PROJECT REPORT

TO: ENVIRONMENTAL EVALUATION COMMITTEE **AGENDA DATE: January 14, 2021**

Informational Item Only

FROM: PLANNING & DEVELOPMENT SERVICES DEPT. **AGENDA TIME 1:30 PM/No.2**

PROJECT TYPE: Energy-Source Minerals LLC ALTis (Conditional Use Permit CUP 20-0008 and Parcel Map 2485) SUPERVISOR DISTRICT 4

LOCATION: 477 West McDonald Road APN: 020-100-044-000

Calipatria, CA 92233 PARCEL SIZE: 92 acres

GENERAL PLAN (existing) Agriculture/Geothermal Overlay Zone GENERAL PLAN (proposed) N/A

ZONE (existing) M2G-PE ZONE (proposed) N/A

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: 01/14/2021

INITIAL STUDY: **20-0014**

☐ NEGATIVE DECLARATION ☐ MITIGATED NEG. DECLARATION ☒ EIR

DEPARTMENTAL REPORTS / APPROVALS:

PUBLIC WORKS	☒ NONE	☐ ATTACHED
AG / APCD	☒ NONE	☐ ATTACHED
E.H.S.	☒ NONE	☐ ATTACHED
FIRE / OES	☒ NONE	☐ ATTACHED
OTHER	(See Attached)	

REQUESTED ACTION:

SEE ATTACHED

Planning & Development Services Department
801 MAIN ST., EL CENTRO, CA, 92243 760-482-4236
(Jim Minnick, ICPDS Director)
S:\AllUsers\APN\020\100\044\CUP20-0008\EEC\projrp.doc

Initial Study & Environmental Analysis
For:

Energy Source Mineral ATLiS Project

Prepared By:

COUNTY OF IMPERIAL
Planning & Development Services Department
801 Main Street
El Centro, CA 92243
(442) 265-1736
www.icpds.com

December 2020

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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 with the proposed Energy Source Mineral ATLiS Facility (Refer to Figure 1 & 2).

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 has determined that the proposed applications will result in potentially significant environmental impacts and therefore, an Environmental Impact Report is deemed as the appropriate document to provide necessary environmental evaluations and clearance as identified hereinafter.

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 which 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 NOTICE OF PREPARATION

This IS and Notice of Preparation (NOP) are informational documents which are intended to inform County 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 will be circulated for a period of 35 days for public and agency review and comments.

D. CONTENTS OF INITIAL STUDY

This Initial Study 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, potentially significant impact, or no impact.

PROJECT SUMMARY, LOCATION AND EVIRONMENTAL SETTINGS describes 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. PERSONS AND ORGANIZATIONS CONSULTED identifies those persons consulted and involved in preparation of this Initial Study and Negative Declaration.

V. 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. To each question, there are four possible responses, including:

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 are 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 Negative Declaration 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 which 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.

II. Environmental Checklist

1. **Project Title**: Energy Source Mineral ATLiS Project
2. **Lead Agency**: Imperial County Planning & Development Services Department
3. **Contact person and phone number**: David Black, Planner IV, (442) 265-1736, ext. 1746
4. **Address**: 801 Main Street, El Centro CA, 92243
5. **E-mail**: davidblack@co.imperial.ca.us
6. **Project location**: The Project's lithium hydroxide production plant and facilities will be located at 477 West McDonald Road, Calipatria, California which is approximately 3.8 miles southwest of the community of Niland on three parcels privately owned by Hudson Ranch Power I LLC in the County: APNs 020-100-025, 020-100-044, 020-100-046. Currently, the HR1 power plant exists within the northeast corner of the 65.12-acre parcel, APN 020-100-044. The Project's plant facilities would be built on an approximately 37-acre area that would be subdivided out of the existing 65.12 acres. An additional 15 acres of the Project site located on the northwestern parcel APN 020-100-025 and approximately 40 acres of the Project site located on the southeast parcel APN 020-100-046 will be added to the 37-acres through a subdivision map application to form the new parcel for the Project.
7. **Project sponsor's name and address**: Energy-Source Mineral, LLC
8. **General Plan designation**: Medium Industrial
9. **Zoning**: M-2-G-PE (Medium Industrial/Geothermal Overlay Zone/Pre-existing Overlay Zone

10. **Description of project**: Energy-Source Minerals LLC is proposing to construct and operate a commercial lithium hydroxide production plant within the Salton Sea geothermal field in Imperial County, California (Project). The facility will process geothermal brine from the neighboring Hudson Ranch Power I Geothermal Plant (HR1) to produce lithium hydroxide, as well as zinc and manganese products which would be sold commercially.

11. **Surrounding land uses and setting**: To the west of the Project site is generally Imperial Irrigation District (IID)-owned vacant marsh land adjoining to the Salton Sea. To the north of the Project site is vacant land that now is mostly used for duck hunting clubs and is the location of the production and injection wells for HR1. To the south is vacant land that has never been in any production and is also the site of numerous "mud-pots". There are no residential uses within at least two miles of the Project site.

12. **Other public agencies whose approval is required** (e.g., permits, financing approval, or participation agreement.):

- Caltrans – Encroachment Permit
- California Department of Toxic Substances/Certified Unified Program Agency (CUPA) – Hazardous Materials / Environmental Protection Agency Approvals and Permits
- Regional Water Quality Control Board – Water Discharge Requirement
- Imperial Irrigation District – Encroachment Permit
- Imperial County Air Pollution Control District – Permit to Construct and Permit to Operate
- Environmental Health Departments for HR1 – Potable Water Treatment Modified Permit
- Imperial County Public Works
- Imperial County Fire Department and Office of Emergency Services

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, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures

regarding confidentially, etc.?

In accordance with California Assembly Bill (AB) 52, Native American tribes with potential resources in the area were notified of the Project on November 6, 2020 and offered the opportunity for consultation. As of November 20, 2020, the Quechan Tribe has requested consultation for the Project. Any other results regarding consultation will be outlined in the Cultural Resources Report being prepared for the Project.

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 21080.3.2). 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

Energy-Source Minerals LLC (Applicant) is proposing to construct and operate a commercial lithium hydroxide production plant within the Salton Sea geothermal field in Imperial County (County), California. The facility (ALTiS Plant) will process geothermal brine from the neighboring Hudson Ranch Power I Geothermal Plant (HR1) to produce lithium hydroxide, as well as zinc and manganese products which would be sold commercially.

A. Project Location:

The Project's production plant and facilities will be located at 477 West McDonald Road, Calipatria, California which is approximately 3.8 miles southwest of the community of Niland on three parcels privately owned by Hudson Ranch Power I (HR1) LLC in the County: APNs 020-100-025, 020-100-044, 020-100-046 (Project site; Figure 1). Currently, the HR1 power plant exists within the northeast corner of the 65.12-acre parcel, APN 020-100-044. The Project's plant facilities would be built on an approximately 37-acre area that would be subdivided out of the existing 65.12 acres. An additional 15 acres of the Project site located on the northwestern parcel APN 020-100-025 and approximately 40 acres of the Project site located on the southeast parcel APN 020-100-046 will be added to the 37-acres through a subdivision map application to form the new parcel for the Project. The layout of the Project is shown in the Project Site Plan (Figure 2).

All parcels that make up the Project site are zoned medium industrial (M-2) and are located within the geothermal overlay zone (G) and pre-existing allowed/restricted overlay zone (PE). The M-2 zone is to designate areas for wholesale commercial, storage, trucking, assembly type manufacturing, general manufacturing, research and development, medium intensity fabrication and other similar medium intensity processing facilities. Land in the PE overlay zone is also classified in another "base" zone, and is intended to allow an existing base zoned use to continue with its current use, even though through the strict interpretation of the County General Plan and Zoning Ordinances, such use is a pre-existing, non-conforming use. Additionally, the geothermal overlay zone designates the area for geothermal energy extraction and associated activities. The Project is located entirely within the Salton Sea Geothermal Overlay Zone.

Two primary entry driveways that serve as the access to the Project site will be constructed from McDonald Road. A secondary access entrance to the Project site will serve as an emergency only access point and will be constructed off Davis Road. Primary highway access to the proposed Project site will be via State Highway (HWY) 111. The Applicant will obtain encroachment permits from the County Department of Public Works for the driveway access. The unpaved portion of McDonald Road between Highway 111 and English Road will be paved.

The western portion of the Project site is located within the Federal Emergency Management Agency (FEMA) "Zone A" flood zone, in which there is a one percent annual chance of flooding. However, to comply with FEMA regulations, during the construction of Hudson Ranch I a berm was installed along the exterior boundary to eliminate possible flooding.

B. Current Use of the Project Site and Surrounding Areas

Currently, the location of the proposed Project is partially on the existing HR1 site, which was previously permitted for the geothermal plant. In addition to the actual power plant, the rest of the land has been used for laydown areas, storage areas, and stormwater management. The additional land that will be included is an approximately 15-acre parcel, APN 020-100-025, located at the southeast corner of Davis Road and McDonald Road. This 15-acre site has been vacant for several decades and was previously used for geothermal testing. Also added to the Project site is an approximate 40-acre portion of APN 020-100-046, directly south of the HR1 plant site.

To the west of the Project site (on the west side of Davis Road) is generally Imperial Irrigation District (IID)-owned

vacant marsh land adjoining to the Salton Sea. To the north of the Project site is vacant land that now is mostly used for duck hunting clubs and the location of the production and injection wells for HR1. To the south is vacant land that has never been in any production and is also the site of numerous "mud-pots". There are no residential uses within at least two miles of the Project site.

C. Project Summary:

The Project would consist of the following activities:

- Construction and operation of a plant to extract lithium, manganese, zinc, and other commercially viable substances from geothermal brine and process the extracted substances to produce commercial quantities of lithium, and to the extent possible, manganese and zinc products and other products;
- Construction and operation of brine supply and return pipelines and other associated interconnection facilities with the HR1 power plant;
- Construction of a primary access road from McDonald Road (approximately 500 feet west of the HR 1 entrance),a second primary access about 800 feet west, and an emergency access entrance only from Davis Road;
- Paving of McDonald Road from Highway 111 to English Road (approximately 3 miles);
- Construction of a power interconnection line from the IID and HR1 switchyard located at the northeast corner of the HR1 site;
- Construction of associated facilities between HR1 and the Project site to facilitate the movement of brine and other services;
- Construction of a laydown yard that will also support temporary offices during construction as well as serving as a truck management yard during operations; and
- Construction of offices, repair facilities, shipping and receiving facilities and other infrastructure components.

