.51	6	Sandy Silt to Clayey Silt	ML	medium dense	115	3.5	23	0.96	73.3	60	63	37		
10.20	33.5	37.15	4.96	3	Clay	CL/CH	hard	125	1.3	30	0.95		95			2.12	>10
10.38	34.0	64.36	2.92	6	Sandy Silt to Clayey Silt	ML	medium dense	115	3.5	18	0.95	57.6	60	56	36		
10.53	34.5	29.97	4.79	3	Clay	CL/CH	very stiff	125	1.3	24	0.94		100			1.69	>10
10.68	35.0	29.92	3.84	5	Clayey Silt to Silty Clay	ML/CL	very stiff	120	2.5	12	0.94		95			1.69	>10
10.83	35.5	23.61	5.61	3	Clay	CL/CH	very stiff	125	1.3	19	0.93		100			1.32	6.88
10.98	36.0	22.73	5.87	3	Clay	CL/CH	very stiff	125	1.3	18	0.92		100			1.26	6.43
11.13	36.5	28.95	5.03	3	Clay	CL/CH	very stiff	125	1.3	23	0.92		100			1.63	9.79
11.28	37.0	46.55	4.86	4	Silty Clay to Clay	CL	hard	125	1.8	27	0.91		90			2.66	>10
11.43	37.5	39.15	5.37	3	Clay	CL/CH	hard	125	1.3	31	0.91		100			2.23	>10
11.58	38.0	53.45	3.14	6	Sandy Silt to Clayey Silt	ML	medium dense	115	3.5	15	0.90	45.6	70	49	35		
11.73	38.5	28.43	4.22	4	Silty Clay to Clay	CL	very stiff	125	1.8	16	0.90		100			1.59	>10
11.88	39.0	25.20	3.49	5	Clayey Silt to Silty Clay	ML/CL	very stiff	120	2.5	10	0.89		100			1.40	>10
12.05	39.5	22.90	3.14	5	Clayey Silt to Silty Clay	ML/CL	very stiff	120	2.5	9	0.89		100			1.27	>10
12.20	40.0	21.63	2.43	5	Clayey Silt to Silty Clay	ML/CL	very stiff	120	2.5	9	0.88		100			1.19	9.39
12.35	40.5	21.36	2.37	5	Clayey Silt to Silty Clay	ML/CL	very stiff	120	2.5	9	0.88		100			1.18	8.85
12.50	41.0	22.07	4.16	4	Silty Clay to Clay	CL	very stiff	125	1.8	13	0.87		100			1.22	6.54
12.65	41.5	21.98	3.88	4	Silty Clay to Clay	CL	very stiff	125	1.8	13	0.87		100			1.21	6.43
12.80	42.0	23.51	4.00	4	Silty Clay to Clay	CL	very stiff	125	1.8	13	0.86		100			1.30	7.00
12.95	42.5	22.85	4.47	3	Clay	CL/CH	very stiff	125	1.3	18	0.86		100			1.26	5.10
13.10	43.0	22.91	4.29	4	Silty Clay to Clay	CL	very stiff	125	1.8	13	0.85		100			1.26	6.43
13.25	43.5	23.56	3.52	5	Clayey Silt to Silty Clay	ML/CL	very stiff	120	2.5	9	0.85		100			1.30	9.59
13.40	44.0	25.46	3.73	5	Clayey Silt to Silty Clay	ML/CL	very stiff	120	2.5	10	0.85		100			1.41	>10
13.58	44.5	35.10	4.18	4	Silty Clay to Clay	CL	very stiff	125	1.8	20	0.84		100			1.98	>10
13.73	45.0	60.49	4.10	5	Clayey Silt to Silty Clay	ML/CL	hard	120	2.5	24	0.84		80			3.47	>10
13.88	45.5	102.50	2.70	6	Sandy Silt to Clayey Silt	ML	medium dense	115	3.5	29	0.83	80.7	55	66	37		
14.03	46.0	84.76	3.05	6	Sandy Silt to Clayey Silt	ML	medium dense	115	3.5	24	0.83	66.5	60	60	36		
14.18	46.5	41.46	3.38	5	Clayey Silt to Silty Clay	ML/CL	hard	120	2.5	17	0.83		90			2.35	>10
14.33	47.0	52.77	3.49	5	Clayey Silt to Silty Clay	ML/CL	hard	120	2.5	21	0.82		80			3.01	>10
14.48	47.5	71.63	3.14	6	Sandy Silt to Clayey Silt	ML	medium dense	115	3.5	20	0.82	55.4	70	55	36		
14.63	48.0	50.35	4.38	4	Silty Clay to Clay	CL	hard	125	1.8	29	0.81		90			2.87	>10
14.78	48.5	30.59	4.10	4	Silty Clay to Clay	CL	very stiff	125	1.8	17	0.81		100			1.70	9.00
14.93	49.0	36.45	3.31	5	Clayey Silt to Silty Clay	ML/CL	hard	120	2.5	15	0.81		95			2.05	>10
15.10	49.5	23.19	2.67	5	Clayey Silt to Silty Clay	ML/CL	very stiff	120	2.5	9	0.80		100			1.27	7.41
15.25	50.0	16.54	2.45	5	Clayey Silt to Silty Clay	ML/CL	stiff	120	2.5	7	0.80		100			0.88	4.18

LOG OF BORING NO. 1

SHEET 1 OF 1

DEPTH	FIELD: SAMPLE	FIELD: USCS CLASS.	FIELD: BLOW COUNT	FIELD: POCKET PEN. (tsf)	DESCRIPTION OF MATERIAL	LABORATORY: DRY DENSITY (pcf)	LABORATORY: MOISTURE CONTENT (% dry wt.)	LABORATORY: OTHER TESTS
					CLAY (CL): Light brown, dry, medium plasticity			LL=44% PI=29%
5			7	1.5	CLAY (CL): Brown, very moist, stiff consistency, medium plasticity	102.1	21.3	
10			35		SILTY SAND/SAND (SM/SP): Light brown, saturated, medium dense, fine grained sand.			4% passing #200
15			10					
20			25		SANDY SILT (ML): Brown, saturated, medium dense, with fine grained sand	102.3	23.7	LL=21% PI=---
25			9	3.0	CLAY (CL-CH): Dark brown, very moist, very stiff consistency, medium to high plasticity			
30			7		SANDY SILT (ML): Brown, saturated, loose, with fine grained sand		26.2	LL=25% PI=---
35			7	0.5	CLAYEY SILT/SILTY CLAY (ML-CL): Brown, very moist, firm to stiff consistency, low to medium plasticity.			
40			10	1.5	Thin clay layer (CL-CH)			
45			7	1.0	CLAY (CL-CH): Brown, very moist, firm to stiff consistency, medium to high plasticity.			
50			17	0.5	CLAYEY SILT (ML): Brown, wet, medium dense/stiff, low plasticity.			
55					Total Depth = 51.5' Backfilled with excavated soil			
60								

DATE DRILLED:	1/30/08	TOTAL DEPTH:	51.5 Feet	DEPTH TO WATER:	+/- 7.0 ft.
LOGGED BY:	J. Avalos	TYPE OF BIT:	Hollow Stem Auger	DIAMETER:	8 in.
SURFACE ELEVATION:	N/A	HAMMER WT.:	140 lbs.	DROP:	30 in.

PROJECT NO. LE08033

LANDMARK Geo-Engineers and Geologists

PLATE B-3

LOG OF BORING NO. 2

SHEET 1 OF 1

DEPTH	FIELD: SAMPLE	FIELD: USCS CLASS.	FIELD: BLOW COUNT	FIELD: POCKET PEN. (tsf)	DESCRIPTION OF MATERIAL	LABORATORY: DRY DENSITY (pcf)	LABORATORY: MOISTURE CONTENT (% dry wt.)	LABORATORY: OTHER TESTS
5			11	2.0	CLAY (CL): Light brown, dry, medium plasticity CLAY (CL): Brown, very moist, stiff consistency, medium plasticity			
10			31		SILTY SAND/SAND (SM/SP): Light brown, saturated, medium dense to dense, fine grained sand.			
15			40		SANDY SILT (ML): Brown, saturated, dense, with fine grained sand	103.7	23.0	60% passing #200
20			12		SILTY SAND/SAND (SM/SP): Light brown, saturated, medium dense, fine grained sand.			
25			11	3.0	CLAY (CL-CH): Dark brown, very moist, very stiff consistency, medium to high plasticity			
30					Total Depth =26.5' Backfilled with excavated soil			
35								
40								
45								
50								
55								
60								

DATE DRILLED:	1/30/08	TOTAL DEPTH:	26.5 Feet	DEPTH TO WATER:	+/- 7.0 ft.
LOGGED BY:	J. Avalos	TYPE OF BIT:	Hollow Stem Auger	DIAMETER:	8 in.
SURFACE ELEVATION:	N/A	HAMMER WT.:	140 lbs.	DROP:	30 in.

PROJECT NO. LE08033

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PLATE B-4

LOG OF BORING NO. 3

SHEET 1 OF 1

DEPTH	FIELD: SAMPLE	FIELD: USCS CLASS.	FIELD: BLOW COUNT	FIELD: POCKET PEN. (tsf)	DESCRIPTION OF MATERIAL	LABORATORY: DRY DENSITY (pcf)	LABORATORY: MOISTURE CONTENT (% dry wt.)	LABORATORY: OTHER TESTS
5			24	2.5	CLAY (CL): Light brown, dry, medium plasticity CLAY (CL): Brown, very moist, stiff to very stiff consistency, medium plasticity			LL=40% PI=25% EI = 54%
10			12	1.5				
15			29		SILTY SAND/SAND (SM/SP): Light brown, saturated, medium dense, fine grained sand.			
20			6	0.5	SILTY CLAY (CL): Brown, very moist, firm consistency, low to medium plasticity. Thin clayey silt (ML) layer			
25			24	1.5	CLAY (CL-CH): Dark brown, very moist, stiff consistency, med. to high plasticity			
30					Total Depth =26.5' Backfilled with excavated soil			
35								
40								
45								
50								
55								
60								

DATE DRILLED: 1/30/08 TOTAL DEPTH: 26.5 Feet DEPTH TO WATER: +/- 7.0 ft.

LOGGED BY: J. Avalos TYPE OF BIT: Hollow Stem Auger DIAMETER: 8 in.

SURFACE ELEVATION: N/A HAMMER WT.: 140 lbs. DROP: 30 in.

PROJECT NO. LE08033

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PLATE B-5

LOG OF BORING NO. 4

SHEET 1 OF 1

DEPTH	FIELD: SAMPLE	FIELD: USCS CLASS.	FIELD: BLOW COUNT	FIELD: POCKET PEN. (tsf)	DESCRIPTION OF MATERIAL	LABORATORY: DRY DENSITY (pcf)	LABORATORY: MOISTURE CONTENT (% dry wt.)	LABORATORY: OTHER TESTS
0					CLAY (CL): Light brown, dry, medium plasticity			LL=43% PI=29%
5			19	1.5	CLAY (CL): Brown, very moist, stiff to very stiff consistency, medium plasticity			
10			10	0.5	Firm consistency			
15			29		SILTY SAND/SAND (SM/SP): Light brown, saturated, medium dense, fine grained sand.			
20			6	0.5	SILTY CLAY/CLAYEY SILT (CL/ML): Brown, very moist, firm consistency, low to medium plasticity.			
25			10	0.5	Stiff consistency			
30					Total Depth =26.5' Backfilled with excavated soil			
35								
40								
45								
50								
55								
60								

DATE DRILLED:	1/30/08	TOTAL DEPTH:	26.5 Feet	DEPTH TO WATER:	+/- 7.0 ft.
LOGGED BY:	J. Avalos	TYPE OF BIT:	Hollow Stem Auger	DIAMETER:	8 in.
SURFACE ELEVATION:	N/A	HAMMER WT.:	140 lbs.	DROP:	30 in.

PROJECT NO. LE08033

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PLATE B-6

LOG OF BORING NO. 5

SHEET 1 OF 1

DEPTH	FIELD: SAMPLE	FIELD: USCS CLASS.	FIELD: BLOW COUNT	FIELD: POCKET PEN. (tsf)	DESCRIPTION OF MATERIAL	LABORATORY: DRY DENSITY (pcf)	LABORATORY: MOISTURE CONTENT (% dry wt.)	LABORATORY: OTHER TESTS
0					CLAY (CL): Light brown, dry, medium plasticity			LL=47% PI=31%
5			16	1.0	CLAY (CL-CH): Dark brown, very moist, stiff to very stiff consistency, medium to high plasticity			
10			23		SILTY SAND/SAND (SM/SP): Light brown, saturated, medium dense, fine grained sand.			
15			9		Loose			
				0.5	CLAYEY SILT (ML): Brown, very moist, loose/firm, low plasticity.			
20			29		SILTY SAND/SAND (SM/SP): Light brown, saturated, medium dense, fine grained sand.			
				0.5	CLAYEY SANDY SILT (ML): Brown, saturated, loose/firm, low plasticity, some fine grained sand.			
25			23	4.0	CLAY (CL-CH): Dark brown, very moist, very stiff consistency, medium to high plasticity.			
30					Total Depth ≈26.5' Backfilled with excavated soil			
35								
40								
45								
50								
55								
60								

DATE DRILLED:	1/30/08	TOTAL DEPTH:	26.5 Feet	DEPTH TO WATER:	+/- 7.0 ft.
LOGGED BY:	J. Avalos	TYPE OF BIT:	Hollow Stem Auger	DIAMETER:	8 in.
SURFACE ELEVATION:	N/A	HAMMER WT.:	140 lbs.	DROP:	30 in.

PROJECT NO. LE08033

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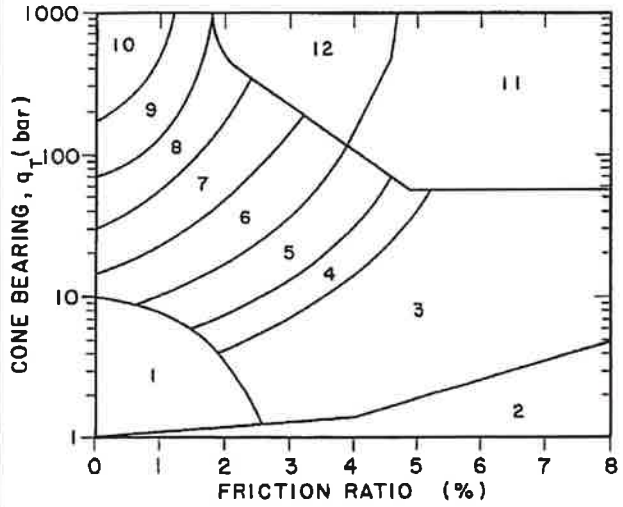
PLATE B-7

Simplified Soil Classification Chart

After Robertson & Campanella (1989)



Geotechnical Parameters from CPT Data:

Equivalent SPT N(60) blow count = Qc/(Qc/N Ratio)

N1(60) = Cn*N(60) Normalized SPT blow count

Cn = 1/(p'o)^0.5 < 1.6 max. from Liao & Whitman (1986)

p'o = effective overburden pressure (tsf) using unit densities given below and estimated groundwater table.

Dr = Relative density (%) from Jamiolkowski et. al. (1986) relationship

= -98 +68*log(Qc/p'o^0.5) where Qc, p'o in tonne/sqm

Note: 1 tonne/sqm = 0.1024 tsf, 1 bar =1.0443 tsf

Phi = Friction Angle estimated from either:

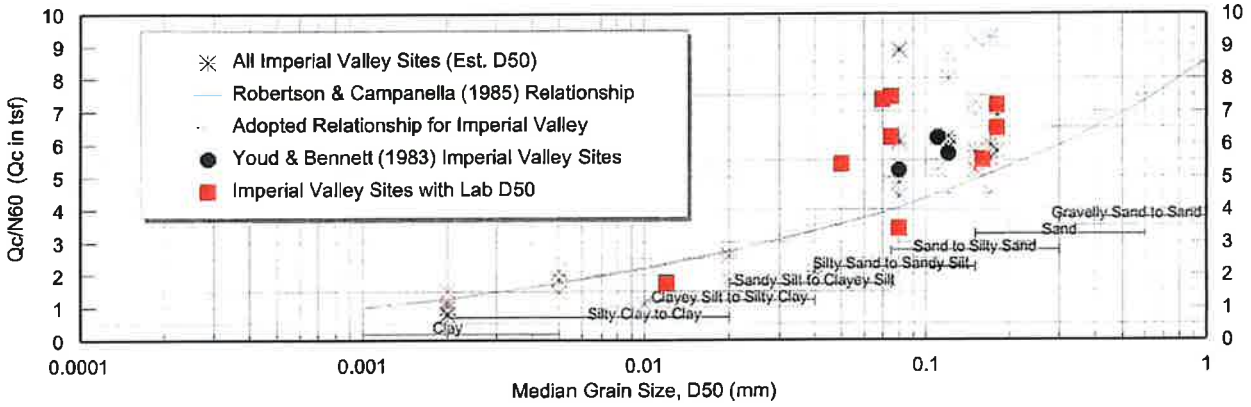
1. Roberton & Campanella (1983) chart:
   Phi = 5.3 + 24*(log(Qc/p'o))+3(log(Qc/p'o))^2
2. Peck, Hansen & Thornburn (1974) N-Phi Correlation
3. Schmertman (1978) chart [Phi = 28+0.14*Dr for fine uniform sands]

Su = undrained shear strength (tsf)

= (Qc-p'o)/Nk where Nk varies from 10 to 22, 17 for OC clays

OCR = Overconsolidation Ratio estimated from Schmertman (1978) chart using Su/p'o ratio and estimated normal consolidated Su/p'o

Variation of Qc/N Ratio with Grain Size



Note: Assumed Properties and Adopted Qc/N Ratio based on correlations from Imperial Valley, California soils

Table of Soil Types and Assumed Properties

Zone	Soil Classification	UCS	Density (pcf)	R&C Qc/N	Adopted Qc/N	Est. PI	Fines (%)	D50 (mm)	Su (tsf)	Consistency
1	Sensitive fine grained	ML	120	2	2	NP-15	65-100	0.020	0-0.13	very soft
2	Organic Material	OL/OH	120	1	1	--	--	--	0.13-.25	soft
3	Clay	CL/CH	125	1	1.25	25-40+	90-100	0.002	0.25-0.5	firm
4	Silty Clay to Clay	CL	125	1.5	2	15-40	90-100	0.010	0.5-1.0	stiff
5	Clayey Silt to Silty Clay	ML/CL	120	2	2.75	5-25	90-100	0.020	1.0-2.0	very stiff
6	Sandy Silt to Clayey Silt	ML	115	2.5	3.5	NP-10	65-100	0.040	>2.0	hard
7	Silty Sand to Sandy Silt	SM/ML	115	3	5	NP	35-75	0.075	Dr (%)	Relative Density
8	Sand to Silty Sand	SP/SM	115	4	6	NP	5-35	0.150	0-15	very loose
9	Sand	SP	110	5	6.5	NP	0-5	0.300	15-35	loose
10	Gravelly Sand to Sand	SW	115	6	7.5	NP	0-5	0.600	35-65	medium dense
11	Overconsolidated Soil	--	120	1	1	NP	90-100	0.010	65-85	dense
12	Sand to Clayey Sand	SP/SC	115	2	2	NP-5	--	---	>85	very dense

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Key to CPT Interpretation of Logs

Plate B-8

DEFINITION OF TERMS

PRIMARY DIVISIONS			SYMBOLS	SECONDARY DIVISIONS
Coarse grained soils More than half of material is larger than No. 200 sieve	Gravels More than half of coarse fraction is larger than No. 4 sieve	Clean gravels (less than 5% fines)	GW	Well graded gravels, gravel-sand mixtures, little or no fines
			GP	Poorly graded gravels, or gravel-sand mixtures, little or no fines
		Gravel with fines	GM	Silty gravels, gravel-sand-silt mixtures, non-plastic fines
			GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines
	Sands More than half of coarse fraction is smaller than No. 4 sieve	Clean sands (less than 5% fines)	SW	Well graded sands, gravelly sands, little or no fines
			SP	Poorly graded sands or gravelly sands, little or no fines
		Sands with fines	SM	Silty sands, sand-silt mixtures, non-plastic fines
			SC	Clayey sands, sand-clay mixtures, plastic fines
Fine grained soils More than half of material is smaller than No. 200 sieve	Silts and clays Liquid limit is less than 50%		ML	Inorganic silts, clayey silts with slight plasticity
			CL	Inorganic clays of low to medium plasticity, gravely, sandy, or lean clays
			OL	Organic silts and organic clays of low plasticity
	Silts and clays Liquid limit is more than 50%		MH	Inorganic silts, micaceous or diatomaceous silty soils, elastic silts
			CH	Inorganic clays of high plasticity, fat clays
			OH	Organic clays of medium to high plasticity, organic silts
Highly organic soils			PT	Peat and other highly organic soils

GRAIN SIZES

Silts and Clays	Sand			Gravel		Cobbles	Boulders
	Fine	Medium	Coarse	Fine	Coarse		

200 40 10 4 3/4" 3" 12"

US Standard Series Sieve — Clear Square Openings

Sands, Gravels, etc.	Blows/ft. *
Very Loose	0-4
Loose	4-10
Medium Dense	10-30
Dense	30-50
Very Dense	Over 50

Clays & Plastic Silts	Strength **	Blows/ft. *
Very Soft	0-0.25	0-2
Soft	0.25-0.5	2-4
Firm	0.5-1.0	4-8
Stiff	1.0-2.0	8-16
Very Stiff	2.0-4.0	16-32
Hard	Over 4.0	Over 32

* Number of blows of 140 lb. hammer falling 30 inches to drive a 2 inch O.D. (1 3/8 in. I.D.) split spoon (ASTM D1586).

** Unconfined compressive strength in tons/s.f. as determined by laboratory testing or approximated by the Standard Penetration Test (ASTM D1586), Pocket Penetrometer, Torvane, or visual observation.

Type of Samples:

Ring Sample Standard Penetration Test Shelby Tube Bulk (Bag) Sample

Drilling Notes:

1. Sampling and Blow Counts
   - Ring Sampler - Number of blows per foot of a 140 lb. hammer falling 30 inches.
   - Standard Penetration Test - Number of blows per foot.
   - Shelby Tube - Three (3) inch nominal diameter tube hydraulically pushed.
2. P. P. = Pocket Penetrometer (tons/s.f.).
3. NR = No recovery.
4. GWT = Ground Water Table observed @ specified time.

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Key to Logs

Plate B-9

APPENDIX C

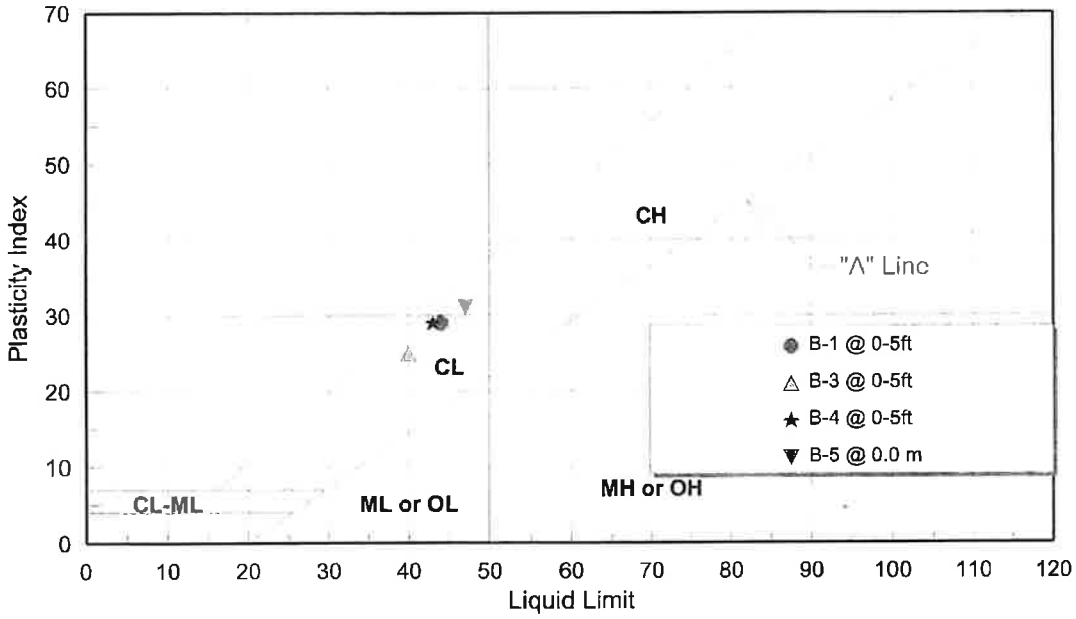
LANDMARK CONSULTANTS, INC.

CLIENT: Palo Verde Valley Disposal Service
PROJECT: PVVD MRF & Transfer Station - Imperial, CA
JOB NO: LE08033
DATE: 02/11/08

ATTERBERG LIMITS (ASTM D4318)

Sample Location	Sample Depth (ft)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	USCS Classif-ation
B-1	0-5	44	15	29	CL
B-1	20	21	---	---	ML
B-1	30	25	---	---	ML
B-3	0-5	40	15	25	CL
B-4	0-5	43	14	29	CL
B-5	0-5	47	16	31	CL

PLASTICITY CHART



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Project No: LE08033

Atterberg Limits Test Results

Plate C-1

LANDMARK CONSULTANTS, INC.

CLIENT: Palo Verde Valley Disposal Service
PROJECT: PVVD MRF & Transfer Station - Imperial, CA
JOB NO: LE08033
DATE: 02/11/08

EXPANSION INDEX TEST (UBC 29-2 & ASTM D4829)

Sample Location & Depth (ft)	Initial Moisture (%)	Compacted Dry Density (pcf)	Final Moisture (%)	Volumetric Swell (%)	Expansion Index (EI)	Expansive Potential
B-3 0-5 ft.	11.9	102.2	26.7	5.4	**54**	Medium

UBC CLASSIFICATION	
0-20	Very Low
20-50	Low
50-90	Medium
90-130	High
130+	Very High

Note: * The measured EI have been adjusted to the estimated EI at 50% saturation in accordance with Section 10.1.2 of ASTM D4829.

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Project No: LE08033

Expansion Index Test Results

Plate C-2

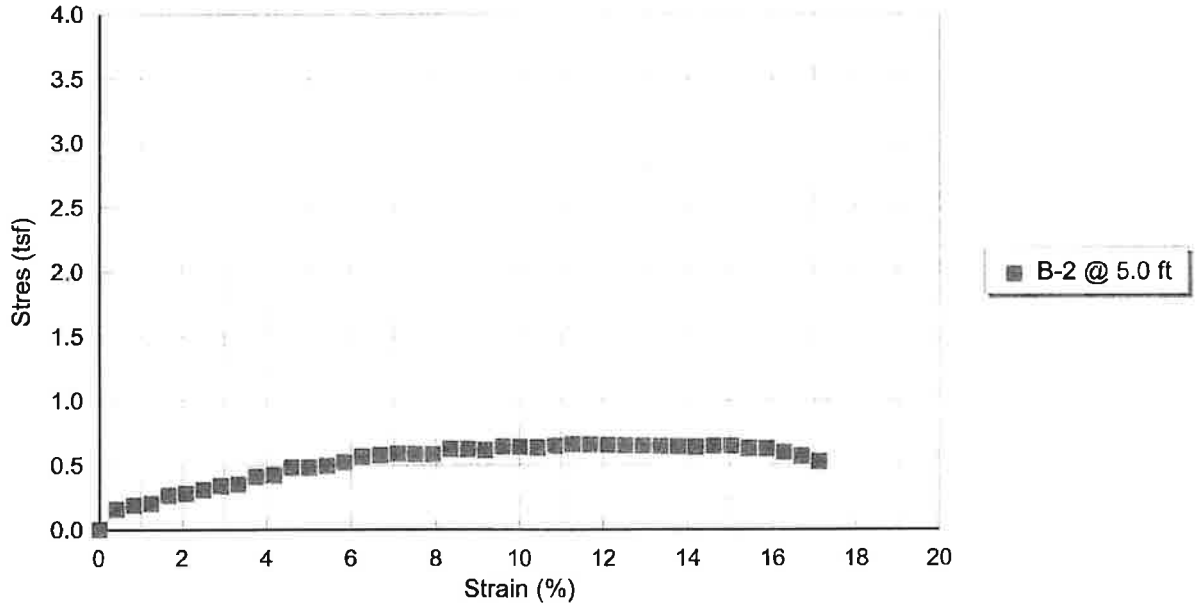
LANDMARK CONSULTANTS, INC.

CLIENT: Palo Verde Valley Disposal Service
PROJECT: PVVD MRF & Transfer Station - Imperial, CA
JOB NO: LE08033
DATE: 02/02/08

UNCONFINED COMPRESSION TEST (ASTM D2166)

Boring No.	Sample Depth (ft)	Natural Moisture Content (%)	Unit Dry Weight (pcf)	Maximum Compressive Strength (tsf)	Cohesion (tsf)	Failure Strain (%)
B-2	5.0	29.4	94.3	0.59	0.29	7.1

STRESS-STRAIN PLOT



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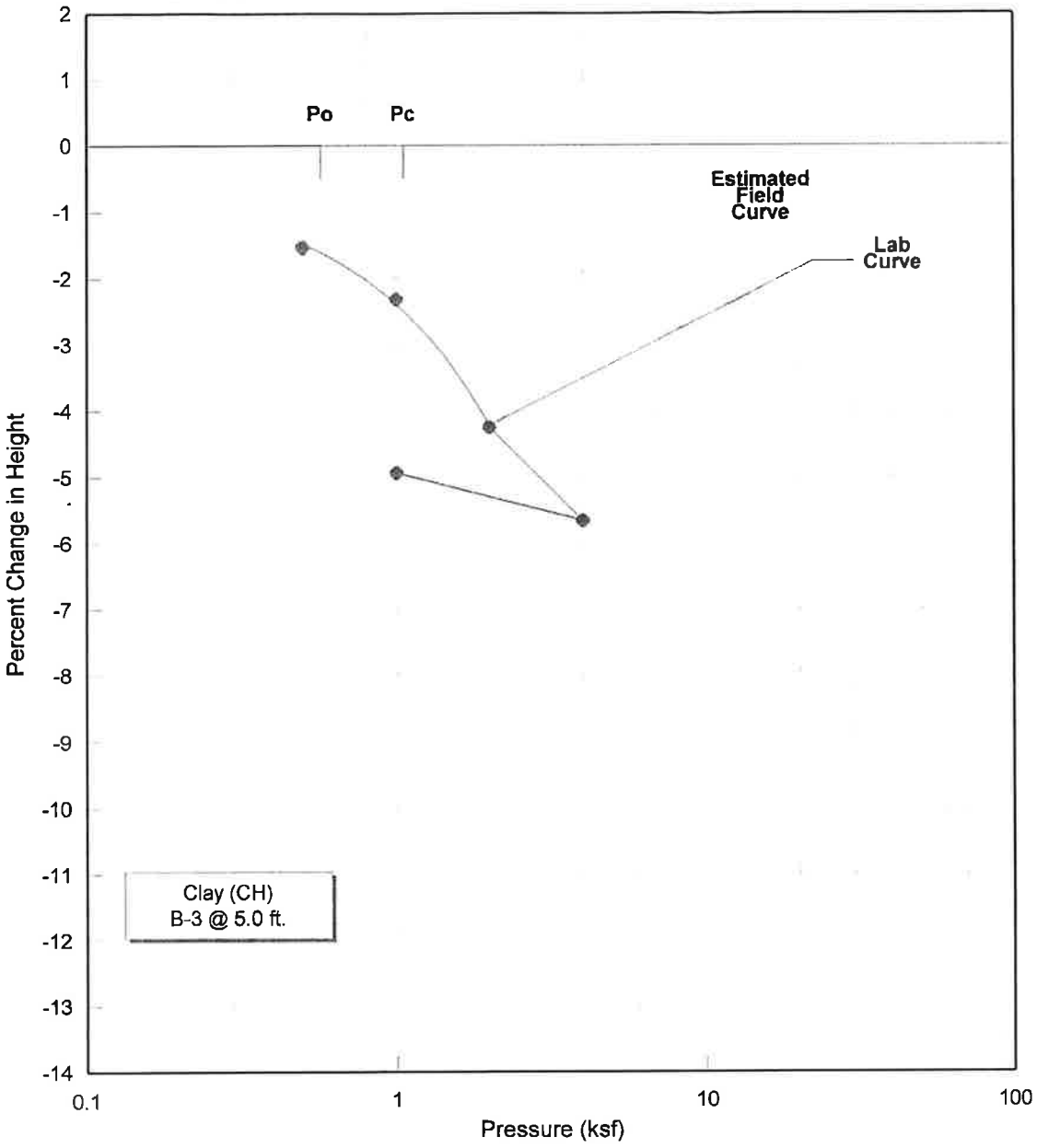
Project No: LE08033

Unconfined Compression Test Results

Plate C-3

ONE DIMENSIONAL CONSOLIDATION TEST (ASTM D2435)



Results of Test:			Initial	Final
Overburden Pressure, Po:	0.6 ksf	Dry Density, pcf:	92.1	96.9
Preconsol. Pressure, Pc:	1.1 ksf	Water Content, %:	22.8	22.8
Compression Index, Cc:	0.321	Void Ratio, e:	0.830	0.740
Recompression. Index, Cr:	0.031	Saturation, %:	74.3	83.4

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Consolidation Test Results

Plate C-4

LANDMARK

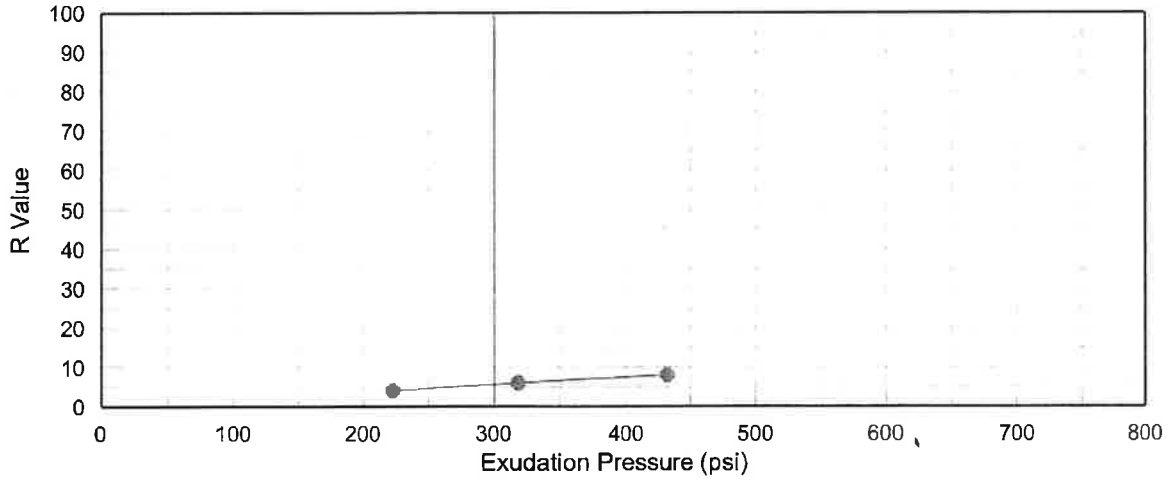
CLIENT: Palo Verde Valley Disposal Service
PROJECT: PVVD MRF & Transfer Station - Imperial, CA
JOB NO: LE08033
DATE: 02/08/08

R VALUE TEST (CAL TEST 301)

SAMPLE DESCRIPTION: Clay (CL)
SAMPLE LOCATION: B-1@0-5'

Specimen ID:	A	B	C
Moisture Content, %:	27.7%	26.8%	25.8%
Dry Density, pcf:	95.6	96.5	97.2
Compaction foot pressure, psi:	50	60	70
Specimen Height, in.:	2.50	2.55	2.50
Stabilometer, Ph @ 1000 lb:	72	70	66
Stabilometer, Ph @ 2000 lb:	150	146	142
Displacement:	4.01	4	3.90
Expansion pressure, psf:	44	48	57
Exudation pressure, psi:	223	318	432
Equilibrum R Value:	4	6	8
R Value at 300 psi:		**6**	

EXUDATION PRESSURE CHART



LANDMARK Geo-Engineers and Geologists **Project No: LE08033**	**R Value Test Results**	**Plate C-5**

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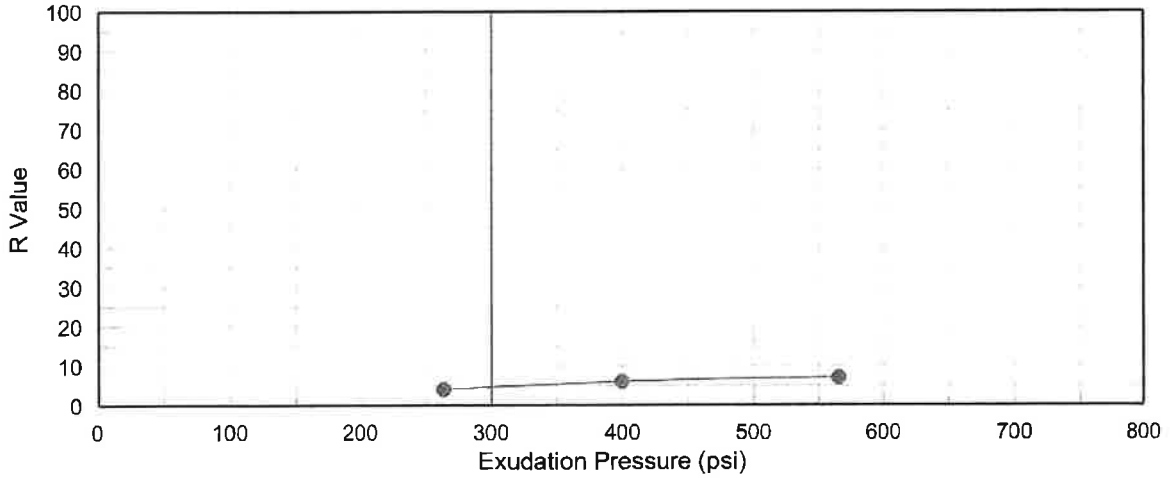
CLIENT: Palo Verde Valley Disposal Service
PROJECT: PVVD MRF & Transfer Station - Imperial, CA
JOB NO: LE08033
DATE: 02/11/08

R VALUE TEST (CAL TEST 301)

SAMPLE DESCRIPTION: Clay (CL)
SAMPLE LOCATION: B-3@0-5'

Specimen ID:	A	B	C
Moisture Content, %:	23.4%	22.5%	21.6%
Dry Density, pcf:	98.4	99.4	100.1
Compaction foot pressure, psi:	50	60	80
Specimen Height, in.:	2.52	2.52	2.51
Stabilometer, Ph @ 1000 lb:	72	70	68
Stabilometer, Ph @ 2000 lb:	150	147	145
Displacement:	4.15	3.59	3.50
Expansion pressure, psf:	26	35	52
Exudation pressure, psi:	263	399	565
Equilibrum R Value:	4	6	7
R Value at 300 psi:		**5**	

EXUDATION PRESSURE CHART



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Project No: **LE08033**

R Value
Test Results

Plate
C-6

LANDMARK CONSULTANTS, INC.

CLIENT: Palo Verde Valley Disposal Service
PROJECT: PVVD MRF & Transfer Station - Imperial, CA
JOB NO: LE08033
DATE: 02/11/08

CHEMICAL ANALYSES

Boring:	B-1	B-3	B-4	B-5	CalTrans
Sample Depth, ft:	0-5	0-5	0-5	0-5	Method
pH:	7.9	7.8	7.7	7.4	643
Electrical Conductivity (mmhos):	2.2	2.1	2.3	2.8	424
Resistivity (ohm-cm):	440	390	350	250	643
Chloride (Cl), ppm:	370	520	610	1,150	422
Sulfate (SO_4), ppm:	4,209	3,993	4,170	4,677	417

General Guidelines for Soil Corrosivity

Material Affected	Chemical Agent	Amount in Soil (ppm)	Degree of Corrosivity
Concrete	Soluble Sulfates	0 -1000	Low
		1000 - 2000	Moderate
		2000 - 20,000	Severe
		> 20,000	Very Severe
Normal Grade Steel	Soluble Chlorides	0 - 200	Low
		200 - 700	Moderate
		700 - 1500	Severe
		> 1500	Very Severe
Normal Grade Steel	Resistivity	1-1000	Very Severe
		1000-2000	Severe
		2000-10,000	Moderate
		10,000+	Low

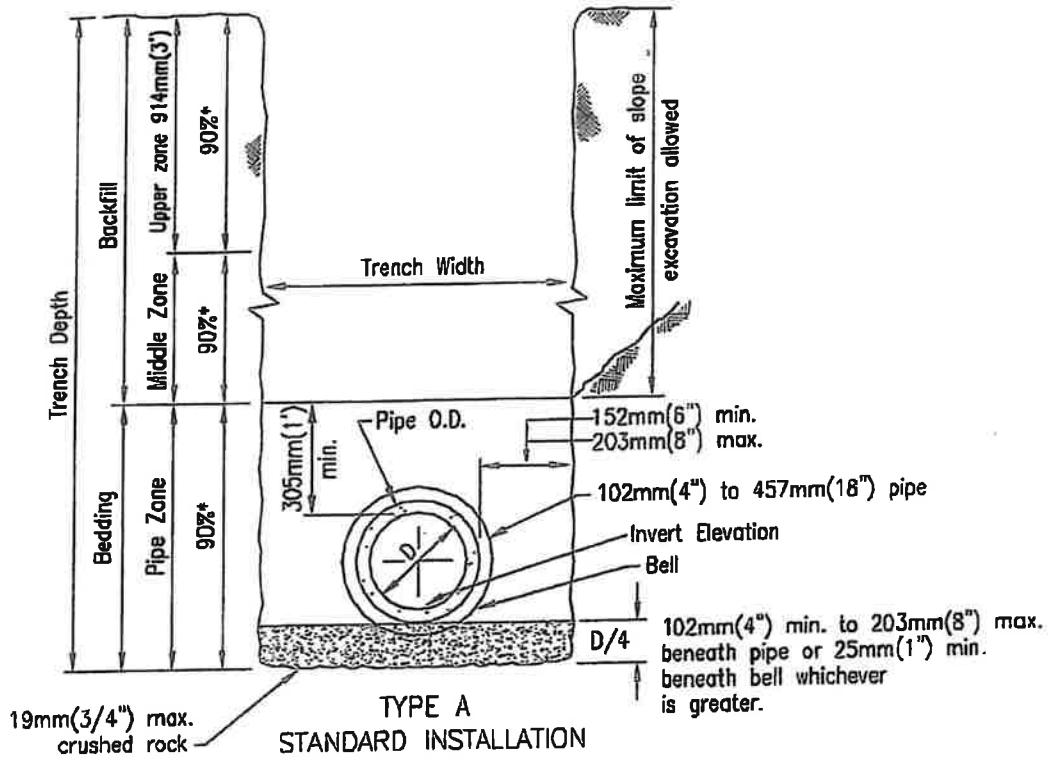
LANDMARK
Geo-Engineers and Geologists

Project No: LE08033

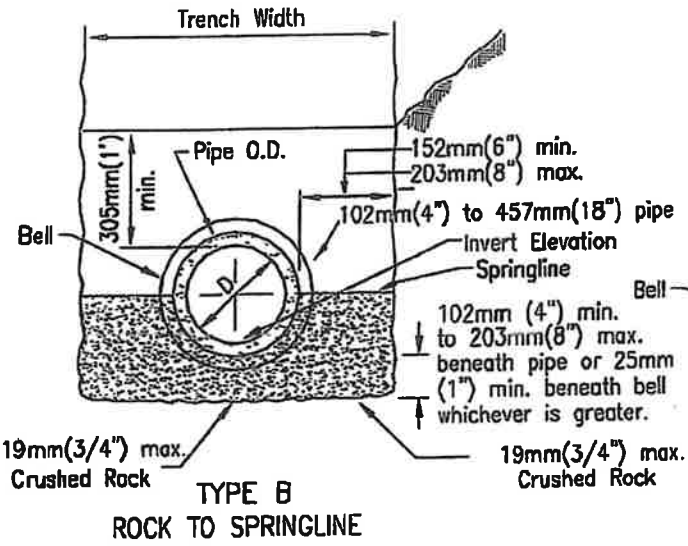
Selected Chemical Analyses Results

Plate C-7

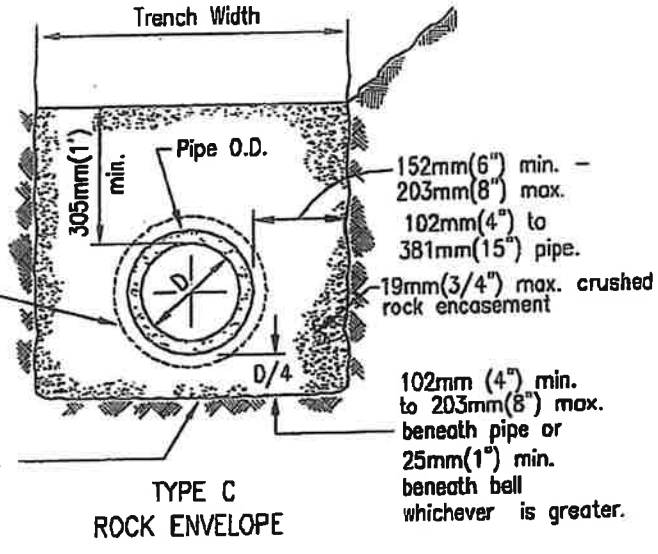
APPENDIX D



TYPE A
STANDARD INSTALLATION



TYPE B
ROCK TO SPRINGLINE



TYPE C
ROCK ENVELOPE

NOTES

1. For trenching in improved streets, see Standard Drawings G-24 or G-25 for trench resurfacing.
2. (*) indicates minimum relative compaction.
3. Minimum depth of cover from the top of pipe to finish grade for all sanitary sewer installations shall be 914mm(3'). For cover less than 914mm(3'), see Standard Drawing S-7 for concrete encasement.
4. See Type A installation for details not shown for Types B and C.

Revision	By	Approved	Date
ORIGINAL		A.Kercheval	12/75
Add Metric		T. Stanton	03/03

SAN DIEGO REGIONAL STANDARD DRAWING

PIPE BEDDING AND TRENCH BACKFILL FOR SEWERS

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

Chairperson R.C.E. 19246 Date 3/01/2003

DRAWING NUMBER **S-4**

APPENDIX E

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LANDMARK
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(760) 370-3000
(760) 337-8900 fax

77-948 Wildcat Drive
Palm Desert, CA 92211
(760) 360-0665
(760) 360-0521 fax

March 10, 2008

Mr. Gordon Beers
Harris Rd., LLC
14701 South Broadway
Blythe, CA 92225

Subject: **Percolation Test – Proposed PVVD MRF & Transfer Station**
Harris Road / Imperial, CA
LCI Project No. LE08033

Dear Mr. Beers:

Percolation tests were performed on February 26th and 27th, 2008 in the proposed leach field and two alternate alternative field areas located at the southwest corner of the parcel (Alternate 1), the maintenance building (primary leach field) and north of the future expansion of the C & D Greenwaste/Tire Processing (Alternate 2). The site is located on the north side of Harris Road and .5 mile west of Hwy 111 in a rural area northeast of Imperial, California. The upper native soils are clays and silts with a very low permeability.

Percolation tests were performed in accordance with the Taft Method as described in the U.S. Department of Health "Manual of Septic Tank Practice" at time intervals specified by the Riverside County Environmental Health Department standard test methods. The percolation test holes were 8-inch in diameter and extended to depths of 1.5 ft. and 3.0 ft. below the natural ground surface. A hand auger was used to excavate the bottom 12 inches of the hole to prevent sidewall smearing. A 2-inch layer of pea gravel was placed on the bottom of each test hole and the hole was filled with water 8 to 10 inches above the gravel. After a 24 hour presaturation time, water was refilled to a hydrostatic level of 8 to 10 inches in the bottom of hole after each 30 minute reading during a 6 hour test period.

Groundwater was encountered to a depth of 7 feet below surface after 24 hours in a 6 inch diameter observation hole. The test results follow:

Test Hole	Location	Stabilized Drop Min./Inch	Percolation Rate Gal./S.F./Day
1.5 ft. Depth	**(Alternate 1 Site)**		
1	Southwest	> 360.00	0.00
2	Northwest	> 360.00	0.00
3.0 ft. Depth			
3	Northeast	> 360.00	0.00
4	Southeast	> 360.00	0.00

Test Hole	Location	Stabilized Drop Min./Inch	Percolation Rate Gal./S.F./Day
1.5' Depth	**(Primary Site)**		
5	Southwest	> 360.00	0.00
6	Northwest	> 360.00	0.00
3' Depth			
7	Northeast	> 360.00	0.00
8	Southeast	> 360.00	0.00
3.0 ft. Depth	**(Alternate 2 Site)**		
9	Southeast	> 360.00	0.00
10	Northeast	> 360.00	0.00
11	Northwest	> 360.00	0.00
12	Southwest	> 360.00	0.00

All tests were made under the responsible charge of a registered civil engineer in conformance to the test method referenced. Percolation rates were determined by the formula:

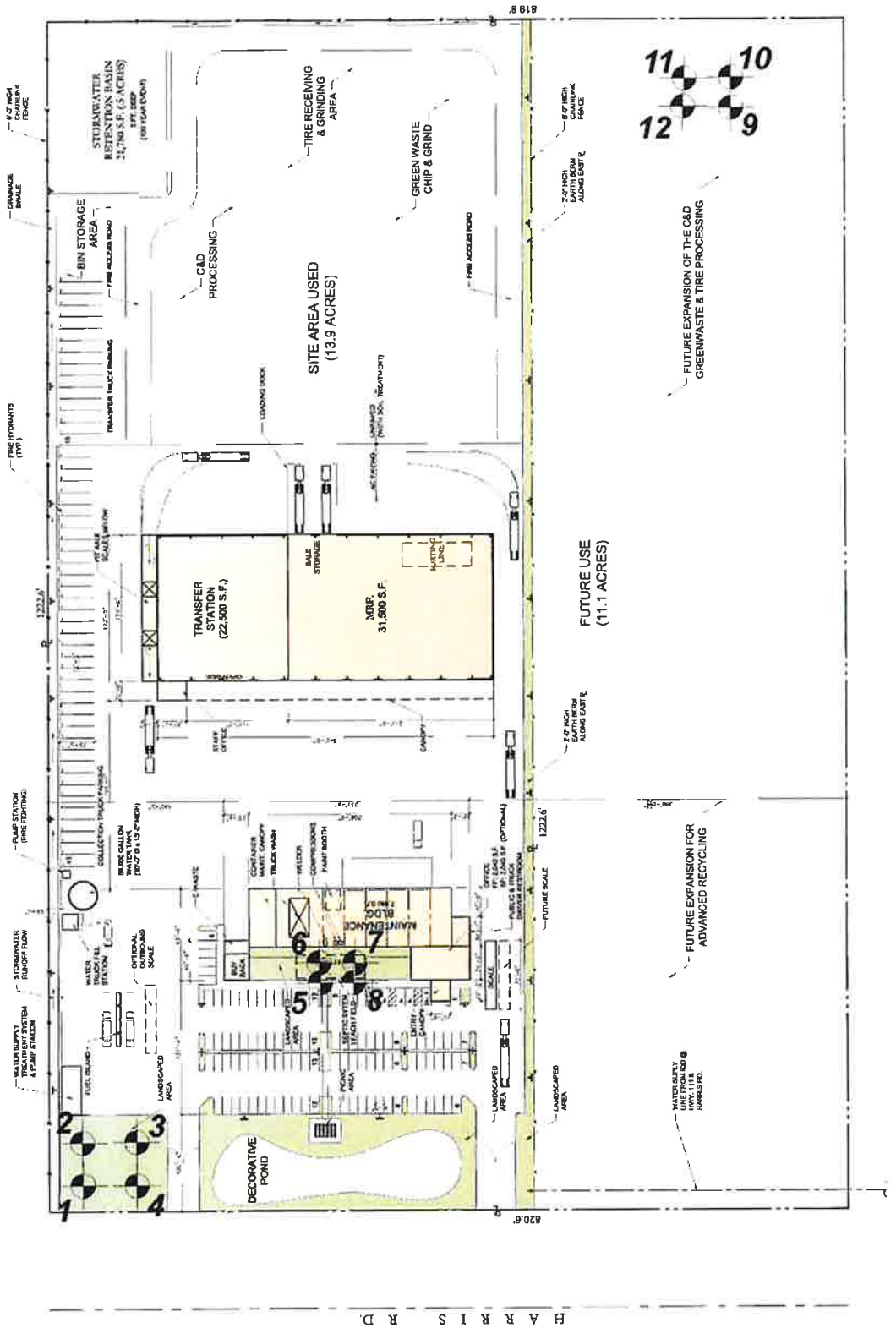
$Q=5/(T)^{½}$
where: Q=gals/sf/day
T=Stabilized drop (min/in)

Please contact our office if there are any questions or comments regarding the tests.