Structures

The Project site will include construction of the following buildings and structures:

- Plant offices (which will house offices and meeting rooms);
- Operations and employee facilities (which will house offices for supervisors, meeting rooms, breakroom/lunch room, lockers/shower rooms);
- Maintenance shop, materials warehouse (which will house plant maintenance equipment and supplies, and shops such as machine, paint, welding, and electronic);
- Materials warehouse (which will store equipment, reagents, etc.);
- Electrical building(s) (which will house motor control centers, electric power switchgear and metering to provide power for plant operations);
- Emergency generator building;
- Two reagent storage and preparation buildings;
- Chemical laboratory building (which will contain a wet chemistry laboratory and analytical instruments for analysis of in-process and finished products);
- Filter press sheds (which will house filter presses);
- Lithium product production building (which will house the proprietary technology for manufacturing the lithium carbonate and lithium hydroxide products);
- Lithium product handling, packaging, and warehouse buildings (which will house the filtration and drying equipment for the lithium products and bagging and palletizing of finished products);
- Manganese product handling, production, and warehouse building (which will house the filtration and drying equipment for the manganese product and bagging and palletizing of finished products);
- Zinc product handling, production, and warehouse building (which will house the filtration and drying equipment for the zinc product and bagging, palletizing and storage of finished products);
- Calcium oxide silo and slacker;
- Limestone stockpile and solution tanks;

- Hydrogen chloride offloading and storage tank(s);
- Gate guard house; and
- Cooling tower.

The product production, handling, and warehouse buildings will be about 80 feet tall, and the various other components of the plant may be as high as 100 feet tall.

The sewage from the Project will be processed by the HR1 sewer treatment plant, hence no further permitting for solid waste is required. Potable water will be provided from the HR1 permitted water treatment plant via an agreement between HR1 and the ATLiS Plant. An application to modify the HR1 water treatment plant by using both the existing approved plant and the former Simbol plant will be made to EHS to HR1.

Impurity Removal and Production Extraction Facilities

The impurity removal and the product extraction process areas will be constructed within designated areas of the plant site on concrete pads with a containment curb. These process areas may not be located within a building but will consist of a series of interconnected tanks and pipelines. The arrangement of these facilities is part of the Applicant's proprietary technology.

Product Production Facilities

Product production facilities consisting of a series of interconnected tanks and pipelines will also be constructed on the site. The processing facilities will also be erected within designated portions of the plant site on concrete pads with a concrete containment curb or in designated buildings. The arrangement of these facilities is also part of the Applicant's proprietary technology.

Pipe Rack and Process Pipelines

A pipe rack will be constructed from the Project's process area to the HR1 site. A post clarifier brine delivery pipeline from HR1 to the Project's process area and a depleted brine return pipeline from the process area to HR1 will be constructed on one or more pipe racks. A steam/steam condensate delivery pipeline will also be constructed on the pipe rack. The Project will be responsible for returning the depleted barren brine to the HR1 site. Additional delivery or return pipelines may also be constructed onto the pipe rack as needed to handle the different fluids transported. The delivery and return pipelines will be constructed with minimal usage of flanged connections to reduce the potential for pipe leaks. Automatic valves will be integrated into the pipeline system which would close quickly in the event of a pipe rupture to minimize the size of any potential spill. An Emergency Response Plan will be prepared and implemented should a fluid spill event occur.

Fire Water and Freshwater Pond

The Project will share with HR1 the fire suppression system, and the freshwater storage containment pond. The fire suppression system will be re-designed to accommodate the overall fire protection obligation to both plants along with the necessary controls. The raw water storage pond currently located on the east side of the HR1 plant will continue to receive canal water from the IID "O" lateral. However, a backup delivery line will also be installed from the "N" lateral located about ¼ mile south of the plant. This redundancy is necessary for two reasons, first when IID does maintenance work on canals they can be out of service for several days and second in the event of a natural interruption such as an earthquake that may render the "O" lateral out of service. The Imperial County Fire Department will be consulted as appropriate to review and approve the proposed fire water and freshwater pond facilities. A 500,000-gallon above-ground water tank will be constructed to serve as the primary water supply for the joint fire suppression system for the HR1 and ATLiS sites.

Stormwater Retention Basin

The Project may share the HR1 stormwater retention basin. The retention basin will be engineered and constructed to contain the combined stormwater storage requirements of both the HR1 and Project plant sites. If a shared facility cannot be done for technical, legal or other reasons then the Project will construct its own basin on the far south side of the parcel. The current HR 1 Plant site was constructed to eliminate any off-site discharge and this site will be designed in the same manner.

Security Fence and Landscaping

A nominal six-foot-high chain-link security fence, which may be topped with three-strand barbed wire, will be constructed around the Project plant site. The fence will be constructed to meet County standards for obscured fencing around processing areas. Due to security levels required for the HR1 power plant and because of the interconnectivity between HR1 and the Project, security protocols for both HR1 and the Project will be similar in nature.

Substation and Power Line Facilities

Up to 8 MW of electrical power will be needed for the Project operations. The power will be purchased from the IID. The Project will construct an electrical substation on the Project site. An emergency 600 HP diesel generator(s) will be used to keep vital Project plant systems operating during power outages.

Road Improvements

At the junction of McDonald Road and HWY 111, improvements will also be constructed to meet the requirements of the County and the California Department of Transportation (Caltrans). As currently planned these improvements will include:

- Relocation of the IID drain exit structure on the west side of HWY 111
- Relocation of the IID canal gates on the west side of HWY 111
- Northbound left turn lane on HWY 111 (or as required by an approved Traffic Study)
- Southbound right turn lane on HWY 111 (or as required by an approved Traffic Study)

A short power line will be constructed between the current IID/HR1 switchyard and the plant site along McDonald Road to the Project site.

D. PROJECT CONSTRUCTION

Construction will include light grading of approximately 30 acres of land that will include the Project site, new entry road off of McDonald Road, an emergency access road off of Davis Road, and a connection to the IID/HR1 electric substation. The Project site driveway, parking, and maneuvering areas will be constructed to County standards (generally a minimum of three inches of asphaltic concrete paving or higher quality material).

The Project will either be constructed to an elevation above the Imperial County designated special flood hazard for lands near the Salton Sea, or have the existing berm extended to the outer perimeter of the site. The Project will be constructed so that no off-site discharge of any waters will be allowed and all of the runoff or discharge will be managed on site.

It is estimated that on average 20-25 trucks per day will travel in and out of the Project site during construction except during grading when about 50-60 trucks will be traveling in and out of the Project site. An average of 100 workers will commute to the Project site during construction.

Construction Work Force and Schedule

Project construction would begin when all necessary permits are obtained, expected to be Quarter Three (Q3) of 2021. Construction is expected to be complete Quarter Two (Q2) of 2023. All work would occur in one phase, with approximately 90% of work occurring during daylight hours over 5 or 6 days per week over an intermittent 24-month period. The remaining 10% of work would occur during nighttime hours to avoid extreme summer temperatures. Approximately 200 to 250 workers are anticipated at peak periods. Construction workers will commute to the site and there will be no onsite housing of workers. Construction parking will be in the 15 acre laydown area, which will be located at the southeast corner of Davis Road and McDonald Road on what is currently APN 020-100-025.

Construction Equipment

Below is a list of construction equipment anticipated to be required for the Project:

- Off-highway trucks
- Rollers
- Crawler tractors
- Excavators
- Graders
- Water trucks
- Compactors
- Rubber tired loaders
- Scrapers
- Cranes
- Generator sets
- Concrete pump
- Plate compactors
- Rough terrain forklifts
- Skid steer loaders
- Tractor/Loader/Backhoe
- Aerial lifts
- Welders
- Air compressors
- Pavers
- Paving equipment

Construction Water Supply Source and Requirements

It is estimated that up to 50,000 gallons per day of water will be needed during Project construction for fugitive dust control during Project site grading and construction activities. This water will be purchased from the IID and will be transported to the site via temporary pipeline or via water truck. A Water Supply Assessment is being prepared for the Project to analyze the impacts associated with the Project's construction and operational water requirements.

E. PROJECT OPERATIONS

The Project's plant will utilize post-secondary clarifier brine produced from the geothermal fluid management activities on the neighboring HR1 power plant site as the resource process stream for the commercial production of lithium hydroxide monohydrate (LIOH), and zinc and manganese products. The production operations will consist of the following general processing steps:

1. Impurity removal
2. Lithium extraction as Lithium Chloride (LiCl)
3. Conversion and processing of LiCl to Lithium products
4. Drying and packaging of lithium products
5. Zinc extraction and processing to Zinc products
6. Manganese extraction and processing to manganese products
7. Offsite product shipping

The production processing steps may be altered over time as production methods and efficiencies evolve and new or revised product lines are developed at the facility. The arrangement of the processing equipment is part of the proprietary technology developed for the Project.

Impurity Removal

Post heat extraction geothermal brine from the secondary clarifier of the HR1 power plant site will be transported via pipeline to the impurity removal process area on the ATLiS plant site. A nominal 7,000 gallons per minute (gpm) of the brine will be processed by the facility. This projected process rate is used as the basis for the estimate provided throughout this Project description, but the actual rate of brine eventually processed on the site will be optimized to take advantage of the available facilities on the HR1 and ATLiS plant sites.

Iron (Fe) and silica (SiO2) will be removed from the brine followed by the removal of the manganese (Mn) and zinc (Zn) in a two-stage process. The separated Fe-SiO2 material, and the Mn-Zn material will be dewatered in the Filter Press sheds. The mineral depleted brine will then be transported via pipeline to the Lithium (Li) Extraction process area.

The separated Fe- SiO2 material will be initially managed as a waste stream. The waste material will be collected and analyzed in conformance with appropriate laboratory testing protocols to ensure that it is handled and disposed of in an appropriate manner.

If and when in the future, opportunities exist to use this material, the Applicant plans to market Fe- SiO2 material as an additional product(s) to be shipped to a third party(ies) for use in other industrial processes, and it will no longer be a waste but a product. The market for Fe- SiO2 material is currently being developed. Based on average production rates at the target nominal process rate of 7,000 gmp, approximately 136,200 metric tons of Fe- SiO2 material will be processed annually.

Li Extraction as Lithium Chloride

The treated brine will be fed to a Li extraction process located within the Li extraction process area on the ATLiS plant site. This area will be outside on a concrete pad. The area will contain proprietary Li extraction media. Li from the brine will be retained on the extraction media. A lithium chloride (LiCl) product stream will be produced from the extraction process. The LiCl will be transported via pipeline from the Li extraction area into the Li purification process area. Impurities will be removed from the LiCl product stream and handled as nonhazardous waste. The purified LiCl will then be concentrated in an evaporator or equivalent process.

Conversion and Processing of LiCl into Li Products

The purified, concentrated LiCl will be transported via pipeline from the Li purification area to the Li Product Production Building. Proprietary technology will be used to convert the LiCl and then into lithium carbonate (Li2CO3) and then into LiOH product stream.

Drying and Packaging of Li Products

The lithium hydroxide (LiOH) product stream will be transported to a Lithium Product Handling, Production and Warehouse building where the crystals will be separated from the Li-rich process fluid in a dewatering system. LiOH crystals will be dried, sized, and cooled.

Packaging of the Li Products

The dried Li products will be packaged, palletized, staged, and loaded into trucks for distribution in the Li Product Handling, Production, and Warehouse buildings. The dried Li products will be loaded into bulk bags in a bagging station. Packaging is expected to be 500 kilograms (kg) to 1,000 kg super sacks.

Extraction of Zn and Mn

Zn/Mn filter cake will be acid leashed, separated and purified in a two-part solvent extraction process. The separated steams will each then be dried and packaged for further processing by others.

Mn Extraction and Processing to Mn Products

The Mn removed by the solvent extraction process will be precipitated into Mn oxides/hydroxides products, then dewatered in filter presses into wet cake product. The products will be transported to the Mn Product Handling, Production and Warehouse building for further handling, packaging, and offsite shipment to market.

Product Shipping to Offsite Markets

The ATLiS plant may produce multiple products for offsite shipment to market by truck. The average annual amount of product shipped out of the ATLiS plant is estimated as 19,000 metric tons of Li product, 10,000 to 20,000 metric tons of Zn product(s), and up to 60,000 metric tons of Mn product(s). Products will be transported by freight truck on existing roadways to shipping distribution points. Other products of the production operations may be generated by the proprietary technology on the ATLiS plant site and would also be shipped offsite to market by truck. Trucking will generally be to markets in the greater Los Angeles basin, Arizona, and Texas.

Operational Truck Traffic

It is estimated that approximately 24 trucks per day will travel in and out of the Project site during normal operations. The truck traffic includes about 10 trucks per day of outgoing products, including one truck load of dry lithium, two truckloads of 31% HCl, three truckloads of zinc, and four truckloads of manganese. Truck traffic also includes about eight truck deliveries of reagent chemicals; cooling tower treatment chemicals; consumptive media; product packaging materials; and fuel. The estimate also includes six trucks of outgoing waste generated on the site. The majority of the outgoing waste generated onsite is expected to be delivered to and processed at the Burrtec Solid Waste Facility. However, it is estimated that up to 10% of trucks carrying filter cakes (waste debris mix of silica, sand and iron) from the plant would be required to be delivered to a waste treatment facility in Arizona.

Operational Water Supply Source and Requirements

Approximately 90,000 gallons per hour (g/h) or about 3,400 acre-feet per year (AFY) of canal water will be purchased from the IID for project cooling water makeup and additional process water. Approximately 112 g/h or about 3 AFY of the canal water to be purchased will be used for potable water purposes, including potable washbasin water, eyewash equipment water, water for showers and toilets in crew change quarters, and sink water in the sample laboratory. A Water Supply Assessment is being prepared for the Project to analyze the impacts associated with the Project's construction and operational water requirements.

Operational Plant Maintenance

Operation of the Project would be dependent on the ability of the HR1 facility to deliver spent geothermal brine for processing at the ATLiS facility. Thus, approximately every three years the Project facility will be shut down for about three weeks to complete a facility cleaning in alignment with the HR1 plant cleaning. This process would remove mineral scale from Project plant piping.

Operational Work Force and Schedule

Project operations will begin as soon as construction activities are completed, expected to be Q2 of 2023. Beginning with startup operations, the Project is expected to be operated by a total staff of approximately 62 full-time, onsite employees. Plant operations will continue 24 hours per day, 7 days per week. It is projected that up to 40 employees

will be onsite at any given time with 24 day-staff employees and two rotating shifts of 16 additional employees overlapping the day-staff and covering nights, weekend, and holidays.

F. PROJECT DECOMISSIONING

The projected life of the Project is a nominal 30 to 40 years. The Applicant will prepare a Site Abandonment Plan in conformance with Imperial County requirements, for consideration by the Planning Commission prior to Project approval. This plan would describe the proposed equipment dismantling and site restoration program in conformance with the wishes of the respective landowners/lessors and Imperial County requirements in effect at the time of abandonment and would be implemented at the end of Project operations. Decommissioning activities would be similar to project construction activities; however, decommissioning is likely to be less intensive than construction. Because this phase would occur approximately 30 to 40 years into the future, decommissioning is anticipated to employ equipment that is more technologically advanced than that which will be used during construction. Further, there will be a reduction in the need for site preparation and associated activities.

G. REQUIRED PERMITS AND APPROVALS

Lead Agency Approval

Imperial County Planning Department would be the lead agency for the proposed Project. The following permits would be required from the lead agency:

- Imperial County Planning Department – Minor Subdivision
- Imperial County Planning Department – Water Supply Assessment
- Imperial County Planning Department – Conditional Use Permit
- Imperial County Planning Department – Development Agreement (if required)
- Imperial County Building Department – Building and Grading Permits
- Imperial County Public Works Department – Encroachment Permit(s)

Reviewing Agencies

State Agencies

- Caltrans – Encroachment Permit
- California Department of Toxic Substances/Certified Unified Program Agency (CUPA) – Hazardous Materials / Environmental Protection Agency Approvals and Permits
-

Regional Agencies

- Regional Water Quality Control Board – Water Discharge Requirement
- Imperial Irrigation District – Encroachment Permit
- Imperial County Air Pollution Control District – Permit to Construct and Permit to Operate
- Environmental Health Departments for HR1 – Potable Water Treatment Modified Permit
- Imperial County Public Works
- Imperial County Fire Department and Office of Emergency Services

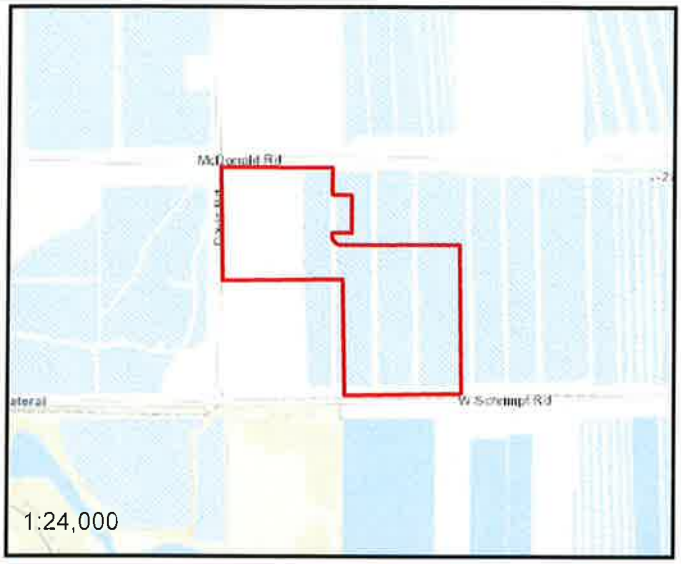
H. OBJECTIVES

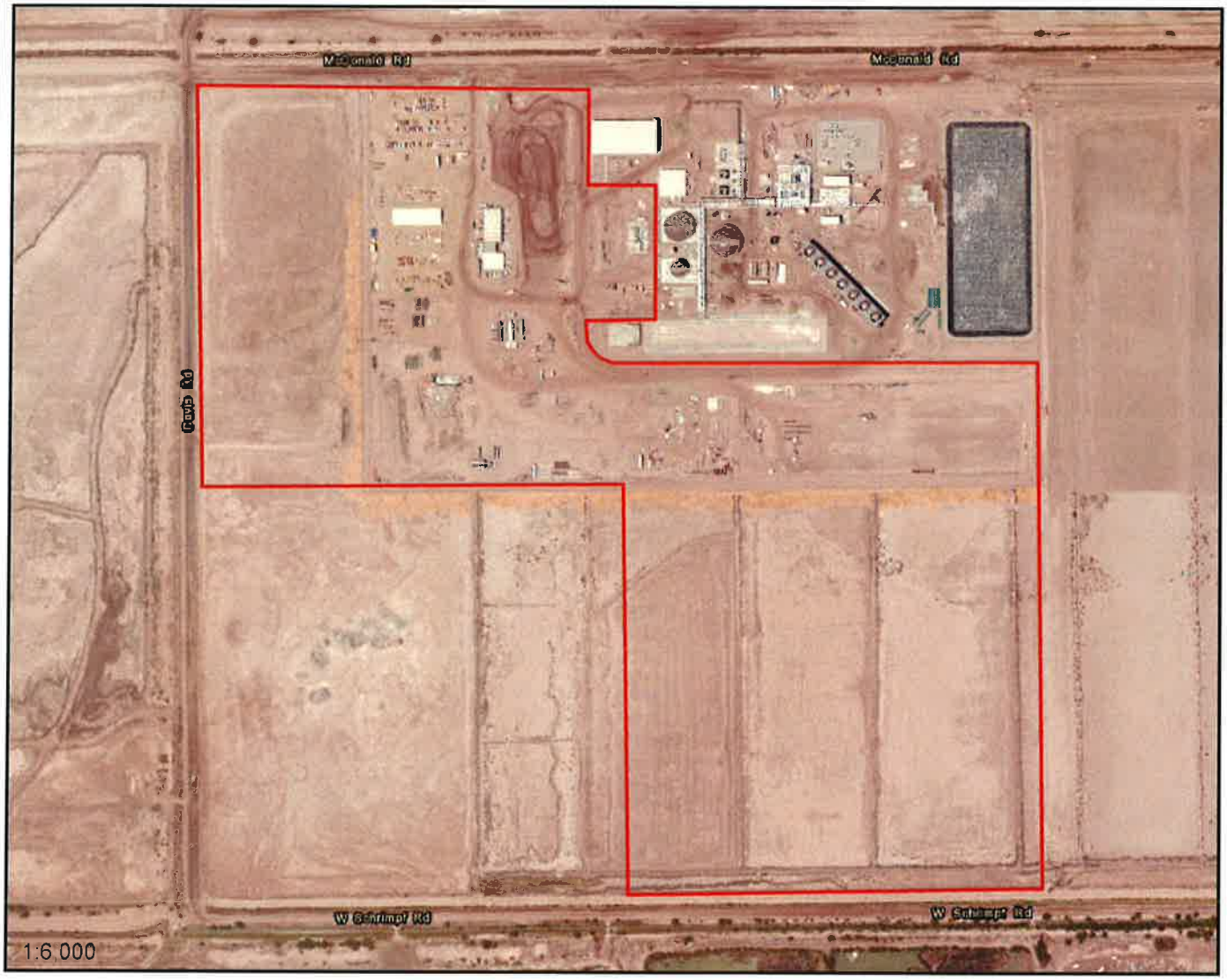
The Project has the following objectives:

- To produce quantities of lithium, manganese, zinc and other strategic minerals from geothermal brine for commercial sale.
- To co-locate near a geothermal flash plant to minimize the distance required to pipe the brine between the

geothermal plant and the mineral extraction plant.

- To provide a supplemental domestic source of lithium, a designated critical material identified by the U.S. Department of Energy.
- Minimize and mitigate any potential impact to sensitive environmental resources within the Project area.