Sincerely Yours,
Landmark Consultants, Inc.

Jeffrey O. Lyon, P.E.
Principal Engineer

REGISTERED PROFESSIONAL ENGINEER
JEFFREY O. LYON
No. 31921
Exp. 12/31/08
CIVIL
STATE OF CALIFORNIA



LANDMARK Geo-Engineers and Geologists Project No.: LE08033	Percolation Test Locations	Plate 1

LANDMARK
Geo-Engineers and Geologists

Leach Line Percolation Data Sheet

Project: PROPOSED PWD MRF & TRANSFORMER STATION Job No: LE08033
Test Hole No: 1 Date Excavated: 2-26-08
Depth of Test Hole: 18" Soil Claasification: ML
Check for Sandy Soil Criteria Tested By: JA Date: 2-26-08 Presoak: YES
Actual Percolation Tested By: " Date: 2-27-08

Sandy Soil Criteria Test

2-26

TRIAL No.	TIME	TIME INTERVAL (MIN.)	INITIAL WATER LEVEL (IN.)	FINAL WATER LEVEL(IN.)	CHANGE WATER LEVEL (IN.)
A	11:15 AM 11:40 "	25	13.5	11	2.5

Use Normal/Sandy (CIRCLE ONE) Soil Criteria

2-27

TIME	TIME INTERVAL	TOTAL ELAPSED TIME	INITIAL WATER LEVEL	FINAL WATER LEVEL	CHANGE IN WATER LEVEL	PERCOLATION RATE (MIN/INCH)
8:40 AM	30 MINS	30	13.25"	11.50"	1.75	
9:10 "		60	11.5	10.5	1	
9:40 "		90	10.5	10	0.5	
10:10 "		120	10	9.75	0.25	
10:40 "		150	9.75	9.5	0.25	
11:10 "		180	9.5	9	0.5	
11:40 "		210	9	8.5	0.5	
12:10 PM "		240	8.5	8	0.5	
12:40 "		270	8	8	0	
1:10 "		300				
1:40 "		330				
2:10 "		360				@ 360
2:40						

LANDMARK
Geo-Engineers and Geologists

Leach Line Percolation Data Sheet

Project: PROPOSED PUD MRF & TRANSFORMER STATION Job No: LEC08033
Test Hole No: 2 Date Excavated: 2-26-08
Depth of Test Hole: 18" Soil Claasification: ML
Check for Sandy Soil Criteria Tested By: JAL Date: 2-26-08 Presoak: YES
Actual Percolation Tested By: Date:

Sandy Soil Criteria Test

2.26

TRIAL No.	TIME	TIME INTERVAL (MIN.)	INITIAL WATER LEVEL (IN.)	FINAL WATER LEVEL(IN.)	CHANGE WATER LEVEL (IN.)
A	11:13 AM 11:38	25	10.5	7.5	3

Use Normal/Sandy (CIRCLE ONE) Soil Criteria

2.27

TIME	TIME INTERVAL	TOTAL ELAPSED TIME	INITIAL WATER LEVEL	FINAL WATER LEVEL	CHANGE IN WATER LEVEL	PERCOLATION RATE (MIN/INCH)
8:41 AM 9:11	30 MINS	30	10"	9.5"	0.5	
9:41		60	9.5	9	0.5	
10:11		90	9	8.5	0.5	
10:41		120	8.5	8	0.5	
11:11		150	8	7.5	0.5	
11:41		180	7.5	7.5	Ø	
12:11 PM		210	7.5	7.25	0.25	
12:41		240	7.25	7	0.25	
1:11		270	7	7	Ø	
1:41		300				
2:11		330				
2:41		360				# > 360

LANDMARK
Geo-Engineers and Geologists

Leach Line Percolation Data Sheet

Project: PROPOSED PVVF MRF & TRANSFORMER STATION Job No: LE08033
Test Hole No: 3 Date Excavated: 2-26-08
Depth of Test Hole: 36" Soil Claasification: ML/CL
Check for Sandy Soil Criteria Tested By: JAZ Date: 2-26-08 Presoak: Yes
Actual Percolation Tested By: " Date: 2.27-08

Sandy Soil Criteria Test

2.26

TRIAL No.	TIME	TIME INTERVAL (MIN.)	INITIAL WATER LEVEL (IN.)	FINAL WATER LEVEL(IN.)	CHANGE WATER LEVEL (IN.)
A	11:12 AM 11:37 "	25	9.75	8.50	1.25

2.27

Use Normal/Sandy (CIRCLE ONE) Soil Criteria

TIME	TIME INTERVAL	TOTAL ELAPSED TIME	INITIAL WATER LEVEL	FINAL WATER LEVEL	CHANGE IN WATER LEVEL	PERCOLATION RATE (MIN/INCH)
~~8:42 AM~~ 9:12	30 MINS	30	13.25"	12"	1.25	
" 9:42		100	12"	10.5	1.50	
" 10:12		90	10.5	10	0.5	
" 10:42		120	10	9.75	0.25	
" 11:12		150	9.75	9.25	0.5	
" 11:42		180	9.25	9.25	0	
" 12:12 PM		210	9.25	9	0.25	
" 12:42		240	9	9	0	
" 1:12		270				
" 1:42		~~300~~				
" 2:12		~~330~~				
" 2:42		360				~~>~~ >360

LANDMARK
Geo-Engineers and Geologists

Leach Line Percolation Data Sheet

Project: PROPOSED PWD MRF & TRANSFORMER STATION
Job No: LE08033
Test Hole No: 4
Date Excavated: 2-26-08
Depth of Test Hole: 36"
Soil Claasification: ML / CL
Check for Sandy Soil Criteria Tested By: JAZ
Date: 2-26-08 Presoak: Yes
Actual Percolation Tested By: "
Date: 2-27-08

2.26

Sandy Soil Criteria Test

TRIAL No.	TIME	TIME INTERVAL (MIN.)	INITIAL WATER LEVEL (IN.)	FINAL WATER LEVEL(IN.)	CHANGE WATER LEVEL (IN.)
A	11:11 AM 11:36 "	25	10	8.25	1.75

2.27

Use Normal/Sandy (CIRCLE ONE) Soil Criteria

TIME	TIME INTERVAL	TOTAL ELAPSED TIME	INITIAL WATER LEVEL	FINAL WATER LEVEL	CHANGE IN WATER LEVEL	PERCOLATION RATE (MIN/INCH)
8:43 AM						
9:13	30 MINS.	30	12"	10"	2	
"						
9:43		60	10	9.5	0.5	
"						
10:13		90	9.5	8.75	0.75	
"						
10:43		120	8.75	8.5	0.25	
"						
11:13		150	8.5	8.25	0.25	
"						
11:43		180	8.25	8	0.25	
"						
12:13 PM		210	8	7.75	0.25	
"						
12:43		240	7.75	7.75	0	
"						
1:13		270				
"						
1:43						
"						
2:13						
"						
2:43		360				> 360

LANDMARK
Geo-Engineers and Geologists

Leach Line Percolation Data Sheet

Project: PROPOSED PWD MAKE & TRUCK FORMER STATION
Test Hole No: 5
Depth of Test Hole: 18"
Check for Sandy Soil Criteria Tested By: JAL
Actual Percolation Tested By: "

Job No: LE08033
Date Excavated: 2-26-08
Soil Claasification: NL
Date: 2-26-08 Presoak: yes
Date: 2-27-08

Sandy Soil Criteria Test

2-26

TRIAL No.	TIME	TIME INTERVAL (MIN.)	INITIAL WATER LEVEL (IN.)	FINAL WATER LEVEL(IN.)	CHANGE WATER LEVEL (IN.)
A	11:05 AM 11:30 "	25	8.5	2.5	6

Use Normal/Sandy (CIRCLE ONE) Soil Criteria

2-27

TIME	TIME INTERVAL	TOTAL ELAPSED TIME	INITIAL WATER LEVEL	FINAL WATER LEVEL	CHANGE IN WATER LEVEL	PERCOLATION RATE (MIN/INCH)
8:50 AM						
9:30 "	30 MIN.	30	12"	8.5"	3.5	
9:50 "		60	8.5	7.75	0.75	
10:30 "		90	7.75	6	1.75	
10:50 "		120	6	5	1	
11:20 "		150	11	10	1	
11:50 "		180	10	9	1	
12:20 PM		210	9	8.75	0.25	
12:50 "		240	8.75	8.75	0	
1:20 "		270	"	"	"	
1:50 "		300	"	"	"	
2:20 "		330	"	"	"	
2:50 "		360	"	"	"	0 >360

LANDMARK
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Leach Line Percolation Data Sheet

Project: PROPOSED PWD MRF & TEXACO FORMER STATION
Test Hole No: 6
Depth of Test Hole: 18"
Check for Sandy Soil Criteria Tested By: JAL
Actual Percolation Tested By: "

Job No: LE08033
Date Excavated: 2-26-08
Soil Claasification: M2
Date: 2-26-08 Presoak: Yes
Date: 2-27-08

2.26

Sandy Soil Criteria Test

TRIAL No.	TIME	TIME INTERVAL (MIN.)	INITIAL WATER LEVEL (IN.)	FINAL WATER LEVEL(IN.)	CHANGE WATER LEVEL (IN.)
A	11:06 AM 11:31 AM	25	8	6.5	1.5

2.27

Use Normal/Sandy (CIRCLE ONE) Soil Criteria

TIME	TIME INTERVAL	TOTAL ELAPSED TIME	INITIAL WATER LEVEL	FINAL WATER LEVEL	CHANGE IN WATER LEVEL	PERCOLATION RATE (MIN/INCH)
8:51 AM	30 MINS.	30	10 1/4	10	0.25	
4 9:21		60	10	9.5	0.5	
4 9:51		90	9.5	9.25	0.25	
4 10:21		120	9.25	9	0.25	
4 10:51		150	9	8.5	0.5	
4 11:21		180	8.5	8.25	0.25	
4 11:51		210	8.25	8.25	0	
4 12:21 PM		240				
4 12:51		270				
4 1:21		300				
4 1:51		330				
4 2:21		360				
4 2:51						

> 360

LANDMARK
Geo-Engineers and Geologists

Leach Line Percolation Data Sheet

Project: PROPOSED PWD MRF & TEXACO FORMER STATION
Test Hole No: 7
Depth of Test Hole: 36"
Check for Sandy Soil Criteria Tested By: JAZ
Actual Percolation Tested By: "

Job No: LE08033
Date Excavated: 2-26-08
Soil Claasification: ML/CL
Date: 2-26-08 Presoak: Yes
Date: 2.27.08

2.26

Sandy Soil Criteria Test

TRIAL No.	TIME	TIME INTERVAL (MIN.)	INITIAL WATER LEVEL (IN.)	FINAL WATER LEVEL(IN.)	CHANGE WATER LEVEL (IN.)
A	11:01 AM 11:32	25	9	3.5	5.5

2.27

Use Normal/Sandy (CIRCLE ONE) Soil Criteria

TIME	TIME INTERVAL	TOTAL ELAPSED TIME	INITIAL WATER LEVEL	FINAL WATER LEVEL	CHANGE IN WATER LEVEL	PERCOLATION RATE (MIN/INCH)
8:52 AM	30 MINS	30	12"	8"	4	
9:22	"					
9:52	"	60	8	4"	4	
10:22	"	90	11.5	10	1.5	
10:52	"	120	10	9	1	
11:22	"	150	9	8	1	
11:52	"	180	8	7	1	
12:22 PM	"	210	7	6.5	0.5	
12:52	"	240	6.5	6.25	0.25	
1:22	"	270	6.25	6	0.25	
1:52	"	300	6	6	0	
2:22	"	330				
2:52	"	360				> 360

LANDMARK
Geo-Engineers and Geologists

Leach Line Percolation Data Sheet

Project: PROPOSED PWD MIKE & TRAUX FORMER STATION
Test Hole No: 8
Depth of Test Hole: 36"
Check for Sandy Soil Criteria Tested By: JAL
Actual Percolation Tested By: "

Job No: LE08033
Date Excavated: 2-26-08
Soil Claasification: ML / CL
Date: 2-26-08 Presoak: Yes
Date: 2-27-08

Sandy Soil Criteria Test

2-26

TRIAL No.	TIME	TIME INTERVAL (MIN.)	INITIAL WATER LEVEL (IN.)	FINAL WATER LEVEL(IN.)	CHANGE WATER LEVEL (IN.)
A	11:08 AM 11:33	25	14	10	4

Use Normal/Sandy (CIRCLE ONE) Soil Criteria

2-27

TIME	TIME INTERVAL	TOTAL ELAPSED TIME	INITIAL WATER LEVEL	FINAL WATER LEVEL	CHANGE IN WATER LEVEL	PERCOLATION RATE (MIN/INCH)
8:53 AM 9:23	30 MINS.	30	13.25"	11.5	1.75	
" 9:53		60	11.5	10.5	1	
" 10:23		90	10.5	10	0.5	
" 10:53		120	10	8.5	1.5	
" 11:23		150	8.5	7.5	1	
" 11:53		180	7.5	7	0.5	
" 12:23 PM		210	7	6	1	
" 12:53		240	6	5.5	0.5	
" 1:23		270	9	8.75	0.25	
" 1:53		300	8.75	8.75	0	
" 2:23		330				
" 2:53		360				> 360

LANDMARK
Geo-Engineers and Geologists

Leach Line Percolation Data Sheet

Project: PROPOSED PWD MAKE & TRUCK FORMER STATION
Test Hole No: 9
Depth of Test Hole: 36"
Check for Sandy Soil Criteria Tested By: JAL
Actual Percolation Tested By: "

Job No: LE08033
Date Excavated: 2-26-08
Soil Claasification: ML/CL
Date: 2-26-08 Presoak: Yes
Date: 2.27.08

Sandy Soil Criteria Test

2.26

TRIAL No.	TIME	TIME INTERVAL (MIN.)	INITIAL WATER LEVEL (IN.)	FINAL WATER LEVEL(IN.)	CHANGE WATER LEVEL (IN.)
A	10:57 AM 11:22	25	19.5	18.5	1

Use Normal/Sandy (CIRCLE ONE) Soil Criteria

2.27

TIME	TIME INTERVAL	TOTAL ELAPSED TIME	INITIAL WATER LEVEL	FINAL WATER LEVEL	CHANGE IN WATER LEVEL	PERCOLATION RATE (MIN/INCH)
9:00 AM	30 MIN.	30	14"	13"	1	
9:30		60	13	13	0	
10:00		90	13	12.75	0.25	
10:30		120	12.75	12.5	0.25	
11:00		150	12.5	12	0.5	
11:30		180	12	11.75	0.25	
12:00 PM		210	11.75	11.75	0	
12:30		240				
1:00		270				
1:30		300				
2:00		330				
2:30		360				0 > 360
3:00						

LANDMARK
Geo-Engineers and Geologists

Leach Line Percolation Data Sheet

Project: PROPOSED PWD MRF & TRANSFORMER STATION
Test Hole No: 10
Depth of Test Hole: 36"
Check for Sandy Soil Criteria Tested By: SRL
Actual Percolation Tested By: "

Job No: LB08033
Date Excavated: 2-26-08
Soil Claasification: ML / CL
Date: 2-26-08 Presoak: Yes
Date: 2-27-08

2-26

Sandy Soil Criteria Test

TRIAL No.	TIME	TIME INTERVAL (MIN.)	INITIAL WATER LEVEL (IN.)	FINAL WATER LEVEL(IN.)	CHANGE WATER LEVEL (IN.)
A	10:56 AM 11:21 "	25	16.5	13.5	3

2-27

Use Normal/Sandy (CIRCLE ONE) Soil Criteria

TIME	TIME INTERVAL	TOTAL ELAPSED TIME	INITIAL WATER LEVEL	FINAL WATER LEVEL	CHANGE IN WATER LEVEL	PERCOLATION RATE (MIN/INCH)
9:01 AM	30 Mins.	30	15"	14"	1	
931		60	14"	13"	1	
1001		90	13	12.5	0.5	
1031		120	12.5	12	0.5	
1101		150	12	11.5	0.5	
1131		180	11.5	11	0.5	
1201 PM		210	11	11	0	
1231		240				
1301		270				
1331		300				
201		330				
231		360				0 > 360
301						

LANDMARK
Geo-Engineers and Geologists

Leach Line Percolation Data Sheet

Project: PROPOSED PWD MRF & TRANSFORMER STATION
Test Hole No: 11
Depth of Test Hole: 18"
Check for Sandy Soil Criteria Tested By: JBZ
Actual Percolation Tested By: "

Job No: LE08033
Date Excavated: 2-26-08
Soil Claasification: ML
Date: 2-26-08 Presoak: YES
Date: 2-27-08

Sandy Soil Criteria Test

2-26

TRIAL No.	TIME	TIME INTERVAL (MIN.)	INITIAL WATER LEVEL (IN.)	FINAL WATER LEVEL(IN.)	CHANGE WATER LEVEL (IN.)
A	10:55 AM 11:20	25	4	6	2

Use Normal/Sandy (CIRCLE ONE) Soil Criteria

2-27

TIME	TIME INTERVAL	TOTAL ELAPSED TIME	INITIAL WATER LEVEL	FINAL WATER LEVEL	CHANGE IN WATER LEVEL	PERCOLATION RATE (MIN/INCH)
7:02 AM	30 Mins.	30	11	10	1	
7:32						
8:02		60	10	9	1	
8:32		90	9	8	1	
9:02		120	8	7	1	
9:32		150	7	6.5	0.5	
10:02 PM		180	6.5	6	0.5	
10:32		210	6	5.5	0.5	
11:02		240	8	7.75	0.25	
11:32		270	7.75	7.75	0	
12:02		300				
12:32		330				
1:02		360				360

LANDMARK
Geo-Engineers and Geologists

Leach Line Percolation Data Sheet

Project: PROPOSED PWD MAIN & TRANSFORMER STATION
Test Hole No: 12
Depth of Test Hole: 18"
Check for Sandy Soil Criteria Tested By: JAZ
Actual Percolation Tested By:

Job No: LE08033
Date Excavated: 2-26-08
Soil Claasification: ML
Date: 2-26-08 Presoak: ✓ 4/3
Date: 2.27.08

Sandy Soil Criteria Test

2.26

TRIAL No.	TIME	TIME INTERVAL (MIN.)	INITIAL WATER LEVEL (IN.)	FINAL WATER LEVEL(IN.)	CHANGE WATER LEVEL (IN.)
A	10:53 AM 11:18	25	10	7.5	2.5

Use Normal/Sandy (CIRCLE ONE) Soil Criteria

2.27

TIME	TIME INTERVAL	TOTAL ELAPSED TIME	INITIAL WATER LEVEL	FINAL WATER LEVEL	CHANGE IN WATER LEVEL	PERCOLATION RATE (MIN/INCH)
9:03 AM						
933	30 MINS.	30	13	11 3/4	1.25	
" 1003		60	11.75	11	0.75	
" 1033		90	11	10.25	0.75	
" 1103		120	10.25	10	0.25	
" 1133		150	10	9.5	0.5	
" 1203 PM		180	9.5	8	1.5	
" 1233		210	8	7.5	0.5	
" 103		240	7.5	7.25	0.25	
" 133		270	7.25	7	0.25	
" 203		300	7	7	0	
" 233		330	↓	↓	↓	
" 303		360	↓	↓	↓	@ > 360

APPENDIX E – Phase I ESA Report Proposed Harris Road Recycling Facility NWC Harris Road and Hwy 111 Imperial, California prepared by GS Lyon Consultants, Inc. in May 2021.

Phase I ESA Report

Proposed Harris Road Recycling Facility
NWC Harris Road and Hwy 111
Imperial, California

Prepared for:

True North Renewable Energy, LLC
2390 E. Camelback Road, Suite 203
Phoenix, AA 85016

Prepared by:

GS Lyon Consultants, Inc.
780 N. 4th Street
El Centro, CA 92243
(760) 337-1100

May 2021

GSL Lyon

Engineering And
Information Technology

May 21, 2021

Mr. Frank Lauro, PE
True North Renewable Energy, LLC
2390 E. Camelback Road, Suite 203
Phoenix, AZ 85016

Phase I Environmental Site Assessment Report
Proposed Harris Road Recycling Facility
NWC Harris Road and Hwy 111
Imperial, California
GSL Report No. GS2110

Dear Mr. Lauro:

We have performed a Phase I Environmental Site Assessment in general conformance with the scope and limitations of ASTM E1527-13 of the property located at the northwest corner of Harris Road and Hwy 111 northeast of Imperial, California. Any exceptions to, or deletions from, this practice are described in Section 1.4 of this report. **This assessment has revealed the following "de minimis" environmental conditions (REC's) in connection with the property:**

- Pesticide residues (low concentrations) typical to agricultural crop applications may be present in the near surface soils.
- A concrete lined basin and several piles of concrete debris are located in the northeast portion of the subject property. There is a slight potential that the concrete may contain asbestos.

This assessment has not revealed any recognized environmental conditions (REC's) in connection with the property.

We declare that, to the best of our professional knowledge and belief, we meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR §312 and we have the specific qualifications based on education, training and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed all the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Attached is our report which describes the procedures used and results of the assessment. If you have any questions or require additional information, please do not hesitate to contact the undersigned at (760) 337-1100. We appreciate the opportunity to provide our professional review for this subject property.

Respectfully Submitted,
GS Lyon Consultants, Inc.

Steven K. Williams, PG, CEG
Consulting Geologist

Peter E. LaBrucherie, PE
Consulting Engineer

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APPENDICES

1.0 INTRODUCTION

1.1 Purpose

GS Lyon Consultants, Inc. was retained by True North Renewable Energy to conduct a Phase I Environmental Site Assessment (ESA) for the Property (herein referred to as the subject property or subject property in this Phase I ESA Report) as a prerequisite to property transaction (purchase, sale, refinance, etc.). The subject property is located at the northwest corner of Harris Road and Hwy 111 approximately 4 miles northeast of Imperial, California. See Plate 1 in Appendix B for a Vicinity Map of the subject property.

The purpose of this Phase I Environmental Site Assessment (ESA) is to identify, to the extent feasible, recognized environmental conditions (RECs) associated with past and present activities on the subject property or in the immediate subject property vicinity in general conformance to ASTM Standard E1527-13 "*Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*" that may affect future uses of the subject property.

This report is intended to satisfy the Phase I ESA portion of "*all appropriate inquiry*" into the previous ownership and uses of the subject property as defined under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) at Title 42 of the United States Code (U.S.C.) §9601(35)(B) and in accordance with 40 Code of Federal Regulations (CFR) Part 312, Standards and Practices for All Appropriate Inquiries; Final Rule (AAI Rule).

1.2 Scope of Services

The scope of work for this ESA is in general accordance with the requirements of ASTM Standard E1527-13. This assessment included:

- Reconnaissance of the subject property and adjacent properties
- Review user-provided information
- Interviews with persons with significant knowledge of the subject property
- Review of a regulatory database report provided by a third-party vendor
- Review readily-available historical sources (including but not limited to: aerial photographs, fire insurance maps, property tax files, recorded land title records, and topographical maps)
- Prepare report of findings

1.3 Limitations

No Phase I ESA can completely eliminate uncertainty regarding the potential for RECs in connection with a property. Conformance of this assessment with ASTM Standard E1527-13 is intended to reduce, but not eliminate uncertainty regarding the potential for RECs in connection with the Subject Property. While GS Lyon has made reasonable effort to discover and interpret available historical and current information on the property within the time available, the possibility of undiscovered contamination remains. Our assessment of the subject property and surrounding areas was conducted in accordance with ASTM guidelines and the *generally accepted environmental engineering standard of practice* which existed in Imperial County, California at the time that the report was prepared. No warranty, express or implied, is made.

GS Lyon Consultants, Inc. derived the data in this report primarily from visual inspections, examination of public records and information in the public domain, informal interviews with individuals, and readily available information about the subject property. The passage of time, manifestation of latent conditions or occurrence of future events may require further exploration of the subject property, analysis of the data, and reevaluation of the findings, observations, and conclusions expressed in this report.

The findings, observations, and conclusions expressed by GS Lyon Consultants in this report are not, and should not be considered, an opinion concerning the compliance of any past or present owner or operator of the subject property with any federal, state or local law or regulation.

This report should not be relied upon after **180 days** from the date of issuance, unless additional services are performed as defined in ASTM E1527-13 - Section 4.7.

1.4 Deviations or Data Gaps

ASTM Standard E1527-13 requires any significant data gaps, deviations, and deletions from the ASTM Standard to be identified and addressed in the Phase I ESA. A significant data gap would be one that affected the ability to identify a REC on the subject property or adjacent properties.

Through the course of this assessment, *data failures* or *data gaps* may have been encountered. These failures or gaps, if any, are discussed below. The following provides the opinion of the Environmental Professional as to the significance of the data gaps in terms of defining *recognized environmental conditions* at the subject property. Data failures may or may not be significant data gaps, and the discussion also provides information pertaining to whether the data failures resulted in significant data gaps.

1.4.1 Data Failures

Data failure is a failure to achieve the historical (property use) research objectives specified in the ASTM Standard Practice even after reviewing the eight standard historical sources that are reasonably ascertainable and likely to be useful. Data failure is one type of data gap.

No *data failures w*ere encountered during this investigation.

1.4.2 Data Gaps

A *data gap* is a lack of or inability to obtain information required by the ASTM Standard Practice, despite good faith efforts by the Environmental Professional (EP) to gather such information. This could include any component of the Practice, e.g., standard environmental records, interviews, or a complete reconnaissance. A data gap by itself is not inherently significant, but if other information and/or the EP's experience raises reasonable concerns about the gap, it may be judged to be significant.

Due to the location of the subject property, Sanborn Fire Insurance maps were not available for the subject property. Because there is no historical data or physical indications that the property has ever been developed or occupied by a business that would have produced hazardous materials, the lack of Sanborn Fire Insurance maps is not considered a significant data gap.

Aerial photographs and other historical records were not available at 5 year intervals as required under the ASTM E1527-13 standard. This resulted in a data gap for years that records were not available regarding the area of the subject property. However, based upon other historical information reviewed, the subject property has been an agricultural field since at least the 1930s. Therefore, this data gap is not considered to be significant.

Interviews with past owners, operators and occupants were not reasonably ascertainable and thus constitute a data gap. Based on information obtained from other historical sources (as discussed in Section 3.0), this data gap is not expected to alter the findings of this assessment.

GS Lyon requested information relative to deed restrictions and environmental liens, a title search, and completion of a pre-survey questionnaire from the Report User. This information was not provided at the time of the assessment. This represents a data gap.

1.5 Significant Assumptions

In preparing this report, GS Lyon Consultants, Inc. has relied upon and presumed accurate certain information (or the absence thereof) about the subject property and adjacent properties by governmental officials and agencies, the Client, and others identified herein. Except as otherwise stated in the report, GS Lyon Consultants has not attempted to verify the accuracy or completeness of any such information.

1.6 User Reliance

This report has been prepared on behalf of and for the exclusive use of True North Renewable Energy for the particular subject property identified in this report, and is subject to and issued in connection with the referenced Agreement and the provisions thereof. This report should not be relied upon by any party other than the client, its legal counsel, and financial institution without the express permission of GS Lyon Consultants, Inc. Any reliance on this report by other parties shall be at such party's sole risk. Any future consultation or provision of services to third parties related to the subject property requires written authorization from True North Renewable Energy or their representatives. Any such services may be provided at GS Lyon Consultants sole discretion and under terms and conditions acceptable to GS Lyon Consultants, including potential additional compensation.

2.0 SITE DESCRIPTION

2.1 Site Location and Legal Description

The subject property (APNs 040-360-036, -037, -038, and -039) is located at the northwest corner of Harris Road and Hwy 111 approximately 4 miles northeast of Imperial, California. The subject property location is depicted on Plate 2, Site Map.

2.2 Current Property Use and Description

The subject property currently consists of an agricultural field currently under alfalfa crop. The subject property is rectangular in plan view, elongate in the east-west direction. The subject site is bounded on the south by Harris Road and the east by Old Hwy 111. The Rose Drain forms the western property boundary.

The northeast corner is currently not a part of the agricultural field. This area is used as a hay bale storage area and is overgrown with brush. Several debris piles (concrete, household debris, plastics, etc.) were noted in this area. A concrete lined basin is also located in this area.

2.3 Adjoining Property Use

The subject property is located within an agricultural area northeast of Imperial, California. Adjacent properties consist of agricultural fields to the south. Fish farms are located to the west. Dry duck ponds are located to the north. Highway 111, a 4-lane divided highway, is located to the east with agricultural fields further to the east.

2.4 Physical Site Characteristics

Topography: Topographic maps (USGS 7.5 minute Brawley, CA Quadrangle) indicate that the subject property elevation is approximately 132 feet below mean sea level (MSL) or Elevation 868 (local datum). The Imperial Irrigation District, which supplies power and raw (irrigation) water to the area, established local datum by equating mean sea level to El. 1000.00 feet.

Geologic Setting: The subject property is located in the Colorado Desert Physiographic province of southern California. The dominant feature of the Colorado Desert province is the Salton Trough, a geologic structural depression resulting from large-scale regional faulting. The trough is bounded on the northeast by the San Andreas Fault and the southwest by faults of the San Jacinto Fault Zone.

The Salton Trough represents northward extension of the Gulf of California, which has experienced continual in-filling with both marine and non-marine sediments since the Miocene Epoch (25 million years before present). The tectonic activity that formed the trough continues at a high rate as evidenced by deformed young sedimentary deposits and high levels of historic seismicity.

The subject property is directly underlain by Holocene (0-11,000 years before present) Cahuilla Lake sediments, which consist of interbedded lenticular and tabular sand, silt, and clay. The predominant surface soil is silty clay. The Holocene lake deposits are considered to be less than 100 feet thick and are characterized by surficial clay and silt deposits with varying amounts of fine sand. The topography of the Imperial Valley is relatively flat, with few significant land features. The valley floor slopes gently to the north (less than 0.5 percent) from an elevation of sea level at Calexico to approximately 225 feet below sea level at the Salton Sea.

Soil Conditions: The U. S. Soil Conservation Service compiled a map of surface soil conditions and published a soil survey report including maps in 1980. The soil survey maps indicate that surficial deposits at the subject property and surrounding area consist predominantly of silty clay and silty clay loams of the Imperial-Glenbar soil group (see Appendix B). These loams are formed in sediment and alluvium of mixed origin (Colorado River overflows and fresh-water lake-bed sediments). Based on Unified Soil Classification System presented in the Soils Survey Report, the permeability of these soils is expected to be low to very low.

Groundwater Conditions: The groundwater in the vicinity of the subject property is brackish and has previously been encountered at depths of 7 to 8 feet below the ground surface. Depth to groundwater may fluctuate due to localized geologic conditions, precipitation, irrigation, drainage and construction practices in the region. Based on the regional topography, groundwater flow is assumed to be generally towards the north within the subject property area. Flow directions may also vary locally in the vicinity of the subject property.

3.0 USER PROVIDED INFORMATION

In order to qualify for one of the *Landowner Liability Protections (LLPs)* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the *Brownfields Amendments*), the *User* must provide the following information (if available) to the *environmental professional*. Failure to provide this information could result in a determination that *all appropriate inquiry* is not complete. The user was asked to provide information or knowledge of the following:

- Environmental cleanup liens that are filed or recorded against the subject property.
- Activity and land use limitations that are in place on the subject property or that have been filed or recorded in a registry.
- Specialized knowledge or experience of the person seeking to qualify for the LLPs.
- Relationship of the purchase price to the fair market value of the *property* if it were not contaminated.
- Commonly known or *reasonably ascertainable* information about the *property*.
- The degree of obviousness of the presence or likely presence of contamination at the *property*, and the ability to detect the contamination by appropriate investigation.
- The reason for preparation of this Phase I ESA.

A user questionnaire was provided to the user to aid in gathering information that may be pertinent to the evaluation of the subject property for environmental conditions. The completed user questionnaire is provided in Appendix I.

3.1 Title Records

GS Lyon reviewed preliminary title reports as part of this assessment and did not find past ownership or easements that would indicate environmentally hazardous uses on the parcels.

3.2 Environmental Liens or Activity and Use Limitations

An environmental lien is a charge, security, or encumbrance upon the title to a property to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of hazardous substances or petroleum products upon the property. According to the User Questionnaire, Mr. Gordon Beers, General Manager of Harris Road, LLC which is the current property owner, is not aware of any Environmental Liens or Activity and Use Limitations associated with the subject property that have been filed or recorded under federal, tribal, state or local law (Appendix I).

GS Lyon Consultants contracted Environmental Data Resources, Inc. (EDR) of Shelton, Connecticut to conduct a search of environmental liens for the subject property. According to the EDR environmental lien report, there are no environmental liens associated with the subject property. The EDR environmental lien report is included in Appendix I.

3.3 Specialized Knowledge

According to the User Questionnaire, Mr. Beers is not aware of any specialized knowledge or experience associated with the subject property or nearby properties.

3.4 Commonly Known or Reasonable Ascertainable Information

No information was provided by the Client regarding any commonly known or reasonably ascertainable information within the local community that is material to RECs in connection with the subject property.

3.5 Valuation Reduction for Environmental Issues

The client indicated that the purchase price of this property reasonably reflects the fair market value of the property with no discounts for environmental issues.

3.6 Owner, Property Manager, and Occupant Information

The current owner of the subject property is Harris Road, LLC.

3.7 Previous Reports and Other Provided Documentation

No previous reports or other pertinent documentation was provided to GS Lyon for review during the course of this assessment.

4.0 RECORDS REVIEW

A review of historic aerial photographs (Appendix C), historic topographic maps (Appendix D), historic Sanborn Fire Insurance maps (Appendix E), governmental regulatory databases (Appendix F), other regulatory and agency databases (Appendix G), and historic telephone and city directories (Appendix H) was performed to evaluate potentially adverse environmental conditions resulting from previous ownership and uses of the subject property. The details of the review are presented in Sections 4.1 through 4.5 of this report.

4.1 Regulatory Database Review

4.1.1 Standard Environmental Record Sources

GS Lyon Consultants contracted Environmental Data Resources, Inc. (EDR) of Shelton, Connecticut which queries and maintains comprehensive environmental databases and historical information, including proprietary databases, aerial photography, topographic maps, Sanborn Maps, and city directories to generate a compilation of Federal, State and Tribal regulatory lists containing information regarding hazardous materials occurrences on or within the prescribed radii of ASTM E1527-13. The search of each database was conducted using the approximate minimum search distances from the subject property defined by the ASTM E1527-13 Standard. The purpose of the records review is to obtain and review *reasonably ascertainable* records that will help identify *recognized environmental conditions* or *historical recognized environmental conditions* in connection with the subject property.

EDR‘s Phase I ESA search package was ordered and performed on April 29, 2021. The search package included: Radius Map with Geocheck, aerial photographs, historic topographic maps, Sanborn maps, building permits, city directory, and property tax information.

The results of EDR’s search were used to evaluate if the subject property and/or properties within prescribed search distances are listed as having a past or present record of actual or potential environmental impact. Inclusion of a property in a government database list does not necessarily indicate that the property has an environmental problem.

The following is a brief synopsis of sites identified in the EDR Radius Map with Geocheck report. The government record search report is included in its entirety in Appendix F.

Federal NPL List

The Environmental Protection Agency's (EPA) National Priorities List (NPL) of uncontrolled or abandoned hazardous waste sites was reviewed for risk sites within a 1 mile radius of the subject property. The NPL identifies sites for priority cleanup and long-term care of properties under the Superfund Program that are contaminated with hazardous substances.

The database search did not identify any NPL sites within 1 mile of the subject property.

Federal CERCLIS List

The EPA's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) listings were reviewed to determine if risks sites within ½ mile are listed for investigation. The CERCLIS database identifies hazardous waste sites that are on or proposed to be included in the NPL and sites that require investigation and possible remedial action to mitigate potential negative impacts on human health or the environment.

The CERCLIS database search did not identify any risk sites within 0.5 mile of the subject property.

Federal CERCLIS – No Further Remedial Action Planned

The EPA's CERCLIS – No Further Remedial Action Planned (NFRAP) database was reviewed to determine if risks sites within ½ mile are listed. CERCLIS NFRAP site are risk sites that have been removed from and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at the subject property has been completed and the EPA has determined that no further steps will be taken to list this subject property on the NPL, unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time.

This designation is for sites where no contamination was found, contamination was quickly removed without the need for the subject property to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration.

The CERCLIS – NFRAP database search did not identify any risk sites within ½mile of the subject property.

Federal RCRA List

The Federal Resource Conservation Recovery Act (RCRA) Notifiers List was reviewed to determine if RCRA treatment, storage or disposal sites (TSD) are located within 1 mile of the subject property. The RCRA Correction Action Sites List (CORRACTS) is maintained for risk sites which are undergoing "a corrective action". A corrective action order is issued when there has been a release of hazardous waste constituents into the environment from a RCRA facility.

The RCRA and RCRA CORRACTS database searches did not identify any RCRA TSD or RCRA CORRACTS risk sites within ½ mile of the subject property.

The RCRA regulated hazardous waste generator notifiers list was reviewed to determine if RCRA generator facilities are located on or adjoining the subject property. No RCRA generator facilities within ¼ mile of the subject property were identified in the database.

Federal ERNS List

The Federal Emergency Response Notification System (ERNS) List was reviewed to determine if reported release of oil and/or hazardous substances occurred on the subject property.

The ERNS database searches did not identify any reported releases for the subject property.

State and Tribal NPL List

The Environmental Protection Agency's (EPA) National Priorities List (NPL) of uncontrolled or abandoned hazardous waste sites was reviewed for risk sites within a 1 mile radius of the subject property. The NPL identifies sites for priority cleanup and long-term care of properties under the Superfund Program that are contaminated with hazardous substances.

The database search did not identify any NPL sites within 1 mile of the subject property.

State and Tribal equivalent CERCLIS

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites.

EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

The EnviroStor database search did not identify any reported releases for the subject property.

State and Tribal Leaking Underground Storage Tank Sites

The California State Water Resources Control Board (SWRCB) maintains a list of information concerning reported leaking underground storage tanks (LUST). The LUST inventory list was reviewed to determine if any LUSTs are located within ½ mile the subject property.

The SWRCB LUST database did not identify any risk sites within ½ mile of the subject property.

State and Tribal Underground and Aboveground Storage Tank Sites

The California State Water Resource Control Board (SWRCB) underground storage tank (UST) and above ground storage tank (AST) inventory list was reviewed to determine if any UAST's are located on or adjacent to the subject property.

The SWRCB UST and AST databases did not identify any risk sites within ¼ mile of the subject property.

Solid Waste Disposal/Landfill Facilities

The Solid Waste Disposal/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data comes from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database.

A review of the SWF/LF list database identified one (1) risk site within ½ mile of the subject property. The listed risk site is the Harris Road MRF and Transfer Station. The Harris Road MRF and Transfer Station is also listed in the Recovered Government Archive Solid Waste Facilities (RGA LF) and CalEPA Regulated Site (CERS) databases. This facility was planned for the subject property, but was never constructed; therefore, this listed risk site does not pose an environmental risk to the subject property.

Unmapped (Orphan) Sites

Not all sites or facilities identified in the database records can be accurately located in relation to the Subject Property due to incomplete information being supplied to the regulatory agencies and are referred to as "orphan sites" by EDR. The "Orphan Summary" section of the EDR Radius Map Report identified several orphan sites. Based on a drive-by reconnaissance of the Subject Property vicinity and review of location and status information provided in the database report, none of the identified orphan sites are located within the search radii for databases specified by the Standard.

No unmapped (orphan) listings were reported.

4.1.2 Additional Environmental Record Sources

California Department of Toxic Substances Control (DTSC) Records – Envirostor Database: EnviroStor is an online search and Geographic Information System tool for identifying sites that have known contamination or sites for which there may be reasons to investigate further. Public Access to EnviroStor is accessible via the DTSC Web Page located at: http://www.envirostor.dtsc.ca.gov/public/. The EnviroStor database includes the following site types: Federal Superfund sites (National Priority List); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. The information includes site name, site type, status, address, any restricted use (recorded deed restrictions), past use(s) that caused contamination, potential contaminants of concern, potential environmental media affected, site history, planned and completed activities. The EnviroStor database also contains current and historical information relating to Permitted and Corrective Action facilities. The EnviroStor database includes current and historical information on the following permit-related documents: facility permits; permit renewal applications; permit modifications to an existing permit; closure of hazardous waste management units (HWMUs) or entire facilities; facility corrective action (investigation and/or cleanup); and/or post-closure permits or other required post-closure activities.

The EnviroStor database was queried on May 12, 2021. A map showing the results of the query is provided in Appendix G. No reported cases were found on the subject property. No risk sites were located within 1 mile of the subject property.

California State Water Resources Control Board Records – GeoTracker Database: GeoTracker is a geographic information system (GIS) maintained by the California State Water Resources Control Board (SWRCB) that provides online access to environmental data at http://www.geotracker.swrcb.ca.gov\. GeoTracker tracks regulatory data about underground fuel tanks, fuel pipelines, and public drinking water supplies.

Site information from the Spills, Leaks, Investigations, and Cleanups (SLIC) Program is also included in GeoTracker.

The GeoTracker database was queried for environmental data pertaining to the Subject property on May 12, 2021. A map showing the results of the query is provided in Appendix G. No reported cases were found on the subject property. No risk sites were located within1 mile of the subject property.

CalEPA Records Search: CalEPA Regulated Site Portal is a website that combines data about environmentally regulated sites and facilities in California into a single, searchable database and interactive map. The portal was created to provide a more holistic view of regulated activities statewide. By combining data from a variety of state and federal databases, the portal provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials. The portal combines information from the following databases: Cal/OSHA, California Environmental Reporting System (CERS), California Integrated Water Quality System (CIWQS), US EPA's Air Emission Inventory System (EIS), Envirostor, Geotracker, Stormwater Multiple Application and Report Tracking System (SMARTS), Solid Waste Information System (SWIS), and Toxics Release Inventory (TRI).

The CalEPA database was queried for environmental data pertaining to the subject property on May 12, 2021. One risk site was found on the subject property. One (1) risk site is listed for adjacent properties. A map showing the results of the query and the CalEPA information for these two risk sites are provided in Appendix G.

The listed risk site at the subject property is the Harris Road MRF and Transfer Station. This facility was planned for the subject property, but was never constructed; therefore, this listed risk site does not pose an environmental risk to the subject property. The other listed risk site is the Mesquite Lake Water and Power Plant I located at 3505 Highway 111 which is located approximately 1 mile north of the subject property; therefore, this risk site poses a low environmental risk to the subject property.

CUPA Records Search: The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency response programs. Cal/EPA and other state agencies set the standards for their programs while local governments implement the standards—these local implementing agencies are called Certified Unified Program Agencies (CUPA).

The DTSC Imperial CUPA office was contacted (Veronica Lopez) by email on May 12, 2021. CUPA records were searched for environmental issues related to the subject property. The DTSC indicated that no records were found associated with the subject property.

4.2 Historical Use Records

ASTM E1527-13 requires the environmental professional to identify all obvious uses of the property from the present back to the property's first developed use or 1940, whichever is earliest. This information is collected to identify the likelihood that past uses have led to RECs in connection with the property. This task is accomplished by reviewing standard historical sources to the extent that they are necessary, reasonably ascertainable, and likely to be useful. These standard records include aerial photographs, fire insurance maps, property tax files, land title records, topographic maps, city directories, telephone directories, building department records, and zoning/land use records.

The general type of historical use (i.e., commercial, retail, residential, industrial, undeveloped, office) should be identified at 5-year intervals, unless the specific use of the property appears to be unchanged over a period longer than 5 years. The historical research is complete when the use is defined or when data failure occurs. Data failure occurs when all of the standard historical sources have been reviewed, yet the property use cannot be identified back to its first developed use or to 1940. Data failure is not uncommon in trying to identify the use of the property at 5-year intervals back to first use or 1940, whichever is earlier.

GS Lyon reviewed the following historical records to identify obvious uses of the subject property from the present back to the property's first developed use, or to 1940, whichever is earlier. The results of this research and data failure, if encountered, are presented in the following sections.

4.2.1 Title Records

GS Lyon reviewed preliminary title reports as part of this assessment and did not find past ownership or easements that would indicate environmentally hazardous uses on the parcels.

4.2.2 Sanborn Fire Insurance Maps

Sanborn Fire Insurance Maps are large scale maps depicting the commercial, industrial, and residential sections of various cities across the United States. Since the primary use of the fire insurance maps was to assess the buildings that were being insured, the existence and location of fuel storage tanks, flammable or other potentially toxic substances, and the nature of businesses are often shown on these maps.

Due to the rural undeveloped nature of the subject property and vicinity for the years the Sanborn Fire Insurance Maps were available for this subject property, no maps are available for the subject property. An "Unmapped Property" letter for the Sanborn Fire Insurance Maps is included in Appendix E.

4.2.3 Aerial Photographs

Aerial photographs obtained from Environmental Data Resources (EDR) dating back to 1937, the Imperial Irrigation District (IID) archives dating back to 1949, and Google Earth aerial photographs dating back to 1996 were reviewed for historical development of the subject property. Reproductions of the historical aerial photographs reviewed are included in Appendix C.

The 1937 aerial photograph shows the subject property as being an agricultural field. Adjacent properties are also agricultural fields. A rural farm house and farm shop is located east of the subject property across Hwy 111.

The 1949 aerial photograph shows the subject site as being an agricultural field. The concrete lined basin in the northeast corner of the subject site is visible

The 1953, 1976, 1984, and 1996 aerial photographs show the subject site as being similar to the 1949 aerial photograph. The duck ponds to the north appear in the 1976 photograph.

The 2002 aerial photograph shows the subject site as being an agricultural field. Hwy 111 has been expanded into a four-lane divided highway and the rural farm house and shop to the east of Hwy 111 has been removed. The fish farm to the west has been constructed.

The 2006, 2009, 2012, and 2016 aerial photographs show the subject site as being similar to the 2002 aerial photograph.

4.2.4 Street Directories

GS Lyon Consultants contracted Environmental Data Resources, Inc. (EDR) of Shelton, Connecticut to conduct a search of historic city directories for the subject property (Appendix H). City directories are used for locating individuals and businesses in a particular urban or suburban area. City directories are generally divided into three sections: a business index, a list of resident names and addresses, the name and type of businesses (if unclear from the name). While city directory coverage is comprehensive for major cities, it may be spotty for rural and small towns.

EDR Digital Archives: The EDR Digital Archives City Directories for the years 1992, 1995, 2000, 2005, 2010, 2014 and 2017 were reviewed. No listing for the subject property or adjacent properties were found.

Polk City Directories: The Polk City Directories for the years 1959, 1963, 1967, 1972, 1977, 1982, and 1987 were reviewed. No listing for the subject property or adjacent properties were found.

4.2.5 Historic Topographic Maps

Historic topographic maps (1940, 1947, 1957, 1976, 1979, and 2012), USGS 7.5 Min. Brawley, CA Quadrangle, showed the subject property as being vacant and undeveloped (Appendix D).

4.2.6 Historical Telephone Directories

Telephone directories for the Imperial County, which included the City of Imperial businesses published in 1941, 1955, 1965, 1974, and 1994 were reviewed. No service stations, chemical manufacturers, petroleum manufacturers, distributors, or automotive repair facilities were noted at or in the immediate vicinity of the subject property.

4.2.7 Building Department Records

Imperial County Building Department records were searched on April 29, 2021. No records were found for the subject property.

4.3 Historical Use Summary

4.3.1 Summary of the Historical Use of Property

Based on a review of the historical information, the subject property was first developed prior to the 1930s for agricultural use.

4.3.2 Summary of the Historical Use of Adjacent Properties

Historically, the properties located immediately adjacent to the subject property have been comprised of agricultural fields. Fish farms were developed to the west of the subject site around 2000.

5.0 SITE RECONNAISSANCE

5.1 Methodology and Limiting Conditions

A site reconnaissance was performed by Mr. Steven Williams, a consulting geologist to GS Lyon Consultants, on May 12, 2021. The site visit consisted of a walking the perimeter of the subject property and randomly crossing the subject property. The reconnaissance included visual observations of surficial conditions at the subject property and observation of adjoining properties to the extent that they were visible from public areas. Mr. Williams was unaccompanied during the site reconnaissance.

The site reconnaissance was limited to visual and/or physical observation of the exterior and interior of the subject property and its improvements, the current uses of the property and adjoining properties, and the current condition of the property. The site visit evaluated the subject property and adjoining properties for potential hazardous materials/waste and petroleum product use, storage, disposal, or accidental release, including the following: presence of tank and drum storage; mechanical or electrical equipment likely to contain liquids; evidence of soil or pavement staining or stressed vegetation; ponds, pits, lagoons, or sumps; suspicious odors; fill and depressions; or any other condition indicative of potential contamination. The site visit did not evaluate the presence of asbestos-containing materials, radon, lead-based paint, mold, indoor air quality, or structural defects, or other non-scope items.

A site reconnaissance can be limited by weather conditions, bodies of water, adjacent buildings, or other obstacles. The weather was warm and sunny and no access limitations were placed on the site visit.

5.2 General Site Setting

The subject property currently consists of an agricultural field currently under alfalfa crop. The subject property is rectangular in plan view, elongate in the east-west direction. The subject site is bounded on the south by Harris Road and the east by Old Hwy 111. The Rose Drain forms the western property boundary.

The northeast corner is currently not a part of the agricultural field. This area is used as a hay bale storage area and is overgrown with brush. Several debris piles (concrete, household debris, plastics, etc.) were noted in this area. A concrete lined basin is also located in this area.