Project Location

N

0 150 300 600

Feet

Figure 1

Energy Source Mineral Project

Project Location & Vicinity

Name: 21268 BIO Fig 1 Project Location and Vicinity Mxd
Print Date: 11/9/2020, Author: pcarles

CHAMBERS GROUP

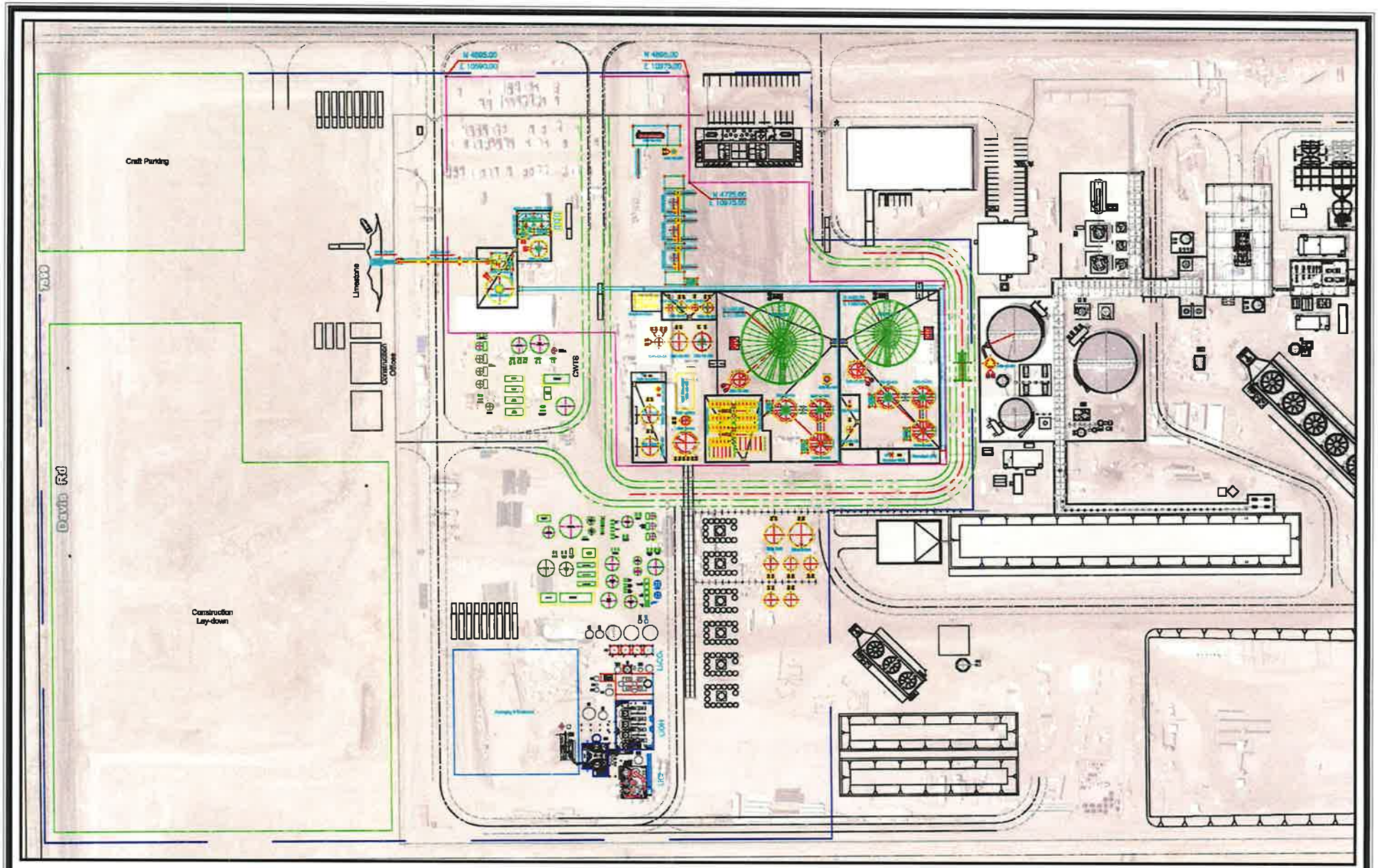


Figure 2
Energy Source Mineral Project
Project Site Plan

Name: 21268 PLAN Fig 2 Project Site Plan Mxd
Print Date: 11/25/2020, Author: pcarlos

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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? ☐ ☐ ☐ ☒

a) and b) No Impact. The Project is not located within the viewshed of any scenic vistas or officially designated State scenic highways (Caltrans 2019). The closest scenic viewpoint is an observation deck located within the Sonny Bono Salton Sea National Wildlife Refuge, approximately 3 miles southwest of the Project site (USFWS 2019). Although the area is relatively flat, an extensive shrub-covered marsh and the Alamo River separate the viewpoint from the Project site; thus, the Project site would not be within the viewshed of the observation deck. Additionally, HWY 111 is listed by Caltrans as eligible for State scenic highway designation and is located 3 miles east of the Project site. Though, HWY 111 has not been officially designated and the eligible section of highway is from Bombay Beach to the Imperial County-Riverside County line, approximately 13 miles northwest of the Project site at the closest point (Caltrans 2019). Further, the site is void of any trees, rock outcrops, or historic buildings and therefore, no scenic resources would be damaged as a result of the Project. No impacts would occur to scenic vistas or scenic resources along a State scenic highway and no further analysis is required.

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) No Impact. The Project is located on a vacant, non-urbanized area characterized by agricultural and industrial land uses, as well as vacant desert land. Public viewers of the Project site would be limited to workers at HR1 power plant, workers at the aquaculture farm to the southeast, and any passersby on nearby roads. There are no residences or recreation areas in proximity of the Project site. In addition, construction of the Project would be temporary occurring from approximately Q3 of 2021 to Q2 of 2023. Views of Project operations will be consistent with current views of the area, which includes the neighboring HR1 power plant. The Project would not substantially degrade the existing visual character or public views of the site or surroundings and no impacts would occur. Thus, no further analysis is required.

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

d) Less Than Significant Impact. As part of the Project design, industrial grade lighting sources would be required for Project operations and safety purposes. Lighting would be covered and directed downward (downshielded) or towards the proposed facility to avoid backscatter. Nighttime illumination features for the Project would be controlled with sensors or switches operated such that lighting would only be activated when needed. In addition, the Project is in a rural area of the County with the closest sensitive receptor being a residence over 1 mile north of the Project site on Pound Road. Industrial level lighting that would be associated with the proposed Project, would not be significant when compared to the existing uses on the site. Impacts related to increased light and glare from operation of the proposed facility would be less than significant and no further analysis is required.

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? ☐ ☐ ☐ ☒

a) No Impact. According to the California Department of Conservation's Farmland Mapping and Monitoring Program, the Project site is a combination of "Urban and Built-Up Land" and "Other Land" (DOC 2020a). No Prime Farmland, Unique Farmland, or Farmland of

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

Statewide Importance is located within or in proximity to the Project site. The County General Plan designates the Project site as Agriculture land use; however, according to the General Plan Land Use Element, a non-agricultural land use may be permitted within General Plan-designated agricultural land if the use does not conflict with agricultural operations and will not result in the premature elimination of agricultural operations (County 1993). There is no existing agricultural land on the Project site, thus the Project would not conflict with or eliminate agricultural operations. Historically there were agricultural operations on the Project site, but the conversion of this agricultural land to another use was analyzed as part of the 2007 Hudson Ranch Power I Project and determined to be below the level of CEQA significance. No impacts would occur and no further analysis is required.

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

b) No Impact. The Project site is zoned M-2 and is located within the geothermal overlay zone (G) and pre-existing allowed/restricted overlay zone (PE). No land within the Project site is zoned for agricultural use and the Project was considered consistent with the site zoning with the approval of the Conditional Use Permit in June 2020. The Project site is not subject to the provisions of a Williamson Act contract (DOC 2018). No impacts would occur and no further analysis is required.

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) No Impact. As previously mentioned, the Project site is zoned M-2-G-PE. No land within the Project site is zoned forest land or timberland and there is no existing forest land on the Project site or in the immediate vicinity. The Project would not result in the loss of forest land or the conversion of forest land to non-forest use; no impacts would occur and no further analysis is required.

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) No Impact. The Project site is zoned M-2-G-PE and does not contain agricultural land or forest land. The Project would not result in the conversion of agricultural land or forest land. No impacts would occur and no further analysis is required.

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? ☒ ☐ ☐ ☐

a) Potentially Significant Impact. The Project is located within the Salton Sea Air Basin (SSAB) and is subject to the jurisdiction of the Imperial County Air Pollution Control District (ICAPCD) Rules and Regulations (CARB 1999). The ICAPCD is charged with upholding ambient air quality standards set forth by the state and federal government for the area within its jurisdictional limits. The ICAPCD also serves as a regional authority to legally enforce air pollution regulations related to the release of toxic and hazardous emissions.

The Project has potential to create emissions during construction and operation including dust, fumes, equipment exhaust, and other air contaminates that could conflict with the ICAPCD Rules and Regulations as well as the County's Air Quality Attainment Plan. To limit impacts during site construction, the Project will implement a dust control plan consisting of dust-reducing Best Management Practices (BMPs). Some of these BMPs include frequent watering of the Project site during construction activities and limiting vehicle traffic to 15 miles per hour on unpaved onsite access roads. In addition, the Project would comply with the applicable ICAPCD regulations including but not limited to Rule 801, Rule 803, Rule 804, and Rule 805 (ICAPCD 2020).

During Project operations small quantities of criteria air pollutants, criteria air pollutant precursors, and hazardous air pollutants would be released during extraction, processing, and packaging activities. Additionally, the Project will utilize a backup diesel generator. Other than emergency uses, regular tests will be conducted in accordance with operational requirements. A Permit to Construct and a Permit to Operate would be obtained, as required by ICAPCD, for the facility's stationary air pollutant emission sources and air pollutant control equipment. Warehouse and yard vehicles (forklifts and manlift) would be propane-powered to minimize combustion emissions from these non-stationary sources. Moreover, the Project will utilize a small cooling tower designed to minimize particulate emissions.

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

Although Project emissions may be reduced through the use of pollution control devices and dust control measures, Imperial County is currently designated as a serious nonattainment area for PM10 (CARB 2019), and therefore potentially significant impacts may still result and impacts will be further addressed in the EIR.

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) Potentially Significant Impact. Currently, the SSAB is either in attainment or unclassified for all federal and state air pollutant standards with the exception of ozone (O3) and total suspended particulate matter less than 2.5 microns in diameter (PM2.5) and 10 microns or less in diameter (PM10). SSAB is in federal and state nonattainment for ozone and PM10, and partially in federal nonattainment for PM2.5 (CARB 2019). As mentioned above, both Project construction and operations have the potential to create emissions that could result in a cumulatively considerable net increase of a criteria pollutant for which the Project region is in non-attainment, namely O3, PM10, and PM2.5. Project emissions may be reduced through the use of pollution control devices and dust control measures previously discussed, but a potentially significant may still result. Thus, impacts are considered potentially significant and will be addressed in the EIR.

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

c) Less Than Significant Impact. The Project is located in a rural area of the County and is not in close proximity to any sensitive receptors such as residences, hospitals, or schools. The closest residence is over a mile north of the Project site along Pound Road, the closest school is approximately 4 miles southeast of the Project site, and the closest hospital is approximately 16 miles south of the Project site (Google 2020).Approximately 62 full-time employees are expected to be working onsite, but these employees will be provided the proper personal protective equipment (PPE) and training in accordance with Occupational Safety and Health Administration (OSHA) regulations to protect them from substantial pollutant concentrations. A less than significant impact is expected to result, but these issues will be evaluated further in the EIR.

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

d) Less Than Significant Impact. As mentioned above, the Project is located in a rural area of the County and is not in close proximity to any sensitive receptors with the closest residence over a mile north of the Project site along Pound Road, the closest school approximately 4 miles southeast of the Project site, and the closest hospital approximately 16 miles south of the Project site (Google 2020). Approximately 62 full-time employees are expected to be working onsite, but these employees will be provided the PPE and training in accordance with OSHA regulations. Any odors onsite are expected to only affect employees and are not anticipated to affect a substantial amount of people. Less than significant impacts are expected, but odors will be evaluated further in the EIR.

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? ☒ ☐ ☐ ☐

a) Potentially Significant Impact. The Project site is heavily disturbed from historic agricultural operations onsite and construction of the HR1 plant. Yet, the Project site is approximately two miles east of the Salton Sea, which serves as an important wintering and staging site for migratory birds and several endangered species populations. Biological surveys were conducted by biologists at Chambers Group, Inc. in November 2020. A Biological Technical Report is being prepared for the Project to identify the potential for endangered, threatened, sensitive or species of concern within the Project area; map habitats; and ascertain the probability of the presence of sensitive species onsite. Due to previous disturbance of the Project site, high quality habitat is not expected to exist onsite. However, impacts from the Project on migratory birds may be potentially significant and will be addressed in the EIR.

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 ☐ ☐ ☒ ☐

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

protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

b) and c) Less Than Significant Impact. According to the U.S. Fish and Wildlife Service's National Wetland Inventory, the Project site does not contain any wetland or riparian habitat. The closest potential wetland and riparian habitats include freshwater emergent wetlands and the Alamo River, which is likely to have riparian habitat along its banks, located approximately 1 mile southwest of the Project site (USFWS 2020). The Project site is approximately 500 feet north of IID canals and agricultural drains that flow into these wetlands and the Alamo River; however, to prevent offsite impacts to nearby wetlands resulting from stormwater runoff during construction the Project would be required to obtain coverage under a Construction General Permit to comply with National Pollutant Discharge Elimination System (NPDES) requirements. Compliance with the Construction General Permit would require the development and implementation of a Stormwater Pollution Prevent Plan (SWPPP) and associated BMPs. These BMPs will include measures that would be implemented to prevent discharges into adjacent wetland and riparian habitat from the Project site during construction activities.

To prevent significant impacts to the nearby wetland and riparian habitat due to increased runoff at the Project site during operations, a stormwater retention basin will be developed on site. The Project will likely share the HR1 stormwater retention basin and will ensure the basin is engineered and constructed to contain the combined stormwater storage requirements of both the HR1 and Project plant sites. If a shared basin cannot be done for technical, legal, or other reasons then the Project will construct its own, separate basin on the far south side of the parcel. Overall, impacts to wetland and riparian habitats resulting from the Project would be less than significant and no further analysis is required.

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) Potentially Significant Impact. The Project site is heavily disturbed from previous agricultural operations and construction of the HR1 plant. Additionally, there are no identified wildlife corridors within the Project site (County 1993). However, as mentioned above, the Project site is approximately two miles east of the Salton Sea, which serves as an important wintering and staging site for migratory birds and several endangered species populations. A Biological Technical Report is being prepared for the Project to identify the potential for native or migratory wildlife within the Project area; map habitats; and ascertain the probability of the presence of sensitive species onsite. Due to previous disturbance of the Project site, high quality habitat is not expected to exist. However, impacts from the Project on migratory birds, may be potentially significant and will be addressed in the EIR.

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?	☐	☐	☒	☐

e) and f) Less Than Significant Impact. The County General Plan Conservation and Open Space Element policies require conservation of native habitat of sensitive plants and animals through the dedication of open space easements, or other means that will ensure their long-term protection and survival. As mentioned above, the Project site is highly disturbed from previous uses and is not expected to contain high quality native habitat. However, the Project site is located within the Desert Renewable Energy Conservation Plan (DRECP) boundaries which aims at protecting irreplaceable desert habitats, plants, animals and ecological processes and allowing for the development of a significant amount of centralized renewable energy (from solar, wind and geothermal facilities, which will also require transmission lines) by focusing on areas with the least ecological impact. Because the DRECP's intent is to identify areas in the desert appropriate for the utility-scale development of wind, solar, and geothermal energy projects and the Project does not include the development of such energy projects, the Project would neither conflict with nor does it require compliance with the DRECP. Impacts to native habitat of sensitive plants and animals resulting from the Project would be less than significant and no further analysis is required.

V. *CULTURAL RESOURCES Would the project:*

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

	Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☒	☐	☐	☐

a) and b) Potentially Significant Impact. Unrecorded subsurface archaeological and historical resources may be impacted, if present, by minor grading of the Project site and installation of footings four to six feet below the ground surface. A Cultural Resources Report will be prepared for the Project detailing the results of an archaeological literature review, records search, and intensive pedestrian survey of the Project site. Further analysis of the historical and archaeological resources is required and will be addressed in the EIR.

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

c) Potentially Significant Impact. The Project is not expected to disturb any human remains. However, with grading involved, a potential to find human remains exists. A Cultural Resources Report will be prepared for the Project detailing the results of an archaeological literature review, records search, and intensive pedestrian survey of the Project site. Further analysis of potential impacts to human remains is required and will be addressed in the EIR.

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?	☒	☐	☐	☐

a) and b) Potentially Significant Impact. Both Project construction and operational activities would require energy consumption. Construction activities consume energy temporarily through the use of heavy construction equipment, as well as truck and worker traffic. It is estimated on average 20 to 25 trucks per day will travel to and from the construction site, except during grading when about 50 to 60 trucks are anticipated. Approximately 200 to 250 workers are anticipated to be onsite during Project construction. Construction equipment anticipated for the Project is listed in Section 2 D above. The Project will use energy-conserving construction equipment to the extent possible, including standard mitigation measures for construction combustion equipment recommended in the Imperial County Air Pollution Control District (ICAPCD) CEQA Air Quality Handbook. The use of better engine technology, in conjunction with the ICAPCD's standard mitigation measures will reduce the amount of energy used for Project construction.

For operation of the ATLiS plant, up to 8 MW of electrical power is required. Power will be purchased from the IID and a new power line will be constructed to the ATLiS plant site from the current IID/HR1 substation located near the northeast corner of the HR1 property. Electrically driven equipment including a power distribution unit will be installed at the HR1 facility to deliver geothermal brine, steam/stream condensate and no condensable gas to the Project site. The power distribution unit will be provided power via a distribution line from either the ATLiS electrical building or the IID/HR1 substation. Further, a 600 HP emergency diesel generation will be used to keep vital plant systems operating during plant outages. Project operations would also require daily gasoline- and diesel-fueled vehicle travel for up to 62 full-time staff and approximately 24 trucks traveling to and from the Project site. Six of these trucks are estimated for outgoing waste generated on the site, which is expected to be delivered to and processed at the Burrtec Solid Waste Facility. However, it is estimated that up to 10% of trucks carrying filter cakes (waste debris mix of silica, sand and iron) from the plant would be required to be delivered to a waste treatment facility out of state.

Buildings onsite will be designed in accordance with the California Energy Commission's 2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings and the California Green Building Standards (CCR, Title 24, Part 11). Additionally, an energy analysis will be prepared for the Project to quantify energy consumption. Further analysis of the Project's energy consumption and consistency with applicable plans, policies, and regulations for reducing wasteful, inefficient, and unnecessary energy usage. Impacts will be analyzed further in the EIR.

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?	☐	☐	☒	☐

1) Less Than Significant Impact. The Project site is not located within an Alquist-Priolo fault zone and the closest fault zone is

the San Andreas fault zone approximately 13 miles northwest (DOC 2020b). However, the County General Plan shows that the potentially active Calipatria Fault runs underneath the Project site (County 1993). Despite a known earthquake fault within the Project site, all parcels encompassing the site have been previously graded and would not require excavation. Approximately 10,000 cubic yards of soil will be brought onsite to raise the elevation, but no significant ground disturbing activities that could directly cause rupture of the Calipatria Fault would occur during Project construction or operation. Further, no Project activities would indirectly cause rupture of any known earthquake faults in the area. Impacts would be less than significant.

2) Strong Seismic ground shaking? ☒ ☐ ☐ ☐

2) Potentially Significant Impact. As mentioned above, the Project site is not located within an Alquist-Priolo fault zone and the closest fault zone is the San Andreas fault zone approximately 13 miles northwest (DOC 2020b). However, the Project site is located within a seismically active area of Southern California and the County General Plan shows that the potentially active Calipatria Fault is underlying the Project site (County 1993). Additionally, approximately 62 full-time employees would be on the Project site 24 hours per day, 7 days a week. 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 2019 seismic requirements provided in the California Building Code. A registered professional civil/geotechnical engineer will also prepare a geotechnical investigation of the Project site that includes comprehensive subsurface exploration, appropriate laboratory testing, and detailed evaluation of potential constraints to critical project structures. The geotechnical investigation and proposed site measures may prevent Project activities from exacerbating the risk of loss, injury, or death involving rupture of a known earthquake fault or seismic ground shaking; however, further analysis is required and these issues will be addressed in the EIR.

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

3) Potentially Significant Impact. The Project site is not located within a Department of Conservation identified liquefaction zone, but the County General Plan identifies that liquefaction is a common hazard in the County due to geologically young, unconsolidated sediments of the Salton Trough (DOC 2020b; County 1993). Soils on the Project site are also majority wet Imperial silty clay, which may be susceptible to ground failure (USDA 2020). Additionally, approximately 62 full-time employees would be on the Project site 24 hours per day, 7 days a week. As mentioned above, a registered professional civil/geotechnical engineer will prepare a geotechnical investigation of the Project site. Impacts involving seismic-related ground failure require further analysis and will be addressed in the EIR.