Photographs of the subject property taken on May 12, 2021 during our site reconnaissance are included in Appendix A.

5.3 Adjacent Properties

The subject property is located within an agricultural area northeast of Imperial, California. Adjacent properties consist of agricultural fields to the south. Fish farms are located to the west. Dry duck ponds are located to the north. Highway 111, a 4-lane divided highway, is located to the east with agricultural fields further to the east.

5.4 Exterior and Interior Observations

The following conditions were specifically assessed for their potential to indicate RECs and may include conditions inside or outside structures on the subject property.

5.4.1 Hazardous Substances and Petroleum Products

GS Lyon did not observe operations that use, treat, store, dispose of, or generate hazardous materials or petroleum products on the subject property.

5.4.2 Storage Tanks

Underground Storage Tanks (USTs) – No obvious visual evidence indicating the current presence of USTs (i.e. vent pipes, fill ports, etc.) was noted.

Aboveground Storage Tanks (ASTs) – No obvious visual evidence indicating the historical presence of ASTs (i.e. secondary containments, concrete saddles, etc.) was observed.

5.4.3 Odors

No obvious strong, pungent, or noxious odors were noted during the site reconnaissance.

5.4.4 Pools of Liquid

Pools of liquid were not observed during the site reconnaissance.

5.4.5 Drums and Containers

GS Lyon did not observe drums or storage containers on the subject property.

5.4.6 Unidentified Substance Containers

GS Lyon did not observe open or damaged containers containing unidentified substances at the subject property.

5.4.7 Suspect Polychlorinated Biphenyl (PCB) Containing Equipment

No potential PCB containing equipment such as electrical transformers, capacitors, and hydraulic equipment were observed during the site reconnaissance on the subject property or immediate vicinity.

5.5 Interior Observations

The subject property is currently vacant with no structures; therefore, no interior observations were made.

5.6 Exterior Observations

5.6.1 Pits, Ponds, and Lagoons

No pits, ponds, or lagoons were noted on the subject property other than a dry concrete lined basin in the northeast corner of the subject property.

5.6.2 Stained Soils or Pavement

No evidence of significantly stained soil or pavement was noted on the subject property.

5.6.3 Stressed Vegetation

No evidence of stressed vegetation attributed to potential contamination was noted on the subject property.

5.6.4 Solid Waste

No dumpsters or solid waste containers exist on the subject property. There were several debris piles (concrete, household debris, plastics, etc.) were noted in this area.

5.6.5 Wastewater

Wastewater is not generated on the subject site other than irrigation tail water that is piped to the Rose Drain.

5.6.6 Wells

No evidence of wells (dry wells, drinking water, observation wells, groundwater monitoring wells, irrigation wells, injection wells or abandoned wells) was noted on the subject property.

5.6.7 Septic Systems

No septic systems are present on the subject property.

5.7 Non-Scope Issues

ASTM guidelines identify non-scope issues, which are beyond the scope of a Phase I ESA as defined by ASTM. These issues may affect environmental risk at the subject property and may warrant discussion and/or assessment. Some of these non-scope issues include; asbestos-containing building materials, radon, lead-based paint, and wetlands which are discussed below.

5.7.1 Asbestos-Containing Building Materials

The potential for asbestos containing materials (ACM) existing at the subject property is very low due to the lack of subject property structures. A concrete lined basin and several piles of concrete debris are located in the northeast portion of the subject property. There is a slight potential that the concrete may contain asbestos.

5.7.2 Lead-Based Paint

The potential or lead based paint residues existing at the subject property is very low due to the lack of subject property development.

5.7.3 Radon

The subject property is located in Zone 3 as shown on the EPA Map of Radon Zones indicating a predicted average indoor radon screening level of less than 2 pCi/L; therefore, no further action is required. Radon gas is not believed to be a potential hazard at the subject property.

5.7.4 Wetlands

Wetlands are located to the west within one (1) mile of the subject property.

5.7.5 Agricultural Use

Based on our review of environmental records, historical documents, and subject property conditions, the property has been in agricultural use and/or vacant since the late 1940's. Residues of currently available pesticides and currently banned pesticides such as DDT/DDE may be present in near surface soils in limited concentrations. The concentrations of these pesticides found on other Imperial Valley agricultural sites are typically less than 25% of the current regulatory threshold limits and, at those levels, are not considered a significant environmental hazard. The presence and concentration of near surface pesticides at this subject property can be accurately characterized only by site-specific sampling and testing.

6.0 INTERVIEWS

GS Lyon interviewed various individuals familiar with the subject property, as identified to us, and/or government officials in order to evaluate historical uses and identify potential RECs existing on the subject property. The individuals interviewed were asked to provide responses in good faith and to the best of their knowledge. The following sections identify the individuals interviewed and summarize the information each provided; however, additional information provided by these individuals may be presented in other sections of this report.

6.1 Interview with Owner

Mr. Gordon Beers, General Manager for Harris Road, LLC which is the current property owner, provided information through an Environmental Questionnaire concerning her knowledge of the subject property. Mr. Beers indicated that he had no information pertaining to any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the subject property; any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the subject property; or any notices from a governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.

6.2 Interview with the Site Manager

The subject property is vacant, agricultural land; therefore, there is no site manager.

6.3 Interview with Occupants

The subject property is vacant, agricultural land; therefore, there are no occupants.

6.4 Interview with Local Government Officials

The DTSC Imperial CUPA office was contacted (Veronica Lopez) by email on February 21, 2020. CUPA records were searched for environmental issues related to the subject property. The DTSC indicated that no records were found associated with the subject property.

7.0 EVALUATION

7.1 Summary of Findings

The subject property is located in an area generally developed for agricultural use northeast of Imperial, California. The subject property has been developed as an agricultural field since at least the 1930s according to the historical information obtained and reviewed during this site assessment. The subject property is generally flat, with surface water drainage toward the northwest into the Rose Drain.

7.2 Conclusions

GS Lyon has performed a Phase I Environmental Site Assessment in general conformance with the scope and limitations of ASTM E1527-13 of the property located at the northwest corner of Harris Road and Hwy 111 northeast of Imperial, California. Any exceptions to, or deviations from, this practice are described in Section 1.4 of this Phase I ESA report.

7.2.1 Recognized Environmental Conditions

A *recognized environmental condition (REC)* refers to the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term REC includes hazardous substances and petroleum products even under conditions that might be in compliance with laws. The term is not intended to include "de minimis" conditions as defined in Section 7.2.3 of this report.

This Phase I ESA has revealed no evidence of *recognized environmental conditions* in connection with the subject property.

7.2.2 Historical Recognized Environmental Conditions

A *historical recognized environmental condition (HREC)* refers to a past *release* of any *hazardous substances* or *petroleum products* that has occurred in connection with the *property* and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the *property* to any required controls (for example, *property* use restrictions, *activity and use limitations*, *institutional controls*, or *engineering controls*).

This Phase I ESA has revealed no evidence of *historical recognized environmental conditions* in connection with the subject property.

7.2.3 Environmental Concerns and De Minimis Conditions

A *de minimis condition* is a condition that generally does not present a threat to human health or the *environment* and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis conditions* are not *recognized environmental conditions* nor *controlled recognized environmental conditions*.

This Phase I ESA has revealed the following *de minimis* conditions or environmental concerns in connection with the subject property:

1. Pesticide residues (low concentrations) typical to agricultural crop applications may be present in the near surface soils.
2. A concrete lined basin and several piles of concrete debris are located in the northeast portion of the subject property. There is a slight potential that the concrete may contain asbestos.

7.3 Recommendations

Based on the scope of work performed for this assessment, it is our professional opinion that no RECs have been identified in connection with the subject property that would warrant further environmental study; however, the subject property has been in agricultural use since the 1930's and residues of currently available pesticides and currently banned pesticides such as DDT/DDE may be present in near surface soils in limited concentrations. A concrete lined basin and several piles of concrete debris are located in the northeast portion of the subject property that may contain asbestos.

In order to accurately determine the presence and concentration or absence of near surface pesticides in the site soils and asbestos content in the concrete lined basin and concrete debris at this subject property, a Phase II ESA should be conducted.

8.0 REFERENCES

40 CFR 312, Standards and Practices for All Appropriate Inquiries; Final Rule, November 2005 (AAI Rule).

American Society for Testing and Materials. 2013. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. Designation E 1527-13. West Conshohocken, Pennsylvania. 35 pp.

California Environmental Protection Agency (CalEPA). 2021. CalEPA Regulated Site Portal, https://siteportal.calepa.ca.gov/nsite/map/help accessed via the Internet, May 2021.

Department of Toxic Substances Control. 2021. EnviroStor Database Website, http://www.envirostor.dtsc.ca.gov/public/ accessed via the Internet, May 2021.

Environmental Data Resources, Inc., *The EDR Radius Map with Geocheck*. Inquiry number 6471270, dated April 29, 2021

Environmental Data Resources, Inc., *The EDR-City Directory Abstract*. Inquiry number 6471270, dated April 29, 2021

Environmental Data Resources, Inc., *EDR Historical Topographic Map Report*. Inquiry number 6471270, dated April 29, 2021

Environmental Data Resources, Inc., *The EDR Aerial Photo Decade Package*. Inquiry number 6471270, dated April 29, 2021

Environmental Data Resources, Inc., *Sanborn Map Report*. Inquiry number 6471270, dated April 29, 2021

Environmental Data Resources, Inc., *The EDR Property Tax Map Report*. Inquiry number 6471270, dated April 29, 2021

State Water Resources Control Board. 2021. GeoTracker Database Website, http://geotracker.swrcb.ca.gov/ accessed via the Internet, may 2021

United States Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey, accessed via the Internet, May 2021

United States Environmental Protection Agency, EPA Map of Radon Zones (Document EPA-402-R-93-071), accessed via the Internet, May 2021

United States Geological Survey Topographic Map 1997, 7.5 minute series

APPENDIX A

Photo 1: Looking west along the southern boundary of the subject site.

Photo 2: Looking northwest across the subject site from the southeast corner. Subject site is currently under cultivation of alfalfa.

Photo 3: Looking north from the southeast corner of the subject site.

Photo 4: Alfalfa bale storage area in the northeast corner of the subject site.

Photo 5: Concrete debris in the northeast corner of the subject site.

Photo 6: Waste piles in the northeast corner of the subject site.

Photo 7: Pile of waste dumped in the northeast corner of the subject site.

Photo 8: Debris and concrete lined basin in the northeast corner of the subject site.

Photo 9: Close-up view of concrete lined basin in the northeast corner of the subject site.

Photo 10: Looking east along the northern property boundary.

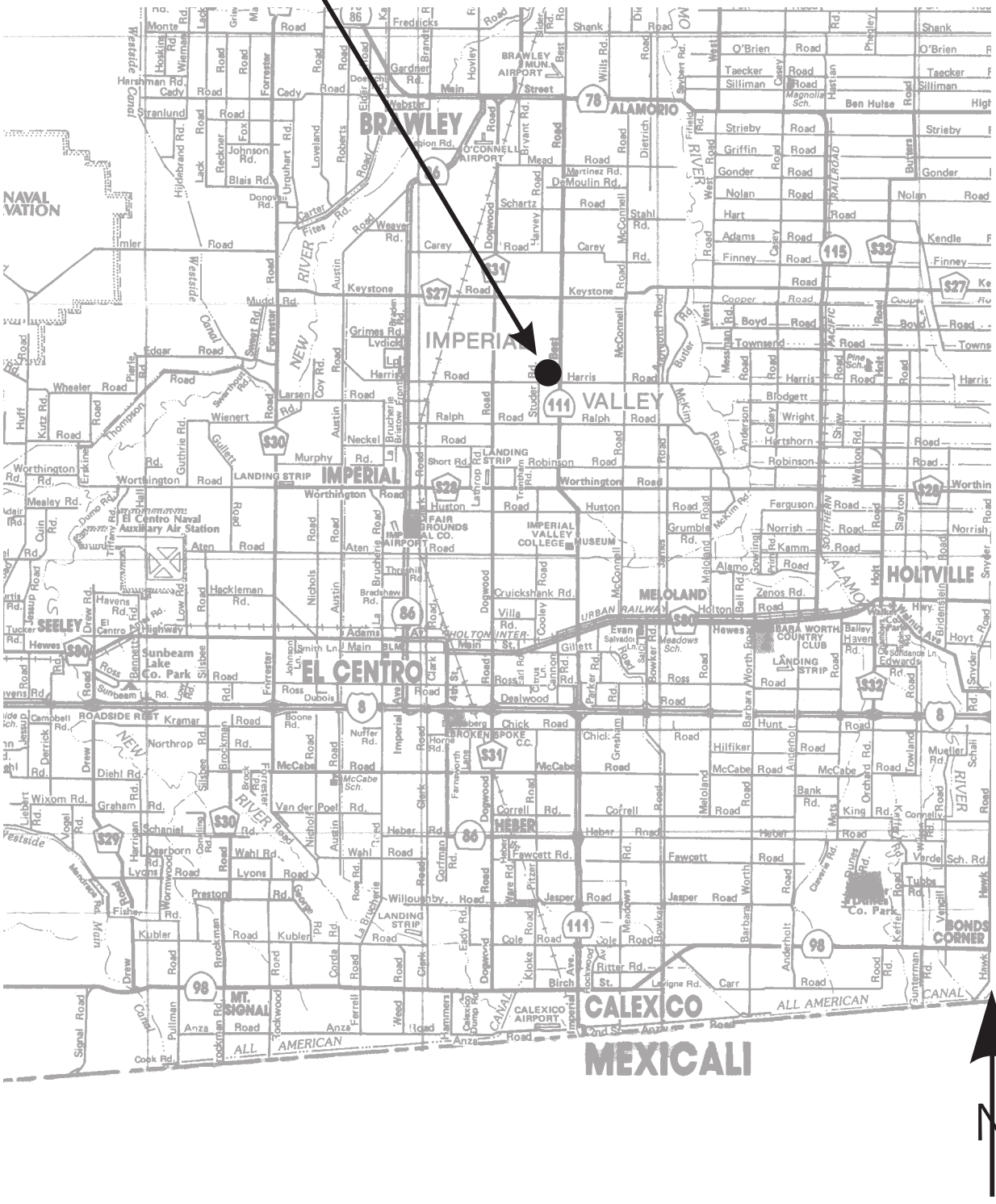
Photo 11: Looking southeast across the site from the northeast corner of the subject site.

Photo 12: Looking south along the western boundary of the subject site. The Rose Drain forms the western boundary of the site.

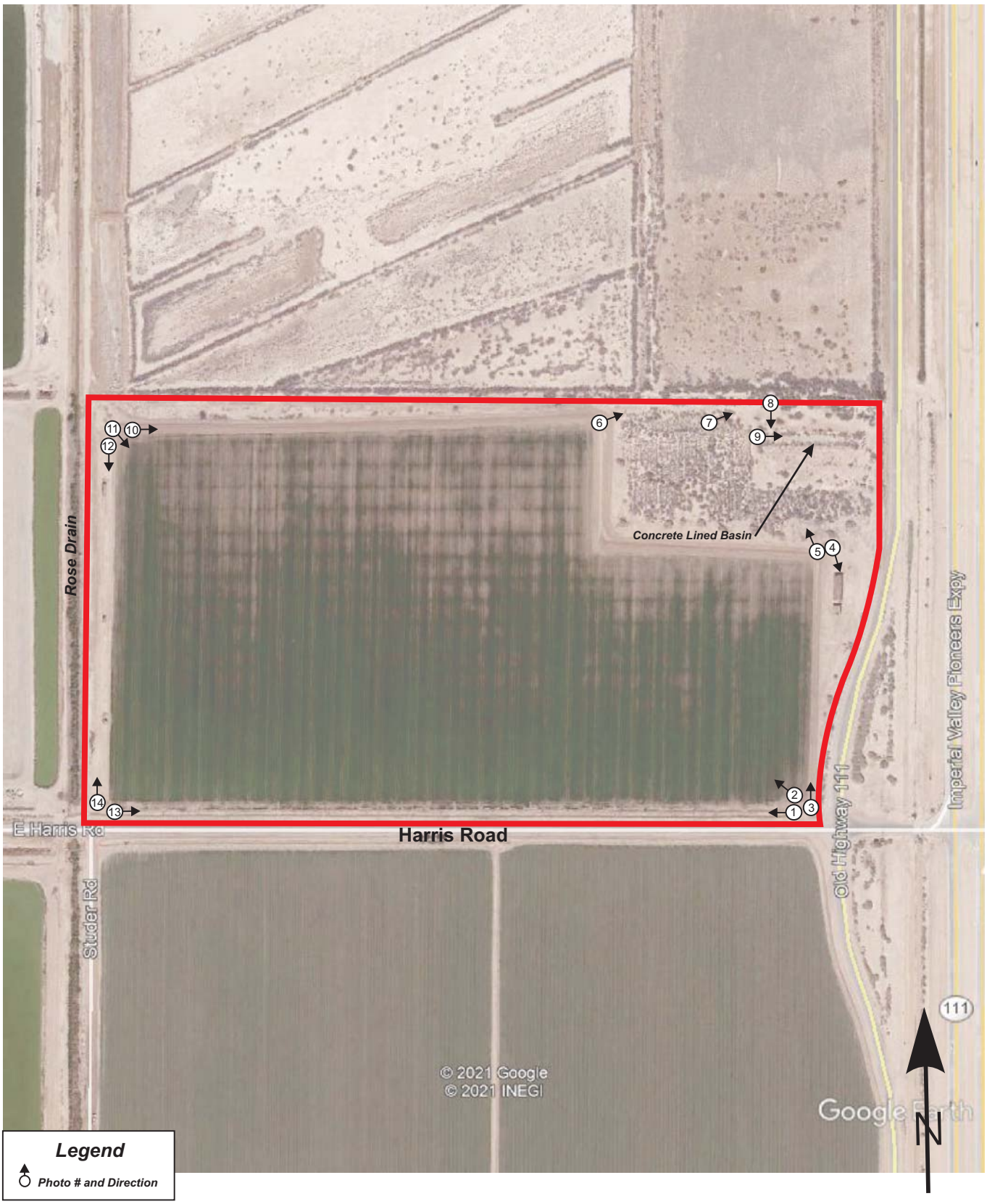
Photo 13: Looking east along Harris Road from the southwest corner of the subject site.

Photo 14: Looking north from the southwest corner of the subject site.

APPENDIX B



GS Lyon Project No.: GS2110	Vicinity Map	Plate 1



GS Lyon

Project No.: GS2110

Site Map

Plate 2

GS Lyon

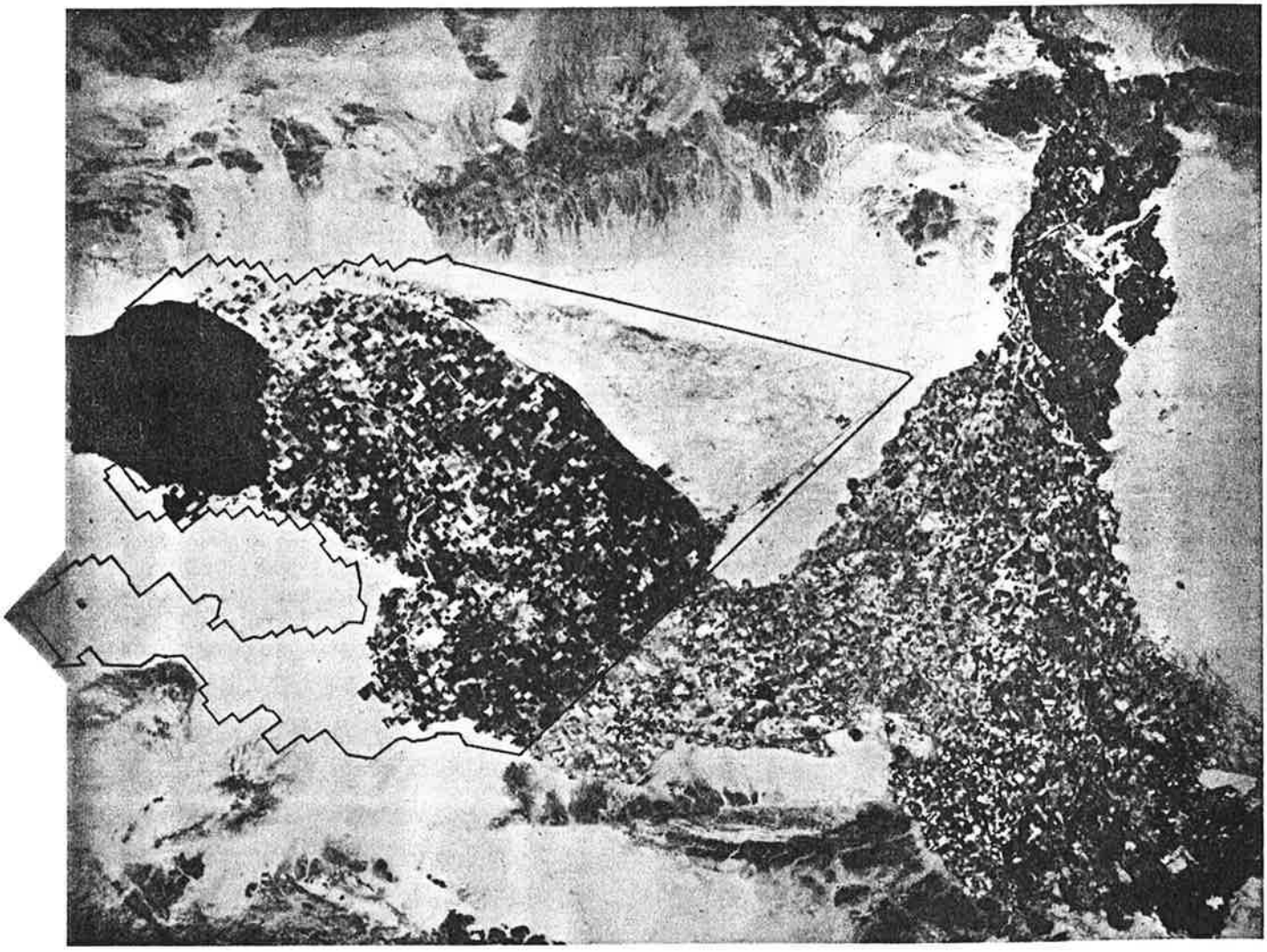
Project No.: GS2110

Soil Survey Map

Plate 3

Soil Survey of

IMPERIAL COUNTY CALIFORNIA IMPERIAL VALLEY AREA



United States Department of Agriculture Soil Conservation Service
in cooperation with
University of California Agricultural Experiment Station
and
Imperial Irrigation District

TABLE 11.--ENGINEERING INDEX PROPERTIES

[The symbol > means more than. Absence of an entry indicates that data were not estimated]

Soil name and map symbol	Depth	USDA texture	Classification		Fragments > 3 inches	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
100---------- Antho	0-13	Loamy fine sand	SM	A-2	0	100	100	75-85	10-30	---	NP
	13-60	Sandy loam, fine sandy loam.	SM	A-2, A-4	0	90-100	75-95	50-60	15-40	---	NP
101*:											
Antho----------	0-8	Loamy fine sand	SM	A-2	0	100	100	75-85	10-30	---	NP
	8-60	Sandy loam, fine sandy loam.	SM	A-2, A-4	0	90-100	75-95	50-60	15-40	---	NP
Superstition------	0-6	Fine sand-------	SM	A-2	0	100	95-100	70-85	15-25	---	NP
	6-60	Loamy fine sand, fine sand, sand.	SM	A-2	0	100	95-100	70-85	15-25	---	NP
102*. Badland											
103---------- Carsitas	0-10	Gravelly sand---	SP, SP-SM	A-1, A-2	0-5	60-90	50-85	30-55	0-10	---	NP
	10-60	Gravelly sand, gravelly coarse sand, sand.	SP, SP-SM	A-1	0-5	60-90	50-85	25-50	0-10	---	NP
104* Fluvaquents											
105---------- Glenbar	0-13	Clay loam-------	CL	A-6	0	100	100	90-100	70-95	35-45	15-30
	13-60	Clay loam, silty clay loam.	CL	A-6	0	100	100	90-100	70-95	35-45	15-30
106---------- Glenbar	0-13	Clay loam-------	CL	A-6, A-7	0	100	100	90-100	70-95	35-45	15-25
	13-60	Clay loam, silty clay loam.	CL	A-6, A-7	0	100	100	90-100	70-95	35-45	15-25
107*---------- Glenbar	0-13	Loam----------	ML, CL-ML, CL	A-4	0	100	100	100	70-80	20-30	NP-10
	13-60	Clay loam, silty clay loam.	CL	A-6, A-7	0	100	100	95-100	75-95	35-45	15-30
108---------- Holtville	0-14	Loam----------	ML	A-4	0	100	100	85-100	55-95	25-35	NP-10
	14-22	Clay, silty clay	CL, CH	A-7	0	100	100	95-100	85-95	40-65	20-35
	22-60	Silt loam, very fine sandy loam.	ML	A-4	0	100	100	95-100	65-85	25-35	NP-10
109---------- Holtville	0-17	Silty clay------	CL, CH	A-7	0	100	100	95-100	85-95	40-65	20-35
	17-24	Clay, silty clay	CL, CH	A-7	0	100	100	95-100	85-95	40-65	20-35
	24-35	Silt loam, very fine sandy loam.	ML	A-4	0	100	100	95-100	65-85	25-35	NP-10
	35-60	Loamy very fine sand, loamy fine sand.	SM, ML	A-2, A-4	0	100	100	75-100	20-55	---	NP
110---------- Holtville	0-17	Silty clay------	CH, CL	A-7	0	100	100	95-100	85-95	40-65	20-35
	17-24	Clay, silty clay	CH, CL	A-7	0	100	100	95-100	85-95	40-65	20-35
	24-35	Silt loam, very fine sandy loam.	ML	A-4	0	100	100	95-100	55-85	25-35	NP-10
	35-60	Loamy very fine sand, loamy fine sand.	SM, ML	A-2, A-4	0	100	100	75-100	20-55	---	NP

See footnote at end of table.

TABLE 11.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 3 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
111*:											
Holtville	0-10	Silty clay loam	CL, CH	A-7	0	100	100	95-100	85-95	40-65	20-35
	10-22	Clay, silty clay	CL, CH	A-7	0	100	100	95-100	85-95	40-65	20-35
	22-60	Silt loam, very fine sandy loam.	ML	A-4	0	100	100	95-100	65-85	25-35	NP-10
Imperial	0-12	Silty clay loam	CL	A-7	0	100	100	100	85-95	40-50	10-20
	12-60	Silty clay loam, silty clay, clay.	CH	A-7	0	100	100	100	85-95	50-70	25-45
112	0-12	Silty clay	CH	A-7	0	100	100	100	85-95	50-70	25-45
Imperial	12-60	Silty clay loam, silty clay, clay.	CH	A-7	0	100	100	100	85-95	50-70	25-45
113	0-12	Silty clay	CH	A-7	0	100	100	100	85-95	50-70	25-45
Imperial	12-60	Silty clay, clay, silty clay loam.	CH	A-7	0	100	100	100	85-95	50-70	25-45
114	0-12	Silty clay	CH	A-7	0	100	100	100	85-95	50-70	25-45
Imperial	12-60	Silty clay loam, silty clay, clay.	CH	A-7	0	100	100	100	85-95	50-70	25-45
115*:											
Imperial	0-12	Silty clay loam	CL	A-7	0	100	100	100	85-95	40-50	10-20
	12-60	Silty clay loam, silty clay, clay.	CH	A-7	0	100	100	100	85-95	50-70	25-45
Glenbar	0-13	Silty clay loam	CL	A-6, A-7	0	100	100	90-100	70-95	35-45	15-25
	13-60	Clay loam, silty clay loam.	CL	A-6, A-7	0	100	100	90-100	70-95	35-45	15-25
116*:											
Imperial	0-13	Silty clay loam	CL	A-7	0	100	100	100	85-95	40-50	10-20
	13-60	Silty clay loam, silty clay, clay.	CH	A-7	0	100	100	100	85-95	50-70	25-45
Glenbar	0-13	Silty clay loam	CL	A-6, A-7	0	100	100	90-100	70-95	35-45	15-25
	13-60	Clay loam, silty clay loam.	CL	A-6	0	100	100	90-100	70-95	35-45	15-30
117, 118	0-12	Loam	ML	A-4	0	95-100	95-100	85-100	75-90	20-30	NP-5
Indio	12-72	Stratified loamy very fine sand to silt loam.	ML	A-4	0	95-100	95-100	85-100	75-90	20-30	NP-5
119*:											
Indio	0-12	Loam	ML	A-4	0	95-100	95-100	85-100	75-90	20-30	NP-5
	12-72	Stratified loamy very fine sand to silt loam.	ML	A-4	0	95-100	95-100	85-100	75-90	20-30	NP-5
Vint	0-10	Loamy fine sand	SM	A-2	0	95-100	95-100	70-80	25-35	---	NP
	10-60	Loamy sand, loamy fine sand.	SM	A-2	0	95-100	95-100	70-80	20-30	---	NP
120*	0-12	Loam	ML, CL-ML	A-4	0	100	95-100	75-85	55-65	20-30	NP-10
Laveen	12-60	Loam, very fine sandy loam.	ML, CL-ML	A-4	0	95-100	85-95	70-80	55-65	15-25	NP-10

See footnote at end of table.

TABLE 11.--ENGINEERING INDEX PROPERTIES--Continued

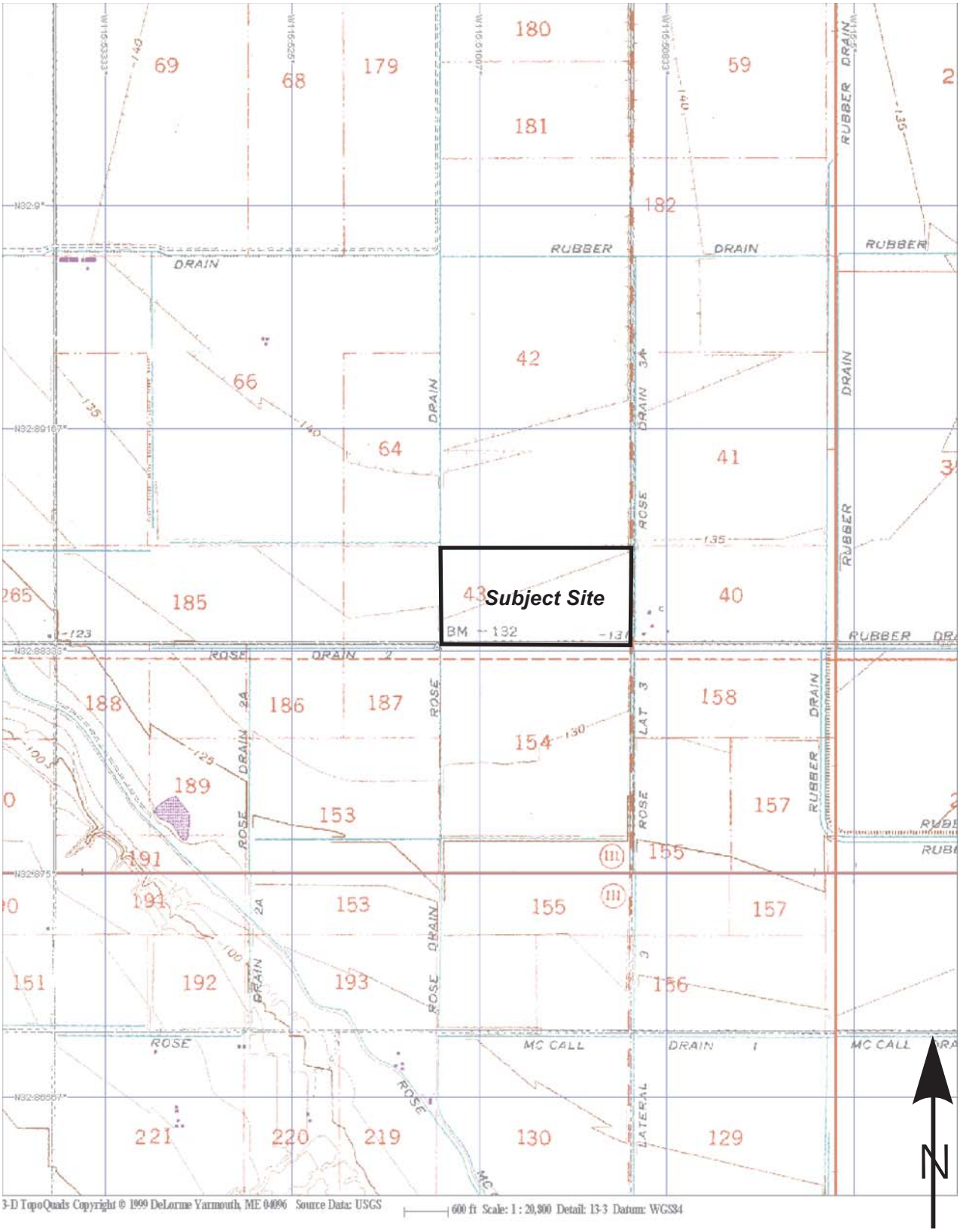
Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 3 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
121---------- Meloland	0-12	Fine sand-------	SM, SP-SM	A-2, A-3	0	95-100	90-100	75-100	5-30	---	NP
	12-26	Stratified loamy fine sand to silt loam.	ML	A-4	0	100	100	90-100	50-65	25-35	NP-10
	26-71	Clay, silty clay, silty clay loam.	CL, CH	A-7	0	100	100	95-100	85-95	40-65	20-40
122---------- Meloland	0-12	Very fine sandy loam.	ML	A-4	0	95-100	95-100	95-100	55-85	25-35	NP-10
	12-26	Stratified loamy fine sand to silt loam.	ML	A-4	0	100	100	90-100	50-70	25-35	NP-10
	26-71	Clay, silty clay, silty clay loam.	CH, CL	A-7	0	100	100	95-100	85-95	40-65	20-40
123*: Meloland----------	0-12	Loam----------	ML	A-4	0	95-100	95-100	95-100	55-85	25-35	NP-10
	12-26	Stratified loamy fine sand to silt loam.	ML	A-4	0	100	100	90-100	50-70	25-35	NP-10
	26-38	Clay, silty clay, silty clay loam.	CH, CL	A-7	0	100	100	95-100	85-95	40-65	20-40
	38-60	Stratified silt loam to loamy fine sand.	SM, ML	A-4	0	100	100	75-100	35-55	25-35	NP-10
Holtville---------	0-12	Loam----------	ML	A-4	0	100	100	85-100	55-95	25-35	NP-10
	12-24	Clay, silty clay	CH, CL	A-7	0	100	100	95-100	85-95	40-65	20-35
	24-36	Silt loam, very fine sandy loam.	ML	A-4	0	100	100	95-100	55-85	25-35	NP-10
	36-60	Loamy very fine sand, loamy fine sand.	SM, ML	A-2, A-4	0	100	100	75-100	20-55	---	NP
124, 125---------- Niland	0-23	Gravelly sand---	SM, SP-SM	A-2, A-3	0	90-100	70-95	50-65	5-25	---	NP
	23-60	Silty clay, clay, clay loam.	CL, CH	A-7	0	100	100	85-100	80-95	40-65	20-40
126---------- Niland	0-23	Fine sand-------	SM, SP-SM	A-2, A-3	0	90-100	90-100	50-65	5-25	---	NP
	23-60	Silty clay------	CL, CH	A-7	0	100	100	85-100	80-95	40-65	20-40
127---------- Niland	0-23	Loamy fine sand	SM	A-2	0	90-100	90-100	50-65	15-30	---	NP
	23-60	Silty clay------	CL, CH	A-7	0	100	100	85-100	80-95	40-65	20-40
128*: Niland----------	0-23	Gravelly sand---	SM, SP-SM	A-2, A-3	0	90-100	70-95	50-65	5-25	---	NP
	23-60	Silty clay, clay, clay loam.	CL, CH	A-7	0	100	100	85-100	80-100	40-65	20-40
Imperial----------	0-12	Silty clay------	CH	A-7	0	100	100	100	85-95	50-70	25-45
	12-60	Silty clay loam, silty clay, clay.	CH	A-7	0	100	100	100	85-95	50-70	25-45
129*: Pits											
130, 131---------- Rositas	0-27	Sand----------	SP-SM	A-3, A-1, A-2	0	100	80-100	40-70	5-15	---	NP
	27-60	Sand, fine sand, loamy sand.	SM, SP-SM	A-3, A-2, A-1	0	100	80-100	40-85	5-30	---	NP

See footnote at end of table.

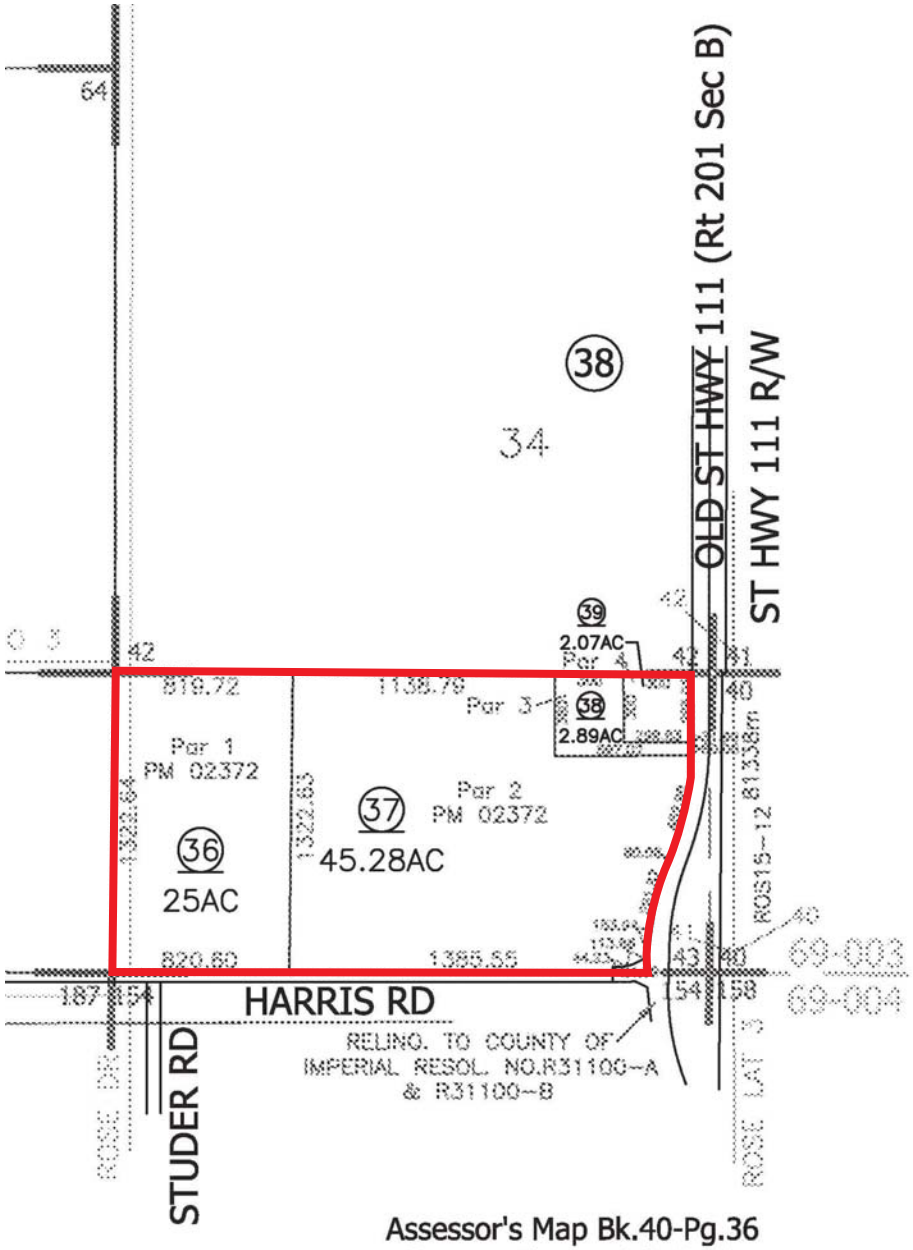
TABLE 11.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 3 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
132, 133, 134, 135-Rositas	0-9	Fine sand-------	SM	A-3, A-2	0	100	80-100	50-80	10-25	---	NP
	9-60	Sand, fine sand, loamy sand.	SM, SP-SM	A-3, A-2, A-1	0	100	80-100	40-85	5-30	---	NP
136----------	0-4	Loamy fine sand	SM	A-1, A-2	0	100	80-100	40-85	10-35	---	NP
Rositas	4-60	Sand, fine sand, loamy sand.	SM, SP-SM	A-3, A-2, A-1	0	100	80-100	40-85	5-30	---	NP
137----------	0-12	Silt loam-------	ML	A-4	0	100	100	90-100	70-90	20-30	NP-5
Rositas	12-60	Sand, fine sand, loamy sand.	SM, SP-SM	A-3, A-2, A-1	0	100	80-100	40-85	5-30	---	NP
138*:											
Rositas----------	0-4	Loamy fine sand	SM	A-1, A-2	0	100	80-100	40-85	10-35	---	NP
	4-60	Sand, fine sand, loamy sand.	SM, SP-SM	A-3, A-2, A-1	0	100	80-100	40-85	5-30	---	NP
Superstition------	0-6	Loamy fine sand	SM	A-2	0	100	95-100	70-85	15-25	---	NP
	6-60	Loamy fine sand, fine sand, sand.	SM	A-2	0	100	95-100	70-85	15-25	---	NP
139----------	0-6	Loamy fine sand	SM	A-2	0	100	95-100	70-85	15-25	---	NP
Superstition	6-60	Loamy fine sand, fine sand, sand.	SM	A-2	0	100	95-100	70-85	15-25	---	NP
140*:											
Torriorthents											
Rock outcrop											
141*:											
Torriorthents											
Orthids											
142----------	0-10	Loamy very fine sand.	SM, ML	A-4	0	100	100	85-95	40-65	15-25	NP-5
Vint	10-60	Loamy fine sand	SM	A-2	0	95-100	95-100	70-80	20-30	---	NP
143----------	0-12	Fine sandy loam	ML, CL-ML, SM, SM-SC	A-4	0	100	100	75-85	45-55	15-25	NP-5
Vint	12-60	Loamy sand, loamy fine sand.	SM	A-2	0	95-100	95-100	70-80	20-30	---	NP
144*:											
Vint----------	0-10	Very fine sandy loam.	SM, ML	A-4	0	100	100	85-95	40-65	15-25	NP-5
	10-40	Loamy fine sand	SM	A-2	0	95-100	95-100	70-80	20-30	---	NP
	40-60	Silty clay------	CL, CH	A-7	0	100	100	95-100	85-95	40-65	20-35
Indio----------	0-12	Very fine sandy loam.	ML	A-4	0	95-100	95-100	85-100	75-90	20-30	NP-5
	12-40	Stratified loamy very fine sand to silt loam.	ML	A-4	0	95-100	95-100	85-100	75-90	20-30	NP-5
	40-72	Silty clay------	CL, CH	A-7	0	100	100	95-100	85-95	40-65	20-35

* See description of the map unit for composition and behavior characteristics of the map unit.



GS Lyon Project No.: GS2110	Topographic Map	Plate 4



Assessor's Map Bk.40-Pg.36
County of Imperial, Calif.

N

GS Lyon Project No.: GS2110	Assessors Parcel Number Map	Plate 5

APPENDIX C

Harris Road Recycling Facility

NEC Harris Road and Hwy 111

Imperial, CA 92251

Inquiry Number: 6471270.11

April 29, 2021

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

04/29/21

Site Name:

Harris Road Recycling Facility
NEC Harris Road and Hwy 111
Imperial, CA 92251
EDR Inquiry # 6471270.11

Client Name:

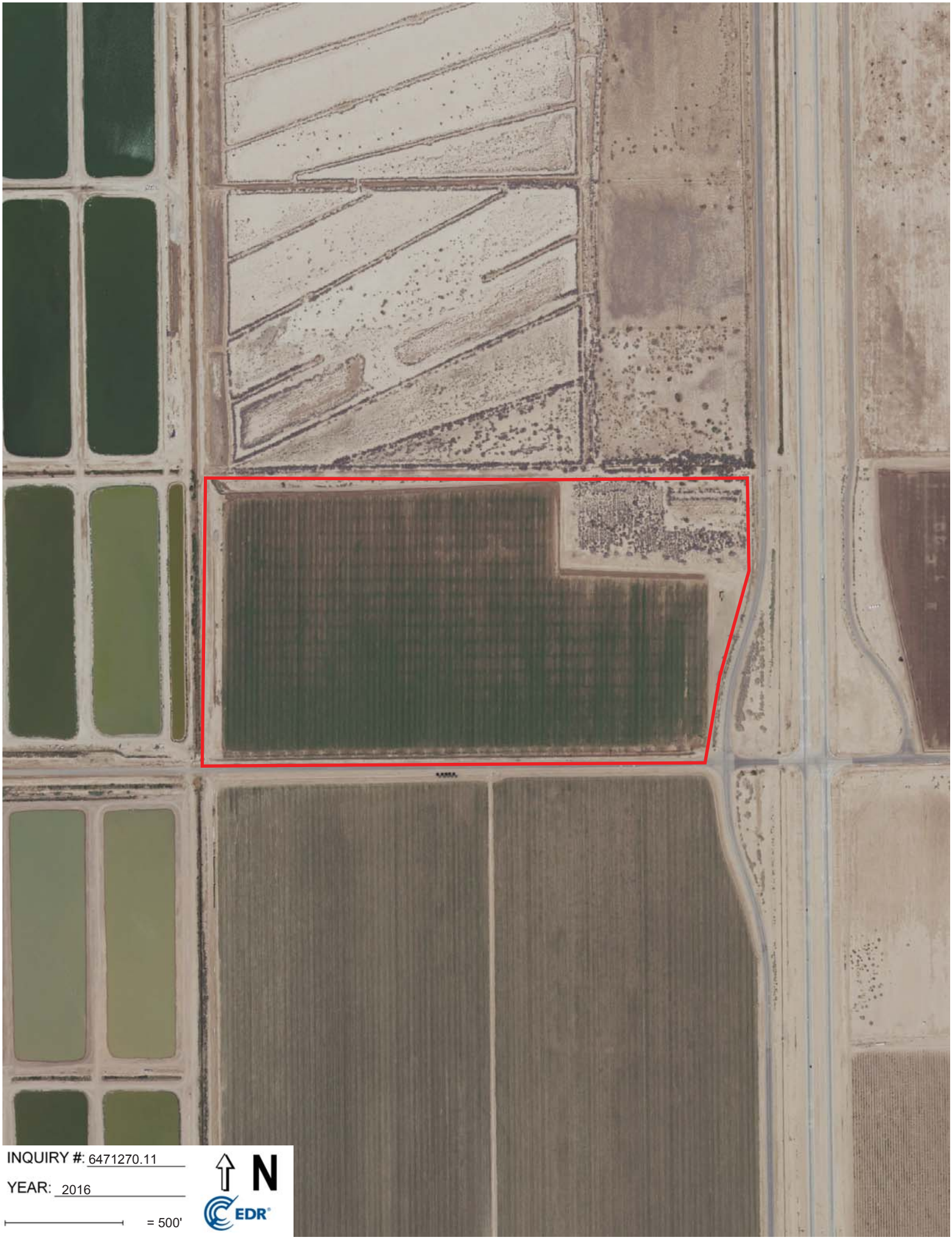
GS Lyon Consultants
780 N. Fourth Street
El Centro, CA 92243
Contact: Steven Williams

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
2002	1"=500'	Acquisition Date: January 01, 2002	USGS/DOQQ
1996	1"=500'	Acquisition Date: June 16, 1996	USGS/DOQQ
1984	1"=500'	Flight Date: August 23, 1984	USDA
1976	1"=500'	Flight Date: October 12, 1976	USGS
1953	1"=500'	Flight Date: April 10, 1953	USDA
1949	1"=500'	Flight Date: February 18, 1949	USDA
1937	1"=500'	Flight Date: November 21, 1937	USDA

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.