4) Landslides? ☐ ☐ ☐ ☒

4) No Impact. The Project site is flat and is not located within an identified landslide zone (DOC 2020b). 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 1993). 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) Less Than Significant Impact. Project construction and operations have the potential to result in soil erosion and loss of topsoil mainly through increasing impervious surfaces onsite and increasing vehicle and foot traffic onsite. All parcels encompassing the Project site have been previously graded and would not require excavation. Approximately 10,000 cubic yards of soil will be brought onsite to raise the elevation and approximately 55 acres of the Project site would be permanently disturbed by the Project. The Project would implement standard industry methods, such as BMPs, to prevent surface runoff and erosion where applicable. These BMPs would comply with the County Building & Grading Regulations and the SWPPP developed for the Project. Moreover, a Drainage and Grading Plan will be submitted to the County to ensure implementation of all required BMPs. Impacts related to soil erosion would be less than significant and no further analysis is required.

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) Potentially Significant Impact. As previously discussed, the Project site is flat and is not located within a Department of Conservation identified liquefaction or landslide zone (DOC 2020b). However, the County General Plan identifies that liquefaction is a common hazard in the County (County 1993). Soils on the Project site are also majority wet Imperial silty clay, which may be susceptible to soil instabilities causing subsidence, liquefaction, and expansion (USDA 2020). A registered professional civil/geotechnical engineer will prepare a geotechnical investigation of the Project site that includes comprehensive subsurface exploration, appropriate laboratory testing, and detailed evaluation of potential constraints to critical project structures, including liquefaction, subsidence, and expansive

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

soils. Impacts involving geologic unit or soil instability require further analysis and will be addressed in the EIR.

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) No Impact. During construction of the Project, portable toilets would be provided for construction workers and waste would be transported offsite to a sanitary water treatment plant. Sewage generated during Project operations would be processed by the existing HR1 sewer treatment plant adjacent to the Project site which as discussed in Section XIX Utilities and Service Systems, has available capacity. No new septic tanks or alternative waste water disposal systems will be constructed as a result of the Project; thus, no impacts would occur and no further analysis will be required.

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

f) Potentially Significant Impact. Paleontological resources are typically impacted when earthwork activities, such as mass excavation cut into geological deposits (formations) with buried fossils. The Project is anticipated to only require minor grading and installation of footings four to six feet below the ground surface. Moreover, the entire Project site development area has been previously disturbed during early agricultural operations and during the construction of HR1. No paleontological resources are known to occur in the area. However, the potential to disturb unknown resources may still exist as, many paleontological fossil sites have been recorded in Imperial County and have been discovered during construction activities. Further analysis is required and will be addressed in the EIR.

VIII. *GREENHOUSE GAS EMISSION* *Would the project:*

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? ☒ ☐ ☐ ☐

a) and b) Potentially Significant Impact. The primary climate change legislation in California is Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 focuses on reducing greenhouse gas (GHG) emissions in California, and AB 32 required that GHGs emitted in California be reduced to 1990 levels by the year 2020. In addition to AB 32, Executive Order B-30-15 was issued on April 29, 2015 that aims to reduce California's GHG emissions 40 percent below 1990 levels by 2030. In September 2016, AB 197 and Senate Bill (SB) 32 codified into statute the GHG emission reduction targets provided in Executive Order B-20-15.

Project construction activities are expected to emit GHGs including carbon dioxide (CO2), nitrogen oxides (NOx), and methane (CH4), from the combustion of fossil fuels during the operation of gasoline and diesel-fueled construction equipment and vehicles. A list of anticipated construction equipment for the Project can be found in Section D of the Project Description above. Project operations would create new sources of particulate matter from drying, transfer, and packing lithium products; operation of the cooling tower; and maintenance, testing, and emergency operations of the emergency diesel engine-generator. The emergency diesel engine-generator would also generate NOx, carbon monoxide (CO), PM, and sulfur dioxide (SO2). These emissions may potentially conflict with an applicable plan, policy, or regulation for reducing the emissions of GHGs. Further analysis of potential impacts related to GHG emissions generated by the Project, will be quantified and assessed in the EIR.

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? ☒ ☐ ☐ ☐

a) and b) Potentially Significant Impact. Construction of the Project would require the limited transport and temporary use of

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

materials deemed to be hazardous, including unleaded gasoline, diesel fuel, oil, lubricants (i.e., motor oil, transmission fluid, and hydraulic fluid), solvents, adhesives, and paint materials. However, any potentially hazardous materials used or found onsite during construction would be handled in accordance with state and federal regulations regarding the transport, use, and storage of hazardous materials.

Project operations would generate solid hazardous waste through geothermal brine processing, including iron-silica filter cakes, lead sulfide, and various laboratory wastes. Hazardous materials/waste generated by the Project would not be left on-site and will be transported to an approved hazardous waste landfill. The majority of the outgoing waste generated onsite is expected to be delivered to and processed at the Burrtec Solid Waste Facility. However, filter cakes generated during the impurity removal process may contain hazardous materials at higher levels than allowed at waste facilities in the state of California. These filter cakes will be tested and routed to the appropriate disposal location. It is estimated that up to 10% of trucks carrying hazardous waste from the plant would therefore be delivered to a waste treatment facility in Arizona or Idaho.

To prevent accidental release of hazardous materials, spill containment areas and sumps subject to spills of immiscible chemicals would be drained to a dilution water tank. Any oil contamination spills would be collected with absorbent pads and disposed as required by law. The Project site would be graded and constructed so that all process spills would drain into area drains that would be reprocessed into the system. Excess process spills would drain into the brine pond.

Additionally, an Emergency Response Plan (ERP) would be prepared and implemented, which will identify proper hazardous materials handling, use, and storage; emergency response; spill control and prevention; employee training; and reporting and record keeping. This would help to limit human risk and environmental risk associated with exposure to hazardous materials. Nonetheless, impacts from hazardous materials may occur and further analysis would be required. This issue will be addressed in the EIR.

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) Less Than Significant Impact. Although the Project has the potential to emit hazardous emissions and/or handle hazardous substances, the Project site is not within one-quarter mile of an existing or proposed school. The closest school to the Project site is Grace Smith Elementary School, approximately 4 miles northeast in Niland, CA. Additionally, the ERP that would be prepared and implemented for the Project will limit human risk associated with exposure to hazardous materials, with special consideration of the schools in the area. Impacts would be less than significant and no further analysis is required.

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) Potentially Significant Impact. According to the Department of Toxic Substance Control's EnviroStor Database and the State Water Resources Control Board's GeoTracker Database, there are no recorded hazardous material sites within a mile of the Project site (DTSC 2020; SWRCB 2020). However, due to the neighboring HR1 plant, a Phase I Environmental Site Assessment will be prepared to analyze the potential for contaminants within the Project site resulting from HR1 plant operations. Further analysis is required and will be addressed in the EIR.

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) No Impact. The Project site is not located within two miles of a public airport or public use airport or within the boundaries of an airport land use plan. The closest airport is Calipatria Municipal Airport approximately 6 miles southeast of the Project site. Therefore, the Project would not expose people working in the Project area to safety hazards or excessive noise. No impact would occur and no further analysis is required.

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

f) 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 2015; 2016).

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

Therefore, the Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant and no further analysis is required.

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 Impact. The Seismic and Public Safety Element of the County General Plan states that the potential for a major fire in the unincorporated areas of the County is generally low (County 1993). According to the California Department of Forestry and Fire Protection's (CALFIRE) Fire Hazard Severity Zone Viewer, there are no very high, high, or moderate fire hazard severity zones in the local or state responsibility areas within 30 miles of the Project site (CALFIRE 2020). Additionally, the Project will include fire suppression systems designed in accordance with federal, state, and local fire codes; occupational health and safety regulations; and other jurisdictional codes, requirements, and standard practices. Included in the fire suppression system is a 500,000 gallon above-ground water tank to be installed onsite, serving as the primary water supply for the joint fire suppression system. In addition, during construction the Project site and access road will be cleared of all vegetation and cleared areas will be maintained throughout construction. Fire extinguishers will be available around the construction site as well. During operations, a brush control program will be prepared and implemented on those portions of the Project site that will not be developed. The Imperial County Fire District (ICFD) will be consulted to review and approve any and all proposed fire equipment, apparatus, and related fire prevention plans. Impacts would be less than significant and no further analysis is required.

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? ☐ ☐ ☒ ☐

a) Less Than Significant Impact. The Project site is located within the California Regional Water Quality Control Board's Colorado River Basin Region (RWQCB 2019). The Project is therefore subject to standards set forth in the Colorado River Basin's (Basin) Water Quality Control Plan. As previously mentioned, Project construction and operations would have the potential to result in soil erosion and runoff on and offsite mainly due to grading and increased impervious surfaces. Through implementation of a SWPPP and a Drainage and Grading Plan, the Project would implement standard industry BMPs and relevant Basin BMPs to control off-site discharges. Additionally, the Project would develop a stormwater retention basin, either shared with HR1 or independent, which would be engineered and constructed to contain any stormwater runoff. If a shared facility cannot be done for technical, legal, or other reasons then the Project will construct its own basin on the far south side of the parcel. Stormwater flows will be directed to the retention basin via ditches, culverts, and/or swales.

As previously mentioned in Section IX, Hazards and Hazardous Materials, spill containment areas and sumps subject to spills of immiscible chemicals would be drained to a dilution water tank. Any oil contamination spills would be collected with absorbent pads and disposed as required by law. The Project site would be graded and constructed so that all process spills would drain into area drains that would be reprocessed into the system. Excess process spills would drain into the brine pond.

The Project will not allow any offsite discharges that could violate water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality. Impacts would therefore be less than significant and no further analysis is required.

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

b) Potentially Significant Impact. It is estimated that the Project would require up to 50,000 gallons of water per day during construction for fugitive dust control; approximately 90,000 gallons per hour for operational cooling and other processes; and approximately 112 gallons per hour for potable water purposes during operations. All water required for the Project would be purchased from the IID, whose only source of water is the Colorado River. IID operates no water wells or groundwater recharge areas due to the lack of rainfall and poor quality of groundwater resources in the area (IID 2017). However, a Water Supply Assessment will be prepared for the Project to analyze potential impacts to groundwater supplies in the area. Further analysis is required and would be included in the EIR.

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:

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

c) i) through iv) Less Than Significant Impact. No rivers or streams travel through the Project site or are directly adjacent to the Project site. The Alamo River is approximately 0.7 mile southwest of the Project site and drainage channels approximately 500 feet south of the Project site (along Schrimpf Road) lead towards the Alamo River and surrounding wetlands. Although Project construction and operations would have the potential to result in soil erosion and runoff on and offsite due to grading and increased impervious surfaces, through implementation of a SWPPP and a Drainage and Grading Plan, the Project would implement standard industry BMPs and relevant Basin BMPs to control off-site discharges. Additionally, a stormwater retention basin would be developed on the site. In order to prevent substantial erosion resulting from high winds in the area, a Fugitive Dust Suppression Plan will be prepared and the Project site will be watered as necessary.