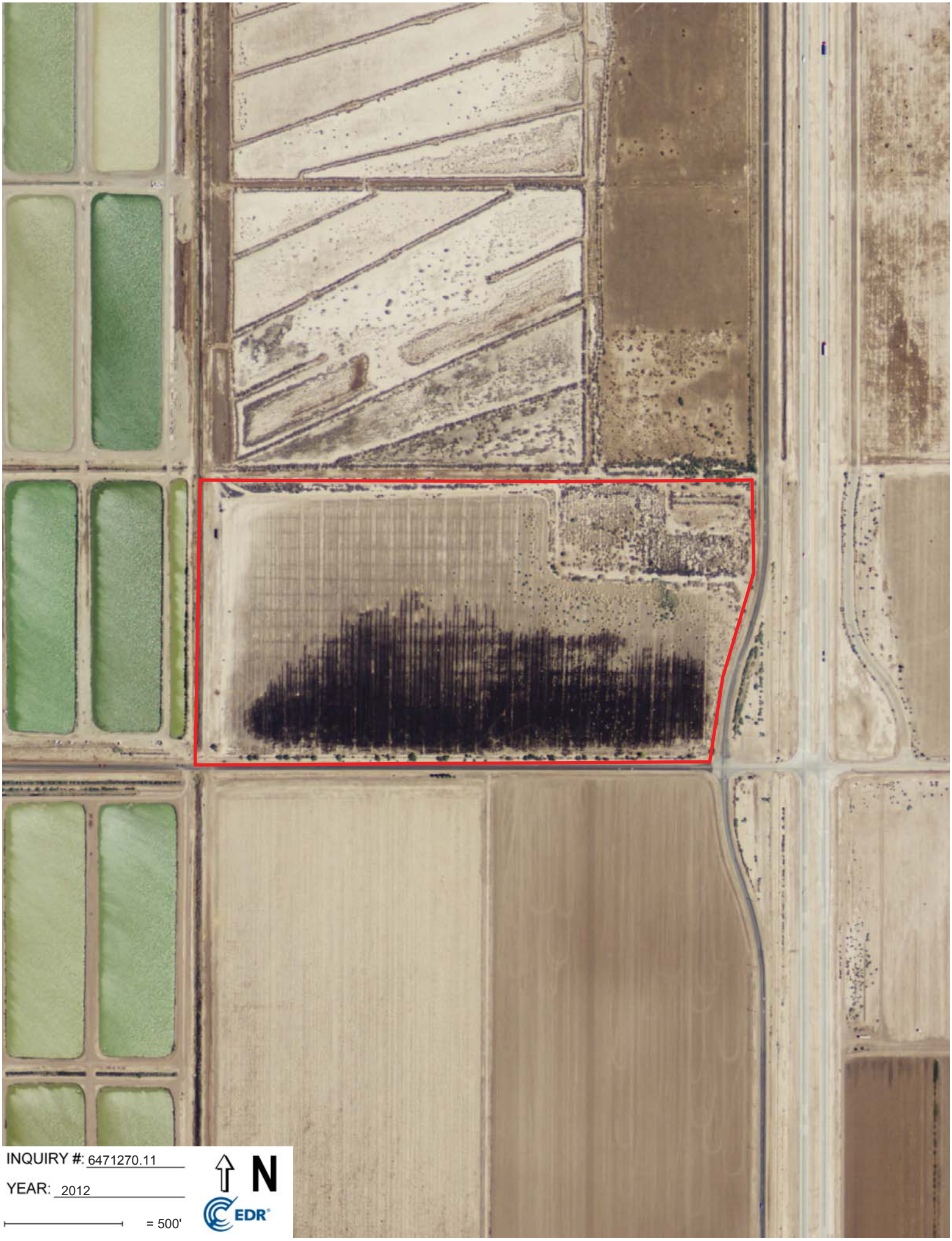
INQUIRY #: 6471270.11

YEAR: 2016

= 500'

N

EDR



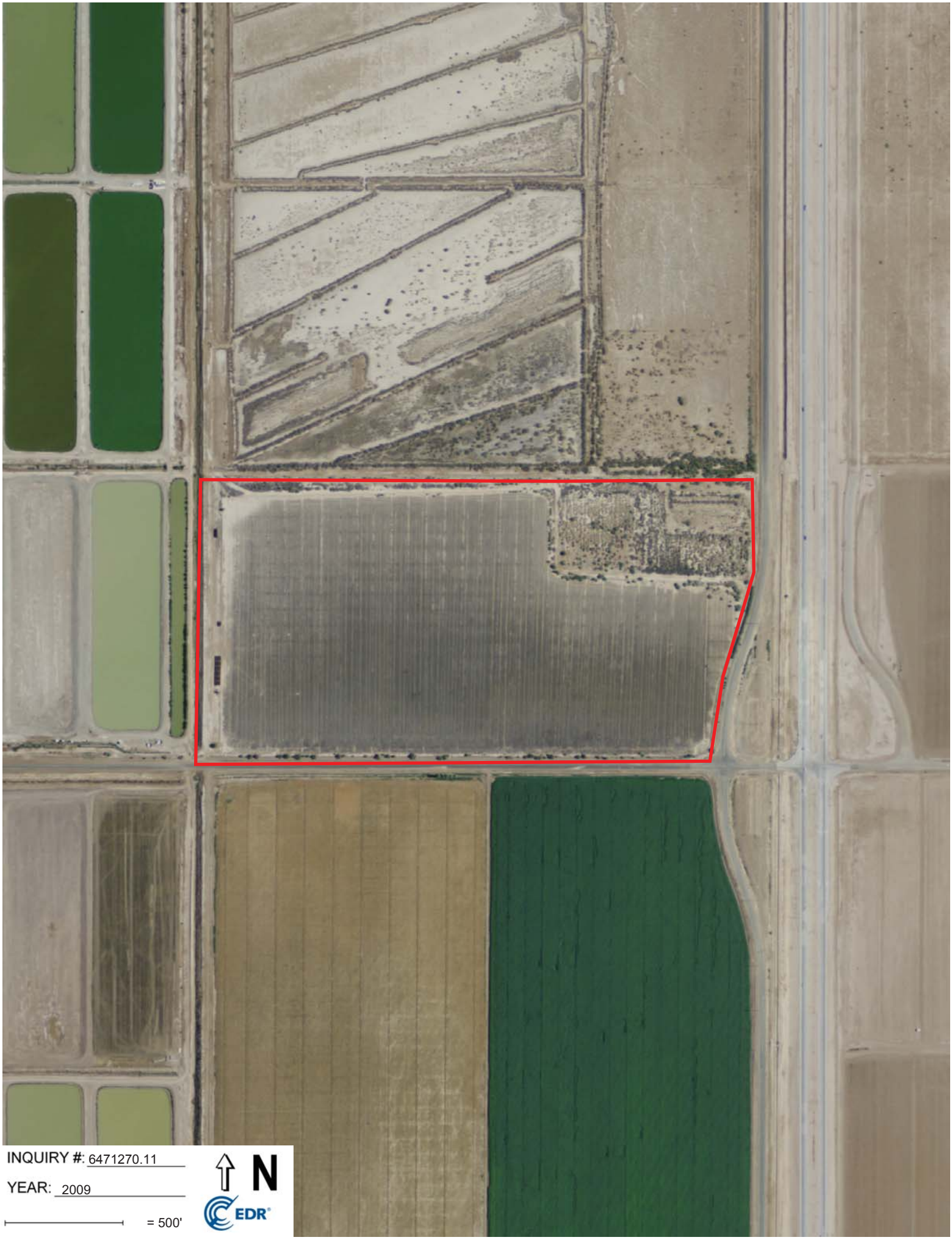
INQUIRY #: 6471270.11

YEAR: 2012

= 500'

N

EDR



INQUIRY #: 6471270.11

YEAR: 2009

= 500'

N

EDR

INQUIRY #: 6471270.11

YEAR: 2006

= 500'

N

EDR

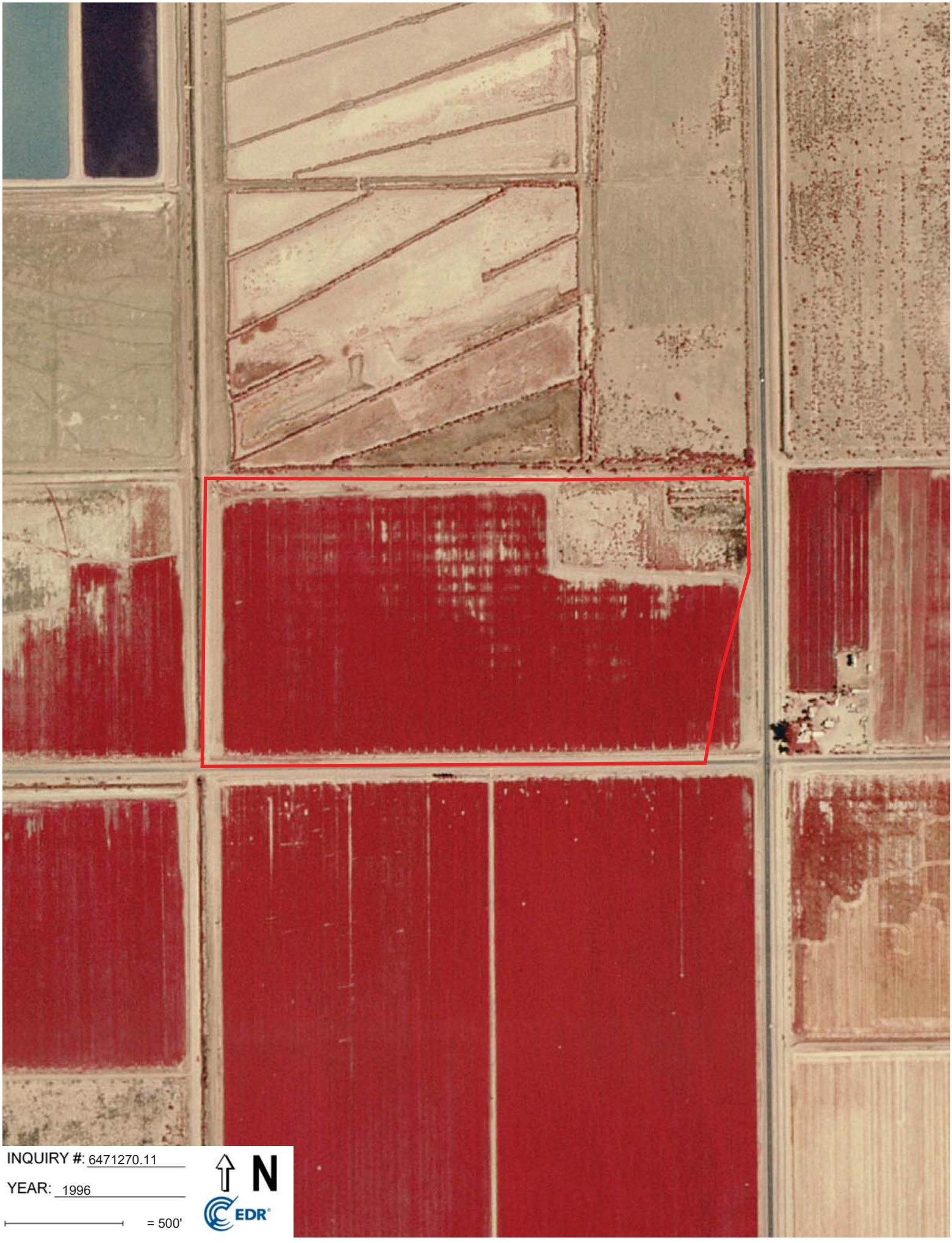
INQUIRY #: 6471270.11

YEAR: 2002

= 500'

N

EDR



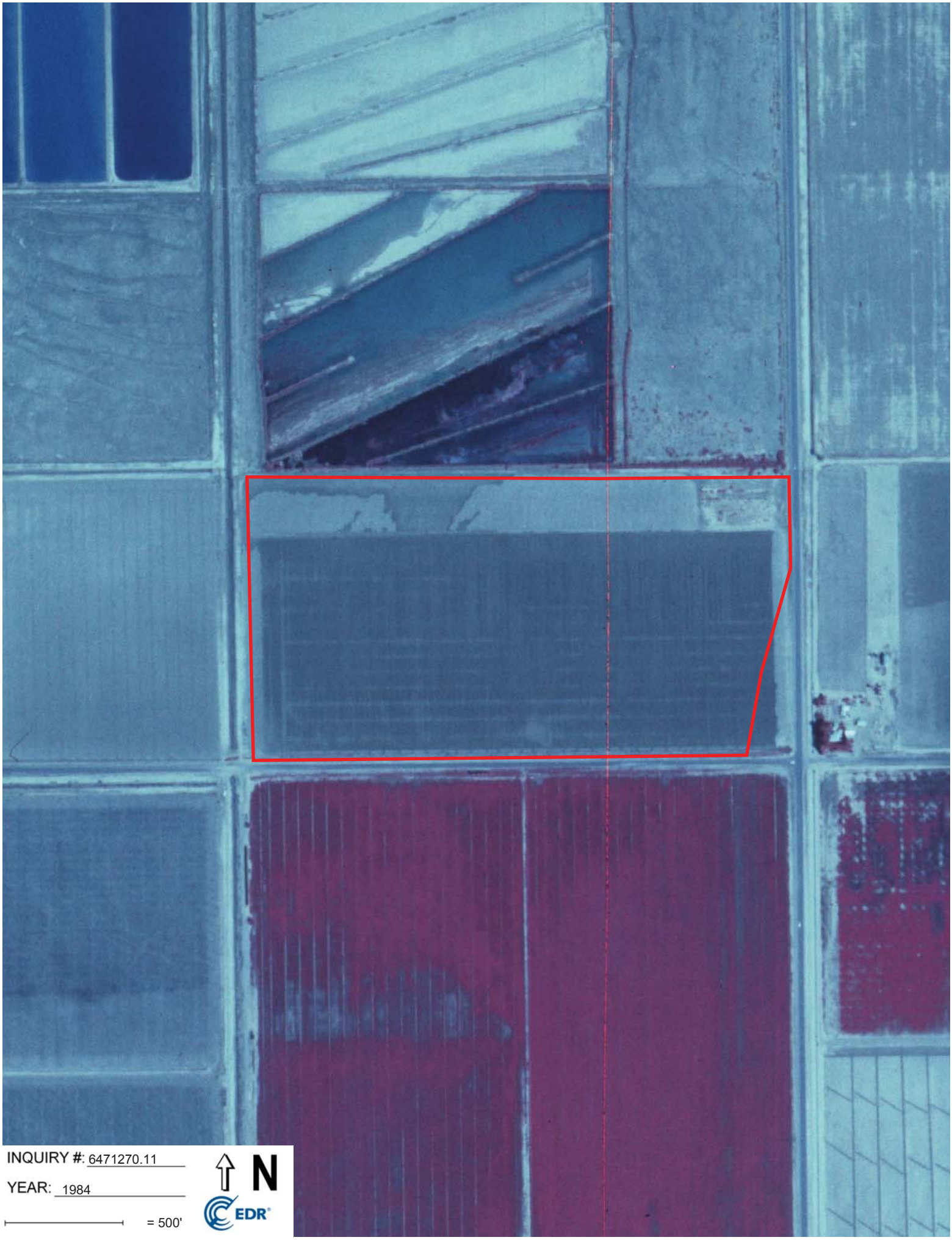
INQUIRY #: 6471270.11

YEAR: 1996

= 500'

N

EDR



INQUIRY #: 6471270.11

YEAR: 1984

= 500'

N

EDR

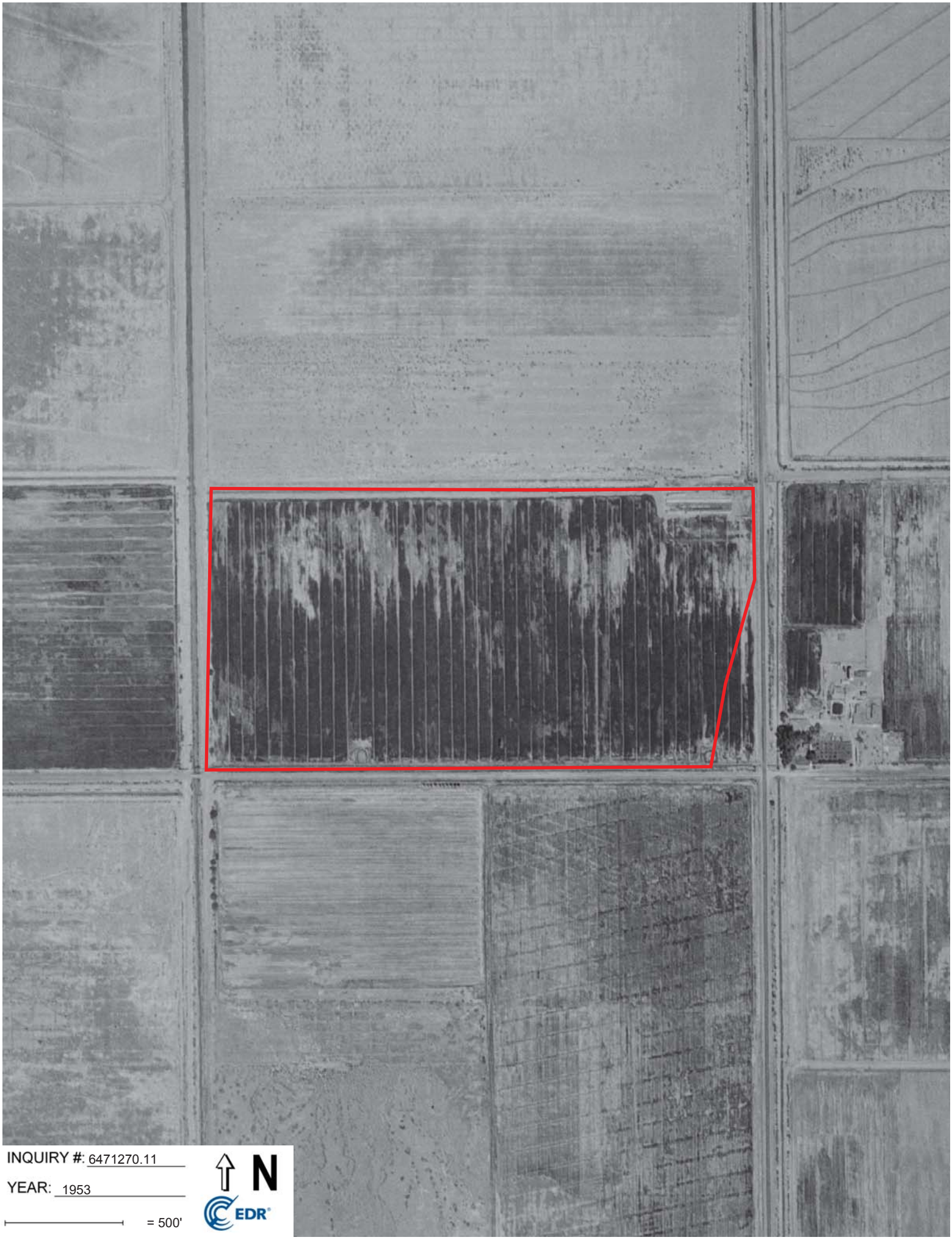
INQUIRY #: 6471270.11

YEAR: 1976

= 500'

N

EDR



INQUIRY #: 6471270.11

YEAR: 1953

= 500'

N

EDR


INQUIRY #: 6471270.11
YEAR: 1949
= 500'
N
EDR


INQUIRY #: 6471270.11
YEAR: 1937
= 500'
N
EDR

APPENDIX D

Harris Road Recycling Facility
NEC Harris Road and Hwy 111
Imperial, CA 92251

Inquiry Number: 6471270.4
April 28, 2021

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

04/28/21

Site Name:

Harris Road Recycling Facility
NEC Harris Road and Hwy 111
Imperial, CA 92251
EDR Inquiry # 6471270.4

Client Name:

GS Lyon Consultants
780 N. Fourth Street
El Centro, CA 92243
Contact: Steven Williams

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by GS Lyon Consultants were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# GS2110

Project: Harris Road Recycling Facility

Coordinates:

Latitude:	32.885664 32° 53' 8" North
Longitude:	-115.514214 -115° 30' 51" West
UTM Zone:	Zone 11 North
UTM X Meters:	638981.12
UTM Y Meters:	3639590.33
Elevation:	-131.00' below sea level

Maps Provided:

2012
1979
1976
1957
1956, 1957
1947, 1948
1940

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

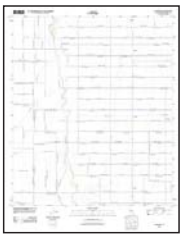
2012 Source Sheets

Holtville West

7.5-minute, 24000

El Centro

7.5-minute, 24000



Alamorio

7.5-minute, 24000

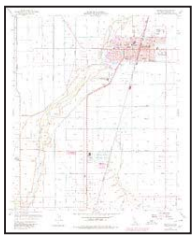
Brawley

7.5-minute, 24000

1979 Source Sheets

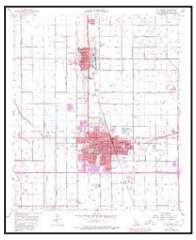
Holtville West

7.5-minute, 24000
Aerial Photo Revised 1976



Brawley

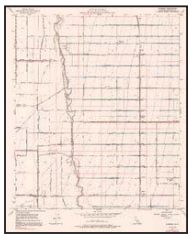
7.5-minute, 24000
Aerial Photo Revised 1976



El Centro

7.5-minute, 24000
Aerial Photo Revised 1976

1976 Source Sheets



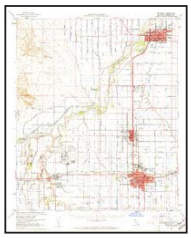
Alamorio

7.5-minute, 24000
Aerial Photo Revised 1953

1957 Source Sheets

Holtville

15-minute, 62500
Aerial Photo Revised 1953



Brawley

15-minute, 62500
Aerial Photo Revised 1953

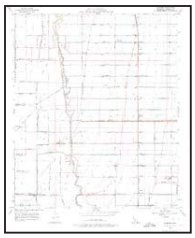
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1956, 1957 Source Sheets

Holtville West

7.5-minute, 24000



Alamorio

7.5-minute, 24000
Aerial Photo Revised 1953

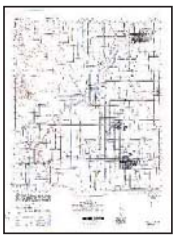
El Centro

7.5-minute, 24000
Aerial Photo Revised 1953

1947, 1948 Source Sheets

ALAMORIO

15-minute, 50000



BRAWLEY

15-minute, 50000

1940 Source Sheets

Alamorio

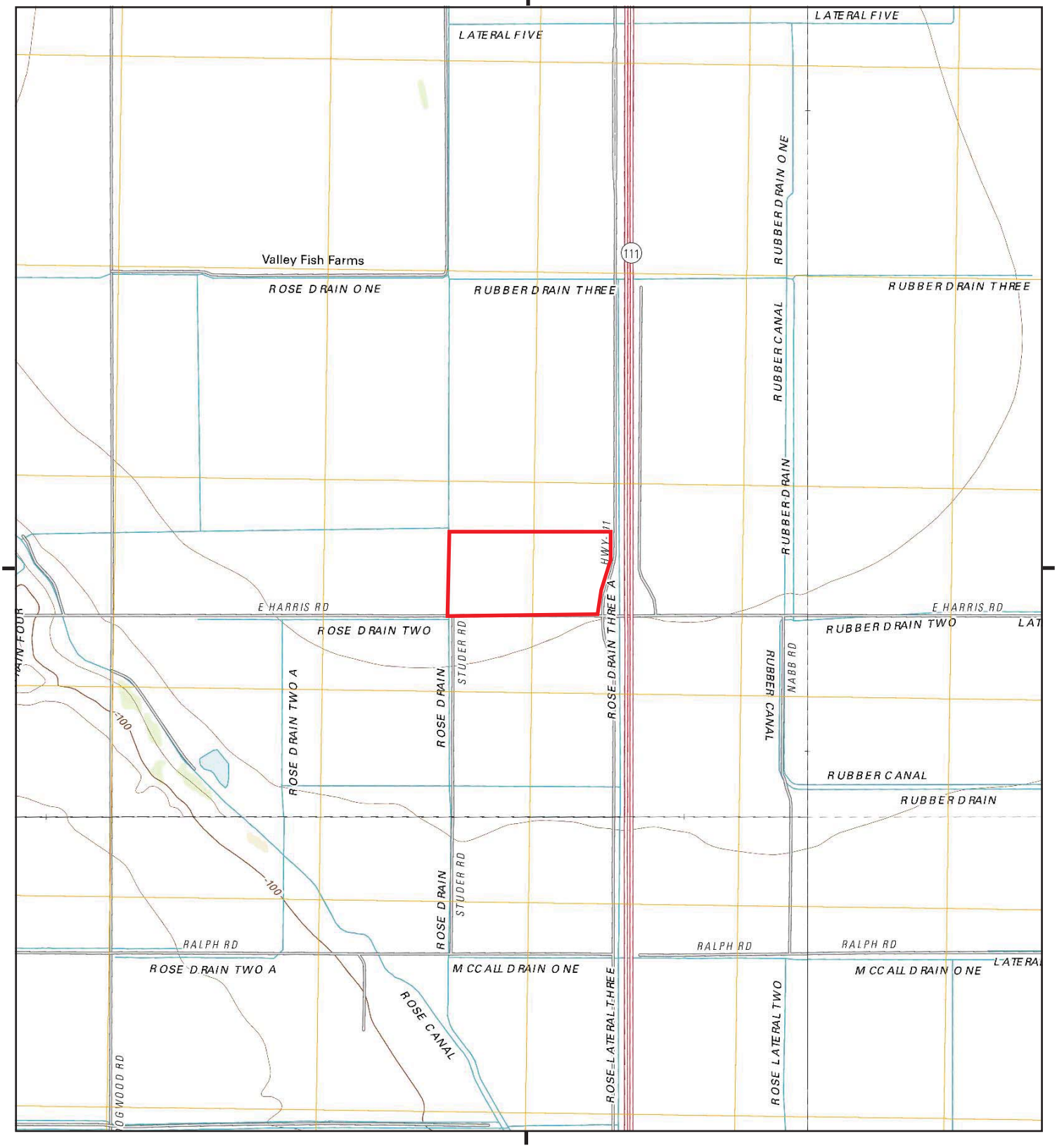
15-minute, 62500
Aerial Photo Revised 1940

Brawley

15-minute, 62500
Aerial Photo Revised 1940

Historical Topo Map

2012



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

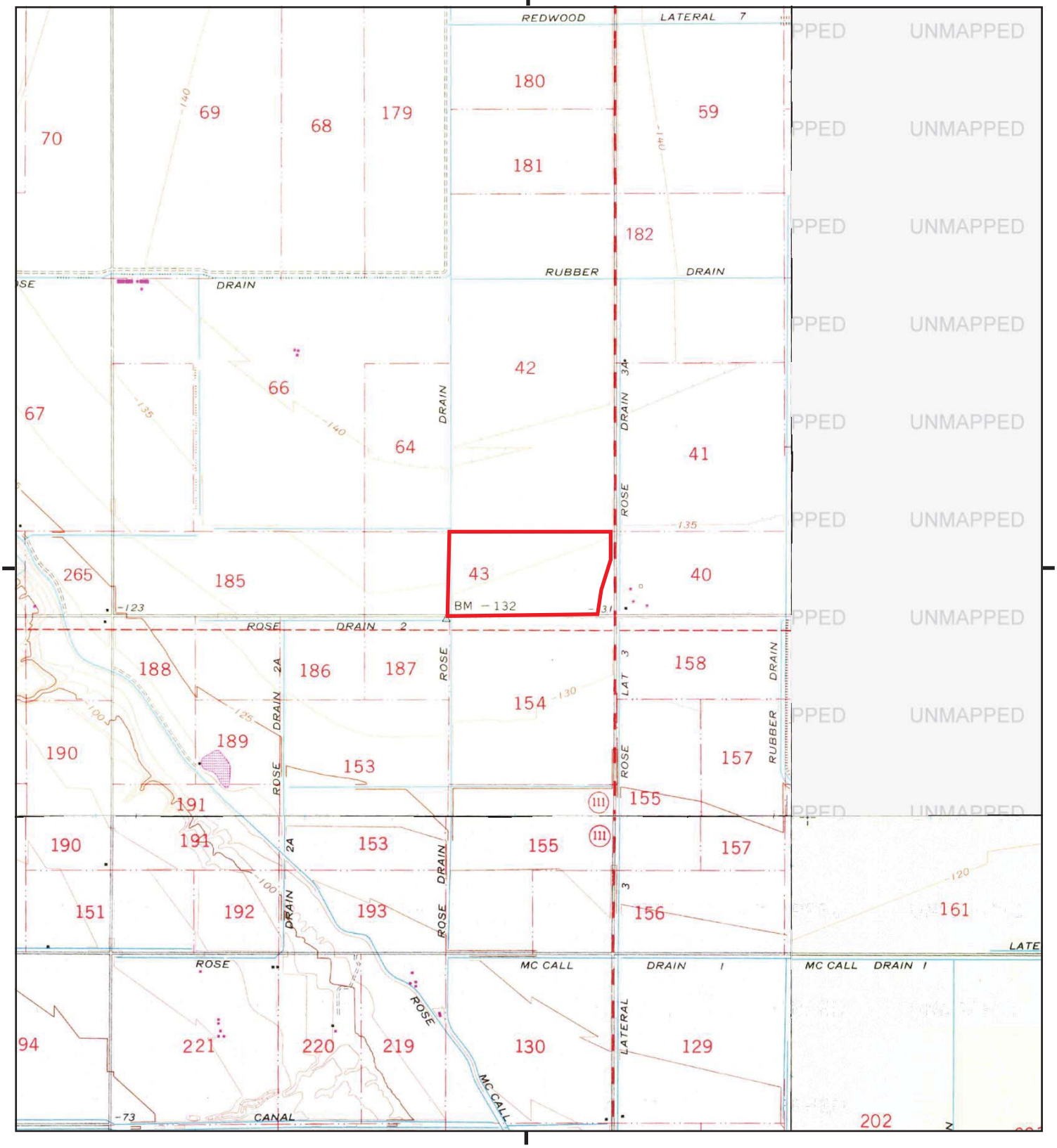
TP, Brawley, 2012, 7.5-minute
NE, Alamorio, 2012, 7.5-minute
SE, Holtville West, 2012, 7.5-minute
SW, El Centro, 2012, 7.5-minute

SITE NAME: Harris Road Recycling Facility
ADDRESS: NEC Harris Road and Hwy 111
Imperial, CA 92251
CLIENT: GS Lyon Consultants

N

Historical Topo Map

1979



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

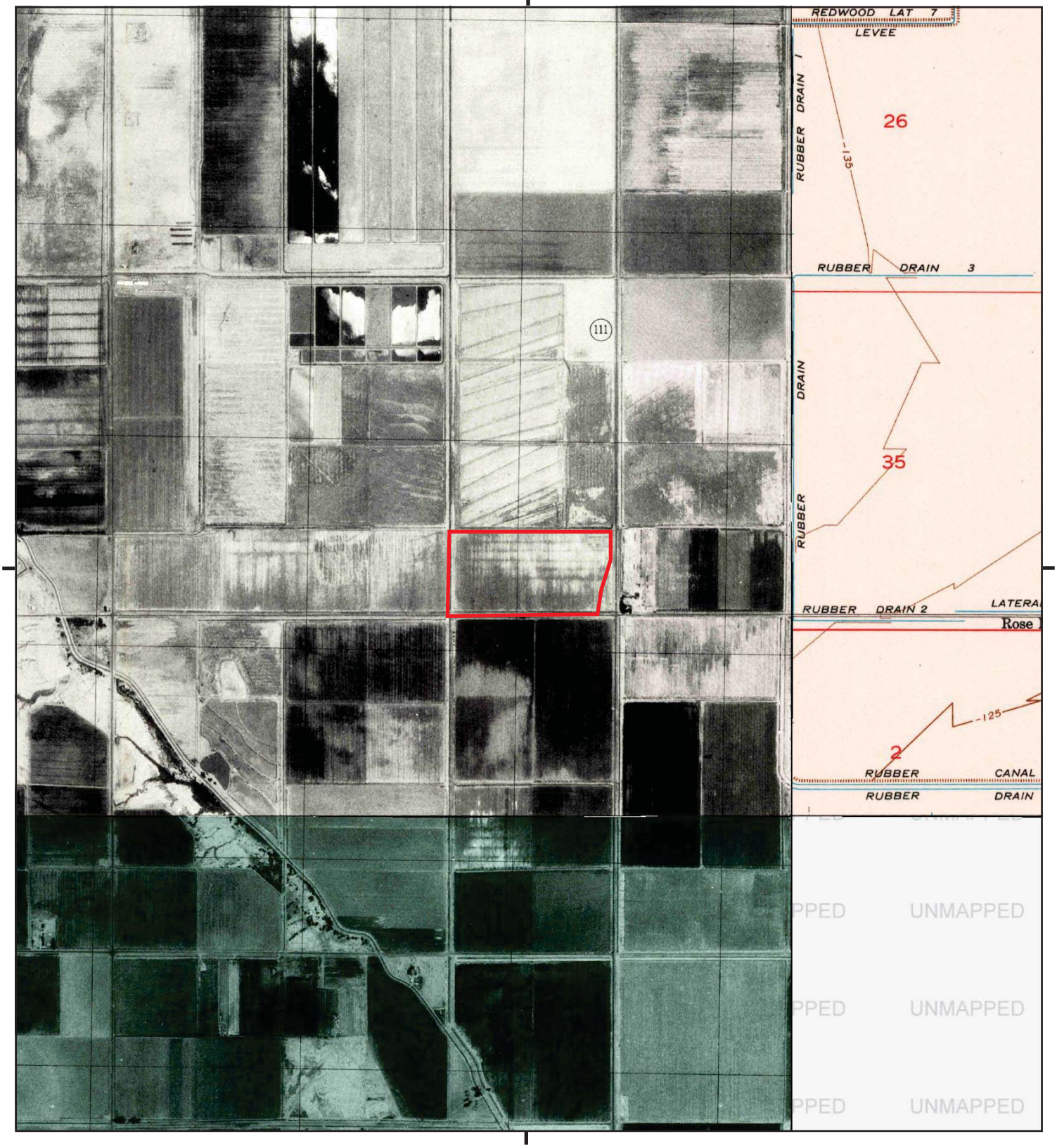
TP, Brawley, 1979, 7.5-minute
SE, Holtville West, 1979, 7.5-minute
SW, El Centro, 1979, 7.5-minute

SITE NAME: Harris Road Recycling Facility
ADDRESS: NEC Harris Road and Hwy 111
Imperial, CA 92251
CLIENT: GS Lyon Consultants

N

Historical Topo Map

1976



This report includes information from the following map sheet(s).

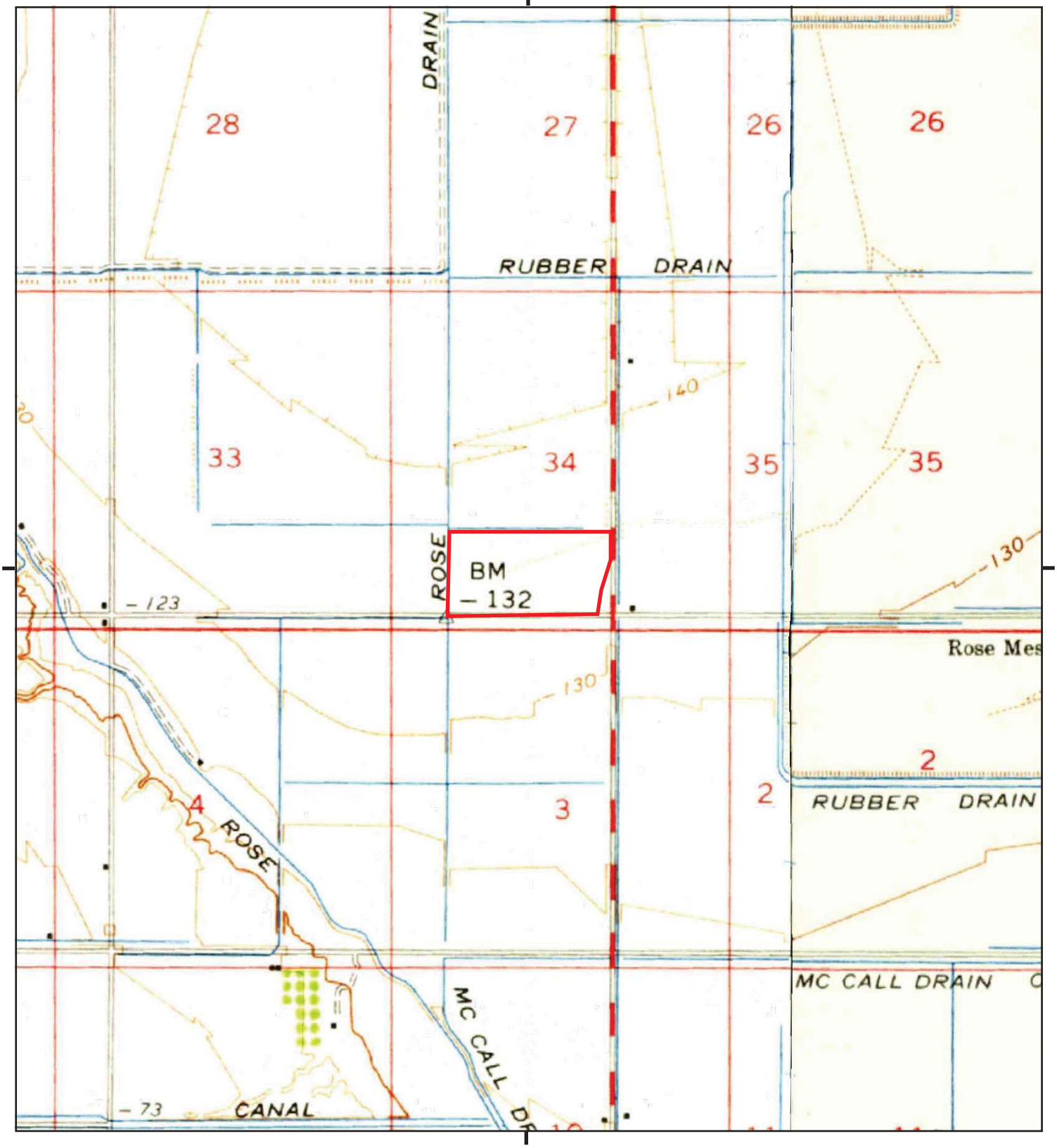
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

NE, Alamorio, 1976, 7.5-minute

SITE NAME: Harris Road Recycling Facility
ADDRESS: NEC Harris Road and Hwy 111
Imperial, CA 92251
CLIENT: GS Lyon Consultants

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

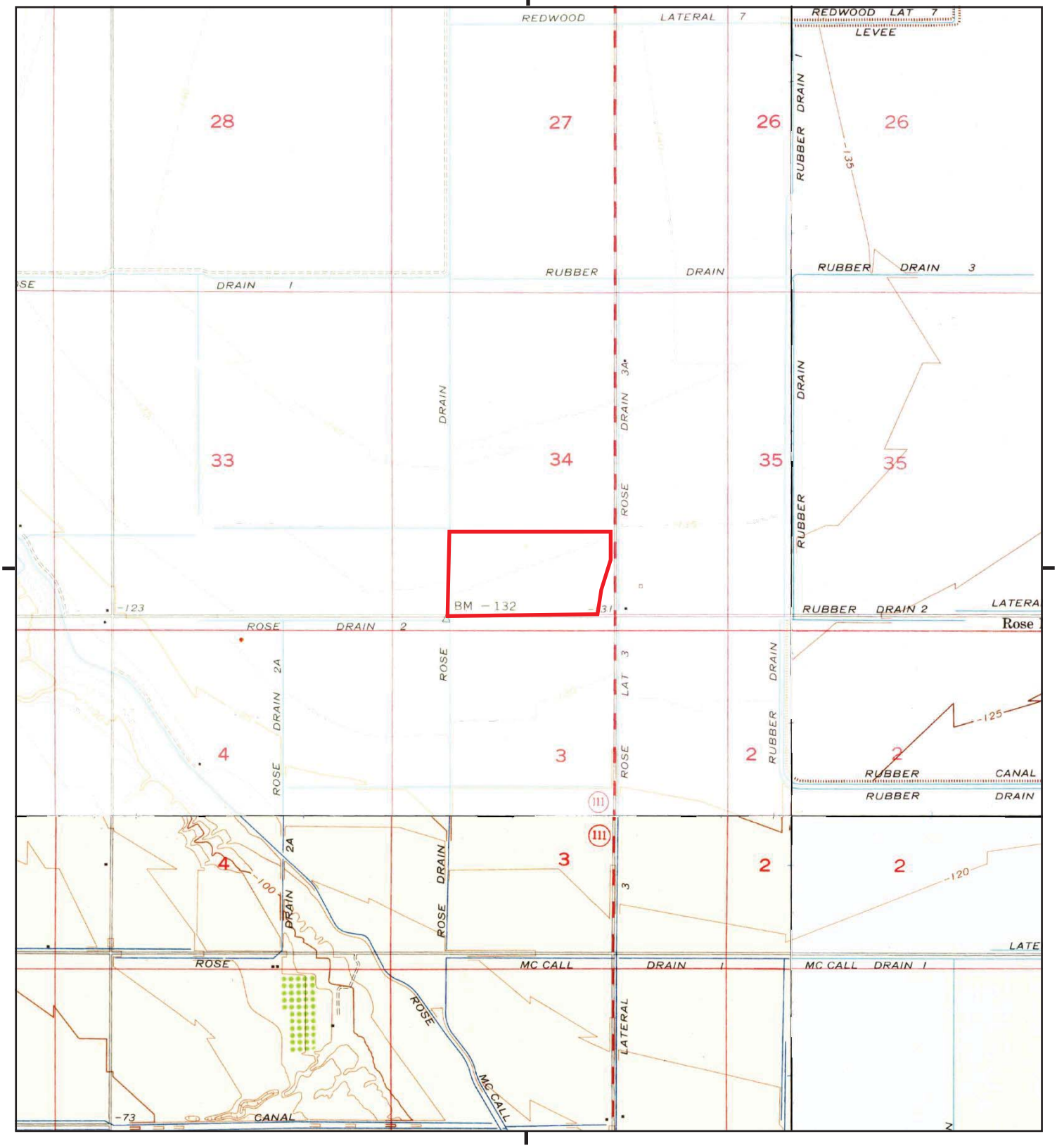
TP, Brawley, 1957, 15-minute
E, Holtville, 1957, 15-minute

SITE NAME: Harris Road Recycling Facility
ADDRESS: NEC Harris Road and Hwy 111
Imperial, CA 92251
CLIENT: GS Lyon Consultants

N

Historical Topo Map

1956, 1957



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

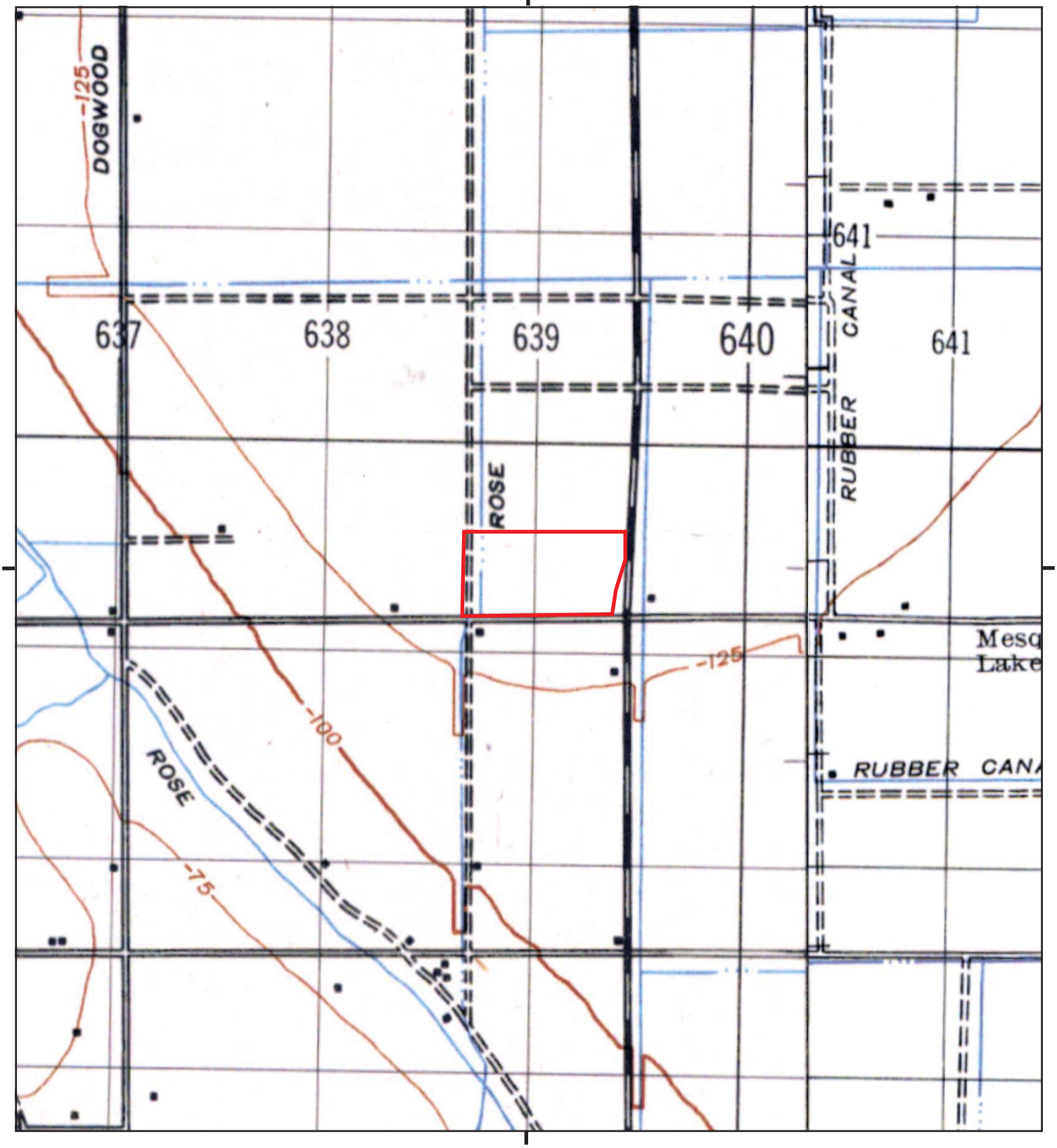
TP, Brawley, 1957, 7.5-minute
NE, Alamorio, 1956, 7.5-minute
SE, Holtville West, 1956, 7.5-minute
SW, El Centro, 1957, 7.5-minute

SITE NAME: Harris Road Recycling Facility
ADDRESS: NEC Harris Road and Hwy 111
Imperial, CA 92251
CLIENT: GS Lyon Consultants

N

Historical Topo Map

1947, 1948



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

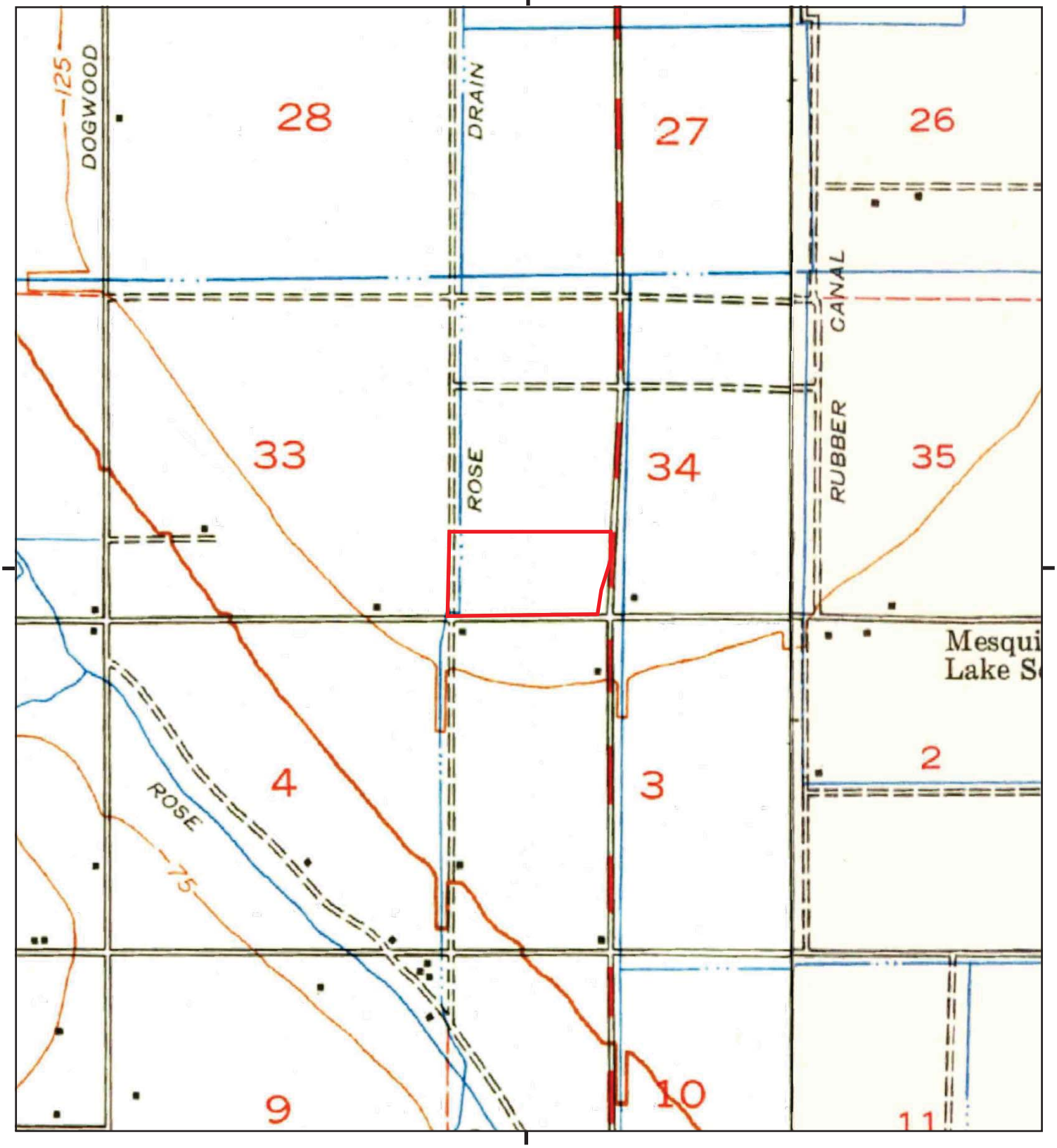
TP, BRAWLEY, 1948, 15-minute
E, ALAMORIO, 1947, 15-minute

SITE NAME: Harris Road Recycling Facility
ADDRESS: NEC Harris Road and Hwy 111
Imperial, CA 92251
CLIENT: GS Lyon Consultants

N

Historical Topo Map

1940



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Brawley, 1940, 15-minute
E, Alamorio, 1940, 15-minute

SITE NAME: Harris Road Recycling Facility
ADDRESS: NEC Harris Road and Hwy 111
Imperial, CA 92251
CLIENT: GS Lyon Consultants

N

APPENDIX E

Harris Road Recycling Facility
NEC Harris Road and Hwy 111
Imperial, CA 92251

Inquiry Number: 6471270.3
April 28, 2021

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

04/28/21

Site Name:

Harris Road Recycling Facility
NEC Harris Road and Hwy 111
Imperial, CA 92251
EDR Inquiry # 6471270.3

Client Name:

GS Lyon Consultants
780 N. Fourth Street
El Centro, CA 92243
Contact: Steven Williams

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by GS Lyon Consultants were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 1855-4E83-8776

PO # GS2110

Project Harris Road Recycling Facility

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 1855-4E83-8776

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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GS Lyon Consultants (the client) is permitted to make up to FIVE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

APPENDIX F

Harris Road Recycling Facility
NEC Harris Road and Hwy 111
Imperial, CA 92251

Inquiry Number: 6471270.2s
April 30, 2021

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

NEC HARRIS ROAD AND HWY 111
IMPERIAL, CA 92251

COORDINATES

Latitude (North):	32.8856640 - 32° 53' 8.39''
Longitude (West):	115.5142140 - 115° 30' 51.17''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	638984.2
UTM Y (Meters):	3639399.5
Elevation:	131 ft. below sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5622946 BRAWLEY, CA
Version Date:	2012
Northeast Map:	5622942 ALAMORIO, CA
Version Date:	2012
Southeast Map:	5622986 HOLTVILLE WEST, CA
Version Date:	2012
Southwest Map:	5622954 EL CENTRO, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140606
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
NEC HARRIS ROAD AND HWY 111
IMPERIAL, CA 92251

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	HARRIS ROAD LLC MRF	194 E. HARRIS ROAD	RGA LF		TP
A2	HARRIS ROAD LLC MRF	914 EAST HARRIS ROAD	RGA LF		TP
A3	HARRIS ROAD LLC MRF	194 E. HARRIS ROAD	SWF/LF, CERS		TP

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 9 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
HARRIS ROAD LLC MRF 194 E. HARRIS ROAD IMPERIAL, CA	RGA LF Facility ID: 13-AA-0111	N/A
HARRIS ROAD LLC MRF 914 EAST HARRIS ROAD IMPERIAL, CA	RGA LF Facility ID: 13-AA-0111	N/A
HARRIS ROAD LLC MRF 194 E. HARRIS ROAD IMPERIAL, CA 92251	SWF/LF Database: SWF/LF (SWIS), Date of Government Version: 11/09/2020 Facility ID: 13-AA-0111 Operational Status: Planned Regulation Status: Permitted CERS	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

EXECUTIVE SUMMARY

Federal RCRA CORRACTS facilities list

CORRACTS ..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ..... RCRA - Large Quantity Generators
RCRA-SQG ..... RCRA - Small Quantity Generators
RCRA-VSQG ..... RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ..... Land Use Control Information System
US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROLS ..... Institutional Controls Sites List

Federal ERNS list

ERNS ..... Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE ..... State Response Sites

State- and tribal - equivalent CERCLIS

ENVIROSTOR ..... EnviroStor Database

State and tribal leaking storage tank lists

LUST ..... Geotracker's Leaking Underground Fuel Tank Report
INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land
CPS-SLIC ..... Statewide SLIC Cases