The western portion of the Project site, currently APN 020-100-025, is located within the Federal Emergency Management Agency (FEMA) 100-year floodplain (FEMA 2020). However, during construction of the HR1 plant an administrative Flood Plan permit was approved for the HR1 site and an earthen flood protection berm was constructed. This berm, constructed on the west and south sides of APN 020-100-025, would prevent flooding of the Project site.

With implementation of BMPs and construction of a new retention basin, substantial erosion and runoff on and offsite is not expected. Less than significant impacts would occur and no further analysis is required.

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

d) Less Than Significant Impact. As mentioned above, the western portion of the Project site (APN 020-100-025) is located within the FEMA 100-year floodplain; although, an earthen flood protection berm surrounds the western and southern sides of the parcel (FEMA 2020). The flood protection berm would prevent flooding onto the Project site. Additionally, the Project site is two miles east of the Salton Sea, which is a potential source of seiche. According to the County General Plan's Seismic and Public Safety Element, a seiche at the Salton Sea could occur under the appropriate seismic conditions, but there have been a number of seismic events with no significant seiches occurred to date (County 1993). Further, all dams within the County are approximately 65 miles east of the Project site and the Project site is approximately 100 miles from the coast of the Pacific Ocean. Thus, there is no risk of dam inundation or tsunami within the Project site. Impacts would be less than significant and no further analysis is required.

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

e) Potentially Significant Impact. As discussed above, implementation of a SWPPP and a Drainage and Grading Plan would ensure the Project would implement standard industry BMPs and relevant Basin BMPs to control off-site discharges. Additionally, a stormwater retention basin would be developed on the site. The Project will not allow any offsite discharges that could violate water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality. Additionally, all water required for the Project would be purchased from the IID, and IID operates no water wells or groundwater recharge areas (IID 2017). A Water Supply Assessment will be prepared to ensure the Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Further analysis is required and would be discussed in the EIR.

XI. *LAND USE AND PLANNING Would the project:*

a) Physically divide an established community?	☐	☐	☐	☒

a) No Impact. The Project is located in a rural area approximately 3 miles south of Niland, CA, which is the closest nearby community. There are no residences in close proximity to the Project site; thus, the Project would not physically divide an established community and no impacts would occur and no further analysis is required.

b) Cause a significant environmental impact due to a conflict with	☐	☐	☐	☒

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

any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

b) No Impact. The Project site is zoned M-2-G-PE (Medium Industrial /Geothermal Overlay) and the County General Plan designates the Project site as Agriculture land use. According to the General Plan Land Use Element, a non-agricultural land use may be permitted within General Plan-designated agricultural land if the use does not conflict with agricultural operations and will not result in the premature elimination of agricultural operations (County 1993). As analyzed in Section II, Agriculture and Forest Resources above, there is no existing agricultural land on the Project site and the land is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the Department of Conservation (DOC 2020a). A CUP was issued for the Project in June 2020, making the Project consistent with the site zoning in accordance with the County's Zoning Ordinance. No impacts would occur and no further analysis is required.

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?	☐	☐	☐	☒

a) and b) No Impact. Other than the geothermal resources being developed in the Project vicinity, there are no known mineral resources or mineral resource recovery sites within the vicinity of the Project site (DOC 2020d; County 1993). There are a number of mines along the Chocolate Mountain Range to the east, but the closest is approximately 6 miles from the Project site (DOC 2020c). The County General Plan's Additionally, the Project is a geothermal brine processing plant that would produce commercial-grade lithium, zinc, and manganese products, increasing the availability of these mineral resources. The Project would therefore be in alignment with the County General Plan's Renewable Energy and Transmission Element, Objective 3.2, which states that the County should "encourage the continued development of the mineral extraction/production industry for job development using geothermal brines from the existing and future geothermal flash power plants" (County 1993). No known mineral resources or mineral resource recovery sites would be lost as a result of the Project; thus no impacts would occur and no further analysis is required.

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?	☐	☐	☒	☐

a) Potentially Significant Impact. The Imperial County Municipal Code Title 9 Land Use Code, Division 7, Chapter 2, Section 90702.00 - Sound level limits, establishes one-hour average sound level limits for the County's land use zones. Industrial operations are required to comply with the noise levels prescribed under the general industrial zones. Therefore, the Project is required to maintain noise levels below 75 decibels (dB) (averaged over one hour) during any time of day. The Project would also be expected to comply with the Noise Element of the General Plan, which states that construction noise from a single piece of equipment or a combination of equipment shall not exceed 75 dB when averaged over an eight hour period and measured at the nearest sensitive receptor. The County Noise Element also requires construction equipment operation to be limited to the hours of 7 a.m. to 7 p.m., Monday through Friday, and 9 a.m. to 5 p.m. on Saturdays (County 1993). Approximately 90% of Project construction would occur during daylight hours, but the remaining 10% of work would occur during nighttime hours to avoid extreme summer temperatures. Although the closest sensitive receptor is a residence over one mile north on Pound Road, construction would occur outside the allowable construction noise hours set within the County Noise Element. Impacts would therefore be potentially significant and will be analyzed in the EIR.

b) Less Than Significant Impact. Groundborne vibration and groundborne noise could originate from earth movement during the construction phase of the Project. However, significant vibration is typically associated with activities such as blasting or the use of pile drivers, neither of which would be required during Project construction. Additionally, the closest sensitive receptor is a residence over one mile north of the Project site and therefore would not experience damage or nuisance. The Project would be expected to comply with all applicable requirements for long-term operation, as well as with measures to reduce excessive groundborne vibration and noise to ensure that the Project would not expose persons or structures to excessive groundborne vibration. Impacts would be less than significant and no further analysis is warranted.

	Potentially Significant Impact (PSI)	Potentially Significant Unless Mitigation Incorporated (PSUMI)	Less Than Significant Impact (LTSI)	No Impact (NI)
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) No Impact. The Project site is not located within two miles of a public airport or public use airport. The closest airport is Calipatria Municipal Airport approximately 6 miles southeast of the Project site. Therefore, the Project would not expose people working in the Project area to excessive noise levels. No impact would occur and no further analysis is required.

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)?	☐	☐	☒	☐

a) Less Than Significant Impact. The Project involves construction and operation of a geothermal brine processing plant and does not propose the development of any housing onsite. The Project would require approximately 62 full-time employees who are expected to live in and commute from the local surrounding communities. Therefore, the Project is not anticipated to induce population growth directly or indirectly, thus impacts would be less than significant and no further analysis is required.

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

b) No Impact. The Project site is partially on the existing HR1 site, which was previously permitted for the geothermal plant. In addition to the actual power plant, the rest of the land has been used for laydown areas, storage areas, and stormwater management. The additional land that will be included is an approximately 15-acre parcel, APN 020-100-025, and an approximate 40-acre portion of APN 020-100-046 both of which have been vacant for several decades and were previously used for geothermal testing and associated activities. There are no residences within the Project site or within close proximity, thus no existing people or housing would be displaced as a result of the Project. No impacts would occur and no further analysis is required.

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?	☐	☐	☒	☐

1) Less Than Significant Impact. Fire protection and emergency medical services in the Project area are provided by the ICFD. The closest station to the Project site is the Niland Station, approximately 4 miles northeast or an approximately 9 minute drive (Google 2020). During construction, the Project site and access road will be cleared of all vegetation and cleared areas will be maintained throughout construction. Fire extinguishers will also be available around the construction site. In case of emergency response during operations, both the Project access roads (off McDonald Road and Davis Road) would have turnaround areas to allow clearance for fire trucks per fire department standards: 70 feet by 70 feet, and 20-foot-wide. In addition, a 500,000 gallon fire water storage tank will be constructed adjacent to the HR1 water storage pond (on the east side of the site) to serve as the primary water supply for the new joint fire suppression system to be constructed near the storage tank. The joint fire protection system will be equipped with quick connect hose bibs; an underground fire main and surface distribution equipment such as yard hydrants and hose houses; monitors around the perimeter of the cooling tower; automatic sprinklers for the buildings, if needed; and a complete detection and alarm system. The firewater supply and pumping system will provide an adequate quantity of fire-fighting water and a 62 HP diesel-fueled firewater pump will be available onsite. A brush control program will also be prepared and implemented on those portions of the Project site not being developed to mitigate the potential of an offsite brush fire.

All fire suppression systems will 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 ICFD will be consulted to review and approve

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

any and all proposed fire equipment, apparatus, and related fire prevention plans. Acceptable service ratios and response times for fire protection will be maintained following Project implementation through consultation with the ICFD and the County. Impacts would be less than significant and no further analysis is required.

2) Police Protection? ☐ ☐ ☒ ☐

2) Less Than Significant Impact. Police protection services in the area are provided by the Imperial County Sheriff's Department. The closest police station to the Project site is the Imperial County Sheriff's office in Niland, approximately 4 miles northeast or an approximately 10 minute drive (Google 2020). The increase in construction related traffic is not anticipated to significantly increase demand on law enforcement services due to the rural nature of the Project vicinity. Additionally, the Project site would be fenced with 6-foot-high chain-link security fence, which may be topped with three-strand barbed wire, and points of ingress/egress would be accessed via locked gates with a guard house. As part of the Project design, industrial grade lighting sources would be also required for Project operations and safety purposes. This lighting will include sensors or switches operated such that lighting would be activated when needed during nighttime hours. In addition, approximately 62 full-time employees will be onsite 24 hours a day, 7 days a week during operations of the Project, thereby minimizing the need for police surveillance. Impacts would be less than significant and no further analysis is required.

3) Schools? ☐ ☐ ☐ ☒

4) Parks? ☐ ☐ ☐ ☒

5) Other Public Facilities? ☐ ☐ ☐ ☒

3) through 5) No Impact. There is estimated to be up to 200 to 250 workers traveling to the Project site during construction and approximately 62 full-time employees during operations. It is expected that most of these workers/employers will commute to the Project site from surrounding communities. Therefore, substantial temporary increases in population that will adversely affect local schools, parks, or other public facilities are not anticipated. No impacts would occur and no further analysis is required.

XVI. *RECREATION*

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? ☐ ☐ ☐ ☒

a) and b) No Impact. There are no parks or other developed federal, State or county recreational facilities in the Project area or immediate vicinity. Further, the Project involves the construction of a geothermal brine processing plant and would not construct any recreational facilities. During construction 200 to 250 workers are anticipated to be on the Project site and operation would include 62 full-time workers employed onsite, but these workers and employees are expected to come from existing populations that live in and commute from the surrounding local communities. Therefore, no increase in population would result and no physical deterioration of existing recreational facilities would occur. No impacts would occur and no further analysis is required.