State and tribal registered storage tank lists

FEMA UST ..... Underground Storage Tank Listing
UST ..... Active UST Facilities
AST ..... Aboveground Petroleum Storage Tank Facilities
INDIAN UST ..... Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

VCP ..... Voluntary Cleanup Program Properties
INDIAN VCP ..... Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS ..... Considered Brownfieds Sites Listing

EXECUTIVE SUMMARY

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT ..... Waste Management Unit Database
SWRCY ..... Recycler Database
HAULERS ..... Registered Waste Tire Haulers Listing
INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations
ODI ..... Open Dump Inventory
IHS OPEN DUMPS ..... Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ..... Delisted National Clandestine Laboratory Register
HIST Cal-Sites ..... Historical Calsites Database
SCH ..... School Property Evaluation Program
CDL ..... Clandestine Drug Labs
Toxic Pits ..... Toxic Pits Cleanup Act Sites
CERS HAZ WASTE ..... CERS HAZ WASTE
US CDL ..... National Clandestine Laboratory Register
PFAS ..... PFAS Contamination Site Location Listing

Local Lists of Registered Storage Tanks

SWEEPS UST ..... SWEEPS UST Listing
HIST UST ..... Hazardous Substance Storage Container Database
CA FID UST ..... Facility Inventory Database
CERS TANKS ..... California Environmental Reporting System (CERS) Tanks

Local Land Records

LIENS ..... Environmental Liens Listing
LIENS 2 ..... CERCLA Lien Information
DEED ..... Deed Restriction Listing

Records of Emergency Release Reports

HMIRS ..... Hazardous Materials Information Reporting System
CHMIRS ..... California Hazardous Material Incident Report System
LDS ..... Land Disposal Sites Listing
MCS ..... Military Cleanup Sites Listing
SPILLS 90 ..... SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR ..... RCRA - Non Generators / No Longer Regulated
FUDS ..... Formerly Used Defense Sites
DOD ..... Department of Defense Sites

EXECUTIVE SUMMARY

SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
FINDS	Facility Index System/Facility Registry System
ECHO	Enforcement & Compliance History Information
DOCKET HWC	Hazardous Waste Compliance Docket Listing
UXO	Unexploded Ordnance Sites
FUELS PROGRAM	EPA Fuels Program Registered Listing
CA BOND EXP. PLAN	Bond Expenditure Plan
Cortese	"Cortese" Hazardous Waste & Substances Sites List
CUPA Listings	CUPA Resources List
DRYCLEANERS	Cleaner Facilities
EMI	Emissions Inventory Data
ENF	Enforcement Action Listing
Financial Assurance	Financial Assurance Information Listing
HAZNET	Facility and Manifest Data
ICE	ICE
HIST CORTESE	Hazardous Waste & Substance Site List
HWP	EnviroStor Permitted Facilities Listing
HWT	Registered Hazardous Waste Transporter Database
MINES	Mines Site Location Listing
MWMP	Medical Waste Management Program Listing
NPDES	NPDES Permits Listing
PEST LIC	Pesticide Regulation Licenses Listing
PROC	Certified Processors Database
Notify 65	Proposition 65 Records
UIC	UIC Listing
UIC GEO	UIC GEO (GEOTRACKER)

WASTEWATER PITS Oil Wastewater Pits Listing
WDS Waste Discharge System
WIP Well Investigation Program Case List
MILITARY PRIV SITES MILITARY PRIV SITES (GEOTRACKER)
PROJECT PROJECT (GEOTRACKER)
WDR Waste Discharge Requirements Listing
CIWQS California Integrated Water Quality System
NON-CASE INFO NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ Well Stimulation Project (GEOTRACKER)
HWTS Hazardous Waste Tracking System
MINES MRDS Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP EDR Proprietary Manufactured Gas Plants
EDR Hist Auto EDR Exclusive Historical Auto Stations
EDR Hist Cleaner EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LUST Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

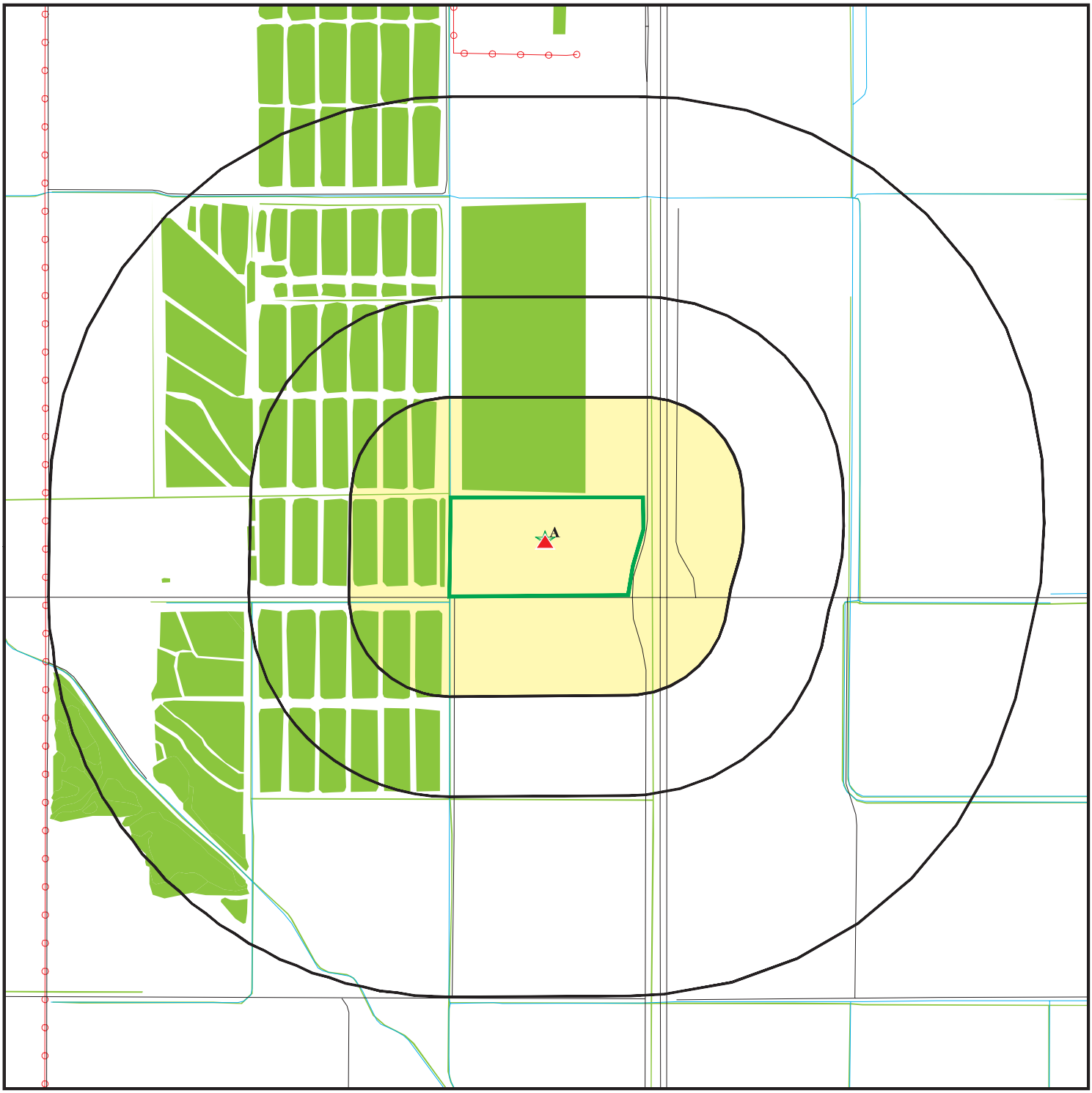
Surrounding sites were not identified.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 6471270.2S



0 1/4 1/2 1 Miles

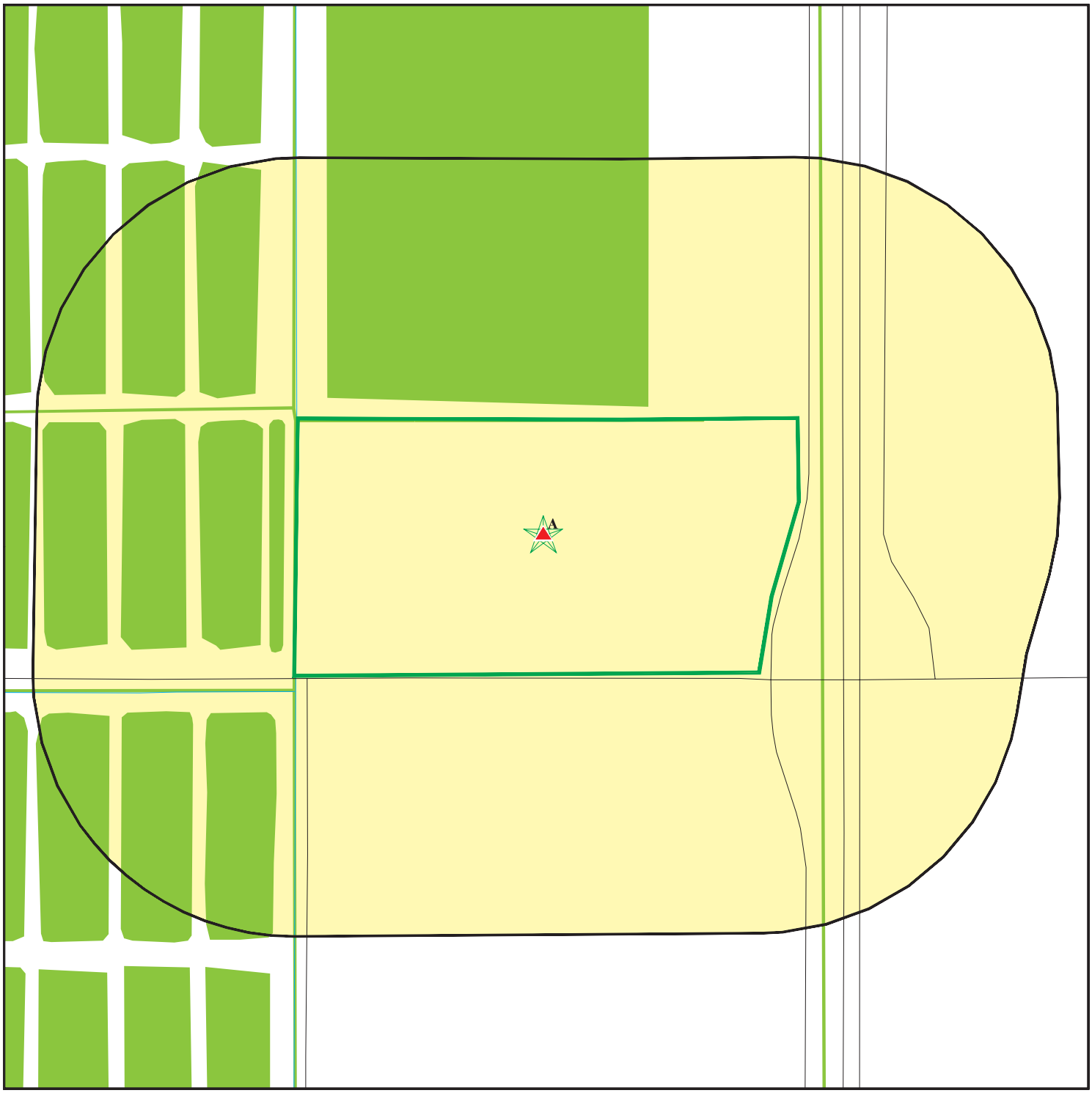
N

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Harris Road Recycling Facility	CLIENT:	GS Lyon Consultants
ADDRESS:	NEC Harris Road and Hwy 111 Imperial CA 92251	CONTACT:	Steven Williams
		INQUIRY #:	6471270.2s
LAT/LONG:	32.885664 / 115.514214	DATE:	April 30, 2021 6:48 am

DETAIL MAP - 6471270.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites

0 1/8 1/4 1/2 Miles

- Indian Reservations BIA
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Harris Road Recycling Facility ADDRESS: NEC Harris Road and Hwy 111 Imperial CA 92251 LAT/LONG: 32.885664 / 115.514214	CLIENT: GS Lyon Consultants CONTACT: Steven Williams INQUIRY #: 6471270.2s DATE: April 30, 2021 6:49 am

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500	1	0	0	0	NR	NR	1
State and tribal leaking storage tank lists								
LUST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CERS HAZ WASTE	0.250		0	0	NR	NR	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001		0	NR	NR	NR	NR	0
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	0	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
UIC GEO	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	0.001		0	NR	NR	NR	NR	0
PROJECT	0.001		0	NR	NR	NR	NR	0
WDR	0.001		0	NR	NR	NR	NR	0
CIWQS	0.001		0	NR	NR	NR	NR	0
CERS	0.001	1	0	NR	NR	NR	NR	1
NON-CASE INFO	0.001		0	NR	NR	NR	NR	0
OTHER OIL GAS	0.001		0	NR	NR	NR	NR	0
PROD WATER PONDS	0.001		0	NR	NR	NR	NR	0
SAMPLING POINT	0.001		0	NR	NR	NR	NR	0
WELL STIM PROJ	0.001		0	NR	NR	NR	NR	0
HWTS	0.001		0	NR	NR	NR	NR	0
MINES MRDS	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001	2	0	NR	NR	NR	NR	2
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		4	0	0	0	0	0	4

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 HARRIS ROAD LLC MRF AND TRANSFER STATION **RGA LF** **S114728621**
Target 194 E. HARRIS ROAD **N/A**
Property IMPERIAL, CA

Site 1 of 3 in cluster A

Actual:
-131 ft.

RGA LF:
Name: HARRIS ROAD LLC MRF AND TRANSFER STATION
Address: 194 E. HARRIS ROAD
City: IMPERIAL
State: IMPERIAL
2012 HARRIS ROAD LLC MRF AND TRANSFER STATION 194 E. HARRIS ROAD

A2 HARRIS ROAD LLC MRF AND TRANSFER STATION **RGA LF** **S114728622**
Target 914 EAST HARRIS ROAD **N/A**
Property IMPERIAL, CA

Site 2 of 3 in cluster A

Actual:
-131 ft.

RGA LF:
Name: HARRIS ROAD LLC MRF AND TRANSFER STATION
Address: 914 EAST HARRIS ROAD
City: IMPERIAL
State: IMPERIAL
2011 HARRIS ROAD LLC MRF AND TRANSFER STATION 914 EAST HARRIS ROAD
Name: HARRIS ROAD LLC MRF AND TRANSFER STATION
Address: 914 EAST HARRIS ROAD
City: IMPERIAL
State: IMPERIAL
2010 HARRIS ROAD LLC MRF AND TRANSFER STATION 914 EAST HARRIS ROAD
Name: HARRIS ROAD LLC MRF AND TRANSFER STATION
Address: 914 EAST HARRIS ROAD
City: IMPERIAL
State: IMPERIAL
2009 HARRIS ROAD LLC MRF AND TRANSFER STATION 914 EAST HARRIS ROAD
Name: HARRIS ROAD LLC MRF AND TRANSFER STATION
Address: 914 EAST HARRIS ROAD
City: IMPERIAL
State: IMPERIAL
2008 HARRIS ROAD LLC MRF AND TRANSFER STATION 914 EAST HARRIS ROAD

A3 HARRIS ROAD LLC MRF AND TRANSFER STATION **SWF/LF** **S111828189**
Target 194 E. HARRIS ROAD **CERS** **N/A**
Property IMPERIAL, CA 92251

Site 3 of 3 in cluster A

Actual:
-131 ft.

SWF/LF (SWIS):
Name: HARRIS ROAD LLC MRF AND TRANSFER STATION
Address: 194 E. HARRIS ROAD
City,State,Zip: IMPERIAL, CA 92251
Region: STATE
Facility ID: 13-AA-0111
SWIS Number: 13-AA-0111
Point of Contact: Gina Weber

HARRIS ROAD LLC MRF AND TRANSFER STATION (Continued) **S111828189**

Is Archived:	No
Is Closed Illegal Abandoned:	No
Is Site Inert Debris Engineered Fill:	No
Is Financial Assurances Responsible:	No
Absorbed On:	Not reported
Operational Status:	Planned
Absorbed By:	Not reported
Closed Illegal Abandoned Category:	Not reported
EPA Federal Registry ID:	Not reported
ARB District:	Imperial
SWRCB Region:	Colorado River
Local Government:	Imperial
Reporting Agency Legal Name:	County of Imperial
Reporting Agency Department:	Public Health Department, Environmental Health Services
Enforcing Agency Legal Name:	County of Imperial
Enforcing Agency Department:	Public Health Department, Environmental Health Services
Regulation Status:	Permitted

Activity:

SWIS Number:	13-AA-0111
Site Name:	Harris Road LLC MRF and Transfer Station
Activity:	Large Volume Transfer/Processing Facility
Activity Is Archived:	No
Category:	Transfer/Processing
Activity Classification:	Solid Waste Facility
WDR Number:	Not reported
WDR Landfill Class:	Not reported
Cease Operation:	Not reported
Cease Operation Type:	Not reported
Inspection Frequency:	Quarterly
Throughput:	1500
Throughput Units:	Cubic Yards per Day
Remaining Capacity:	Not reported
Remaining Capacity Date:	Not reported
Capacity:	Not reported
Capacity Units:	Not reported
Total Acreage:	25
Disposal Acreage:	Not reported
Permitted Elevation:	Not reported
Permitted Elevation Type:	Not reported
Permitted Depth:	Not reported
Permitted Depth Type:	Not reported
Point of Contact:	Gina Weber
Site Operational Status:	Planned
Site Regulatory Status:	Permitted
Site Is Archived:	No
Is Closed Illegal Abandoned:	No
Is Site Inert Debris Engineered Fill:	No
Is Financial Assurances Responsible:	No
Absorbed On:	Not reported
Absorbed By:	Not reported
Closed Illegal Abandoned Category:	Not reported
EPA Federal Registry ID:	Not reported
County:	Imperial
ARB District:	Imperial
SWRCB Region:	Colorado River
Local Government:	Imperial
Street Address:	194 E. Harris Road

HARRIS ROAD LLC MRF AND TRANSFER STATION (Continued) **S111828189**

City:	Imperial
State:	CA
ZIP Code:	92251
Reporting Agency Legal Name:	County of Imperial
Reporting Agency Department:	Public Health Department, Environmental Health Services
Enforcing Agency Legal Name:	County of Imperial
Enforcing Agency Department:	Public Health Department, Environmental Health Services

Operator:

SWIS Number:	13-AA-0111
Site Name:	Harris Road LLC MRF and Transfer Station
Site Operational Status:	Planned
Site Type:	Non-Disposal Only
Site Regulatory Status:	Permitted
Latitude:	32.88492
Longitude:	-115.5166
Is Archived:	No
Operator:	Harris Road LLC
Started On:	9/23/2008
Contact Name:	Not reported
Contact Title:	Not reported
Contact Email:	Not reported
Contact Phone:	(760) 774-3825
Street Address:	Gordon W. Beers 8 Cielo Vista Court
Operator City:	Rancho Mirage
Operator State:	CA
Operator Zip:	92270-3200

Owner:

SWIS Number:	13-AA-0111
Owner:	Harris Road LLC
Owner Address:	Gordon W. Beers 8 Cielo Vista Court
Owner City:	Rancho Mirage
Owner State:	CA
Owner Zip:	92270-3200
Site Name:	Harris Road LLC MRF and Transfer Station
Site Operational Status:	Planned
Site Type:	Non-Disposal Only
Site Regulatory Status:	Permitted
Latitude:	32.88492
Longitude:	-115.5166
Is Archived:	No
Started On:	9/23/2008
Contact Name:	Not reported
Contact Title:	Not reported
Contact Email:	Not reported
Contact Phone:	(760) 774-3825

Waste:

SWIS Number:	13-AA-0111
Site Name:	Harris Road LLC MRF and Transfer Station
Activity:	Large Volume Transfer/Processing Facility
Waste Type:	Construction/demolition
Site Is Archived:	No
Site Operational Status:	Planned
Site Regulatory Status:	Permitted

HARRIS ROAD LLC MRF AND TRANSFER STATION (Continued) **S111828189**

Site Type:	Non-Disposal Only
Point of Contact:	Gina Weber
Activity Is Archived:	No
Activity Operational Status:	Planned
Activity Regulatory Status:	Permitted
Activity Category:	Transfer/Processing
Activity Classification:	Solid Waste Facility
SWIS Number:	13-AA-0111
Site Name:	Harris Road LLC MRF and Transfer Station
Activity:	Large Volume Transfer/Processing Facility
Waste Type:	Green Materials
Site Is Archived:	No
Site Operational Status:	Planned
Site Regulatory Status:	Permitted
Site Type:	Non-Disposal Only
Point of Contact:	Gina Weber
Activity Is Archived:	No
Activity Operational Status:	Planned
Activity Regulatory Status:	Permitted
Activity Category:	Transfer/Processing
Activity Classification:	Solid Waste Facility
SWIS Number:	13-AA-0111
Site Name:	Harris Road LLC MRF and Transfer Station
Activity:	Large Volume Transfer/Processing Facility
Waste Type:	Inert
Site Is Archived:	No
Site Operational Status:	Planned
Site Regulatory Status:	Permitted
Site Type:	Non-Disposal Only
Point of Contact:	Gina Weber
Activity Is Archived:	No
Activity Operational Status:	Planned
Activity Regulatory Status:	Permitted
Activity Category:	Transfer/Processing
Activity Classification:	Solid Waste Facility
SWIS Number:	13-AA-0111
Site Name:	Harris Road LLC MRF and Transfer Station
Activity:	Large Volume Transfer/Processing Facility
Waste Type:	Mixed municipal
Site Is Archived:	No
Site Operational Status:	Planned
Site Regulatory Status:	Permitted
Site Type:	Non-Disposal Only
Point of Contact:	Gina Weber
Activity Is Archived:	No
Activity Operational Status:	Planned
Activity Regulatory Status:	Permitted
Activity Category:	Transfer/Processing
Activity Classification:	Solid Waste Facility
SWIS Number:	13-AA-0111
Site Name:	Harris Road LLC MRF and Transfer Station
Activity:	Large Volume Transfer/Processing Facility
Waste Type:	Tires

HARRIS ROAD LLC MRF AND TRANSFER STATION (Continued) **S111828189**

Site Is Archived:	No
Site Operational Status:	Planned
Site Regulatory Status:	Permitted
Site Type:	Non-Disposal Only
Point of Contact:	Gina Weber
Activity Is Archived:	No
Activity Operational Status:	Planned
Activity Regulatory Status:	Permitted
Activity Category:	Transfer/Processing
Activity Classification:	Solid Waste Facility

SWIS Number:	13-AA-0111
Site Name:	Harris Road LLC MRF and Transfer Station
Activity:	Large Volume Transfer/Processing Facility
Waste Type:	Wood waste
Site Is Archived:	No
Site Operational Status:	Planned
Site Regulatory Status:	Permitted
Site Type:	Non-Disposal Only
Point of Contact:	Gina Weber
Activity Is Archived:	No
Activity Operational Status:	Planned
Activity Regulatory Status:	Permitted
Activity Category:	Transfer/Processing
Activity Classification:	Solid Waste Facility

CERS:

Name:	HARRIS ROAD LLC MRF AND TRANSFER STATION
Address:	194 E. HARRIS ROAD
City,State,Zip:	IMPERIAL, CA
Site ID:	509121
CERS ID:	13-AA-0111
CERS Description:	Solid Waste and Recycle Sites

Affiliation:

Affiliation Type Desc:	Legal Operator
Entity Name:	Harris Road LLC
Entity Title:	Not reported
Affiliation Address:	Gordon W. Beers8 Cielo Vista Court
Affiliation City:	Rancho Mirage
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92270-3200
Affiliation Phone:	7607743825

Affiliation Type Desc:	Legal Owner
Entity Name:	Harris Road LLC
Entity Title:	Not reported
Affiliation Address:	Gordon W. Beers8 Cielo Vista Court
Affiliation City:	Rancho Mirage
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92270-3200
Affiliation Phone:	7607743825

Count: 0 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
		NO SITES FOUND			

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 04/01/2021
Next Scheduled EDR Contact: 07/12/2021
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 04/01/2021
Next Scheduled EDR Contact: 07/12/2021
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 04/01/2021
Next Scheduled EDR Contact: 07/12/2021
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/03/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 03/30/2021
Next Scheduled EDR Contact: 07/12/2021
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 35

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/01/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 35

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/01/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/14/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 5

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/23/2021
Next Scheduled EDR Contact: 07/05/2021
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/14/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 5

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/23/2021
Next Scheduled EDR Contact: 07/05/2021
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/14/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 5

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/23/2021
Next Scheduled EDR Contact: 07/05/2021
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/14/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 5

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/23/2021
Next Scheduled EDR Contact: 07/05/2021
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/14/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 5

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/23/2021
Next Scheduled EDR Contact: 07/05/2021
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 02/09/2021
Date Data Arrived at EDR: 02/11/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 39

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 02/08/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 10/28/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 11/18/2020
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/23/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 10/28/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 11/18/2020
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/23/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/14/2020
Date Data Arrived at EDR: 12/15/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 7

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 12/15/2020
Next Scheduled EDR Contact: 07/05/2021
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 01/25/2021
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/13/2021
Number of Days to Update: 77

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 01/25/2021
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/13/2021
Number of Days to Update: 77

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 11/09/2020
Date Data Arrived at EDR: 11/10/2020
Date Made Active in Reports: 01/14/2021
Number of Days to Update: 65

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 02/09/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)

Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Quarterly

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 11/12/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/07/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/01/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/09/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 09/30/2020
Date Data Arrived at EDR: 12/22/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 80

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/02/2020
Date Data Arrived at EDR: 12/18/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 84

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/01/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)
Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/29/2021
Date Data Arrived at EDR: 02/17/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 33

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/05/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Varies

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases
UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 03/05/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 04/01/2021
Number of Days to Update: 23

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)
Military ust sites

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Varies

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/31/2021
Number of Days to Update: 22

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 03/12/2021
Next Scheduled EDR Contact: 06/28/2021
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/01/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/02/2020
Date Data Arrived at EDR: 12/18/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 84

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 11/12/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/09/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/01/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 09/30/2020
Date Data Arrived at EDR: 12/22/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 80

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/07/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 03/22/2021
Next Scheduled EDR Contact: 07/05/2021
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 01/25/2021
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/13/2021
Number of Days to Update: 77

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Quarterly

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing

A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 12/17/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 03/09/2021
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 03/23/2021
Next Scheduled EDR Contact: 07/05/2021
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 12/11/2020
Date Data Arrived at EDR: 12/11/2020
Date Made Active in Reports: 03/02/2021
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/16/2021
Next Scheduled EDR Contact: 06/28/2021
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 04/21/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 03/09/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/31/2021
Number of Days to Update: 22

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 11/23/2020
Date Data Arrived at EDR: 11/23/2020
Date Made Active in Reports: 02/08/2021
Number of Days to Update: 77

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 02/08/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 04/22/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 04/29/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 12/07/2020
Date Data Arrived at EDR: 12/09/2020
Date Made Active in Reports: 03/02/2021
Number of Days to Update: 83

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 01/25/2021
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/13/2021
Number of Days to Update: 77

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 01/20/2021
Date Made Active in Reports: 04/08/2021
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Varies

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 01/20/2021
Date Data Arrived at EDR: 01/20/2021
Date Made Active in Reports: 04/08/2021
Number of Days to Update: 78

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 04/20/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 12/07/2020
Date Data Arrived at EDR: 12/09/2020
Date Made Active in Reports: 03/02/2021
Number of Days to Update: 83

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: Quarterly

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 12/07/2020
Date Data Arrived at EDR: 12/08/2020
Date Made Active in Reports: 02/22/2021
Number of Days to Update: 76

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 02/24/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Varies

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing
Aboveground storage tank sites

Date of Government Version: 11/05/2020
Date Data Arrived at EDR: 11/06/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 81

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Varies

CERS TANKS: California Environmental Reporting System (CERS) Tanks
List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 01/20/2021
Date Data Arrived at EDR: 01/20/2021
Date Made Active in Reports: 04/08/2021
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/20/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Quarterly

CA FID UST: Facility Inventory Database
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 11/24/2020
Date Data Arrived at EDR: 11/30/2020
Date Made Active in Reports: 02/10/2021
Number of Days to Update: 72

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 35

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 04/01/2021
Next Scheduled EDR Contact: 07/12/2021
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 11/30/2020
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/12/2021
Number of Days to Update: 73

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 03/03/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/16/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 85

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/24/2021
Next Scheduled EDR Contact: 07/05/2021
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 01/20/2021
Date Made Active in Reports: 04/08/2021
Number of Days to Update: 78

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 04/20/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/31/2021
Number of Days to Update: 22

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/31/2021
Number of Days to Update: 22

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/14/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 5

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/23/2021
Next Scheduled EDR Contact: 07/05/2021
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 02/11/2021
Date Data Arrived at EDR: 02/17/2021
Date Made Active in Reports: 04/05/2021
Number of Days to Update: 47

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 02/17/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/16/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/05/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 02/09/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 12/14/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/23/2021
Next Scheduled EDR Contact: 07/05/2021
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 02/02/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 02/05/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/17/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/19/2021
Next Scheduled EDR Contact: 06/28/2021
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 08/14/2020
Date Made Active in Reports: 11/04/2020
Number of Days to Update: 82
Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/02/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 01/20/2021
Date Data Arrived at EDR: 01/21/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 60
Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/20/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 35
Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 04/01/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 11/02/2020
Date Data Arrived at EDR: 11/12/2020
Date Made Active in Reports: 01/25/2021
Number of Days to Update: 74
Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/19/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35
Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 03/05/2021
Number of Days to Update: 50
Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 03/11/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/19/2020
Date Data Arrived at EDR: 01/08/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 73
Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/09/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 03/31/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/05/2020
Date Data Arrived at EDR: 08/10/2020
Date Made Active in Reports: 10/08/2020
Number of Days to Update: 59
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 04/16/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 70
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 03/05/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 03/02/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 02/05/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 03/25/2021
Next Scheduled EDR Contact: 07/12/2021
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 01/13/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 68

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/05/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 11/20/2020
Number of Days to Update: 151

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 03/23/2021
Next Scheduled EDR Contact: 07/05/2021
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/06/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 04/28/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 02/18/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 04/01/2021
Next Scheduled EDR Contact: 07/12/2021
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 11/24/2020
Date Data Arrived at EDR: 11/30/2020
Date Made Active in Reports: 01/25/2021
Number of Days to Update: 56

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 03/01/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Quarterly

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 11/03/2020
Date Data Arrived at EDR: 11/23/2020
Date Made Active in Reports: 01/25/2021
Number of Days to Update: 63

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 02/24/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 12/11/2020
Date Data Arrived at EDR: 12/11/2020
Date Made Active in Reports: 03/02/2021
Number of Days to Update: 81

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 03/10/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/03/2021
Date Data Arrived at EDR: 03/03/2021
Date Made Active in Reports: 04/05/2021
Number of Days to Update: 33

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 03/03/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 07/02/2020
Date Made Active in Reports: 09/17/2020
Number of Days to Update: 77

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/13/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 01/02/2021
Date Data Arrived at EDR: 01/08/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 04/06/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 11/03/2020
Date Data Arrived at EDR: 11/17/2020
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/17/2021
Date Data Arrived at EDR: 02/17/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 33

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 02/17/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 12/17/2020
Date Data Arrived at EDR: 12/17/2020
Date Made Active in Reports: 03/09/2021
Number of Days to Update: 82

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 03/23/2021
Next Scheduled EDR Contact: 07/05/2021
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing

list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 02/12/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: Varies

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 11/23/2020
Date Data Arrived at EDR: 11/24/2020
Date Made Active in Reports: 02/10/2021
Number of Days to Update: 78

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Varies

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 11/17/2020
Date Data Arrived at EDR: 11/18/2020
Date Made Active in Reports: 02/04/2021
Number of Days to Update: 78

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities
A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 11/23/2020
Date Data Arrived at EDR: 11/25/2020
Date Made Active in Reports: 02/10/2021
Number of Days to Update: 77

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Annually

EMI: Emissions Inventory Data
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 06/16/2020
Date Made Active in Reports: 08/28/2020
Number of Days to Update: 73

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 03/19/2021
Next Scheduled EDR Contact: 06/28/2021
Data Release Frequency: Varies

ENF: Enforcement Action Listing
A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 01/20/2021
Date Made Active in Reports: 04/09/2021
Number of Days to Update: 79

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 04/20/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 01/25/2021
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/13/2021
Number of Days to Update: 77

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing
A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 11/12/2020
Date Data Arrived at EDR: 11/13/2020
Date Made Active in Reports: 01/29/2021
Number of Days to Update: 77

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 02/08/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 04/15/2020
Date Made Active in Reports: 07/02/2020
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 04/09/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 11/13/2020
Date Data Arrived at EDR: 11/13/2020
Date Made Active in Reports: 02/01/2021
Number of Days to Update: 80

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 02/17/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 11/13/2020
Date Data Arrived at EDR: 11/13/2020
Date Made Active in Reports: 02/01/2021
Number of Days to Update: 80

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/17/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 01/05/2021
Date Data Arrived at EDR: 01/05/2021
Date Made Active in Reports: 03/18/2021
Number of Days to Update: 72

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 04/06/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing
A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21
Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 10/30/2020
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/12/2021
Number of Days to Update: 73
Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 03/03/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 11/09/2020
Date Data Arrived at EDR: 11/10/2020
Date Made Active in Reports: 01/27/2021
Number of Days to Update: 78
Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 02/09/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing
A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 11/30/2020
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/12/2021
Number of Days to Update: 73
Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 03/03/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 03/09/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/31/2021
Number of Days to Update: 22
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 12/07/2020
Date Data Arrived at EDR: 12/09/2020
Date Made Active in Reports: 12/10/2020
Number of Days to Update: 1
Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 03/12/2021
Next Scheduled EDR Contact: 06/28/2021
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/31/2021
Number of Days to Update: 22

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 11/19/2019
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/09/2020
Number of Days to Update: 62

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 04/09/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 03/19/2021
Next Scheduled EDR Contact: 07/05/2021
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing

In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 03/09/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/31/2021
Number of Days to Update: 22

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 11/30/2020
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/12/2021
Number of Days to Update: 73

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 03/03/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 01/20/2021
Date Data Arrived at EDR: 01/20/2021
Date Made Active in Reports: 04/08/2021
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/20/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)
Produced water ponds sites

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)
Sampling point - public sites

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Varies

HWTS: Hazardous Waste Tracking System
DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.

Date of Government Version: 04/08/2021
Date Data Arrived at EDR: 04/09/2021
Date Made Active in Reports: 04/20/2021
Number of Days to Update: 11

Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 04/05/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Varies

PCS: Permit Compliance System
PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 03/31/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Semi-Annually

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 03/31/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

PCS INACTIVE: Listing of Inactive PCS Permits
An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 03/31/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Semi-Annually

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners
EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 03/31/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 03/17/2021
Date Data Arrived at EDR: 03/18/2021
Date Made Active in Reports: 03/25/2021
Number of Days to Update: 7

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 03/17/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 02/02/2021
Date Data Arrived at EDR: 02/04/2021
Date Made Active in Reports: 04/23/2021
Number of Days to Update: 78

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 03/31/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 12/15/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 12/24/2020
Number of Days to Update: 8

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 07/05/2021
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 78

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 01/25/2021
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/16/2021
Number of Days to Update: 80

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 04/20/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 12/17/2020
Date Data Arrived at EDR: 01/28/2021
Date Made Active in Reports: 04/16/2021
Number of Days to Update: 78

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 04/21/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 10/22/2020
Date Data Arrived at EDR: 11/03/2020
Date Made Active in Reports: 01/20/2021
Number of Days to Update: 78

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 04/21/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 01/14/2021
Date Data Arrived at EDR: 01/15/2021
Date Made Active in Reports: 04/05/2021
Number of Days to Update: 80

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 04/01/2021
Next Scheduled EDR Contact: 07/12/2021
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 11/18/2020
Date Data Arrived at EDR: 11/19/2020
Date Made Active in Reports: 02/04/2021
Number of Days to Update: 77

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 01/19/2021
Date Data Arrived at EDR: 01/20/2021
Date Made Active in Reports: 04/08/2021
Number of Days to Update: 78

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

KERN COUNTY:

CUPA KERN: CUPA Facility List
A listing of sites included in the Kern County Hazardous Material Business Plan.

Date of Government Version: 10/29/2020
Date Data Arrived at EDR: 10/30/2020
Date Made Active in Reports: 01/15/2021
Number of Days to Update: 77

Source: Kern County Public Health
Telephone: 661-321-3000
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Varies

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 01/19/2021
Date Data Arrived at EDR: 01/21/2021
Date Made Active in Reports: 01/28/2021
Number of Days to Update: 7

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 12/03/2020
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/14/2021
Number of Days to Update: 78

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 02/10/2021
Date Data Arrived at EDR: 02/12/2021
Date Made Active in Reports: 03/11/2021
Number of Days to Update: 27

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 04/07/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 07/31/2020
Date Data Arrived at EDR: 08/21/2020
Date Made Active in Reports: 11/09/2020
Number of Days to Update: 80

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 03/12/2021
Next Scheduled EDR Contact: 06/28/2021
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 01/11/2021
Date Data Arrived at EDR: 01/12/2021
Date Made Active in Reports: 03/25/2021
Number of Days to Update: 72

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 04/05/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/11/2021
Date Data Arrived at EDR: 01/12/2021
Date Made Active in Reports: 03/26/2021
Number of Days to Update: 73

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 04/13/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 08/17/2020
Date Made Active in Reports: 11/05/2020
Number of Days to Update: 80

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 04/07/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/26/2021
Next Scheduled EDR Contact: 07/05/2021
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills
This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 02/04/2021
Date Data Arrived at EDR: 04/16/2021
Date Made Active in Reports: 04/21/2021
Number of Days to Update: 5

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 04/16/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory
A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/26/2021
Next Scheduled EDR Contact: 07/05/2021
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory
A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/26/2021
Next Scheduled EDR Contact: 07/05/2021
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 10/19/2020
Date Data Arrived at EDR: 01/12/2021
Date Made Active in Reports: 03/26/2021
Number of Days to Update: 73

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 04/16/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 04/07/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 09/11/2020
Date Data Arrived at EDR: 10/07/2020
Date Made Active in Reports: 12/23/2020
Number of Days to Update: 77

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 04/23/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 08/10/2020
Date Data Arrived at EDR: 08/12/2020
Date Made Active in Reports: 10/23/2020
Number of Days to Update: 72

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 03/25/2021
Next Scheduled EDR Contact: 07/12/2021
Data Release Frequency: Semi-Annually

MENDOCINO COUNTY:

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 12/21/2020
Date Data Arrived at EDR: 12/21/2020
Date Made Active in Reports: 03/10/2021
Number of Days to Update: 79

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 02/04/2021
Date Data Arrived at EDR: 02/09/2021
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 9

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 01/29/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 11/16/2020
Date Data Arrived at EDR: 11/23/2020
Date Made Active in Reports: 02/08/2021
Number of Days to Update: 77

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/3021
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 01/08/2021
Date Data Arrived at EDR: 01/12/2021
Date Made Active in Reports: 03/25/2021
Number of Days to Update: 72

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 03/25/2021
Next Scheduled EDR Contact: 07/12/2021
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 02/03/2021
Date Data Arrived at EDR: 02/04/2021
Date Made Active in Reports: 04/23/2021
Number of Days to Update: 78

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 04/21/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 02/01/2021
Date Data Arrived at EDR: 02/04/2021
Date Made Active in Reports: 04/23/2021
Number of Days to Update: 78

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 04/29/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 09/01/2020
Date Data Arrived at EDR: 11/06/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 81

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 04/29/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 02/01/2021
Date Data Arrived at EDR: 02/02/2021
Date Made Active in Reports: 04/20/2021
Number of Days to Update: 77

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/02/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 11/24/2020
Date Data Arrived at EDR: 11/24/2020
Date Made Active in Reports: 11/25/2020
Number of Days to Update: 1

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 01/13/2021
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 03/10/2021
Number of Days to Update: 55

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/15/2021
Next Scheduled EDR Contact: 06/28/2021
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 01/13/2021
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 03/10/2021
Number of Days to Update: 55

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/15/2021
Next Scheduled EDR Contact: 06/28/2021
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 02/18/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 76

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 03/31/2021
Next Scheduled EDR Contact: 07/12/2021
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 02/24/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/17/2020
Number of Days to Update: 78

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/01/2021
Next Scheduled EDR Contact: 07/12/2021
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List
Cupa facility list

Date of Government Version: 10/28/2020
Date Data Arrived at EDR: 10/30/2020
Date Made Active in Reports: 01/15/2021
Number of Days to Update: 77

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 11/16/2020
Date Data Arrived at EDR: 11/18/2020
Date Made Active in Reports: 02/04/2021
Number of Days to Update: 78

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 02/01/2021
Next Scheduled EDR Contact: 05/17/2021
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 11/30/2020
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/16/2021
Number of Days to Update: 77

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 03/03/2021
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/01/2020
Date Data Arrived at EDR: 11/23/2020
Date Made Active in Reports: 02/08/2021
Number of Days to Update: 77

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing

A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 07/14/2020
Date Data Arrived at EDR: 07/16/2020
Date Made Active in Reports: 09/29/2020
Number of Days to Update: 75

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 11/05/2020
Date Data Arrived at EDR: 11/06/2020
Date Made Active in Reports: 01/27/2021
Number of Days to Update: 82

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Varies

LUST SAN FRANCISCO: Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/05/2020
Date Data Arrived at EDR: 11/06/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 81

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 03/12/2021
Next Scheduled EDR Contact: 06/28/2021
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 11/12/2020
Date Data Arrived at EDR: 11/13/2020
Date Made Active in Reports: 02/01/2021
Number of Days to Update: 80

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/12/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/08/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 11/20/2020
Date Data Arrived at EDR: 11/23/2020
Date Made Active in Reports: 02/05/2021
Number of Days to Update: 74

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 02/22/2021
Next Scheduled EDR Contact: 06/06/2021
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 11/03/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 82

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 02/16/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 12/03/2020
Date Data Arrived at EDR: 12/03/2020
Date Made Active in Reports: 02/18/2021
Number of Days to Update: 77

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 03/12/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 12/15/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 12/23/2020
Number of Days to Update: 7

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 03/19/2021
Next Scheduled EDR Contact: 07/05/2021
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 01/05/2021
Date Data Arrived at EDR: 01/06/2021
Date Made Active in Reports: 03/18/2021
Number of Days to Update: 71

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 03/19/2021
Next Scheduled EDR Contact: 07/05/2021
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 10/01/2020
Date Data Arrived at EDR: 10/06/2020
Date Made Active in Reports: 12/22/2020
Number of Days to Update: 77

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 04/21/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 11/23/2020
Date Data Arrived at EDR: 11/24/2020
Date Made Active in Reports: 02/10/2021
Number of Days to Update: 78

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 02/26/2021
Next Scheduled EDR Contact: 06/14/2021
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 01/13/2021
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 04/06/2021
Number of Days to Update: 82

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 01/19/2021
Date Data Arrived at EDR: 01/20/2021
Date Made Active in Reports: 04/08/2021
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 02/02/2021
Date Data Arrived at EDR: 02/04/2021
Date Made Active in Reports: 04/23/2021
Number of Days to Update: 78

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 04/14/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 12/28/2020
Date Data Arrived at EDR: 01/29/2021
Date Made Active in Reports: 04/22/2021
Number of Days to Update: 83

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 04/19/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/25/2021
Next Scheduled EDR Contact: 07/12/2021
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 02/08/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 03/29/2021
Date Data Arrived at EDR: 04/21/2021
Date Made Active in Reports: 04/23/2021
Number of Days to Update: 2

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 04/19/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 03/01/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/31/2021
Number of Days to Update: 22

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/09/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 12/21/2020
Date Data Arrived at EDR: 12/23/2020
Date Made Active in Reports: 01/04/2021
Number of Days to Update: 12

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 03/26/2021
Next Scheduled EDR Contact: 07/12/2021
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 01/26/2021
Date Data Arrived at EDR: 01/28/2021
Date Made Active in Reports: 02/03/2021
Number of Days to Update: 6

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 04/24/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 08/10/2020
Date Data Arrived at EDR: 10/20/2020
Date Made Active in Reports: 11/02/2020
Number of Days to Update: 13

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 02/12/2021
Next Scheduled EDR Contact: 05/24/2021
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/09/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 04/29/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 01/29/2021
Next Scheduled EDR Contact: 05/10/2021
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/09/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 02/11/2021
Date Made Active in Reports: 02/24/2021
Number of Days to Update: 13

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/09/2021
Next Scheduled EDR Contact: 05/31/2021
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/08/2021
Next Scheduled EDR Contact: 06/21/2021
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.
Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

HARRIS ROAD RECYCLING FACILITY
NEC HARRIS ROAD AND HWY 111
IMPERIAL, CA 92251

TARGET PROPERTY COORDINATES

Latitude (North):	32.885664 - 32° 53' 8.39''
Longitude (West):	115.514214 - 115° 30' 51.17''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	638984.2
UTM Y (Meters):	3639399.5
Elevation:	131 ft. below sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5622946 BRAWLEY, CA
Version Date:	2012
Northeast Map:	5622942 ALAMORIO, CA
Version Date:	2012
Southeast Map:	5622986 HOLTVILLE WEST, CA
Version Date:	2012
Southwest Map:	5622954 EL CENTRO, CA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

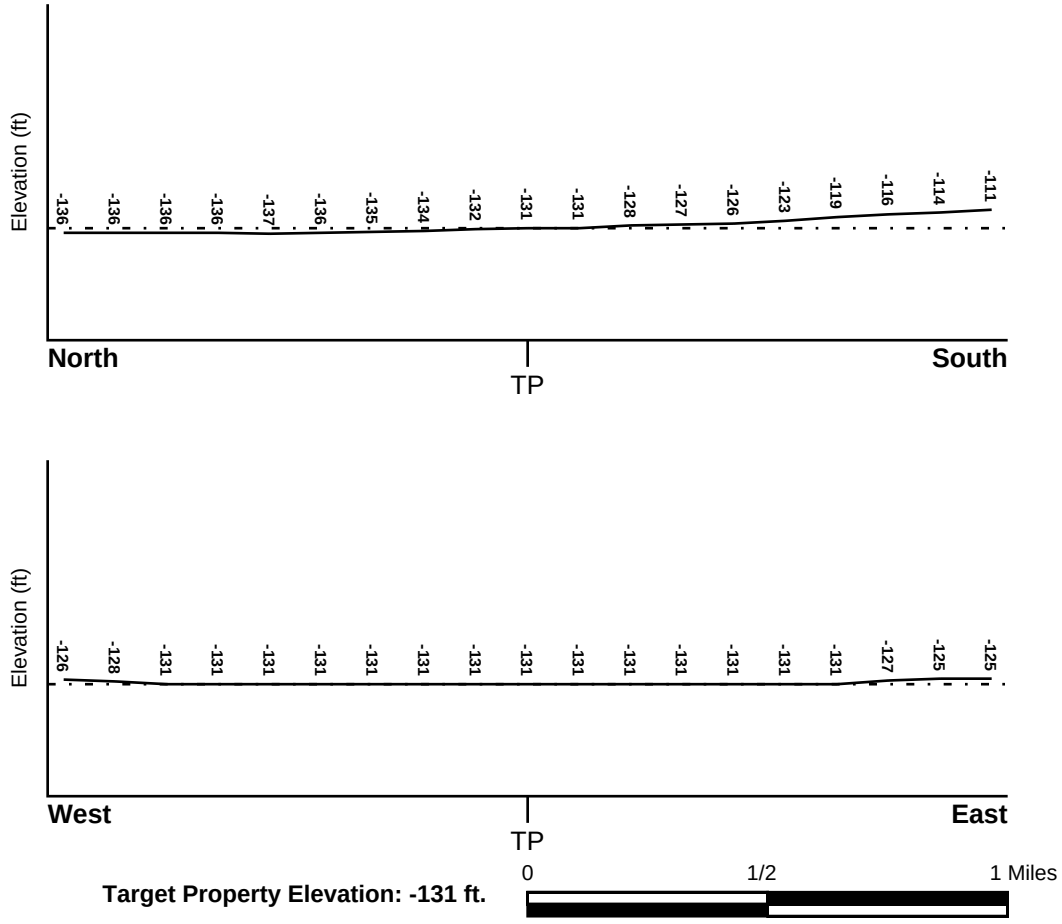
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General North

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06025C1375C	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06025C1400C	FEMA FIRM Flood data
06025C1725C	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
BRAWLEY	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

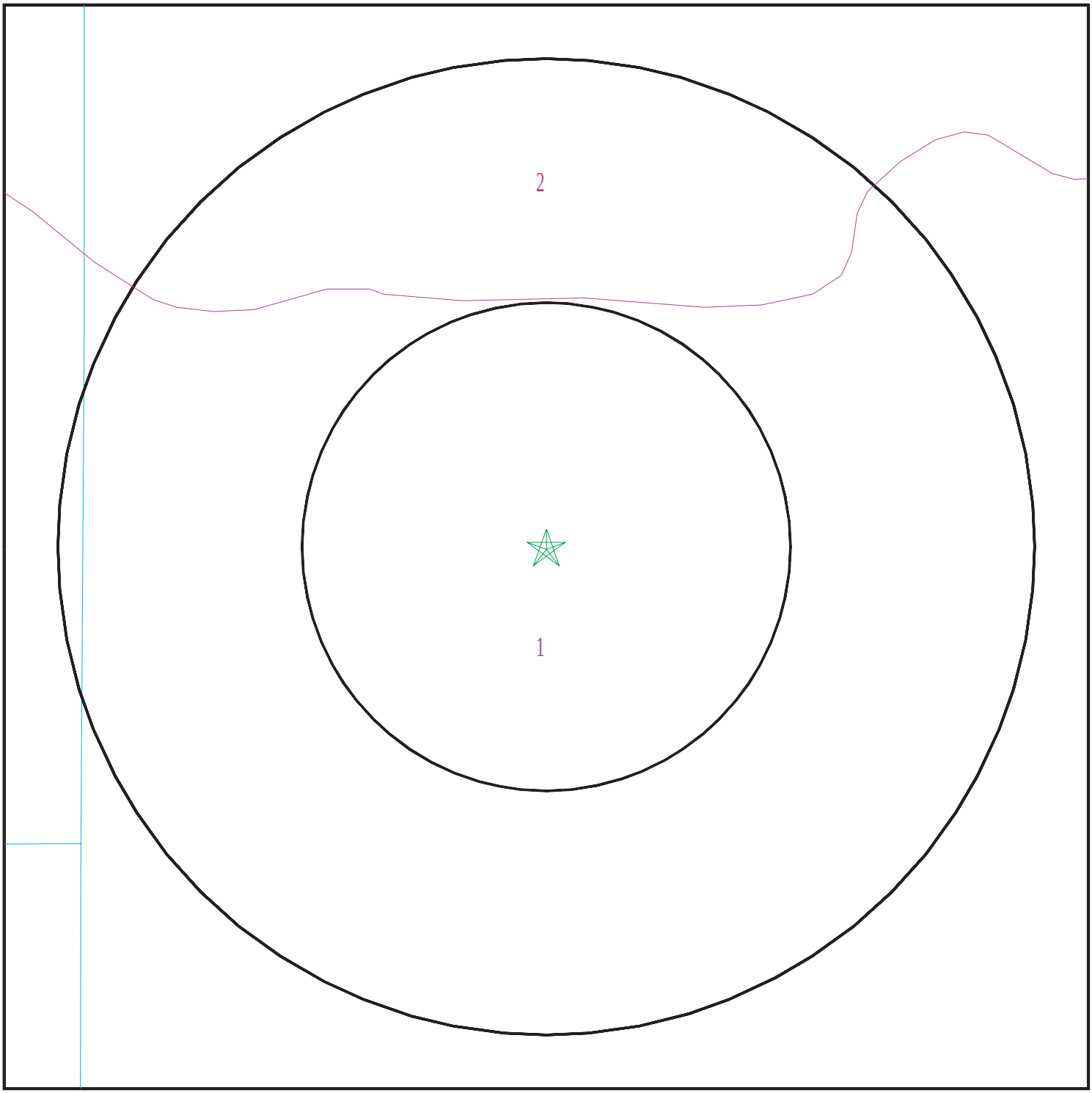
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 6471270.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Harris Road Recycling Facility	CLIENT:	GS Lyon Consultants
ADDRESS:	NEC Harris Road and Hwy 111 Imperial CA 92251	CONTACT:	Steven Williams
		INQUIRY #:	6471270.2s
LAT/LONG:	32.885664 / 115.514214	DATE:	April 30, 2021 6:49 am

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Imperial

Soil Surface Texture: silty clay loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 122 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
2	11 inches	59 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9

Soil Map ID: 2

Soil Component Name: Imperial

Soil Surface Texture: silty clay

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 122 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.4 Min: 0.42	Max: 9 Min: 8.5
2	11 inches	59 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.4 Min: 0.42	Max: 9 Min: 8.5

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A6	USGS40000129989	1/2 - 1 Mile NNW
A7	USGS40000129986	1/2 - 1 Mile NNW
A8	USGS40000129985	1/2 - 1 Mile NNW
A9	USGS40000129988	1/2 - 1 Mile NNW

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A10	USGS40000129987	1/2 - 1 Mile NNW
B19	USGS40000129990	1/2 - 1 Mile NNW
B20	USGS40000129991	1/2 - 1 Mile NNW
B21	USGS40000129992	1/2 - 1 Mile NNW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

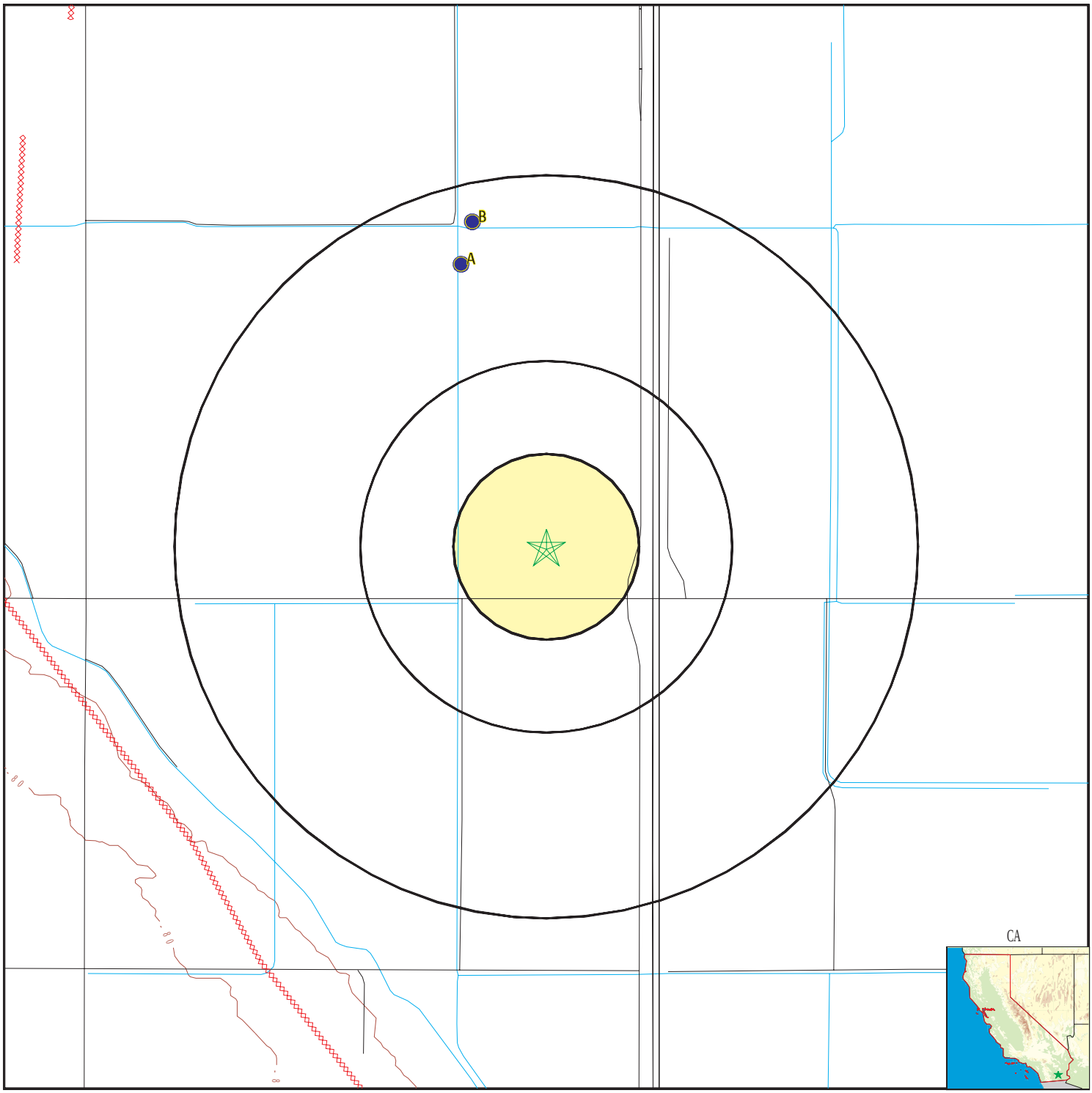
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	CAUSGSN00016757	1/2 - 1 Mile NNW
A2	CAUSGSN00018576	1/2 - 1 Mile NNW
A3	CAUSGSN00000971	1/2 - 1 Mile NNW
A4	CAUSGSN00012104	1/2 - 1 Mile NNW
A5	CAUSGSN00006579	1/2 - 1 Mile NNW
A11	CADWR8000000673	1/2 - 1 Mile NNW
A12	CADWR8000000677	1/2 - 1 Mile NNW
A13	CADWR8000000676	1/2 - 1 Mile NNW
A14	CADWR8000000674	1/2 - 1 Mile NNW
A15	CADWR8000000675	1/2 - 1 Mile NNW
B16	CAUSGSN00003945	1/2 - 1 Mile NNW
B17	CAUSGSN00008119	1/2 - 1 Mile NNW
B18	CAUSGSN00007676	1/2 - 1 Mile NNW
B22	CADWR8000000681	1/2 - 1 Mile NNW
B23	CADWR8000000682	1/2 - 1 Mile NNW
B24	CADWR8000000683	1/2 - 1 Mile NNW

PHYSICAL SETTING SOURCE MAP - 6471270.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	Harris Road Recycling Facility	CLIENT:	GS Lyon Consultants
ADDRESS:	NEC Harris Road and Hwy 111 Imperial CA 92251	CONTACT:	Steven Williams
		INQUIRY #:	6471270.2s
LAT/LONG:	32.885664 / 115.514214	DATE:	April 30, 2021 6:49 am

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A1
NNW
1/2 - 1 Mile
Lower

CA WELLS **CAUSGSN00016757**

Well ID:	USGS-325348115310103	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-325348115310103	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-325348115310103&store_num=		
GeoTracker Data:	Not Reported		

A2
NNW
1/2 - 1 Mile
Lower

CA WELLS **CAUSGSN00018576**

Well ID:	USGS-325348115310102	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-325348115310102	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-325348115310102&store_num=		
GeoTracker Data:	Not Reported		

A3
NNW
1/2 - 1 Mile
Lower

CA WELLS **CAUSGSN00000971**

Well ID:	USGS-325348115310101	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-325348115310101	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-325348115310101&store_num=		
GeoTracker Data:	Not Reported		

A4
NNW
1/2 - 1 Mile
Lower

CA WELLS **CAUSGSN00012104**

Well ID:	USGS-325348115310104	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-325348115310104	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-325348115310104&store_num=		
GeoTracker Data:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A5
NNW
1/2 - 1 Mile
Lower

CA WELLS **CAUSGSN00006579**

Well ID:	USGS-325348115310105	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-325348115310105	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-325348115310105&store_num=		
GeoTracker Data:	Not Reported		

A6
NNW
1/2 - 1 Mile
Lower

FED USGS **USGS40000129989**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	014S014E34D005S S-154 A	Type:	Well
Description:	Not Reported	HUC:	18100200
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Basin and Range basin-fill aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19890226	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	2	Level reading date:	1989-05-23
Feet below surface:	3.61	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1989-04-14	Feet below surface:	3.58
Feet to sea level:	Not Reported	Note:	Not Reported

A7
NNW
1/2 - 1 Mile
Lower

FED USGS **USGS40000129986**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	014S014E34D002S S-154 AT	Type:	Well
Description:	Not Reported	HUC:	18100200
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Basin and Range basin-fill aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19890226	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1989-05-23
Feet below surface:	Not Reported	Feet to sea level:	Not Reported

Note: The site was flowing, but the head could not be measured without additional equipment.

A8
NNW **FED USGS** **USGS40000129985**
1/2 - 1 Mile
Lower

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	014S014E34D001S S-154 AT	Type:	Well
Description:	Not Reported	HUC:	18100200
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Basin and Range basin-fill aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19890226	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1989-05-23
Feet below surface:	Not Reported	Feet to sea level:	Not Reported
Note:	The site was flowing, but the head could not be measured without additional equipment.		

A9
NNW **FED USGS** **USGS40000129988**
1/2 - 1 Mile
Lower

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	014S014E34D004S S-154 AT	Type:	Well
Description:	Not Reported	HUC:	18100200
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Basin and Range basin-fill aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19890226	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	2	Level reading date:	1989-05-23
Feet below surface:	3.39	Feet to sea level:	Not Reported
Note:	Not Reported		
Level reading date:	1989-04-14	Feet below surface:	3.33
Feet to sea level:	Not Reported	Note:	Not Reported

A10
NNW **FED USGS** **USGS40000129987**
1/2 - 1 Mile
Lower

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	014S014E34D003S S-154 AT	Type:	Well
Description:	Not Reported	HUC:	18100200
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported

Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Basin and Range basin-fill aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19890226	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	2	Level reading date:	1989-05-23
Feet below surface:	-0.07	Feet to sea level:	Not Reported
Note:	Not Reported		
Level reading date:	1989-04-14	Feet below surface:	-0.21
Feet to sea level:	Not Reported	Note:	Not Reported

A11
NNW
1/2 - 1 Mile
Lower

CA WELLS **CADWR8000000673**

State Well #:	14S14E34D001S	Station ID:	15772
Well Name:	Not Reported	Well Use:	Unknown
Well Type:	Unknown	Well Depth:	0
Basin Name:	Imperial Valley	Well Completion Rpt #:	Not Reported

---

A12
NNW
1/2 - 1 Mile
Lower

CA WELLS **CADWR8000000677**

State Well #:	14S14E34D005S	Station ID:	32731
Well Name:	Not Reported	Well Use:	Unknown
Well Type:	Unknown	Well Depth:	0
Basin Name:	Imperial Valley	Well Completion Rpt #:	Not Reported

---

A13
NNW
1/2 - 1 Mile
Lower

CA WELLS **CADWR8000000676**

State Well #:	14S14E34D004S	Station ID:	15774
Well Name:	Not Reported	Well Use:	Unknown
Well Type:	Unknown	Well Depth:	0
Basin Name:	Imperial Valley	Well Completion Rpt #:	Not Reported

---

A14
NNW
1/2 - 1 Mile
Lower

CA WELLS **CADWR8000000674**

State Well #:	14S14E34D002S	Station ID:	15773
Well Name:	Not Reported	Well Use:	Unknown
Well Type:	Unknown	Well Depth:	0
Basin Name:	Imperial Valley	Well Completion Rpt #:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A15
NNW
1/2 - 1 Mile
Lower

CA WELLS **CADWR8000000675**

State Well #:	14S14E34D003S	Station ID:	32730
Well Name:	Not Reported	Well Use:	Unknown
Well Type:	Unknown	Well Depth:	0
Basin Name:	Imperial Valley	Well Completion Rpt #:	Not Reported

---

B16
NNW
1/2 - 1 Mile
Lower

CA WELLS **CAUSGSN00003945**

Well ID:	USGS-325354115310002	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-325354115310002	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-325354115310002&store_num=		
GeoTracker Data:	Not Reported		

B17
NNW
1/2 - 1 Mile
Lower

CA WELLS **CAUSGSN00008119**

Well ID:	USGS-325354115310001	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-325354115310001	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-325354115310001&store_num=		
GeoTracker Data:	Not Reported		

B18
NNW
1/2 - 1 Mile
Lower

CA WELLS **CAUSGSN00007676**

Well ID:	USGS-325354115310003	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-325354115310003	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-325354115310003&store_num=		
GeoTracker Data:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

B19
NNW
1/2 - 1 Mile
Lower

FED USGS **USGS40000129990**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	014S014E27N01SLYS S-154		
Type:	Well: Test hole not completed as a well		
Description:	Not Reported	HUC:	18100200
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Basin and Range basin-fill aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19890226	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	3	Level reading date:	1989-07-19
Feet below surface:	2.77	Feet to sea level:	Not Reported
Note:	Not Reported		
Level reading date:	1989-05-23	Feet below surface:	6.55
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1989-04-14	Feet below surface:	8.65
Feet to sea level:	Not Reported	Note:	Not Reported

B20
NNW
1/2 - 1 Mile
Lower

FED USGS **USGS40000129991**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	014S014E27N02SLYS S-154		
Type:	Well: Test hole not completed as a well		
Description:	Not Reported	HUC:	18100200
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Basin and Range basin-fill aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19890226	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	3	Level reading date:	1989-07-19
Feet below surface:	5.37	Feet to sea level:	Not Reported
Note:	Not Reported		
Level reading date:	1989-05-23	Feet below surface:	6.61
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1989-04-14	Feet below surface:	8.70
Feet to sea level:	Not Reported	Note:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

B21
NNW
1/2 - 1 Mile
Lower

FED USGS **USGS40000129992**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	014S014E27N03SLYS S-154		
Type:	Well: Test hole not completed as a well		
Description:	Not Reported	HUC:	18100200
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Basin and Range basin-fill aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19890226	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	3	Level reading date:	1989-07-19
Feet below surface:	7.18	Feet to sea level:	Not Reported
Note:	Not Reported		
Level reading date:	1989-05-23	Feet below surface:	6.54
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1989-04-14	Feet below surface:	8.74
Feet to sea level:	Not Reported	Note:	Not Reported

B22
NNW
1/2 - 1 Mile
Lower

CA WELLS **CADWR8000000681**

State Well #:	14S14E27N001S	Station ID:	15088
Well Name:	Not Reported	Well Use:	Unknown
Well Type:	Unknown	Well Depth:	0
Basin Name:	Imperial Valley	Well Completion Rpt #:	Not Reported

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B23
NNW
1/2 - 1 Mile
Lower

CA WELLS **CADWR8000000682**

State Well #:	14S14E27N002S	Station ID:	15089
Well Name:	Not Reported	Well Use:	Unknown
Well Type:	Unknown	Well Depth:	0
Basin Name:	Imperial Valley	Well Completion Rpt #:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

B24
NNW
1/2 - 1 Mile
Lower

CA WELLS **CADWR8000000683**

State Well #:	14S14E27N003S	Station ID:	15090
Well Name:	Not Reported	Well Use:	Unknown
Well Type:	Unknown	Well Depth:	0
Basin Name:	Imperial Valley	Well Completion Rpt #:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92251	11	0

Federal EPA Radon Zone for IMPERIAL County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for IMPERIAL COUNTY, CA

Number of sites tested: 2

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.450 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

Groundwater Ambient Monitoring & Assessment Program
State Water Resources Control Board
Telephone: 916-341-5577
The GAMA Program is Californias comprehensive groundwater quality monitoring program. GAMA collects data by testing the untreated, raw water in different types of wells for naturally-occurring and man-made chemicals. The GAMA data includes Domestic, Monitoring and Municipal well types from the following sources, Department of Water Resources, Department of Heath Services, EDF, Agricultural Lands, Lawrence Livermore National Laboratory, Department of Pesticide Regulation, United States Geological Survey, Groundwater Ambient Monitoring and Assessment Program and Local Groundwater Projects.

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

California Oil and Gas Well Locations
Source: Dept of Conservation, Geologic Energy Management Division
Telephone: 916-323-1779
Oil and Gas well locations in the state.

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

PHYSICAL SETTING SOURCE RECORDS SEARCHED

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

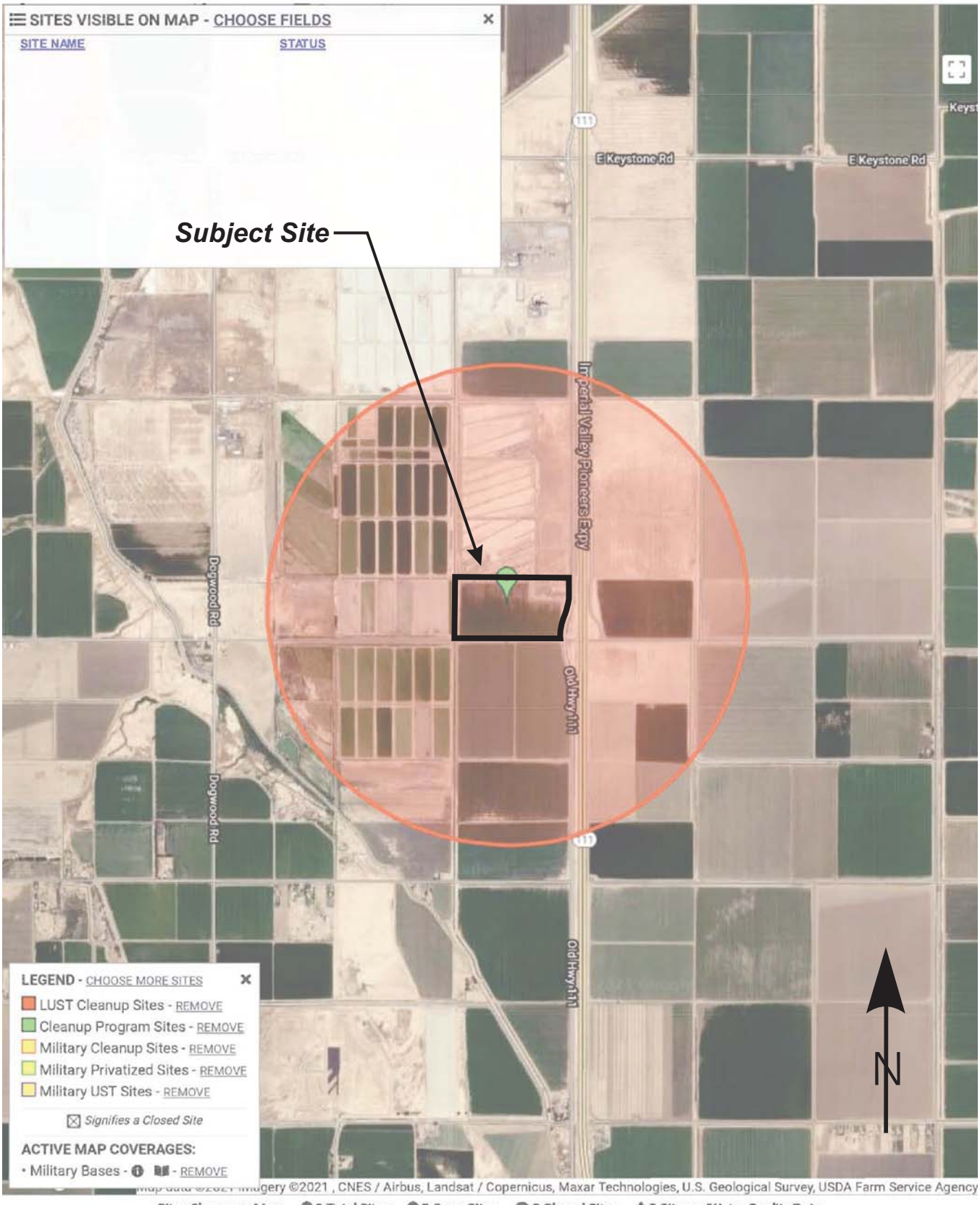
Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

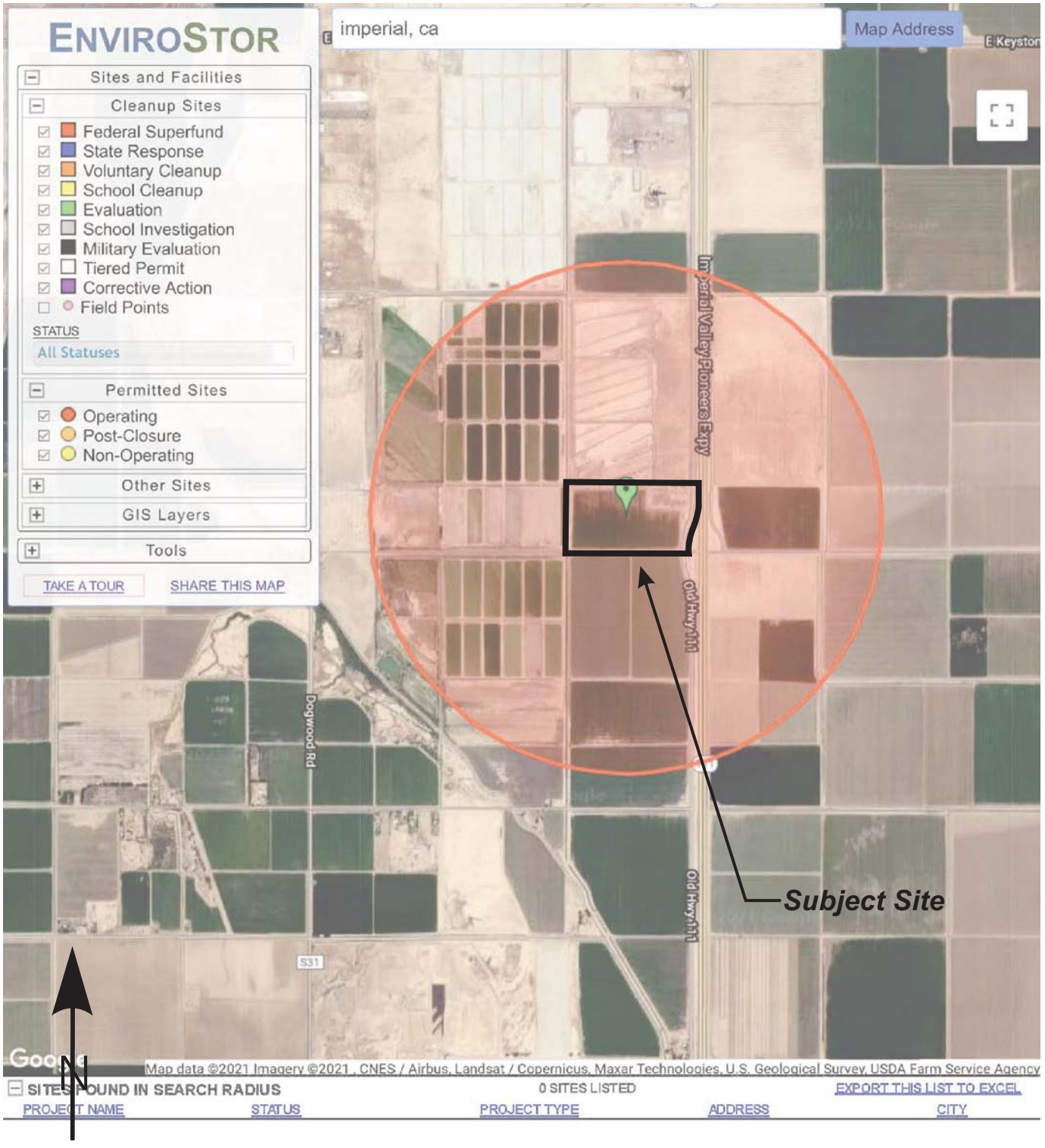
California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

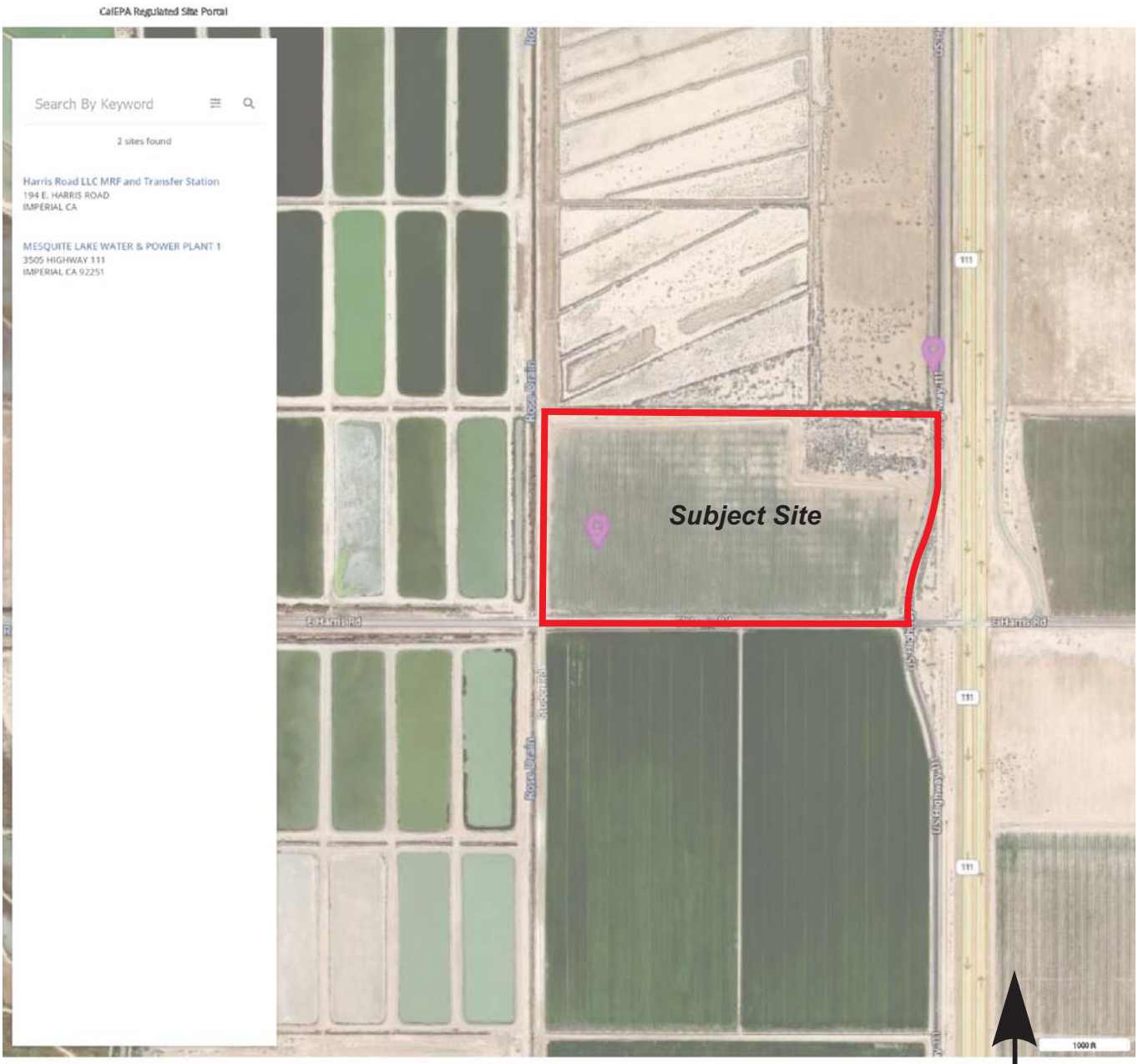
APPENDIX G



GS Lyon Project No.: GS2110	Geotracker Map	Plate 6



GS Lyon Project No.: GS2110	Envirostor Map	Plate 7



GS Lyon

Project No.: GS2110

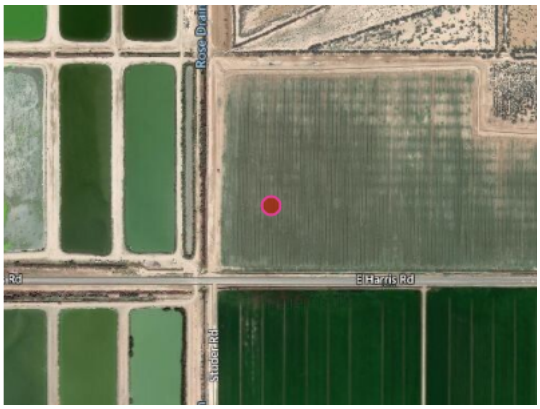
CalEPA Map

Plate 8

Site Report

Harris Road LLC MRF and Transfer Station

194 E. HARRIS ROAD
IMPERIAL, CA



County	Imperial County
CalEnviroscreen 3.0 Percentile Range	71-75%

Alternate IDs

Facilities Explorer ID	509121

Regulatory Programs

Description	Source System	Program Id	Start Date	End Date
Solid Waste and Recycle Sites	Solid Waste Information System (SWIS)	13-AA-0111	06/30/2009	

Site Contacts

Name	Title	Phone	Address
Harris Road LLC		7607743825	Gordon W. Beers8 Cielo Vista Court Rancho Mirage, CA 92270-3200

Harris Road Recycling Facility
NEC Harris Road and Hwy 111
Imperial, CA 92251

Inquiry Number: 6471270.6
April 28, 2021

The EDR Property Tax Map Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

EDR Property Tax Map Report

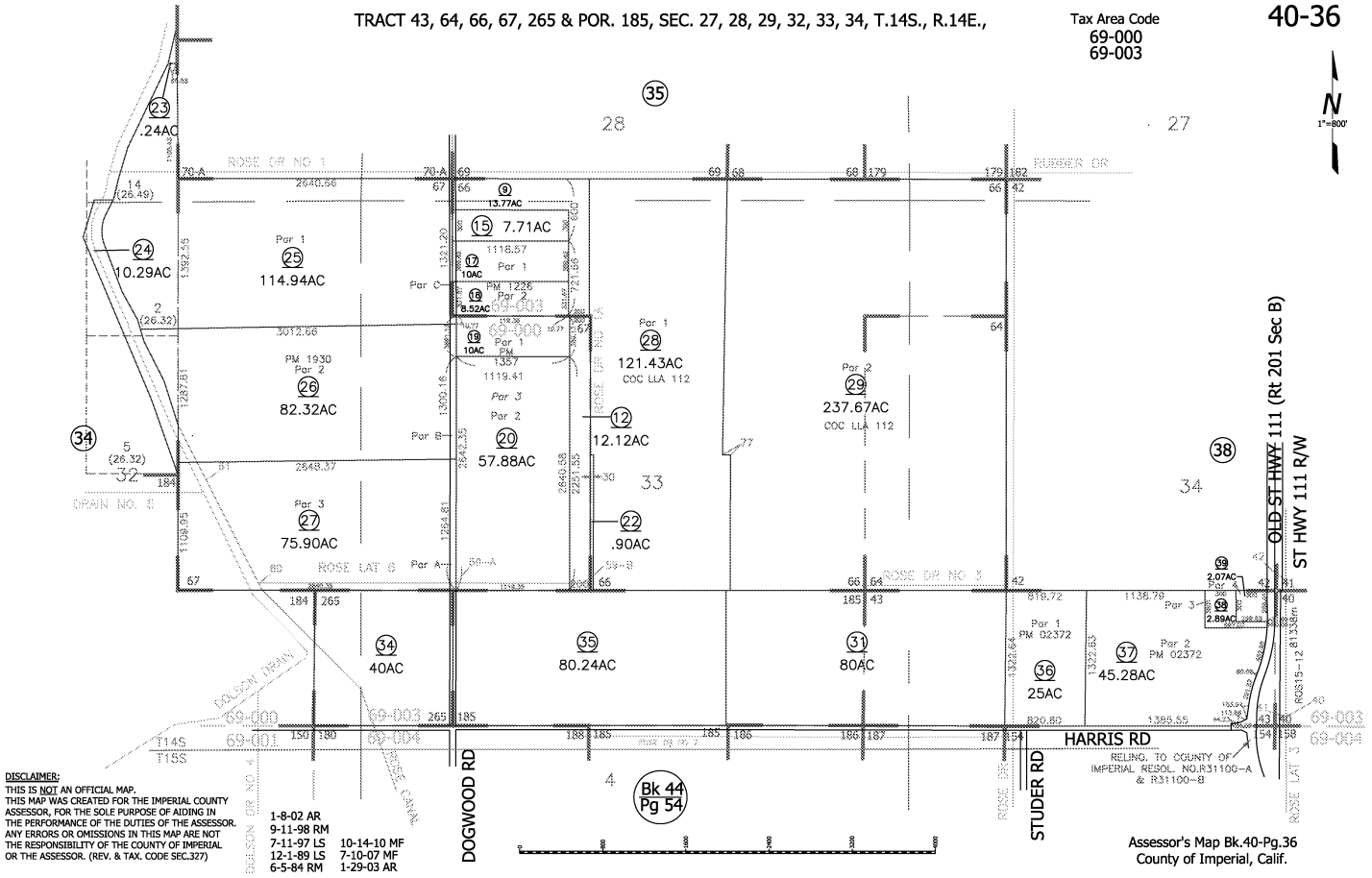
Environmental Data Resources, Inc.'s EDR Property Tax Map Report is designed to assist environmental professionals in evaluating potential environmental conditions on a target property by understanding property boundaries and other characteristics. The report includes a search of available property tax maps, which include information on boundaries for the target property and neighboring properties, addresses, parcel identification numbers, as well as other data typically used in property location and identification.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

TRACT 43, 64, 66, 67, 265 & POR. 185, SEC. 27, 28, 29, 32, 33, 34, T.14S., R.14E.,

Tax Area Code
69-000
69-003

40-36



DISCLAIMER:
THIS IS NOT AN OFFICIAL MAP.
THIS MAP WAS CREATED FOR THE IMPERIAL COUNTY ASSESSOR, FOR THE SOLE PURPOSE OF AIDING IN THE PERFORMANCE OF THE DUTIES OF THE ASSESSOR. ANY ERRORS OR OMISSIONS IN THIS MAP ARE NOT THE RESPONSIBILITY OF THE COUNTY OF IMPERIAL OR THE ASSESSOR. (REV. & TAX. CODE SEC.327)

1-8-02 AR
9-11-98 RM
7-11-97 LS 10-14-10 MF
12-1-89 LS 7-10-07 MF
6-5-84 RM 1-29-03 AR

Assessor's Map Bk.40-Pg.36
County of Imperial, Calif.

First American	ALTA Commitment for Title Insurance
Commitment	ISSUED BY **First American Title Insurance Company** File No: NCS-1065511-PHX1

COMMITMENT FOR TITLE INSURANCE

Issued By

FIRST AMERICAN TITLE INSURANCE COMPANY

NOTICE

IMPORTANT-READ CAREFULLY: THIS COMMITMENT IS AN OFFER TO ISSUE ONE OR MORE TITLE INSURANCE POLICIES. ALL CLAIMS OR REMEDIES SOUGHT AGAINST THE COMPANY INVOLVING THE CONTENT OF THIS COMMITMENT OR THE POLICY MUST BE BASED SOLELY IN CONTRACT.

THIS COMMITMENT IS NOT AN ABSTRACT OF TITLE, REPORT OF THE CONDITION OF TITLE, LEGAL OPINION, OPINION OF TITLE, OR OTHER REPRESENTATION OF THE STATUS OF TITLE. THE PROCEDURES USED BY THE COMPANY TO DETERMINE INSURABILITY OF THE TITLE, INCLUDING ANY SEARCH AND EXAMINATION, ARE PROPRIETARY TO THE COMPANY, WERE PERFORMED SOLELY FOR THE BENEFIT OF THE COMPANY, AND CREATE NO EXTRACONTRACTUAL LIABILITY TO ANY PERSON, INCLUDING A PROPOSED INSURED.

THE COMPANY'S OBLIGATION UNDER THIS COMMITMENT IS TO ISSUE A POLICY TO A PROPOSED INSURED IDENTIFIED IN SCHEDULE A IN ACCORDANCE WITH THE TERMS AND PROVISIONS OF THIS COMMITMENT. THE COMPANY HAS NO LIABILITY OR OBLIGATION INVOLVING THE CONTENT OF THIS COMMITMENT TO ANY OTHER PERSON.

COMMITMENT TO ISSUE POLICY

Subject to the Notice; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and the Commitment Conditions, ***First American Title Insurance Company***, a Nebraska Corporation (the "Company"), commits to issue the Policy according to the terms and provisions of this Commitment. This Commitment is effective as of the Commitment Date shown in Schedule A for each Policy described in Schedule A, only when the Company has entered in Schedule A both the specified dollar amount as the Proposed Policy Amount and the name of the Proposed Insured.

If all of the Schedule B, Part I-Requirements have not been met within six months after the Commitment Date, this Commitment terminates and the Company's liability and obligation end.

First American Title Insurance Company

Dennis J. Gilmore, President

Greg L. Smith, Secretary

If this jacket was created electronically, it constitutes an original document.

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by First American Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions.

COMMITMENT CONDITIONS

1. DEFINITIONS

(a) "Knowledge" or "Known": Actual or imputed knowledge, but not constructive notice imparted by the Public Records.
(b) "Land": The land described in Schedule A and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways, or waterways, but this does not modify or limit the extent that a right of access to and from the Land is to be insured by the Policy.
(c) "Mortgage": A mortgage, deed of trust, or other security instrument, including one evidenced by electronic means authorized by law.
(d) "Policy": Each contract of title insurance, in a form adopted by the American Land Title Association, issued or to be issued by the Company pursuant to this Commitment.
(e) "Proposed Insured": Each person identified in Schedule A as the Proposed Insured of each Policy to be issued pursuant to this Commitment.
(f) "Proposed Policy Amount": Each dollar amount specified in Schedule A as the Proposed Policy Amount of each Policy to be issued pursuant to this Commitment.
(g) "Public Records": Records established under state statutes at the Commitment Date for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge.
(h) "Title": The estate or interest described in Schedule A.

2. If all of the Schedule B, Part I—Requirements have not been met within the time period specified in the Commitment to Issue Policy, this Commitment terminates and the Company's liability and obligation end.

3. The Company's liability and obligation is limited by and this Commitment is not valid without:
(a) the Notice;
(b) the Commitment to Issue Policy;
(c) the Commitment Conditions;
(d) Schedule A;
(e) Schedule B, Part I—Requirements; and
(f) Schedule B, Part II—Exceptions.

4. COMPANY'S RIGHT TO AMEND

The Company may amend this Commitment at any time. If the Company amends this Commitment to add a defect, lien, encumbrance, adverse claim, or other matter recorded in the Public Records prior to the Commitment Date, any liability of the Company is limited by Commitment Condition 5. The Company shall not be liable for any other amendment to this Commitment.

5. LIMITATIONS OF LIABILITY

(a) The Company's liability under Commitment Condition 4 is limited to the Proposed Insured's actual expense incurred in the interval between the Company's delivery to the Proposed Insured of the Commitment and the delivery of the amended Commitment, resulting from the Proposed Insured's good faith reliance to:
  (i) comply with the Schedule B, Part I—Requirements;
  (ii) eliminate, with the Company's written consent, any Schedule B, Part II—Exceptions; or
  (iii) acquire the Title or create the Mortgage covered by this Commitment.
(b) The Company shall not be liable under Commitment Condition 5(a) if the Proposed Insured requested the amendment or had Knowledge of the matter and did not notify the Company about it in writing.
(c) The Company will only have liability under Commitment Condition 4 if the Proposed Insured would not have incurred the expense had the Commitment included the added matter when the Commitment was first delivered to the Proposed Insured.
(d) The Company's liability shall not exceed the lesser of the Proposed Insured's actual expense incurred in good faith and described in Commitment Conditions 5(a)(i) through 5(a)(iii) or the Proposed Policy Amount.
(e) The Company shall not be liable for the content of the Transaction Identification Data, if any.
(f) In no event shall the Company be obligated to issue the Policy referred to in this Commitment unless all of the Schedule B, Part I—Requirements have been met to the satisfaction of the Company.
(g) In any event, the Company's liability is limited by the terms and provisions of the Policy.

6. LIABILITY OF THE COMPANY MUST BE BASED ON THIS COMMITMENT

(a) Only a Proposed Insured identified in Schedule A, and no other person, may make a claim under this Commitment.
(b) Any claim must be based in contract and must be restricted solely to the terms and provisions of this Commitment.
(c) Until the Policy is issued, this Commitment, as last revised, is the exclusive and entire agreement between the parties with respect to the subject matter of this Commitment and supersedes all prior commitment negotiations, representations, and proposals of any kind, whether written or oral, express or implied, relating to the subject matter of this Commitment.
(d) The deletion or modification of any Schedule B, Part II—Exception does not constitute an agreement or obligation to provide coverage beyond the terms and provisions of this Commitment or the Policy.
(e) Any amendment or endorsement to this Commitment must be in writing and authenticated by a person authorized by the Company.
(f) When the Policy is issued, all liability and obligation under this Commitment will end and the Company's only liability will be under the Policy.

7. IF THIS COMMITMENT HAS BEEN ISSUED BY AN ISSUING AGENT

The issuing agent is the Company's agent only for the limited purpose of issuing title insurance commitments and policies. The issuing agent is not the Company's agent for the purpose of providing closing or settlement services.

8. PRO-FORMA POLICY

The Company may provide, at the request of a Proposed Insured, a pro-forma policy illustrating the coverage that the Company may provide. A pro-forma policy neither reflects the status of Title at the time that the pro-forma policy is delivered to a Proposed Insured, nor is it a commitment to insure.

9. ARBITRATION

Arbitration provision intentionally removed.

Transaction Identification Data for reference only:

Issuing Agent: First American Title Insurance Company National Commercial Services
Commitment No.: NCS-1065511-PHX1
Property Address: 194 East Harris Road, Imperial, CA
Revision No.:

Issuing Office: 2425 E. Camelback Road, Suite 300, Phoenix, AZ 85016
Issuing Office File No.: NCS-1065511-PHX1
Escrow Officer/Assistant: Alix Graham/
Phone: (602)567-8141/
Email: agraham@firstam.com/
Title Officer/Assistant: Richard E. Brown/
Phone: (602)567-8100/
Email: ribrown@firstam.com/

SCHEDULE A

1. Commitment Date: May 11, 2021 at 7:30 AM
2. Policy to be issued:

   (a) ☒ 2006 ALTA® Extended Owner Policy
   Proposed Insured: True North Renewable Energy LLC, a Delaware limited liability company
   Proposed Policy Amount: $ 3,085,000.00

   (b) ☐ 2006 ALTA® Policy
   Proposed Insured:
   Proposed Policy Amount: $ 0.00

   (c) ☐ 2006 ALTA® Policy
   Proposed Insured:
   Proposed Policy Amount: $

3. The estate or interest in the Land described or referred to in this Commitment is

   Fee

4. The Title is, at the Commitment Date, vested in:

   Harris Road LLC, A California Limited Liability Company

5. The Land is described as follows:

   See Exhibit "A" attached hereto and made a part hereof

Commitment No.: NCS-1065511-PHX1

SCHEDULE B, PART I

Requirements

All of the following Requirements must be met:

A. The Proposed Insured must notify the Company in writing of the name of any party not referred to in this Commitment who will obtain an interest in the Land or who will make a loan on the Land. The Company may then make additional Requirements or Exceptions.

B. Pay the agreed amount for the estate or interest to be insured.

C. Pay the premiums, fees, and charges for the Policy to the Company.

D. Documents satisfactory to the Company that convey the Title or create the Mortgage to be insured, or both, must be properly authorized, executed, delivered, and recorded in the Public Records.

E. Releases(s) or Reconveyance(s) of Item(s): None

F. Other: None

G. You must give us the following information:
   a. Any off record leases, surveys, etc.
   b. Statement(s) of Identity, all parties.
   c. Other: None

The following additional requirements, as indicated by "X", must be met:

[X] H. Provide information regarding any off-record matters, which may include, but are not limited to: leases, recent works of improvement, or commitment statements in effect under the Environmental Responsibility Acceptance Act, Civil Code Section 850, et seq.

The Company's Owner's Affidavit form (as provided by the company) must be completed and submitted prior to close in order to satisfy this requirement. This Commitment will then be subject to such further exceptions and/or requirements as may be deemed necessary.

[X] I. An ALTA/NSPS survey of recent date, which complies with the current minimum standard detail requirements for ALTA/NSPS land title surveys, must be submitted to the Company for review. This Commitment will then be subject to such further exceptions and/or requirements as may be deemed necessary.

[X] J. The following LLC documentation is required from:

(i) a copy of the Articles of Organization
(ii) a copy of the Operating Agreement, if applicable
(iii) a Certificate of Good Standing and/or other evidence of current Authority to Conduct Business within the State
(iv) express Company Consent to the current transaction

[] K. The following partnership documentation is required **:**

(i) a copy of the partnership agreement, including all applicable amendments thereto
(ii) a Certificate of Good Standing and/or other evidence of current Authority to Conduct Business within the State
(iii) express Partnership Consent to the current transaction

[] L. The following corporation documentation is required:

(i) a copy of the Articles of Incorporation
(ii) a copy of the Bylaws, including all applicable Amendments thereto
(iii) a Certificate of Good Standing and/or other evidence of current Authority to Conduct Business within the State
(iv) express Corporate Resolution consenting to the current transaction

[X] M. Based upon the Company's review of that certain partnership/operating agreement dated **Not disclosed** for the proposed insured herein, the following requirements must be met:
Any further amendments to said agreement must be submitted to the Company, together with an affidavit from one of the general partners or members stating that it is a true copy, that said partnership or limited liability company is in full force and effect, and that there have been no further amendments to the agreement. This Commitment will then be subject to such further requirements as may be deemed necessary.

[] N. A copy of the complete lease, as referenced in Schedule A, #3 herein, together with any amendments and/or assignments thereto, must be submitted to the Company for review, along with an affidavit executed by the present lessee stating that it is a true copy, that the lease is in full force and effect, and that there have been no further amendments to the lease. This Commitment will then be subject to such further requirements as may be deemed necessary.

[X] O. Approval from the Company's Underwriting Department must be obtained for issuance of the policy contemplated herein and any endorsements requested thereunder. This Commitment will then be subject to such further requirements as may be required to obtain such approval.

[] P. Potential additional requirements, if ALTA Extended coverage is contemplated hereunder, and work on the land has commenced prior to close, some or all of the following requirements, and any other requirements which may be deemed necessary, may need to be met:

[] Q. The Company's "Indemnity Agreement I" must be executed by the appropriate parties.

[] R. Financial statements from the appropriate parties must be submitted to the Company for review.

[] S. A copy of the construction contract must be submitted to the Company for review.

[] T. An inspection of the Land must be performed by the Company for verification of the phase of construction.

[] U. The Company's "Mechanic's Lien Risk Addendum" form must be completed by a Company employee, based upon information furnished by the appropriate parties involved.

Commitment No.: NCS-1065511-PHX1

SCHEDULE B, PART II

Exceptions

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

The Policy will not insure against loss or damage resulting from the terms and provisions of any lease or easement identified in Schedule A, and will include the following Exceptions unless cleared to the satisfaction of the Company:

1. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I-Requirements are met.

2. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.

3. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.

4. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.

5. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.

6. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.

7. General and special taxes and assessments for the fiscal year 2021-2022, a lien not yet due or payable.

8. The terms and provisions contained in the document entitled "An Agreement for Right of Way" recorded June 01, 1925 as Book 83, Page 200 of official records.

9. An easement for power line and necessary appurtenances and incidental purposes, recorded December 03, 1937 as Book 473, Page 539 of official records.

   In Favor of: Imperial Irrigation District
   Affects: as described therein

   The location of the easement cannot be determined from record information.

10. An easement for irrigation, waste or drainage canals, or power or telephone lines and incidental purposes, recorded December 11, 1943 as Book 614, Page 313 of official records.

    In Favor of: Imperial Irrigation District
    Affects: as described therein

    The location of the easement cannot be determined from record information.

11. The terms and provisions contained in the document entitled "Conditional Use Permit Cup#06-0008 (Waste Collection/Material recovery facility/transfer station)" recorded June 01, 2006 as Instrument no. 2006-026628 of official records.

12. An easement shown or dedicated on the map of Parcel Map No. 02372 recorded April 17, 2007 on file in Book 12, Page 99, of Parcel Maps.
    For: Rose Drain and incidental purposes.

    (Affects Parcel One)

13. A lease dated April 21, 2008, executed by Joe Omlin and Roberta Omlin as lessor and Western GeoPower., Inc., a California Corporation as lessee, recorded January 05, 2009 as Instrument No. 2009-163 of Official Records.

    Affects: The land and other property.

    Defects, liens, encumbrances or other matters affecting the leasehold estate, whether or not shown by the public records are not shown herein.

14. Any claim that the Title is subject to a trust or lien created under The Perishable Agricultural Commodities Act, 1930 (7 U.S.C. §§499a, et seq.) or the Packers and Stockyards Act (7 U.S.C. §§181 et seq.) or under similar state laws.

    (Affects Parcels One and Two)

15. Additional matters, if any, following review by the Company's Waterways and Boundaries Underwriters.

16. Water rights, claims or title to water, whether or not shown by the Public Records.

17. We find no outstanding voluntary liens of record affecting subject property. An inquiry should be made concerning the existence of any unrecorded lien or other indebtedness which could give rise to any security interest in the subject property.

18. Any facts, rights, interests or claims which would be disclosed by a correct ALTA/NSPS survey.

19. Rights of parties in possession.

ALERT - CA Senate Bill 2 imposes an additional fee of $75 up to $225 at the time of recording on certain transactions effective January 1, 2018. Please contact your First American Title representative for more information on how this may affect your closing.

1. Taxes for proration purposes only for the fiscal year 2020-2021.

   First Installment: $743.38, PAID
   Second Installment: $743.38, PAID
   Tax Rate Area: 069003
   APN: 040-360-036-000

   (Affects Parcel One)

2. Taxes for proration purposes only for the fiscal year 2020-2021.

   First Installment: $1,342.75, PAID
   Second Installment: $1,342.75, PAID
   Tax Rate Area: 069003
   APN: 040-360-037-000

   (Affects Parcel Two)

3. Taxes for proration purposes only for the fiscal year 2020-2021.

   First Installment: $89.25, PAID
   Second Installment: $89.25, PAID
   Tax Rate Area: 069003
   APN: 040-360-038-000

   (Affects Parcel Three)

4. Taxes for proration purposes only for the fiscal year 2020-2021.

   First Installment: $65.01, PAID
   Second Installment: $65.01, PAID
   Tax Rate Area: 069003
   APN: 040-360-039-000

   (Affects Parcel Four)

5. The property covered by this report is vacant land.

6. According to the public records, there has been no conveyance of the land within a period of twenty-four months prior to the date of this report, except as follows:

   None

7. This preliminary report/commitment was prepared based upon an application for a policy of title insurance that identified land by street address or assessor's parcel number only. It is the responsibility of the applicant to determine whether the land referred to herein is in fact the land that is to be described in the policy or policies to be issued.

The map attached, if any, may or may not be a survey of the land depicted thereon. First American Title Insurance Company expressly disclaims any liability for loss or damage which may result from reliance on this map except to the extent coverage for such loss or damage is expressly provided by the terms and provisions of this Commitment or the Policy, if any, to which the map is attached.

Exhibit A

File No.: NCS-1065511-PHX1

The Land referred to herein below is situated in the Unincorporated area of , County of Imperial, State of California, and is described as follows:

TRACT 43, TOWNSHIP 14 SOUTH, RANGE 14 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.
EXCEPTING THEREFROM THE WEST FORTY ACRES THEREOF.

ALSO EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE STATE OF CALIFORNIA BY DEED RECORDED SEPTEMBER 14, 2001, IN BOOK 2080, PAGE 1224 OF OFFICIAL RECORDS OF IMPERIAL COUNTY.

THE ABOVE LEGAL DESCRIPTION IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

PARCEL ONE:

PARCEL 1 AS SHOWN ON PARCEL MAP NO. 02372, IN THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, RECORDED APRIL 17, 2007 IN BOOK 12 OF PARCEL MAPS AT PAGE 99 OF SAID COUNTY.

PARCEL TWO:

PARCEL 2 AS SHOWN ON PARCEL MAP NO. 02372, IN THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, RECORDED APRIL 17, 2007 IN BOOK 12 OF PARCEL MAPS AT PAGE 99 OF SAID COUNTY.

PARCEL THREE:

PARCEL 3 AS SHOWN ON PARCEL MAP NO. 02372, IN THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, RECORDED APRIL 17, 2007 IN BOOK 12 OF PARCEL MAPS AT PAGE 99 OF SAID COUNTY.

PARCEL FOUR:

PARCEL 4 AS SHOWN ON PARCEL MAP NO. 02372, IN THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, RECORDED APRIL 17, 2007 IN BOOK 12 OF PARCEL MAPS AT PAGE 99 OF SAID COUNTY.

For conveyancing purposes only: APN 040-360-036-000 (Parcel One)
040-360-037-000 (Parcel Two)
040-360-038-000 (Parcel Three)
040-360-039-000 (Parcel Four)

APPENDIX H

Harris Road Recycling Facility
NEC Harris Road and Hwy 111
Imperial, CA 92251

Inquiry Number: 6471270.5
April 29, 2021

The EDR-City Directory Image Report

Environmental Data Resources Inc
6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

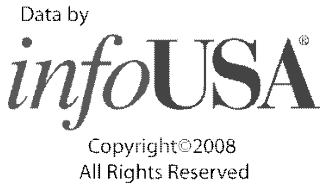
DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

EDR is licensed to reproduce certain City Directory works by the copyright holders of those works. The purchaser of this EDR City Directory Report may include it in report(s) delivered to a customer. Reproduction of City Directories without permission of the publisher or licensed vendor may be a violation of copyright.



RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2017	☑	☐	EDR Digital Archive
2014	☑	☐	EDR Digital Archive
2010	☑	☐	EDR Digital Archive
2005	☑	☐	EDR Digital Archive
2000	☑	☐	EDR Digital Archive
1995	☑	☐	EDR Digital Archive
1992	☑	☐	EDR Digital Archive
1987	☐	☐	POLK DIRECTORY CO
1982	☐	☐	POLK DIRECTORY CO
1977	☐	☐	POLK DIRECTORY CO
1972	☐	☐	POLK DIRECTORY CO
1967	☐	☐	POLK DIRECTORY CO
1963	☐	☐	POLK DIRECTORY CO
1959	☐	☐	POLK DIRECTORY CO

EXECUTIVE SUMMARY

Year	***Target Street***	***Cross Street***	***Source***

FINDINGS

TARGET PROPERTY STREET

NEC Harris Road and Hwy 111
Imperial, CA 92251

Year	*CD Image*	*Source*	
E HARRIS RD			
2017	pg A1	EDR Digital Archive	
2014	pg A3	EDR Digital Archive	
2010	pg A5	EDR Digital Archive	
2005	pg A7	EDR Digital Archive	
2000	pg A9	EDR Digital Archive	
1992	pg A14	EDR Digital Archive	
1987	-	POLK DIRECTORY CO	Street not listed in Source
1982	-	POLK DIRECTORY CO	Street not listed in Source
1977	-	POLK DIRECTORY CO	Street not listed in Source
1972	-	POLK DIRECTORY CO	Street not listed in Source
1967	-	POLK DIRECTORY CO	Street not listed in Source
1963	-	POLK DIRECTORY CO	Street not listed in Source
1959	-	POLK DIRECTORY CO	Street not listed in Source
HARRIS RD			
1995	pg A12	EDR Digital Archive	
HIGHWAY 111			
2000	pg A10	EDR Digital Archive	
US HIGHWAY 111			
2017	pg A2	EDR Digital Archive	
2014	pg A4	EDR Digital Archive	
2010	pg A6	EDR Digital Archive	
2005	pg A8	EDR Digital Archive	
2000	pg A11	EDR Digital Archive	
1995	pg A13	EDR Digital Archive	

FINDINGS

Year	***CD Image***	***Source***	
1992	pg A15	EDR Digital Archive	
1987	-	POLK DIRECTORY CO	Street not listed in Source
1982	-	POLK DIRECTORY CO	Street not listed in Source
1977	-	POLK DIRECTORY CO	Street not listed in Source
1972	-	POLK DIRECTORY CO	Street not listed in Source
1967	-	POLK DIRECTORY CO	Street not listed in Source
1963	-	POLK DIRECTORY CO	Street not listed in Source
1959	-	POLK DIRECTORY CO	Street not listed in Source

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

E HARRIS RD 2017

196 NALE, JOE F
597 LIRA, JERRY C

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

US HIGHWAY 111 2017

2560	BERNAL, JUAN A
2580	MCCOLLOUGH, STEVE N
2586	CASTRO, ANTONIO M
2596	ESQUER, JOHNNY
2705	ROBLES, GERARDO
	ROBLES, JESSICA
2707	WILSON, MARK A
2709	STEFFENS, CHUCK
2711	MANNARINO, DON J
2731	OWENS, JESSE R
2761	LACKEY, RICK D
2763	GARCIA, OSCAR E
2771	MARI, LANCE
2803	RAMOS, RAMON R
	SANCHEZ, ENRIQUE A
	SANCHEZ, MARIA M
2805	ROSALES, LEONARDO L
2807	TREVINO, CRISTOBAL V

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

E HARRIS RD 2014

196 OCCUPANT UNKNOWN,
197 NALE, NANCY
597 LIRA, JERRY C

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

US HIGHWAY 111 2014

2560	BERNAL, JUAN A
	FLORES, ANTONIO B
2580	MCCOLLOUGH, DON L
2586	OCCUPANT UNKNOWN,
2596	GOODSPEED, JOHN W
2701	OCCUPANT UNKNOWN,
2705	FERNANDEZ, LUPE A
	ROBLES, JAMES
	RODRIGUEZ, HOBED
2707	OCCUPANT UNKNOWN,
2709	STEFFENS, CHUCK
2711	OCCUPANT UNKNOWN,
2731	OWENS, JESSE R
2763	GARCIA, OSCAR E
2771	M & M PUMP & METAL FABRICATION INC
	MARI, LANCE
2803	GARCIA, RAMON R
	OCCUPANT UNKNOWN,
	RAMOS, RAMON
	SANCHEZ, ENRIQUE N
2805	ROSALES, LEONARDO L
2807	VALLADA, ANGELINA

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

E HARRIS RD 2010

196 NALE, JOE C
314 MARTINEZ, SANTOS
597 LIRA, JERRY C

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

US HIGHWAY 111 2010

2560	BERNAL, JUAN A
	FLORES, ANTONIO B
2580	MCCOLLOUGH, DON L
2586	CASTRO, BERNARDINA
2596	OCCUPANT UNKNOWN,
2701	WILSON, L L
2703	HAMMIT, LINDA L
2705	FERNANDEZ, LUPE A
2707	OCCUPANT UNKNOWN,
2709	SANCHEZ, ALBERT J
2711	SANCHEZ, JUAN
2731	OWENS, JESSE R
2761	VASQUEZ, JOSHUA E
2763	GARCIA, ENRIQUE L
2771	MARI, AARON J
2803	HEATON, JESSICA
	SWANGER, CLINTON A
2805	ROSALES, LEONARDO L
2807	VALLADA, ANGELINA
3559	CROWN ENGINEERING & CONSTRUCTN

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

E HARRIS RD 2005

196	NALE, JOE
314	MARTINEZ, SANTOS
595	OCCUPANT UNKNOWN,
597	GARCIA, JOSEFINA
801	OCCUPANT UNKNOWN,

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

US HIGHWAY 111 2005

2560	CAMARENA, HORTENCIA G
2580	MCCOLLOUGH, DON L
2586	OCCUPANT UNKNOWN,
2592	ZEDIKER, LAWRENCE E
2596	GOODSPEED, JOHN W
2701	WILSON, L L
2703	OCCUPANT UNKNOWN,
2705	GUZMAN, TOMMY
	OCCUPANT UNKNOWN,
	ZENDEJAS, AMELIA
2707	WILSON, BEN F
2711	OCCUPANT UNKNOWN,
2731	HASTINGS, JAMES L
	PASCUA, TANYA J
2761	LACKEY, MARTINE J
2763	GARCIA, ENRIQUE F
2771	OCCUPANT UNKNOWN,
2783	OBESO, TOMMY
2803	SANCHEZ, ENRIQUE
2805	ROSALES, RAUL R
2807	TREVINO, CRISTOBAL V
3505	IMPERIAL VLY RESOURCE RECOVERY
3559	NEW CHRLSTN PWR I LTD PARTNER

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

E HARRIS RD 2000

314	CHICAS, P
593	OCCUPANT UNKNOWN,
595	OCCUPANT UNKNOWN,
597	GENTRY, GLENN A

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

HIGHWAY 111 2000

3505 IMPERIAL VALLEY RESOURCE RECOVERY COMPANY LLC
3559 MESQUITE PROJECT SERVICES INCORPORATED

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

US HIGHWAY 111 2000

2580 MCCOLLOUGH, DONALD
2586 OCCUPANT UNKNOWN,
2592 ZEDIKER, L
2701 GARCIA, CESAR E
VALADEZ, LARRY V
WILSON, FRANCES
2707 WILSON, BEN
2709 OCCUPANT UNKNOWN,
2711 OCCUPANT UNKNOWN,
2731 HASTINGS, CARL A
2761 OCCUPANT UNKNOWN,
2763 OCCUPANT UNKNOWN,
2771 OCCUPANT UNKNOWN,
2805 ROSALES, PEDRO

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

HARRIS RD 1995

50	OCCUPANT UNKNOWNN
314	FABILA, S M
	LOPEZ, CORTEZ R
595	CANCIO, JOSE
597	GENTRY, GLENN A

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

US HIGHWAY 111 1995

2560	BUTLER, HARRY N
2580	BURGEMEISTER, VIKI L
2592	ZEDIKER, L
2701	WILSON, FRANCES
2705	RICHARDSON, BETTIE A
2707	WILSON, BEN
2709	HANCOCK, CHARLES
2711	TIRADO, V
2731	HASTINGS, CARL A
2763	OCCUPANT UNKNOWNN
2771	GORMAN, LEO E
2803	OCCUPANT UNKNOWNN
2805	ROSALES, PEDRO

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

E HARRIS RD 1992

314	ORTEGA, MANUEL
595	GONZALEZ, ARMANDO O
597	GENTRY, GLENN A

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

US HIGHWAY 111 1992

2592 ZEDIKER, L
2701 WILSON, GILBERT
2707 WILSON, BEN
2709 HANCOCK, CHARLES
2731 HASTINGS, CARL A
2763 GUERRA, ARNULFO
2771 GORMAN, LEO E

APPENDIX I

GS Lyon

780 N. 4th Street
El Centro, CA 92243
(760) 337-1100

Phase I Environmental Site Assessment (ESA)
User Questionnaire

1) **Environmental liens that are filed or recorded against the *property*.**
Did a search of *recorded land title records* (or judicial records where appropriate) identify any environmental liens filed or recorded against the *property* under federal, tribal, state, or local law?

As far as I know there are No Environmental Liens on the property.

2) **Activity and use limitations that are in place on the *property* or that have been filed or recorded against the *property*.**
Did a search of *recorded land title records* (or judicial records where appropriate) identify any AULs, such as *engineering controls*, land use restrictions or *institutional controls* that are in place at the property and/or have been filed or recorded against the *property* under federal, tribal, state or local law?

No Knowledge of any Limitations on the property

3) **Specialized knowledge or experience of the person seeking to qualify for the LLP.**
Do you have any specialized knowledge or experience related to the *property* or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the *property* or an *adjoining property* so that you would have specialized knowledge of the chemicals and processes used by this type of business?

NO. We are Only Landlords

4) **Relationship of the purchase price to the fair market value of the *property* if it were not contaminated.**

Does the purchase price being paid for this *property* reasonable reflect the fair market value of the *property*? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *property*?

Property is not Contaminated

5) **Commonly known or *reasonably ascertainable* information about the *property*.**

Are you aware of commonly known or *reasonably ascertainable* information about the *property* that would help the *environmental professional* to identify conditions indicative of releases or threatened releases? For example,

a. Do you know the past uses of the *property*?

Yes, it was Farm land continues to be Farmed.

b. Do you know of specific chemicals or oils that are present or once were present at the *property*?

NO

c. Do you know of spills or other chemical releases that have taken place at the *property*?

NO

d. Do you know of any environmental cleanups that have taken place at the *property*?

None

6) **The degree of obviousness of the presence or likely presence of contamination at the *property*, and the ability to detect the contamination by appropriate investigation.**

Based on your knowledge and experience related to the *property* are there any *obvious* indicators that point to the presence or likely presence of releases at the *property*?

No. It's Vacant land, No business Located on Property. No Buildings.

Additional Information

1) Reason why Phase I ESA is required:

2) Type of Property:

		Type of Transaction:	
Commercial	☐	Purchase	☐
Industrial	☐	Financing	☐
Residential	☐	Sale	☒
Vacant/Undeveloped	☒	Lease	☐
Other		Other	

Lands is Vacant, being Farmed although its Zoned Industrial

3) Complete and correct address for the property:

194 E. Harris Road
Imperial, CA 92251

4) Are there any existing environmental report, documents, correspondence, etc. available for review?

The County of Imperial Completed an EIR in 2005. This property was included

User Name/Company: Harris Road LLC

Address: 8 Cielo Vista Court
Rancho Mirage, CA 92270

User Signature: Gordon Beers, Harris Road LLC

Date: 5-11-2021

Harris Road Recycling Facility
NEC Harris Road and Hwy 111
Imperial, CA 92251

Inquiry Number: 6471270.7
April 29, 2021

EDR Environmental Lien and AUL Search

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

EDR Environmental Lien and AUL Search

The EDR Environmental Lien and AUL Search Report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied address information to:

- search for parcel information and/or legal description;
- search for ownership information;
- research official land title documents recorded at jurisdictional agencies such as recorders' offices, registries of deeds, county clerks' offices, etc.;
- access a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument(s) (title, parties involved, and description); and
- provide a copy of the deed or cite documents reviewed.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EDR Environmental Lien and AUL Search

TARGET PROPERTY INFORMATION

ADDRESS

NEC Harris Road and Hwy 111
Harris Road Recycling Facility
Imperial, CA 92251

ENVIRONMENTAL LIEN

Environmental Lien: Found ☐ Not Found ☒

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

AULs: Found ☐ Not Found ☒

RESEARCH SOURCE

Source 1:

Imperial Recorder
Imperial, CA

PROPERTY INFORMATION

Deed 1:

Type of Deed:	deed
Title is vested in:	Harris Road LLC
Title received from:	Robert & Patricia Martin
Deed Dated	4/7/2004
Deed Recorded:	7/1/2004
Book:	NA
Page:	na
Volume:	na
Instrument:	na
Docket:	NA
Land Record Comments:	
Miscellaneous Comments:	
Legal Description:	See Exhibit
Legal Current Owner:	Harris Road LLC
Parcel # / Property Identifier:	040-360-036
Comments:	See Exhibit

Deed Exhibit 1

2004 020584 BOOK 2320 PAGE 1378

RECORDING REQUESTED BY:
CHICAGO TITLE

AND WHEN RECORDED MAIL TO:

HARRIS ROAD LLC
14701 S. Broadway
Blythe, CA 92225

Order No.: 47081961
Escrow No.: SD47268-AJ
A.P.N.: 040-360-32-00
33

RECORDED
OFFICIAL RECORDS
IMPERIAL COUNTY, CA
BOOK 2320 PAGE 1378
2004 JUL 1 PM 4 22
DOLORES PROVENCIO
COUNTY RECORDER

TLS	12
RG	5
RF	3
MC	1
IX	1
TF	2
NL	
PY	
PR	

SPACE ABOVE THIS LINE IS FOR RECORDER'S USE

GRANT DEED

THE UNDERSIGNED GRANTOR(S) DECLARE(S)
DOCUMENTARY TRANSFER TAX IS $ 322.85
[X] computed on full value of property conveyed, or
[] computed on full value less value of liens or encumbrances remaining at time of sale.
[X] unincorporated area [< - >] City of

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,
ROBERT MARTIN and PATRICIA MARTIN

hereby GRANT(S) to HARRIS ROAD LLC, A California Limited Liability Company

the following described real property in the County of **Imperial**, State of California
See exhibit 'A' attached hereto and made a part hereof
Dated: **March 25, 2004**

STATE OF CALIFORNIA
COUNTY OF Imperial] SS.

On 4-7-04 before me
ANNA Prince
a Notary Public in and for said County and State, personally appeared Robert Martin
Patricia Martin

personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies) and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s), acted, executed the instrument.

WITNESS my hand and official seal.

Signature _____
Signature of Notary

Robert Martin
ROBERT MARTIN

Patricia Martin
PATRICIA MARTIN

ANNA PRINCE
Commission # 1402071
Notary Public - California
Imperial County
My Comm. Expires Feb 23, 2007

(This area for official notary seal)

MAIL TAX STATEMENTS AS DIRECTED ABOVE

EXHIBIT A

TRACT 43, TOWNSHIP 14 SOUTH, RANGE 14 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM THE WEST FORTY ACRES THEREOF.

ALSO EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE STATE OF CALIFORNIA BY DEED RECORDED SEPTEMBER 14, 2001, ION BOOK 2080, PAGE 1224 OF OFFICIAL RECORDS OF IMPERIAL COUNTY.

GOVERNMENT CODE 27361.7

I CERTIFY UNDER PENALTY OF PERJURY THAT THE NOTARY SEAL ON THE DOCUMENT TO WHICH THIS STATEMENT IS ATTACHED READ AS FOLLOWS:

NAME OF NOTARY: ANNA PRINCE

COMMISION NUMBER: 1402071

COMMISION EXPIRES: February 23, 2007

MANUFACTURER/VENDOR NO.: NNA?

COUNTY WHERE BOND IS FILED: IMPERIAL

PLACE OF EXECUTION: EL CENTRO

DATE: April 7, 2004

SOUTHLAND TITLE COMPANY OF SAN DIEGO

BY:

APPENDIX J

GS Lyon

Steven K. Williams, PG, CEG
Consulting Geologist

Education
M.S. Geology
University of Utah, 1993
B.S. Geology
University of Utah, 1989

Registration
Registered Geologist
Arizona 33759
California 6975
Certified Engineering Geologist
California 2261

Professional Experience

2000 – Present	Senior Engineering Geologist GS Lyon Consultants, Inc.
1994 - 2000	Staff Geologist GS Lyon Consultants, Inc.
1994	Field Geologist Bureau of Land Management
1991 - 1992	Exploration Geologist Kennecott Corporation

Summary of Experience
Mr. Williams has 27 years of experience in performing Phase I Environmental Site Assessments throughout the Imperial and Coachella Valleys. The scope of work for these projects typically include a site reconnaissance, review of historical and government records pertaining to previous site uses, and preparation of a report identifying potential environmental risks.

Mr. Williams has also conducted Phase II Environmental Site Assessments for the evaluation of potential soil contamination by hydrocarbons, pesticides, and other hazardous materials. Mr. Williams has also conducted Preliminary Endangerment Assessments (PEAs) for school sites within the Imperial and Coachella Valleys.

Professional Affiliations
Geological Society of America, Member
Seismological Society of America, Member

Selected Project Experience

Residential
- El Centro Seniors Apartments, El Centro, CA
- Brawley Pioneers Apartments, Brawley, CA
- Calexico Family Apartments, Calexico, CA
- Bratton Subdivision, Imperial, CA
- Linda Vista Subdivision, El Centro, CA
- Mayfield Subdivision, Imperial, CA

Industrial
- Drew Solar Farm Phase I ESA, El Centro, CA
- Seville Solar Facility Phase I ESA, Imperial County, CA
- Dixieland East and West Solar Phase I ESA, Imperial County, CA
- Imperial Solar Energy Center South Phase I ESA, Imperial County, CA
- Imperial Solar Energy Center West Phase I ESA, Imperial County, CA
- Mt. Signal III Solar Facility Phase I ESA, Imperial County, CA
- Midway Solar Facility Phase I ESA, Calipatria, CA
- Iris Cluster Solar Facility Phase I ESA, Calexico, CA
- Vega Solar Facility Phase I ESA, Calexico, CA

Municipal/Commercial
- River Ranch Packing Facility, El Centro, CA
- Farm Fresh Cooling Facility, El Centro, CA
- El Centro Magistrate Court, El Centro, CA
- Bolthouse Farms Packing Facility, Holtville, CA
- Imperial Avenue Extension, El Centro, CA
- Taco Bell, Brawley, CA
- Taco Bell, Calexico, CA
- Calexico Crossroads Plaza, Calexico, CA
- Valley Plaza, El Centro, CA
- Gateway to the Americas Phase I ESA, Calexico, CA

School Sites
- Brawley Union High School, Brawley, CA
- La Paloma Middle School PEA, Brawley, CA
- Cross Elementary School Phase I ESA, Imperial, CA
- Oasis Elementary School PEA, Mecca, CA
- North Shore Elementary School Phase I ESA, Mecca, CA

Peter LaBrucherie, PE
Consulting Engineer

Education

B.S. Civil Engineering
California Polytechnic University, San Luis Obispo, 2011

M.S. Civil Engineering
California Polytechnic University, San Luis Obispo, 2012

Registration
Professional Engineer C84812, California

Professional Experience

2013 - Present	Project Engineer GS Lyon, Inc.
2012 - 2013	Project Engineer BNBuilders.

Summary of Experience
Mr. LaBrucherie has 7 years of experience performing Phase I Environmental Site Assessments in Imperial County. The scope of work for these assessments typically includes site reconnaissance, review of historical and government records pertaining to previous site uses, and preparation of a report identifying potential environmental risks.

Selected Project Experience

Seville Solar Farm, Westmorland, CA
Conducted Phase I environmental site assessment for solar project located about 9 miles northwest of Westmorland, CA.

Drew Solar Farm, Imperial County, CA
Conducted Phase I environmental site assessment for 1000 acre solar project located about 9 miles southwest of El Centro, CA.

Clean Harbors Facility, Westmorland, CA
Conducted annual reports which included flood diversion, photo documentation and post closure for waste facility located about 5 miles west of Westmorland, CA.

Ching Properties, Brawley, CA
Conducted Phase I environmental site assessment for vacant property located in Brawley, CA.

Imperial Apartments, Imperial, CA
Conducted Phase I environmental site assessment for vacant property located in Imperial, CA. Property is being proposed for apartment complex.

1409 E. Alamo Road, Holtville, CA
Conducted Phase I environmental site assessment for property (mostly vacant with some unused shop buildings and abandoned residential home) located west of Holtville, CA.

BUSD School Site, Brawley, CA
Conducted Phase I environmental site assessment for school site proposal on a vacant property located in south Brawley, CA.

CR&R Direct Transfer, El Centro, CA
Conducted Phase I environmental site assessment for commercial property (large warehouse and office with large laydown area) located in El Centro, CA.

Villa Primavera Apartments, Calexico, CA
Conducted Phase I environmental site assessment for vacant property located in Calexico, CA.

APPENDIX F – CEQA Noise Scoping Analysis for Harris Road Recycling Facility Project, prepared by UltraSystems Environmental Incorporated, February 5, 2023.

UltraSystems
environmental • management • planning

MEMO

TO:	Frank Lauro, True North Renewable Energy, LLC
FROM:	Michael B. Rogozen, D.Env.
DATE:	Sunday, February 05, 2023
PROJECT #:	7096
RE:	CEQA Noise Scoping Analysis for Harris Road Recycling Facility Project

1.0 INTRODUCTION

UltraSystems Environmental Incorporated (UltraSystems) has completed a preliminary screening analysis of potential noise exposures from construction and operation of the subject proposed facility, which will be located in unincorporated Imperial County, northwest of the intersection of East Harris Road and State Route 111. The purpose of the analysis was to determine whether noise impacts would be considered potentially significant under the California Environmental Quality Act (CEQA).

Generally, noise impacts occur when undesirable levels of noise are perceived by "sensitive receivers."[1] According to the Imperial County General Plan, sensitive receivers "include, but are not limited to, residences, schools, hospitals, parks and office buildings."[2] Under CEQA, exposures to sensitive receivers are considered significant if they exceed thresholds set by local communities and/or they represent an increase in exposure that is considered adverse. In most of the analyses that UltraSystems does, an increase of 5 dBA is considered to be significant.

2.0 PROJECT DESCRIPTION

True North Renewable Energy, LLC (TNRE) proposes to build a project that at full buildout includes two anaerobic digesters and two enclosed, intensive compost facilities to process greenwaste and food waste from Imperial County and several other Southern California counties. The proposed project is on approximately 73 acres of vacant land in unincorporated Imperial County, northwest of the intersection of East Harris Road and Highway 111, at 194 East Harris Road, Imperial, CA. It is in

[1] Also called "sensitive receptors."

[2] Imperial County General Plan. Noise Element. Planning and Development Services, County of Imperial, El Centro, CA. Approved October 6, 2015, p. 12. Accessed online at https://www.icpds.com/assets/planning/noise-element-2015.pdf on August 28, 2021.

the Mesquite Lake Specific Plan and is currently zoned ML-1-3-RE and ML-1-2-RE. The site and surrounding area are shown in **Figure 1**.[3]

At full buildout, the facility will process 600,000 tons per year (tpy) through its anaerobic digesters, to produce pipeline quality renewable natural gas. Digestate from the digesters will be routed to aerated closed vessels to produce compost for local agricultural use.

3.0 AMBIENT NOISE LEVELS

The Harris Road Recycling Facility Project site is in a rural area devoted mainly to agriculture. Staff of DuBose Design Group in El Centro made a windshield survey of the area[4] and found only one sensitive receiver within one mile of the facility boundary: a residence near the intersection of Studer Road and East Ralph Road, about 6,000 feet south-southwest of the center of activity of the project site.

UltraSystems has not measured ambient noise levels in the area of the project or the aforementioned residence. On a previous project, we took measurements just south of Calipatria, near Route 111, and about 17 miles from the residence of interest, but that area was more densely populated and industrialized, and therefore likely to have higher ambient noise levels than a sparsely populated agricultural area.

We can get an approximate idea of the existing ambient noise level from traffic noise modeling data in the County of Imperial General Plan Noise Element. The modeling predicted the distances from Highway 111 at which 2015 traffic noise levels would reach certain values.[5] We used the prediction for State Route 111 between State Route 78 and State Route 115: 70 dBA CNEL[6] at 182 feet from the highway centerline. The aforementioned residence is about 3,220 feet west of State Route 111. We used the following cylindrical spreading formula for traffic noise[7] to estimate the "existing" ambient noise level at the residence:

$$dBA_2 = dBA_1 + 10 \log_{10} (D_1/D_2)$$

where

dBA_1 = known noise level at distance D_1

dBA_2 = Unknown noise level at distance D_2

---

3 See **Attachment 1**.

4 Email from Lorena Fimbres, DuBose Design Group Inc., El Centro, CA to Michael Rogozen, UltraSystems Environmental Inc., Irvine, CA. August 6, 2021.

5 Imperial County General Plan. Noise Element. Planning and Development Services, County of Imperial, El Centro, CA. Approved October 6, 2015, pp. 10-11. Accessed online at https://www.icpds.com/assets/planning/noise-element-2015.pdf on August 28, 2021.

6 CNEL = Community noise equivalent level, which is a 24-hour weighted average exposure, for which 4.77 dBA are added for the hours between 7 p.m. and 10 p.m., and 10 dBA are added for the hours between 10 p.m. and 7:00 a.m.

7 Technical Noise Supplement. A Technical Supplement to the Traffic Noise Protocol. California Department of Transportation, Hazardous Waste, Air, Noise, Paleontology Office. September 2013, p. 2-29. Accessed online at https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf on August 27, 2021.

The resulting existing ambient noise level is 57.5 dBA CNEL.

4.0 IMPERIAL COUNTY NOISE REQUIREMENTS

The primary regulatory documents that establish noise standards in the county are the Imperial County General Plan, Noise Element[8] and the Imperial Noise Abatement and Control Ordinance.[9] Relevant standards from both documents are discussed below by type of standard (e.g., for construction noise or operation noise). Note that the Imperial County General Plan and the Noise Abatement and Control Ordinance apply only to unincorporated area in the county.

4.1 Imperial County General Plan, Noise Element

4.1.1 Construction Noise

The Imperial County General Plan limits sound levels from construction activities during specific hours of the day and night through a set of construction noise standards, presented below in **Table 4.1-1**. The standards apply to the noise measured at the nearest sensitive receptor.

Table 4.1-1
COUNTY OF IMPERIAL CONSTRUCTION NOISE STANDARDS

Construction Duration	Sound Level (dB L_{eq})	Averaging Period	Hours of Operation Restriction
Short-Term (days or weeks)	75	8 hours	7:00 a.m. – 7:00 p.m. Monday to Friday 9:00 a.m. – 5:00 p.m. Saturday No commercial construction operation is permitted on Sundays and holidays
Extended Periods	75	1 hour	7:00 a.m. – 7:00 p.m. Monday to Friday 9:00 a.m. – 5:00 p.m. Saturday No commercial construction operation is permitted on Sundays and holidays
Source: County of Imperial, General Plan, Noise Element, 2015, p. 21.			

4.1.2 Operational Noise

The Imperial County General Plan, Noise Element includes Property Line Noise Limits, which apply to noise generation from one property to an adjacent property. The standards imply the existence of a sensitive receptor on the adjacent, or receiving, property. In the absence of a sensitive receptor, an exception or variance to the standard may be appropriate. Because no sensitive receivers are on

[8] Imperial County General Plan, Noise Element. County of Imperial Planning and Development Services, El Centro, CA. Approved October 6, 2015. http://www.icpds.com/CMS/Media/Noise Element 2015.pdf. Accessed August 30, 2018.

[9] Title 9, Land Use Ordinance for the County of Imperial, Division 7: Noise Abatement and Control (Last amended April 18, 2017). http://www.icpds.com/CMS/Media/TITLE9Div7_2015.pdf. Accessed August 30, 2018.

properties adjacent to the proposed project site these standards do not apply and will not be enumerated.

4.2 Imperial County Noise Abatement and Control Ordinance

The Imperial County Noise Abatement and Control Ordinance[10] includes property line noise limits that are essentially the same as discussed in **Section 4.1.2**. No other Noise Abatement and Control Ordinance provisions are relevant to the proposed project.

5.0 THRESHOLDS OF SIGNIFICANCE

There are two criteria for judging noise impacts. First, noise levels generated by the project must comply with all relevant federal, state, and local standards and regulations. Noise impacts on the surrounding community are limited by local noise ordinances, which are implemented through investigations in response to nuisance complaints. It is assumed that all existing regulations for the construction and operation of the project would be enforced. In addition, the project should not produce noise levels that are incompatible with adjacent noise sensitive land uses as defined in the General Plan.

The second measure of impact used in this analysis is the significant permanent increase in noise levels above existing ambient noise levels as a result of the introduction of a new noise source. An increase in noise level due to a new noise source has a potential to adversely impact people.

Based on the applicable noise regulations stated above, the project would have a significant noise impact if it would:

- Result in exposures of sensitive receptor during construction to the short-term noise levels specified in **Table 4.1.1**.
- During project operations, result in an increase of 5 dBA CNEL or greater.

6.0 NOISE EVALUATION

6.1 Construction Noise

From many years of experience, we anticipate that the noisiest phases of construction of the Harris Road Recycling Facility will be grading, building construction and paving. The time-weighted average noise equivalent levels (expressed as dBA L_{eq}) range from 83 to 87 dBA at 50 feet. To be conservative, we used the high end of the range, 87 dBA L_{eq}, in the calculations. Construction noise was calculated by the following formula, assuming spherical spreading:[11]

$$dBA_2 = dBA_1 + 20 \log_{10} (D_1/D_2)$$

where

[10] County of Imperial Codified Ordinances, Title 9, Division 7: Noise Abatement and Control, § 90702.00(A).
[11] Ibid., p. 2-28.

dBA_1 = known noise level at distance D_1

dBA_2 = Unknown noise level at distance D_2

For a distance of 6,000 feet, we estimate a construction noise exposure of 45.4 dBA L_{eq} at the residence. This value is far below either the short-term daytime or the nighttime exposure limits shown in **Table 4.1-1**. Because the estimated existing ambient noise level is expressed as CNEL, we need to convert the construction noise component of the exposure to CNEL. If we had the data, we would do the calculation on an hour-by-hour basis. However, we do not have hourly L_{eq} values for the traffic noise predictions. To obtain a good approximation of a solution to this, we assumed that the construction noise would occur only from 7:00 a.m. to 6:00 p.m.; it would be zero in all other hours. Nevertheless, we would apply the two weighting factors as if there were noise contributions during the nonworking hours. The resulting value of the CNEL for the construction activity would be 42.4 dBA CNEL. This value is about 15 dBA less than the existing ambient level, and would not be noticed. Indeed, the *increase* in exposure at the residence would be about 0.1 dBA CNEL, which is not perceptible to the human ear. Therefore, no significant impact is expected from construction noise.

6.2 Operational Noise

Because most of the potentially noisy processing operations will be in fully enclosed buildings (and the nearest sensitive receiver is so far away), the only operational phase noise sources left to consider are (1) the flare and (2) onroad truck traffic hauling feedstock to the facility.

6.2.1 Flare Noise

Elevated flares, especially those using steam as a smoke suppressant, have traditionally been quite noisy. A German technical handbook,[12] cited by Hantschk and Schorer,[13] includes an empirical formula, based on noise measurements on flares with steam injection. Using the formula, along with a flare heat input rate of 150 million Btu per hour, and other reasonable assumptions, yielded an estimate of 121 dBA at the stack tip. Even a high value like this would result in a noise exposure of only about 45.5 dBA at the nearest residence. A similar analysis, using an online flare noise calculator,[14] resulted in an exposure of 43.7 dBA L_{eq}. (See **Attachment** 2 for documentation of this calculation.) However, it is our understanding that the proposed flare will not have steam injection and will have state-of-the art noise reducing design features, so that the noise from the device will be not be an issue for the project.

6.2.2 Truck Traffic Noise

The project will result in an increase in truck traffic, as feedstock is transported to the site from within Imperial County and from Los Angeles, Riverside and San Diego counties. TNRE anticipates receiving

---

12 VDI 3732. Standard Noise Levels of Technical Sound Sources – Flares. Verein Deutscher Ingenieure e.V., Düsseldorf, Germany,1990.

13 Hantschk, C.C. and Schorer, E. "Prediction of Noise Emissions from Industrial Flares." Proceedings of Acoustics '08 Paris, pp. 4403-4405. Accessed online at http://webistem.com/acoustics2008/acoustics2008/cd1/data/articles/003295.pdf on August 28, 2021.

14 Flare Noise Calculator. WKC Group Environmental Consultants. Accessed online at https://www.wkcgroup.com/tools-room/flare-noise-calculator/ on February 5, 2023.

100 trucks per day of feedstock.[15] It is assumed that most of the traffic will arrive at the Harris Road Recycling Facility via State Route 111, although some will travel part of the way on county roads and local streets. A general rule is that traffic needs to double for the increases in exposure to exceed 3 dBA L_{eq},[16] which is the threshold for awareness of the change. Although we do not have traffic data for the road network surrounding the proposed facility, we expect that it would greatly exceed the projected feedstock truck volume. Furthermore, there would be only one sensitive receiver within a mile of the facility.

We did one more analysis, using the sound exposure level (SEL) method prescribed by the Federal Transit Administration (FTA).[17] Assuming 12.5 trucks per hour during an eight-hour day, an average vehicle speed of 30 miles per hour, and a worst-case distance of 35 feet from the roadway results in an estimated exposure of 55.6 dBA. Using the same approach for converting hourly average values to CNEL, we end up with a truck traffic contribution of 52.8 dBA CNEL. The new total exposure would be 58.8 dBA CNEL. The increase would be 1.3 dBA CNEL. Again, this would not be perceptible.

7.0 CONCLUSION

Given the distance from the proposed facility to the nearest sensitive receiver, noise impacts would be less than significant under the California Environmental Quality Act, and no further noise studies are necessary.

---

15 Email from Frank Lauro, True North Renewable Energy to Michael Rogozen, UltraSystems Environmental Incorporated, August 11, 2121.

16 Hendricks, R., Rymer, B., Buehler, D. and Andrews, J. Technical Noise Supplement to the Caltrans Traffic Noise Analysis Protocol. California Department of Transportation, Division of Environmental Analysis. September 2013, p. 2-12. Accessed online at https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf.

17 Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual. Federal Transit Administration, Office of Planning and Environment, Washington, DC. FTA Report No. 0123. 2018, p. 80. Accessed online at https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/researchinnovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-reportno-0123_0.pdf.

Attachment 1

Figure 1
PROJECT LOCATION AND VICINITY MAP

Path: \\Glasnr\gis\Projects\7096_True_North_Renewable_Harris Rd_Tech Studies\MXDs\7096_True_North_Renewable_Project_Vicinity_2023_02_05.mxd February 05, 2023
Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community; SCAG, March 2020; UltraSystems Environmental, Inc., 2023

Scale: 1:24,000

N

0 1,000 2,000 Feet

0 250 500 Meters

Legend

Project Location

Nearest Sensitive Receiver

Harris Road Recycling Facility

Project Vicinity

Attachment 2

ONLINE FLARE NOISE CALCULATION

Flare Noise Calculator

Image source: https://www.cleanair.com/

Flare Noise Calculator

The following formula is used to calculate the sound power level (Lw) for Ground Flares:

$$L_{wac} = 100\ (\pm 5) + 15 \log Q$$

The following formula is used to calculate the sound power level (Lw) for Elevated Flares:

Background – Flare Noise Standard

The Flare Noise Calculator is based upon the German recognised Standard – VDI 3272 standard noise levels of flares. The standard applies to flares used in the petrochemical/chemical industry relying on steam injection to dispose of large quantities of combustible gas.

L_{wac} = 112 (±6) +17logQ

Where:
L_{wac} = A-weighted sound power level of the flare (dBA)
Q = flare gas mass flow (t/h)

Select the type of flare (elevated or ground)

Elevated

Flare gas flow rate (t/h)

3

Flare stack height (m)

12.2

Did you know, the highest flare stack in the world is 204 meter high and is located at Fina in Antwerp

Distance from flare stack base to receiver (m)

1859

Elevation of receiver (m)

1.5

Flare sound power level (Lw) (dB(A)) at flare tip (elevated flare)

120.1

Sound pressure level (Lp) at receiver (dB(A)) (elevated flare)

43.7

Elevated and Ground Flares

Elevated flares are generally used in an emergency operation scenario as safety devices to burn large quantities of gas, up to 1,000 t/h (tonnes per hour). Ground flares are used during a normal operation scenario for burning quantities of gas up to 100 t/h. Although ground flares can also be used as safety devices, their main function is to control the start-up and shutdown of their respective production facilities.

Calculator Note

The variation in the composition of gas being flared influences the sound power level. This is accounted for by the ±6 dB and ±5 uncertainty in the formulae. For more information see the VDI 3732. This calculator does not apply any correction to the calculated flare Lw and should be applied at the discretion of the user.

For flare related tools, please see our flare stack height calculator.

Comments and Suggestions

Is there an environmental engineering tool you would like to see at wkcgroup.com, or do you have recommendations on the tools we have? Please complete our online tools feedback form.

Disclaimer

Please note that this or any other calculators on the wkcgroup.com tools room are for information only. WKC Group has endeavoured to ensure that the information presented here is accurate and that the calculations are correct, but will not accept responsibility for any consequential damages, faults or human errors that may arise from the use of formulas, inventories and values.

@ Subscribe to our Tools Room!

APPENDIX G – Transportation Impact Analysis, Harris Road Recycling, Imperial County, California, prepared by Linscott, Law & Greenspan Engineers, January 9, 2023.

LINSCOTT LAW & GREENSPAN engineers

TRANSPORTATION IMPACT ANALYSIS
HARRIS ROAD RECYCLING
Imperial County, California
January 9, 2023

LLG Ref. 3-21-3416

Prepared by:
Amelia Giacalone
Senior Transportation Planner

Under the Supervision of:
John Boarman, P. E.
Principal

Linscott, Law & Greenspan, Engineers
4542 Ruffner Street
Suite 100
San Diego, CA 92111
858.300.8800 T
858.300.8810 F
www.llgengineers.com

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APPENDICES

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1.0 PROJECT AND STUDY DESCRIPTION

Linscott, Law and Greenspan, Engineers (LLG) has prepared this Vehicle Miles Traveled (VMT) and Local Mobility Analysis (LMA) report to assess the impacts to the street system as a result of the Harris Road Recycling Project, located in Imperial County.

The traffic analysis presented in this report includes the following:

Section 1. Project and Study Description.
Section 2. Vehicle Miles Traveled Assessment
Section 3. Local Mobility Analysis
Section 4. Existing Conditions
Section 5. Project Traffic
Section 6. Cumulative Traffic Volumes
Section 7. Capacity Analysis
Section 8. Conclusions

1.1 Project Location and Vicinity Map

The site is located on the northwest corner of the Harris Road / Old Highway 111 intersection in unincorporated County of Imperial, just west of SR 111. The APNs are 040-360-036, 040-360-037, 040-360-038, and 40-360-039. The site address is 194 E. Harris Road, Imperial, CA.

Figure 1–1 is the Vicinity Map depicting the Project location.

1.2 General Plan and Zoning Designation

The site located is in the Mesquite Lake Specific Plan. The western-most parcel is zoned ML-I-3-RE (Mesquite Lake Heavy Industrial) and the remaining parcels are zoned ML-I-2-RE (Mesquite Lake Medium Industrial).

The areas north and west of the site are zoned ML-I-2-RE; the area east of the site is zoned ML-I-3-RE, which are included within the Mesquite Lake Specific Plan. The areas to the south are zoned A-2-G (General Agriculture) and A-3-G (Heavy Agricultural). A General Plan amendment is not required.

1.3 Project Size and Description

The proposed Project at full-buildout entails development of a 2,500 ton per day (TPD) (600,000 ton per year) anaerobic digestion (AD) and an enclosed, intensive compost facility on approximately 73 acres of vacant land. This study assumes full buildout of the Project.

The staffed operating hours of the facility are expected to be from 5AM to – 7PM, aligned to the delivery of organic material arriving to the facility. A maximum of 50 on-site employees are expected each day. Assuming a processing capacity of 600,000 tons per year, the facility will receive a maximum of 100 feedstock trucks per day and dispatch a maximum of 37 compost trucks per day.

1.4 Project Access

Project access will be provided via a total of three (3) driveways on Old Highway 111 and on Harris Road. The Old Highway 111 driveway will serve employees and feedstock trucks. Two (2) gated driveways will be provided on Harris Road to serve compost trucks. The eastern Harris Road driveway will provide inbound only access and the western Harris Road driveway will provide outbound only access for compost trucks and will not be used by feedstock trucks or employees. The compost trucks will be processed through the gates in a very short amount of time, under a minute, and the arrival of the compost trucks will be sporadic and not all at once. No backups onto Harris Road are anticipated.

Figure 1-2 shows the Project Site Plan.

1.5 Proposed Project Opening Year and Analysis Scenarios

The Project's opening year is projected to be 2025. The following analysis scenarios are analyzed in this study.

- Existing
- Opening Year (Existing + Cumulative Projects) without Project
- Opening Year + Project

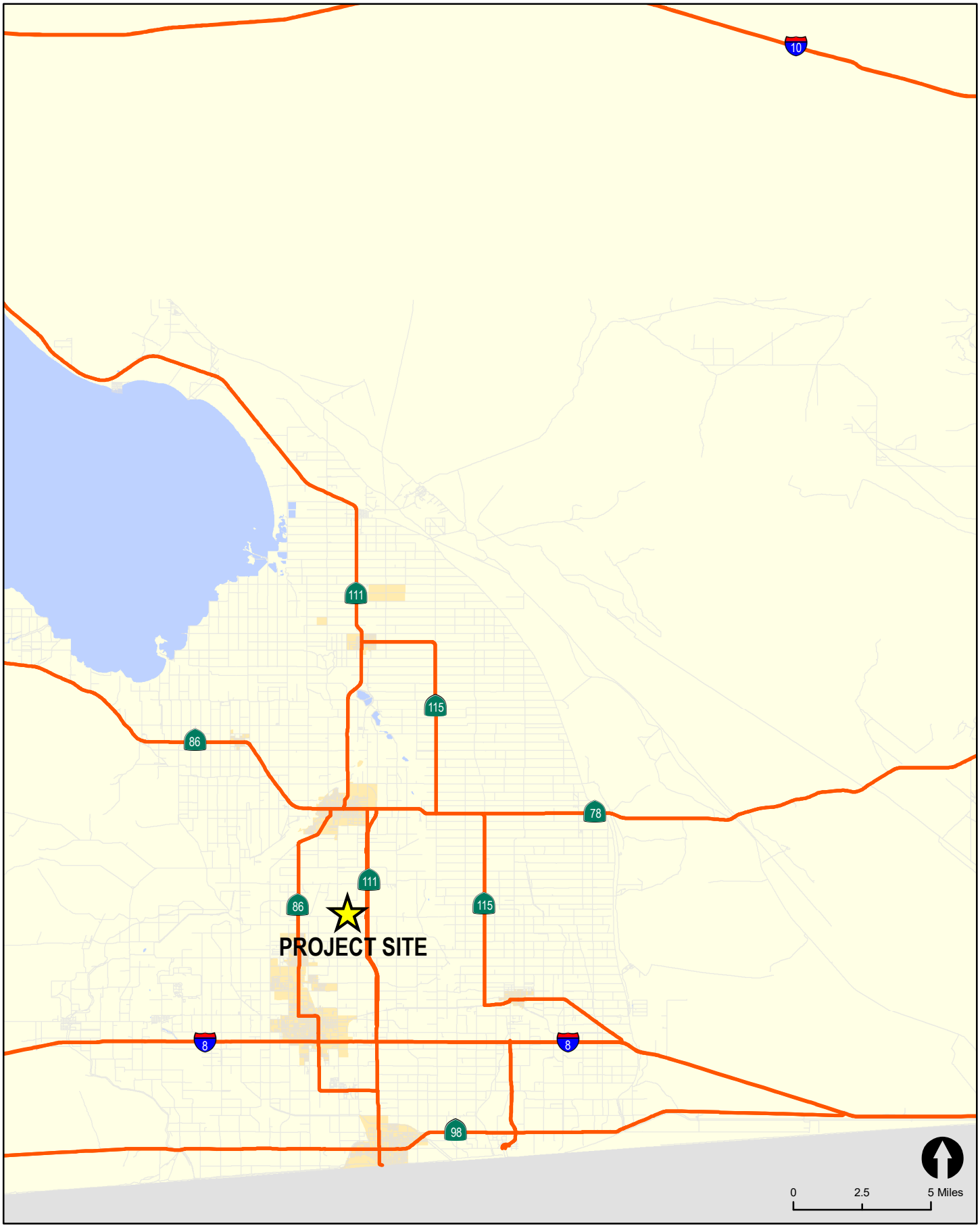

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Figure 1-1

Vicinity Map

Harris Road Recycling

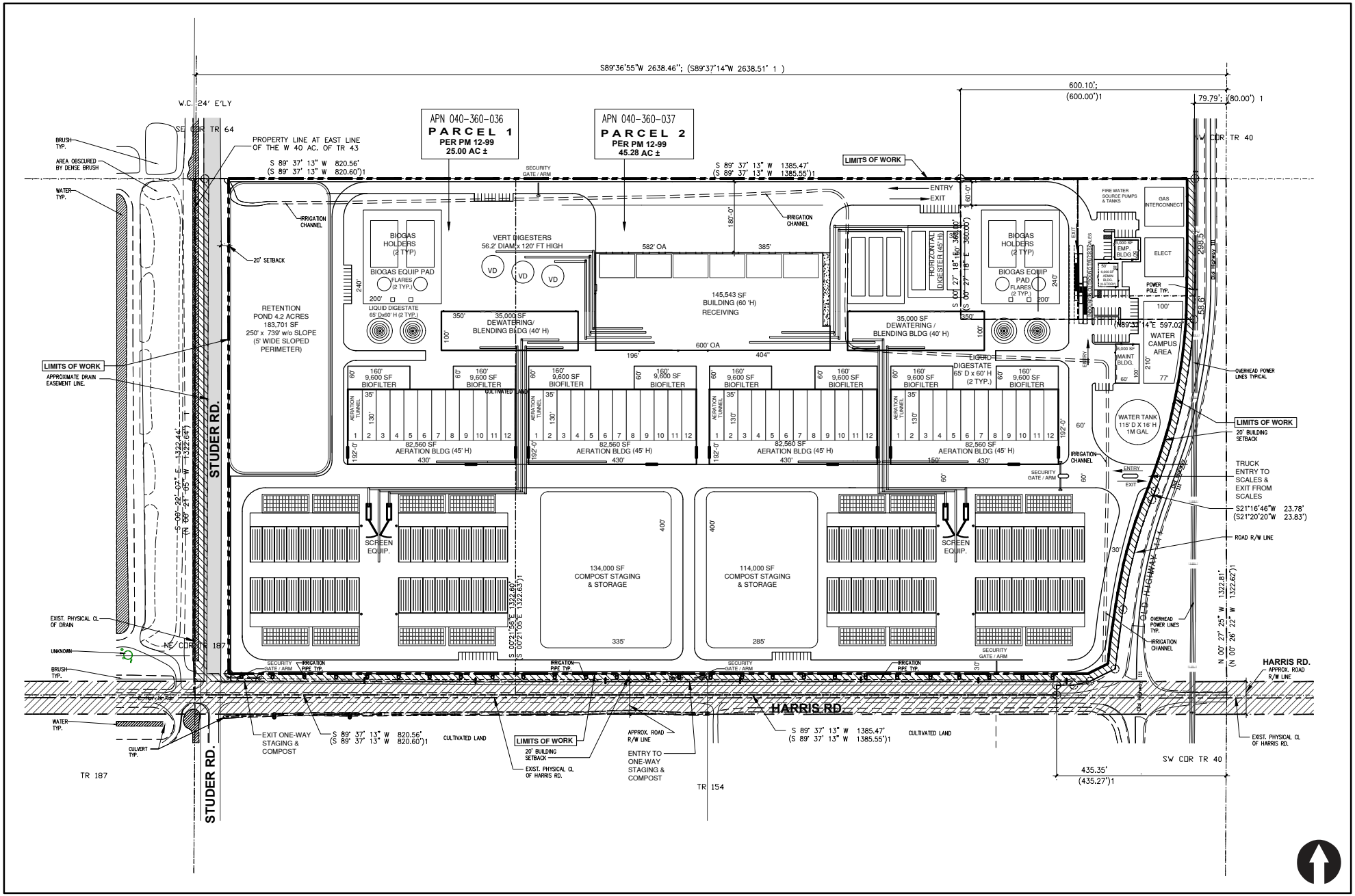

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Figure 1-2

Site Plan

Harris Road Recycling

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2.0 VEHICLE MILES TRAVELED ASSESSMENT

2.1 Background

In September 2013, the Governor's Office signed SB 743 into law, starting a process that fundamentally changes the way transportation impact analysis is conducted under CEQA. These changes include the elimination of auto delay, level of service (LOS), and similar measurements of vehicular roadway capacity and traffic congestion as the basis for determining significant impacts. The justification for this paradigm shift is that Auto Delay/LOS impacts lead to improvements that increase roadway capacity and therefore induce more traffic and greenhouse gas emissions. The VMT standard for evaluating transportation impacts under CEQA became mandatory statewide on July 1, 2020.

Vehicle Miles Traveled (VMT) is defined as a measurement of miles traveled by vehicles within a specified region and for a specified time period. VMT is a measure of the use and efficiency of the transportation network. VMT's are calculated based on individual vehicle trips generated and their associated trip lengths. VMT accounts for two-way (round trip) travel and is typically estimated on a weekday for the purpose of measuring potential transportation impacts.

2.2 Methodology

Imperial County has not yet formally developed guidelines or adopted significance criteria or technical methodologies for VMT analysis. Therefore, LLG utilized the Governor's Office of Planning and Research (OPR) guidelines from the *Technical Advisory on Evaluating Transportation Impacts in CEQA*, December 2018, to develop technical methodologies for this Project.

The Project will generate trips from two distinct types of vehicles: heavy vehicles, which consist of the Project's feedstock and compost trucks, and employee passenger vehicles. Heavy vehicles and passenger vehicles are classified as different vehicle types in the OPR guidelines, and are considered differently in regards to VMT analysis.

2.2.1 *Heavy Vehicles*

Per OPR guidelines, "vehicle miles traveled" refers to the amount and distance of ***automobile*** travel attributable to a project. Here the term "automobile" refers to on-road passenger vehicles, specifically cars and light trucks. VMT does not include trips from heavy-trucks. Therefore, the trips generated by the Project's feedstock and compost trucks are excluded from VMT analysis.

2.2.2 *Employee Passenger Vehicles*

Many agencies use "screening thresholds" to quickly identify when a project should be expected to cause a less-than-significant impact. OPR contains a screening threshold for small projects which states that, "absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact."

The Project's employee passenger vehicles are calculated to generate 100 ADT, as shown in ***Table 5-1***. Therefore, the employee component of the Project can be considered a "small project", assumed to cause a less-than significant transportation impact per OPR guidelines.

3.0 LOCAL MOBILITY ANALYSIS

3.1 Analysis Approach and Methodology

In addition to the VMT analysis presented above, a Local Mobility Analysis (LMA) was also prepared that focuses on automobile delay and Level of Service (LOS). The LOS analysis was conducted to identify Project effects on the roadway operations in the Project study area and recommend Project improvements to address noted deficiencies.

3.1.1 *Level of Service*

Level of service (LOS) is the term used to denote the different operating conditions which occur on a given roadway segment under various traffic volume loads. It is a qualitative measure used to describe a quantitative analysis taking into account factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. Level of service provides an index to the operational qualities of a roadway segment or an intersection. Level of service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. Level of service designation is reported differently for signalized and unsignalized intersections

3.1.2 *Intersections*

Signalized intersections were analyzed under AM and PM peak hour conditions. Average vehicle delay was determined utilizing the methodology found in Chapter 19 of the *Highway Capacity Manual 6th Edition (HCM 6),* with the assistance of the *Synchro* (version 10) computer software. The delay values (represented in seconds) were qualified with a corresponding intersection LOS. City of Escondido, City of San Marcos, and Caltrans location-specific signal timing information such as minimum greens, cycle lengths, splits for the freeway interchanges and real-time peak hour field observations were included in the analysis, where available.

Unsignalized intersections were analyzed under AM and PM peak hour conditions. Average vehicle delay and LOS was determined based upon the procedures found in Chapters 20 and 21 of the *HCM 6* with the assistance of the *Synchro* (version 10) computer software.

3.2 Substantial Effect Criteria

Imperial County does not have published substantial effect criteria. However, the County General Plan does state that the level of service (LOS) goal for intersections is to operate at LOS C or better. Therefore, if a segment degrades from LOS C or better to LOS D or worse with the addition of project traffic, the Project has a substantial effect. If the location operates at LOS D or worse with and without project traffic, the project has a substantial effect if the project causes the intersection delta to increase by more than two (2) seconds, or the V/C ratio to increase by more than 0.02.

TABLE 3–1
TRAFFIC IMPACT SUBSTANTIAL EFFECT CRITERIA

Level of Service with Project [a]	Allowable Increase Due to Project Impacts [b]					
	Freeways		Roadway Segments		Intersections	Ramp Metering
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec.)	Delay (min.)
D, E & F	0.01	1	0.02	1	2	2[c]

Footnotes:

a. All level of service measurements are based upon HCM procedures for peak-hour conditions. However, V/C ratios for Roadway Segments may be estimated on an ADT/24-hour traffic volume. The acceptable LOS for freeways, roadways, and intersections is generally "D" ("C" for undeveloped or not densely developed locations per jurisdiction definitions). For metered freeway ramps, LOS does not apply. However, ramp meter delays above 15 minutes are considered excessive.

b. If a proposed project's traffic causes the values shown in the table to be exceeded, the Project has a substantial effect. These impact changes may be measured from appropriate computer programs or expanded manual spreadsheets. The project applicant shall then identify feasible mitigations (within the Traffic Impact Study [TIS] report) that will maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see note a above), or if the project adds a significant amount of peak hour trips to cause any traffic queues to exceed on- or off-ramp storage capacities, the project applicant shall be responsible for mitigating Project's substantial effect.

c. The allowable increase in delay at a ramp meter with more than 15 minutes of delay and freeway LOS E is 2 minutes and at LOS F is 1 minute.

General Notes:

1. V/C = Volume to Capacity Ratio
2. Speed = Arterial speed measured in miles per hour
3. Delay = Average stopped delay per vehicle measured in seconds for intersections, or minutes for ramp meters.
4. LOS = Level of Service

4.0 EXISTING CONDITIONS

Effective evaluation of the traffic impacts associated with the proposed project requires an understanding of the existing transportation system within the project area. ***Figure 4–1*** shows an existing conditions diagram, including signalized/unsignalized intersections and lane configurations.

4.1 Study Area

The study area includes the following intersections based on the anticipated distribution of the Project traffic and areas of potential effect:

1. Keystone Road / Old Highway 111
2. Keystone Road / SR 111
3. Harris Road / Dogwood Road
4. Harris Road / Old Highway 111
5. Harris Road / SR 111
6. Worthington Road / Old Highway 111
7. Worthington Road / SR 111
8. Harris Road / Outbound Only Project Driveway
9. Harris Road / Inbound Only Project Driveway
10. Old Highway 111 / Project Driveway

4.2 Existing Transportation Conditions

The facilities analyzed in this report fall under the jurisdiction of the Imperial County. The following is a brief description of the streets in the project area:

Old Highway 111 is classified as a local roadway on the County of Imperial Circulation Element. It is currently built as a north-south two-lane undivided roadway. Bike lanes and bus stops are not provided and the posted speed limit ranges from 40-55 mph. Curbside parking is prohibited along both sides of the roadway.

SR-111 is built as a north-south four-lane divided roadway. Bike lanes and bus stops are not provided and the posted speed limit ranges from 55 to 60 mph. Curbside parking is prohibited along both sides of the roadway.

Keystone Road is classified as a two-lane undivided Collector on the Imperial County Circulation Element. It is currently built as an east-west two-lane undivided roadway. The posted speed limit is 55 mph. There are no bus stops provided and on-street parking is prohibited.

Harris Road is classified as a four-lane undivided Collector on the Imperial County Circulation Element. It is currently built as an east-west two-lane undivided roadway. The posted speed limit is 55 mph. There are no bike lanes or bus stops provided and on-street parking is prohibited.

Worthington Road is classified as a four-lane undivided Collector on the Imperial County Circulation Element. It is currently built as an east-west two-lane undivided roadway. There is no posted speed limit, neither bike lanes nor bus stops are provided and curbside parking is prohibited

4.3 Existing Traffic Volumes

Peak hour (7AM to 9AM and 4PM to 6PM) intersection turning movement counts were conducted in September 2021. Due to the ongoing COVID-19 pandemic, which has reduced overall travel and traffic volumes, a growth factor of 10% was added to the traffic count volumes to account for the effects of the pandemic.

Figure 4–2 shows the Existing Traffic Volumes. ***Appendix A*** contains the manual count sheets.

4.4 Peak Hour Intersection Operations

Table 4–1 summarizes the Existing intersection level of service. As seen in *Table 4–1*, the study intersections are calculated to operate at LOS C or better, with the exception of the Harris Road / SR 111 intersection, where the worst-case minor-street movement is calculated to operate at LOS D during the AM peak hour and LOS E during the PM peak hour.

The intersection of Harris Road / SR 111 is two-way stop-controlled, with the minor-street east- and westbound trips on Harris Road required to stop and the major-street north- and southbound trips on SR 111 uncontrolled. The reported LOS of D/E is for the worst-case minor-street movement, in this case the westbound movement. Traffic volumes at the east- and westbound movements are very low, with a total of 14/26 eastbound AM/PM peak hour trips and a total of 13/12 westbound AM/PM peak hour trips. The worst-case delay is experienced by fewer than 30 vehicles in each direction during the peak hours. Overall, the intersection is calculated to operate acceptably.

Appendix B contains the Existing intersection analysis worksheets.

TABLE 4–1
EXISTING INTERSECTION OPERATIONS

Intersection	Control Type	Movement	Peak Hour	Delay[a]	LOS[b]
1. Keystone Road / Old Highway 111	MSSC[c]	NB/SB	AM	10.3	B
			PM	10.1	B
2. Keystone Road / SR 111	Signal	Overall	AM	7.0	A
			PM	6.8	A
3. Harris Road / Dogwood Road	MSSC[c]	EB/WB	AM	11.8	B
			PM	12.7	B
4. Harris Road / Old Highway 111	MSSC	NB/SB	AM	9.6	A
			PM	9.5	A
5. Harris Road / SR 111	MSSC[c]	EB/WB	AM	**29.2**	**D**
			PM	**41.7**	**E**
		NBL[e]	AM	9.1	A
			PM	10.2	B
		SBL[f]	AM	8.9	A
			PM	8.7	A
		Overall	AM	0.8	-[d]
			PM	0.9	-[d]
6. Worthington Road / Old Highway 111	Signal	Overall	AM	15.1	B
			PM	15.2	B
7. Worthington Road / SR 111	Signal	Overall	AM	10.2	B
			PM	9.6	A
8. Harris Road / Proj Dwy #1	-[g]	-	AM	-	-
			PM	-	-
9. Harris Road / Proj Dwy #2	-[g]	-	AM	-	-
			PM	-	-
10. Old Highway 111 / Proj Dwy #3	-[g]	-	AM	-	-
			PM	-	-

Footnotes:
a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. MSSC – Minor-Street Stop Controlled intersection. Worst-case delay reported except where noted.
d. Synchro does not provide an overall intersection LOS for minor-street stop-controlled intersections.
e. North-bound left-turn
f. South-bound left-turn
g. Intersection does not exist under existing conditions.

SIGNALIZED		UNSIGNALIZED	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

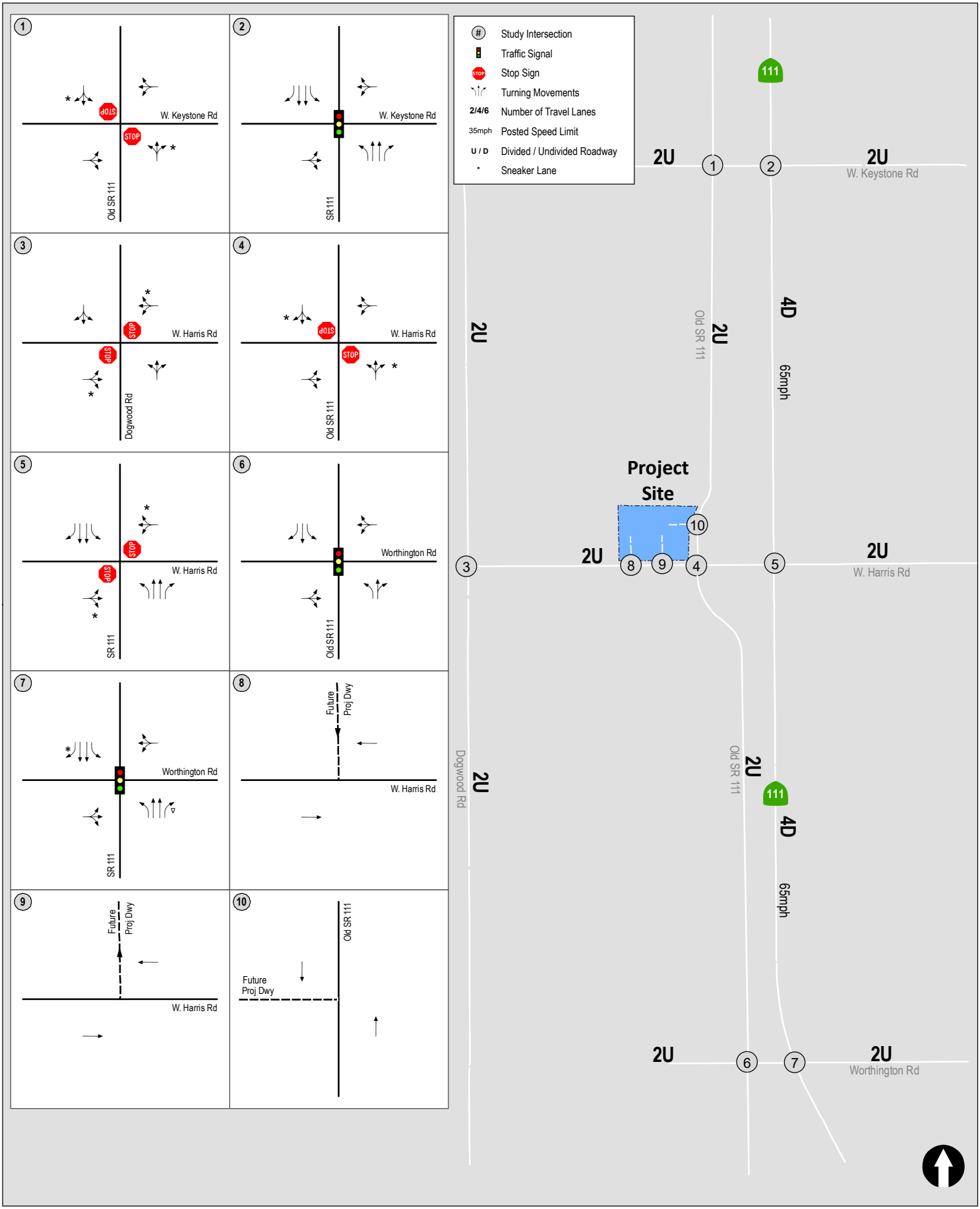

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Figure 4-1

Existing Conditions Diagram

Harris Road Recycling

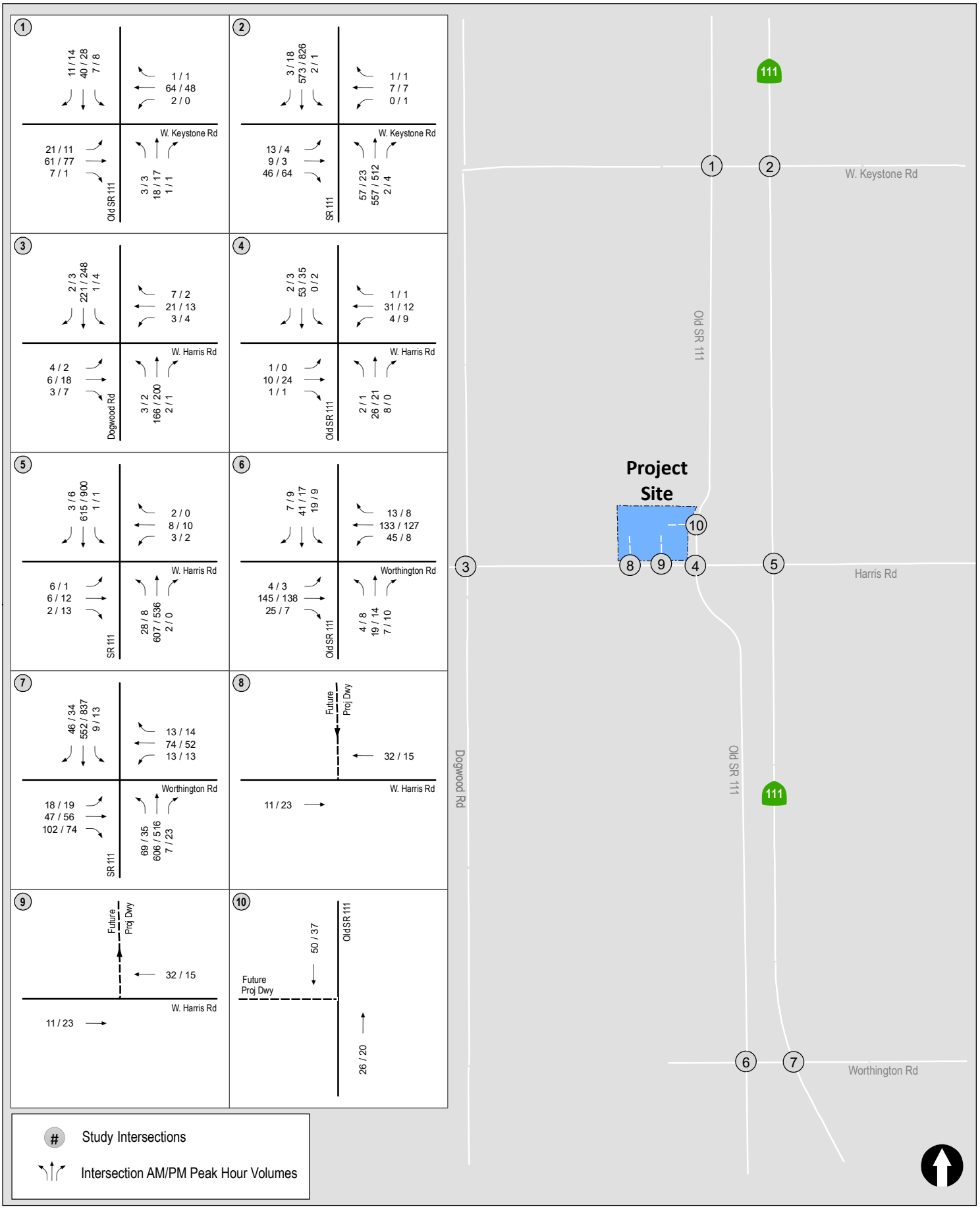

Figure 4-2

Existing Traffic Volumes

Harris Road Recycling

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5.0 PROJECT TRAFFIC

5.1 Trip Generation

Project trips consist of vehicular trips on the street system, which begin or end at the Project site and are generated by the proposed development. Trip generation estimates for the Project are based on site specific information provided by the applicant.

The traffic generated by the Project will consist of several unique trip types as described below. Project traffic generation was calculated for each trip type as shown in ***Table 5-1.*** As seen in *Table 5–1,* the Project is calculated to generate a total of 922 ADT, with 39 inbound / 29 outbound trips during the AM peak hour, and 29 inbound / 39 outbound trips during the PM peak hour. The volumes include a passenger car equivalence factor (PCE), as discussed below.

Employee Trips: A total of 50 on-site employees are expected each day; each driving their own vehicle (no carpooling assumed). To estimate the peak hour employee trips, two-shifts per day (5AM to 1PM, and 11AM to 7 PM) was assumed. Employees working either of these shifts would avoid the 7AM to 9AM morning commuter peak hour and the 3PM to 6PM afternoon commuter peak hour. Nevertheless, in order to provide a conservative analysis, 10% of the total employee ADT were assumed to enter the site (traveling inbound) during the AM peak, and 10% of the total employee ADT were assumed to exit the site (traveling outbound) during the PM peak. A trip rate of 2.1 ADT per worker vehicle was assumed to account for the trips to and from the Project site as well as the occasional mid-workday errand. Based on the location of the site and the nature of the Project, mid-workday trips are expected to be sporadic.

Feedstock Delivery Trips: A total of 100 truck-loads of feedstock are expected to be delivered to the site consistently throughout the day by truck between the hours of 5AM and 7PM (approximately seven (7) trucks per hour for 14-hours). A PCE factor of 3.0 was applied to these trips, which is the PCE for rolling terrain per the Highway Capacity Manual, to account for the reduced performance characteristics (stopping, starting, maneuvering, etc.) of heavy vehicles in the traffic flow. This factor was applied conservatively, as the terrain within the study area is mostly level.

Compost Trucks: A total of 37 truck-loads of composted material are expected to be exported from the site consistently throughout the day by truck between the hours of 5AM and 7PM (approximately 2.5 trucks per hour for 14-hours). A PCE factor of 3.0 was applied to these trips, which is the PCE for rolling terrain per the Highway Capacity Manual, to account for the reduced performance characteristics (stopping, starting, maneuvering, etc.) of heavy vehicles in the traffic flow. This factor was applied conservatively, as the terrain within the study area is mostly level.

5.2 Trip Distribution and Assignment

Project trip distribution was developed based on the Traffic Impact Analysis conducted by LLG for the Mesquite Lake Specific Plan, existing traffic patterns, the regional roadway network, and the locations of the Project driveways. The Project's Old Highway 111 driveway will serve employees and feedstock trucks, which comprise approximately 76% of the Project trips, and the Harris Road driveway will serve compost trucks, which comprise approximately 24% of the Project trips.

Figure 5-1 depicts the Project trip distribution and ***Figure 5-2*** depicts the Project trip assignment.

TABLE 5-1
PROJECT TRIP GENERATION

Number and Type of Trips	Daily Trips			AM Peak Hour (w/PCE)			PM Peak Hour (w/PCE)		
	ADT[a]	PCE[b]	PCE Adjusted ADT	In	Out	Total	In	Out	Total
50 Worker Vehicles	105[c]	1.0	105	10	0	10	0	10	10
100 Feedstock Trucks	200	3.0	600	21	21	42	21	21	42
37 Compost Trucks	74	3.0	222	8	8	16	8	8	16
Total Trips:			**927**	**39**	**29**	**68**	**29**	**39**	**68**

Footnotes:

a. Average Daily Trips

b. Passenger Car Equivalents. Based on the *Highway Capacity Manual,* a Passenger Car Equivalent (PCE) factor of 3.0 was applied to the Project's heavy-truck trips. This is the PCE for rolling terrain. This factor was applied conservatively, as the terrain within the study area is mostly level.

c. A total of 50 on-site employees are expected each day. A trip rate of 2.1 ADT per worker vehicle was assumed to account for the trips to and from the Project site as well as the occasional mid-workday errand. Based on the location of the site and the nature of the Project, mid-workday trips are expected to be very sporadic.

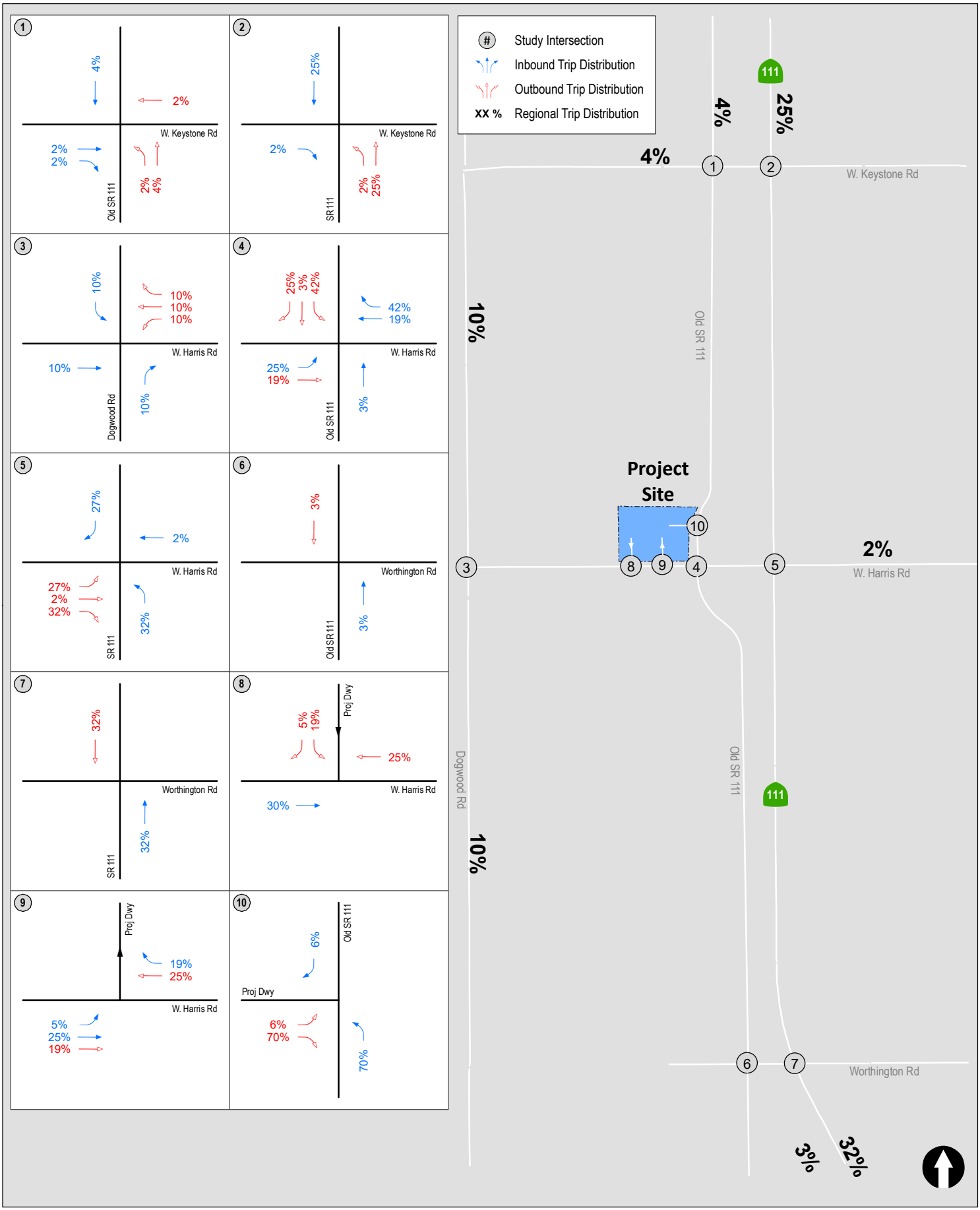

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Figure 5-1

Project Trip Distribution

Harris Road Recycling

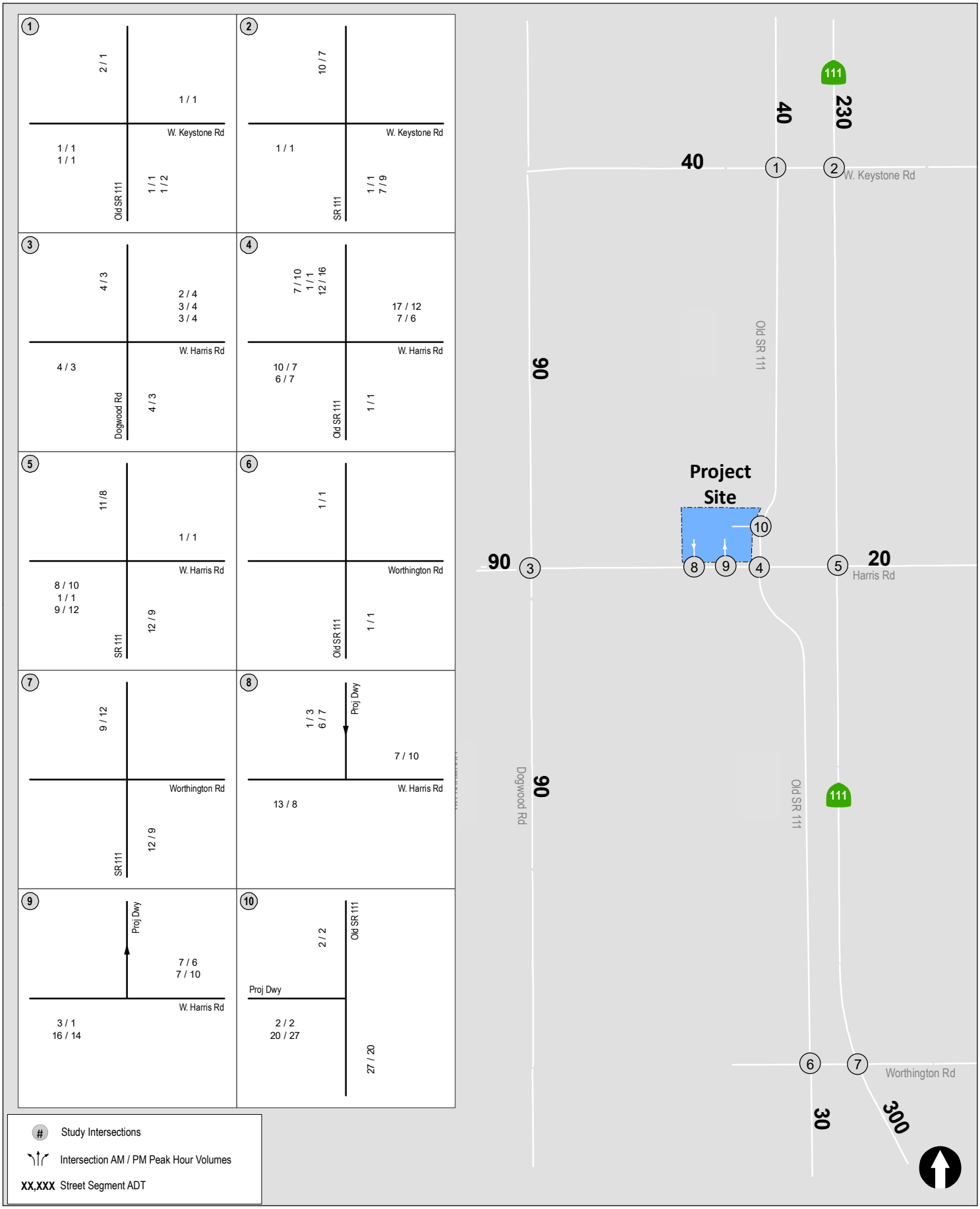

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Figure 5-2

Project Traffic Volumes

Harris Road Recycling

6.0 CUMULATIVE TRAFFIC VOLUMES

The Project's opening year is projected to be 2025. Research was conducted to identify any known Cumulative projects to be built in the next four years in the Project vicinity. The following project was included in the cumulative condition:

- The Green Valley Logistics project, located in the area north of Dahlia Lateral 8 and Harris Road, west of the Union Pacific Rail Road, East of SR-86 and South of IID Newside Drain No. 1-A, was included in the cumulative traffic volume forecast. The project includes two (2) proposed loop tracks that tie into the adjacent Union Pacific Railroad right-of-way, including a ladder track ("rail system"). The rail system will facilitate in-bound and out-bound trains with commodities as well as transloading to and from trucks. The site includes a grain elevator for receiving and distributing corn and similar feed products for consumption by cattle feeder yards and similar. The project is calculated to generate a total of 2,841 ADT, with 111 inbound / 100 outbound trips during the AM peak hour, and 100 inbound / 111 outbound trips during the PM peak hour.

In order to account for any additional unidentified cumulative projects, a growth factor of 2% per year for 4-years (2021 to 2025; 8% total) was applied to the Existing traffic volumes to obtain cumulative traffic volumes. These volumes were added to the Existing traffic volumes to obtain the Opening Year (Existing + Cumulative) traffic volumes.

Figure 6-1 depicts the Cumulative Project traffic volumes, ***Figure 6-2*** depicts the Opening Year (Existing + Cumulative Projects) traffic volumes, and ***Figure 6-3*** depicts the Opening Year + Project traffic volumes.

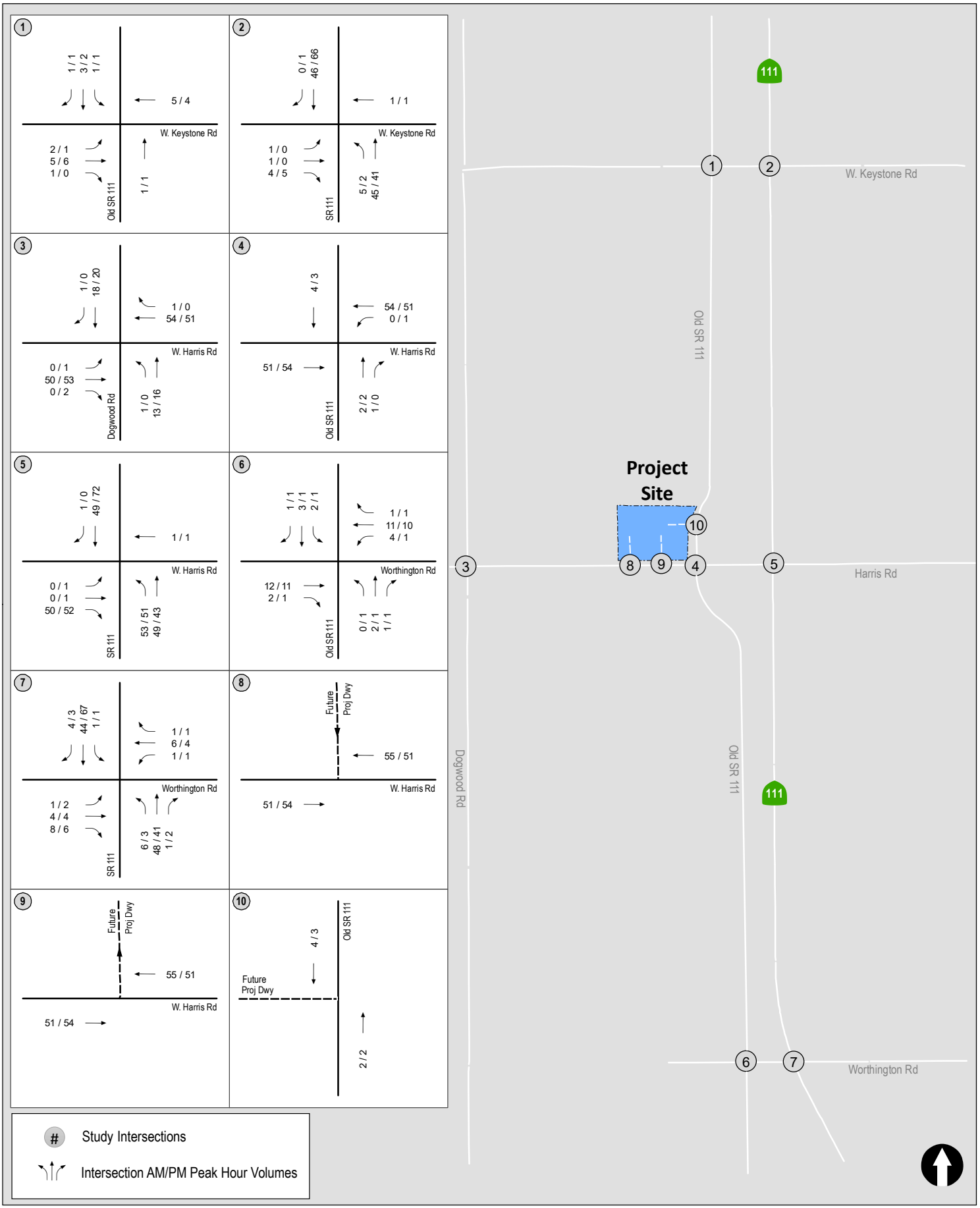

Figure 6-1

Cumulative Projects Traffic Volumes

Harris Road Recycling

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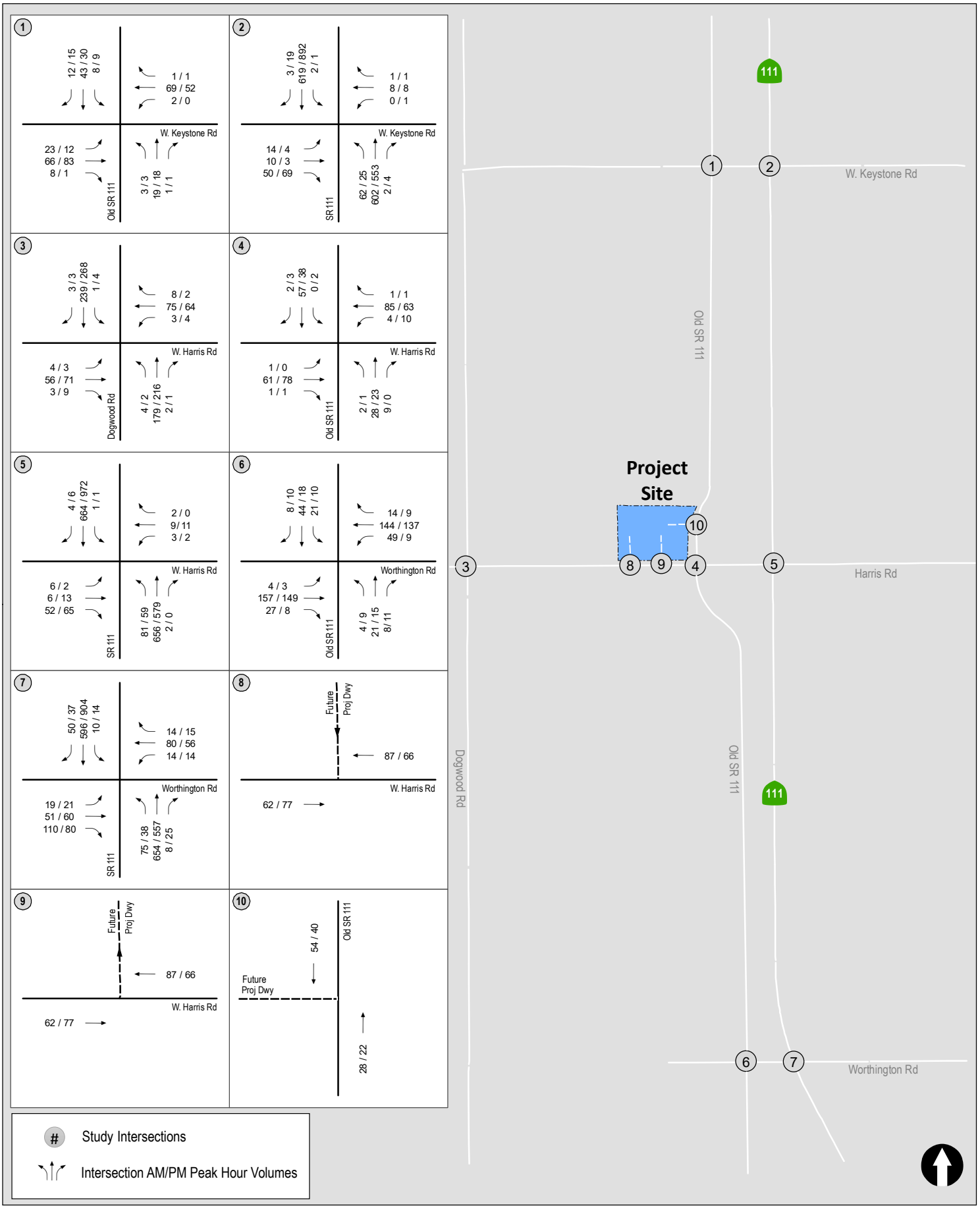

Figure 6-2

Opening Year (Existing + Cumulative Projects) Traffic Volumes

Harris Road Recycling

LINSCOTT LAW & GREENSPAN engineers

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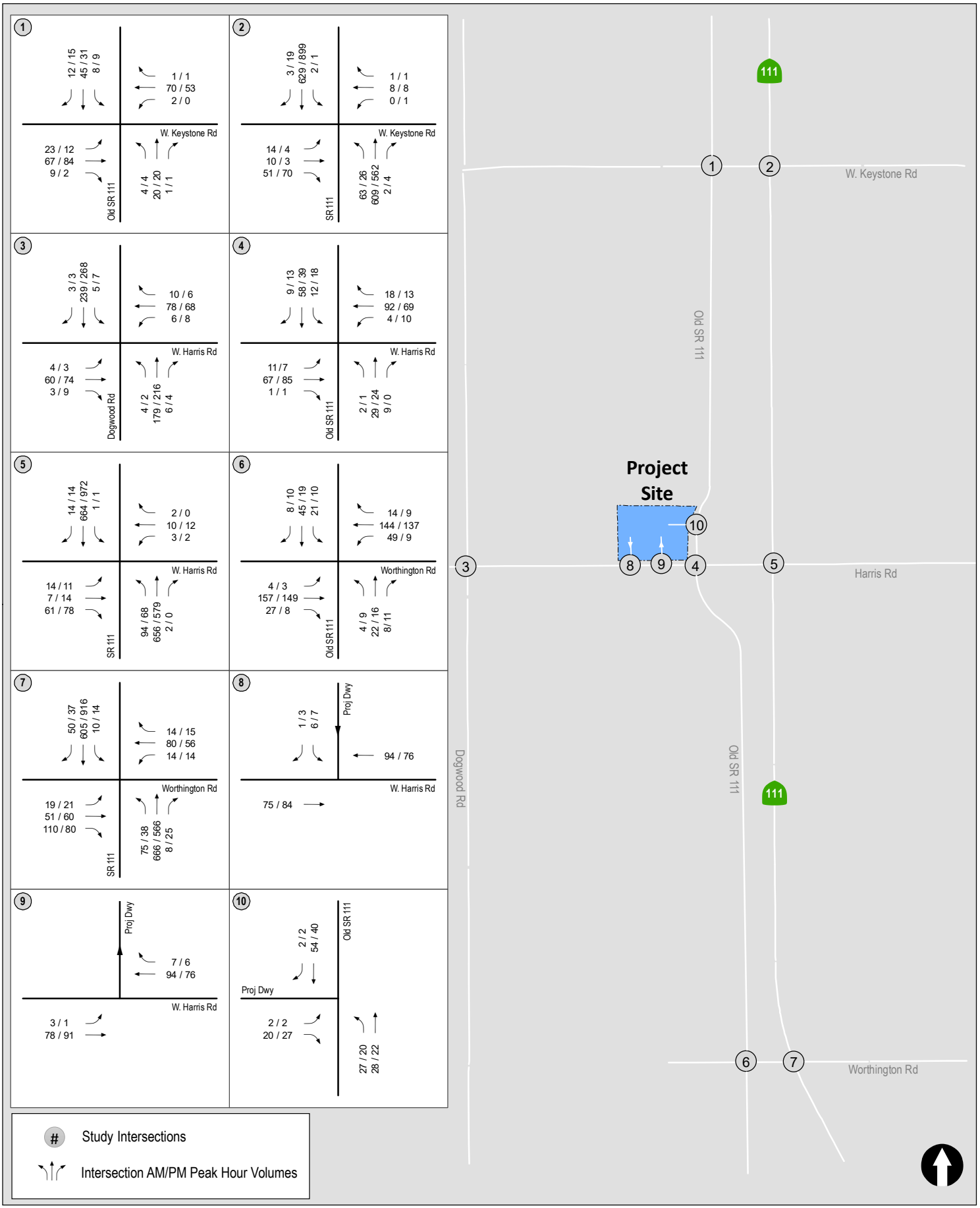

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Figure 6-3

Opening Year + Project Traffic Volumes

Harris Road Recycling

7.0 CAPACITY ANALYSIS

The following section presents the analysis of study area intersections and street segments under Opening Year conditions.

7.1 Peak Hour Intersection Operations

7.1.1 *Opening Year (Existing + Cumulative Projects) Without Project Conditions*

Table 7–1 summarizes the Opening Year without Project intersection operations. As shown in *Table 7–1,* the study intersections are calculated to operate at LOS C or better, with the exception of the Harris Road / SR 111 intersection, where the worst-case minor-street left-turn movement is calculated to operate at LOS E during the AM peak hour and LOS F during the PM peak hour. Opening Year traffic volumes at the minor-street east- and westbound movements are forecast to be very low, with a total of 14/28 eastbound AM/PM peak hour trips and a total of 14/13 westbound AM/PM peak hour trips. The worst-case delay will be experienced by fewer than 30 vehicles in each direction during the peak hours. Overall, the intersection is calculated to operate acceptably.

Appendix C contains the Opening Year without Project intersection analysis worksheets.

7.1.2 *Opening Year With Project Conditions*

Table 7–1 summarizes the Opening Year with Project intersection operations. As shown in *Table 7–1,* the study intersections are calculated to continue to operate at LOS C or better, with the exception of the Harris Road / SR 111 intersection, where the worst-case minor-street movement is calculated to operate at LOS E during the AM peak hour and LOS F during the PM peak hour.

A substantial effect is calculated at the intersection of Harris Road / SR 111 since the Project-related increase in delay exceeds the substantial effect threshold maximum of 2.0 seconds. However, as previously noted, this intersection is two-way stop-controlled, with the minor-street east- and westbound trips on Harris Road required to stop and the major-street north- and southbound trips on SR 111 uncontrolled. The reported LOS is for the worst-case minor-street movement. Overall, the intersection is calculated to operate acceptably with the addition of Project trips.

The substantial Project related effect is primarily caused by heavy trucks traveling from the Project site to northbound SR 111 via Harris Drive. This movement requires a left-turn at an unsignalized minor-street stop-controlled interchange. To address this substantial effect, heavy trucks departing the Project-site will be prohibited from accessing northbound SR 111 via Harris Drive. Instead, trucks heading northbound from the site will be required to travel along Old Highway 111 to access SR 111 via Keystone Road, which is a signalized interchange that is calculated to operate at LOS B during the AM and PM peak hours under Opening Year conditions. This will remove the majority of eastbound to northbound Project trips at the intersection of Harris Road / SR 111, thereby addressing the Project's substantial effect. The heavy truck route detailed above should be implemented as a condition of Project approval, and will be enforced through on-site signage, off-site signage as appropriate, and will be included in contracts with outside trucking companies.

Appendix D contains the Opening Year + Project intersection analysis worksheets.

TABLE 7–1
OPENING YEAR INTERSECTION OPERATIONS

Intersection	Control Type	Movement	Peak Hour	Opening Year		Opening Year + Project		Δ[e]
				Delay[a]	LOS[b]	Delay[a]	LOS[b]	
1. Keystone Road / Old Highway 111	MSSC[c]	NB/SB	AM	10.5	B	10.6	B	0.1
			PM	10.2	B	10.2	B	0.0
2. Keystone Road / SR 111	Signal	Overall	AM	7.3	A	7.3	A	0.0
			PM	7.1	A	7.2	A	0.1
3. Harris Road / Dogwood Road	MSSC[c]	EB/WB	AM	13.7	B	13.8	B	0.1
			PM	14.8	B	15.2	C	0.4
4. Harris Road / Old Highway 111	MSSC[c]	NB/SB	AM	10.4	B	10.9	B	0.5
			PM	10.3	B	10.6	B	0.3
5. Harris Road / SR 111	MSSC[c]	EB/WB	AM	**43.7**	**E**	**47.9**	**E**	**4.2**
			PM	**69.0**	**F**	**73.9**	**F**	**4.9**
		NBL[f]	AM	9.6	A	9.7	A	0.1
			PM	11.1	B	11.2	B	0.1
		SBL[g]	AM	9.1	A	9.1	A	0.0
			PM	8.8	A	8.8	A	0.0
		Overall	AM	1.8	-[d]	2.5	-[d]	-
			PM	2.3	-[d]	3.9	-[d]	-
6. Worthington Road / Old Highway 111	Signal	Overall	AM	15.1	B	15.1	B	0.0
			PM	15.2	B	15.2	B	0.0
7. Worthington Road / SR 111	Signal	Overall	AM	10.7	B	10.7	B	0.0
			PM	10.2	A	10.2	B	0.0
8. Harris Road / Proj Dwy #1[h]	MSSC	SB	AM	-	-	9.4	A	9.4
			PM	-	-	9.3	A	9.3
9. Harris Road / Proj Dwy #2[h]	MSSC	EB	AM	-	-	7.4	A	7.4
			PM	-	-	7.4	A	7.4
10. Old Highway 111 / Proj Dwy #3[h]	MSSC	EB	AM	-	-	8.7	A	8.7
			PM	-	-	8.7	A	8.7

Footnotes:

a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. MSSC – Minor-Street Stop Controlled intersection. Worst-case delay reported.
d. Synchro does not provide an overall LOS for minor-street stop-controlled intersections.
e. Change in delay attributable to the Project.
f. North-bound left-turn
g. South-bound left-turn
h. Intersection does not exist under "without Project" conditions.

SIGNALIZED		UNSIGNALIZED	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

8.0 CONCLUSIONS

8.1 VMT Assessment

8.1.1 *Heavy Vehicles*

Per OPR guidelines, "vehicle miles traveled" refers to the amount and distance of ***automobile*** travel attributable to a project. Here the term "automobile" refers to on-road passenger vehicles, specifically cars and light trucks. VMT does not include trips from heavy-trucks. Therefore, the trips generated by the Project's feedstock and compost trucks are excluded from VMT analysis.

8.1.2 *Employee Passenger Vehicles*

The Project's employee passenger vehicles are calculated to generate 105 ADT, as shown in *Table 5-1*. Therefore, the employee component of the Project can be considered a "small project", assumed to cause a less-than significant transportation impact per OPR guidelines.

8.2 Local Mobility Analysis

A substantial effect is calculated at the intersection of Harris Road / SR 111. The substantial effect is primarily caused by heavy trucks traveling from the Project site to northbound SR 111 via Harris Drive. This movement requires a left-turn at an unsignalized minor-street stop-controlled interchange. To address this substantial effect, heavy trucks departing the Project-site will be prohibited from accessing northbound SR 111 via Harris Drive. Instead, trucks heading northbound from the site will be required to travel along Old Highway 111 to access SR 111 via Keystone Road. This will remove the majority of the eastbound to northbound Project trips at the intersection of Harris Road / SR 111, thereby addressing the Project's substantial effect. The heavy truck route detailed above should be implemented as a condition of Project approval, and will be enforced through on-site signage, off-site signage as appropriate, and will be included in contracts with outside trucking companies.