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)? ☒ ☐ ☐ ☐

a) and b) Potentially Significant Impact. Primary access to the Project site would be located off of McDonald Road and secondary access would be located off of Davis Road. According to the County General Plan's Circulation Element, McDonald Road is a Minor Collector and Davis Road is a Major Collector (County 2008). During construction it is estimated that on average 20 to 25 trucks per day will travel in and out of the Project site, except during grading when about 50 to60 trucks will be traveling in and out of the Project site. An average of 100 workers will commute to the Project site during construction. Approximately 24 trucks per day are anticipated to travel in and out of the Project site during normal operations and approximately 62 full-time employees will be commuting to and

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

from the Project site. Six of these trucks are estimated for outgoing waste generated on the site, which is expected to be delivered to and processed at the Burrtec Solid Waste Facility. However, it is estimated that up to 10% of trucks carrying hazardous filter cakes from the plant would be required to be delivered to a waste treatment facility out of State. Although the Project site is located in a rural area of the County, a Traffic Impact Study will be prepared to calculate estimated Vehicle Miles Traveled (VMT) for the Project and to analyze whether or not the Project aligns with the County's Circulation Plan. Further analysis is required and will be addressed in the EIR.

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?	☐	☐	☒	☐

c) and d) Less than Significant Impact. The Project would not increase hazards due to a design feature, nor impact emergency access. For emergency response, both the Project access roads (off McDonald Road and Davis Road) would have turnaround areas to allow clearance for fire trucks per fire department standards: 70 feet by 70 feet, and 20-foot-wide. The County Department of Public Works, the County Sheriff, and ICFD will be consulted as necessary to ensure that any potential impacts to the public or emergency services traveling on McDonald Road or Davis Road during Project construction or operations would be minimized. Impacts would be less than significant and no further analysis will be required.

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.	☒	☐	☐	☐

(i) and (ii) Potentially Significant Impact. Unrecorded subsurface Tribal cultural resources may be impacted, if present, by minor grading of the Project site and installation of footings four to six feet below the ground surface. In accordance with California Assembly Bill (AB) 52, Native American tribes with potential resources in the area were notified of the Project on November 6, 2020 and offered the opportunity for consultation. As of November 20, 2020, the Quechan Tribe has requested consultation for the Project. Any other requests regarding consultation will be outlined in the Cultural Resources Report being prepared for the Project in addition to the results of an archaeological literature review, records search, and intensive pedestrian survey of the Project site. Further analysis of the potential impact to Tribal cultural resources is required and will be addressed in the EIR.

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?	☒	☐	☐	☐

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

a) Potentially Significant Impact. During operations, the Project intends to use or connect to HR1 plant utility infrastructure to the extent possible. The HR1 potable water treatment plant has been renovated to accommodate sufficient use and reliability for both HR1 and the Project facilities. This system will be operated under one permit by HR1 and the Project will purchase water from HR1. Liquid waste generated by the Project will be processed by the HR1 sewer treatment plant and sludge will be pumped by licensed contractors as needed and transported to a sanitary water treatment plant. The Project may also share the HR1 stormwater retention basin, which would be engineered and constructed to contain the combined stormwater storage requirements for both the Project and HR1 sites. If a shared retention basin cannot be done for technical, legal, or other reasons then the Project will construct its own retention basin on the far south side of the parcel. Electrical power required for the Project will be purchased from the IID and a new power line will be constructed to the ATLiS plant site from the current IID/HR1 substation located near the northeast corner of the HR1 property. Natural gas and telecommunications facilities at the Project site would also tie into the existing infrastructure for HR1. A Water Supply Assessment and Energy Analysis will be prepared to analyze potential impacts resulting from the Project's water and power requirements. Approximate wastewater generation will be estimated using water requirements calculated in the Water Supply Assessment. All new utility infrastructure would be built entirely within the previously disturbed parcel, however further analysis is required and potential impacts to utilities will be analyzed in the EIR.

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) Potentially Significant Impact. As described in Section X Hydrology and Water Quality, it is estimated that the Project would require up to 50,000 gallons of water per day during construction for fugitive dust control; approximately 90,000 gallons per hour for operational cooling and other processes; and approximately 112 gallons per hour for potable water purposes during operations. All water required for the Project would be purchased from the IID, whose only source of water is the Colorado River. Climate change scenarios predict a decrease in annual runoff from the Basin to the Colorado River of about 400,000 acre-feet of water 40 percent of the time by 2025 (IID 2012). Therefore, a Water Supply Assessment will be prepared for the Project to analyze potential impacts to the available water supply. Further analysis is required and potential impacts to water will be analyzed in the EIR.

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) Potentially Significant Impact. As mentioned above, the Project would utilize the HR1 facility's potable water treatment plant and sewer treatment plant for liquid waste. Both of the plants accommodate sufficient use and reliability for the HR1 and the Project facilities. A Water Supply Assessment is being prepared to estimate the Project's water requirements, which will be used to calculate approximate wastewater generation. Further analysis is required in the EIR to determine potential impacts.

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) Potentially Significant Impact. All non-hazardous and hazardous wastes generated during Project construction and operation would be handled and disposed of in accordance with applicable laws, ordinances, regulations, and standards. Non-hazardous solid waste would be disposed of using a locally-licensed waste hauling service, most likely Allied Waste. Solid waste would likely be hauled to the Niland Solid Waste Site located in Niland. The Niland Solid Waste Site has approximately 211,439 cubic yards of remaining capacity and is estimated to remain in operation through 2046 (CalRecycle 2020). Therefore, there is ample landfill capacity in the County to receive the non-hazardous solid waste generated by construction and operation of the Project.

Hazardous materials/waste generated by the Project would not be left onsite and will be transported to an approved hazardous waste landfill. The majority of the outgoing waste generated onsite is expected to be delivered to and processed at the Burrtec Solid Waste Facility, which is anticipated to have ample capacity. Filter cakes generated during the impurity removal process may contain hazardous materials at higher levels than allowed at waste facilities in the state of California, therefore approximately 10% of hazardous waste trucks may be routed to a waste treatment facility in Arizona or Idaho. Further analysis of potential impacts to solid waste is required and would be addressed in the EIR.

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

XX. ***WILDFIRE***

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

a) Substantially impair an adopted emergency response plan or emergency evacuation plan? ☐ ☐ ☒ ☐

a) Less Than Significant Impact. As mentioned in Section IX Hazards and Hazardous Materials above, CALFIRE's Fire Hazard Severity Zone Viewer identifies no very high, high, or moderate fire hazard severity zones in the local or state responsibility areas within 30 miles of the Project site (CALFIRE 2020). Additionally, as mentioned in Section XV Public Services, all fire suppression systems will 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 ICFD will also be consulted to review and approve any and all proposed fire equipment, apparatus, and related fire prevention plans. Compliance with local emergency response and evacuation plans, including the EOP and MJHMP, will be maintained through consultation with the ICFD and the County. Impacts would be less than significant and no further analysis is required.

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? ☐ ☐ ☒ ☐

b) Less Than Significant Impact. As mentioned above, CALFIRE does not have any designated very high, high, or moderate fire hazard severity zones in the local or state responsibility areas within 30 miles of the Project site (CALFIRE 2020). The Seismic and Public Safety Element of the County General Plan also states that the potential for a major fire in the unincorporated areas of the County is generally low (County 1993). Moreover, the Project site is flat and is not within an area of risk due to slope. Although the County has experienced damage from heavy winds in the past, hazards in the County are managed by the MJHMP which is reviewed and updated every 5 years (County 2015). Further, during construction the Project site and access road will be cleared of all vegetation and cleared areas will be maintained throughout construction. Fire extinguishers will be available around the construction site as well. During operations, a brush control program will be prepared and implemented on those portions of the Project site that will not be developed. Hazardous materials onsite during operations may be flammable, but fire suppression systems will be installed and the ICFD will be consulted to review and approve any and all proposed fire equipment, apparatus, and related fire prevention plans. Thus, employees onsite would not be exposed to pollutant concentrations from a wildfire. Impacts would be less than significant and no further analysis is required.

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. CALFIRE maps note that no very high, high, or moderate fire hazard severity zones in the local or state responsibility areas are within 30 miles of the Project site (CALFIRE 2020). To prevent fire-related impacts on the Project site, Project access roads (off McDonald Road and Davis Road) would be constructed with turnaround areas; a 500,000 gallon fire water storage tank will be constructed; and a joint fire protection system will be installed. These features would help fire suppression and would not exacerbate fire risk. Further, these features will be constructed/installed and maintained within previously disturbed areas of the Project site in accordance with federal, state, and local fire codes; occupational health and safety regulations; and other jurisdictional codes, requirements, and standard practices. No significant environmental impacts would result. Impacts would be less than significant and no further analysis is required.

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? ☐ ☐ ☒ ☐

d) Less than Significant Impact. CALFIRE does not have any designated very high, high, or moderate fire hazard severity zones in the local or state responsibility areas within 30 miles of the Project site (CALFIRE 2020). The Project site is also flat and is not located within an identified landslide zone (DOC 2020b). 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 1993). As described in Section X Hydrology and Water Quality, flooding onsite would be prevented by the flood protection berm on the southern and western sides of the Project site. The Project would not expose people or structures to significant risks as a result of runoff, post-fire instability, or drainage changes. Impacts would be less than significant and no further analysis is required.

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,

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

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) Potentially Significant Impact. As discussed in Sections IV Biological Resources and V Cultural Resources, implementation of the Project has the potential to impact sensitive biological resources and cultural/paleontological resources. A Biological Technical Report and Cultural Resources Assessment are being prepared for the Project. Further analysis is required and potential impacts will be addressed in the EIR.

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) Potentially Significant Impact. The Project has the potential to result in significant impacts, and when combined with existing conditions or related projects, may result in a cumulatively considerable impact. Specifically, the Project has the potential to result in a cumulatively considerable net increase in one or more criteria pollutants for which the Project region is in non-attainment under applicable federal and state ambient air quality standards. Therefore further analysis is required and will be analyzed in the EIR.

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

c) Potentially Significant Impact. The Project has the potential to result in significant environmental effects, which could directly or indirectly cause adverse effects on human beings. As demonstrated in this Initial Study, the Project has the potential to result in significant impacts to air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gasses, hazards and hazardous materials, hydrology and water quality, noise, transportation, Tribal cultural resources, and utilities and services systems. These impact areas could result in direct or indirect adverse effects on human beings. Further analysis is required and these issues will be discussed in the EIR.

IV. 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
- David Black, Project Planner
- Imperial County Air Pollution Control District
- Department of Public Works
- Fire Department
- Ag Commissioner
- Environmental Health Services
- Sheriff's Office

B. CHAMBERS GROUP

- Corinne Lytle-Bonine, Principal In Charge
- Victoria Boyd, Project Manager
- Elizabeth Fortin, Environmental Planner
- Phillip Carlos, GIS Specialist

C. OTHER AGENCIES/ORGANIZATIONS

- Quechan Tribe

V. REFERENCES

California Air Resources Board (CARB)

1999 California Air Basins and Counties Map. Available online at: https://ww3.arb.ca.gov/maps/basinmap.jpg

California Department of Conservation (DOC)

2018 The Williamson Act Status Report 2016-17. Available online at: https://www.conservation.ca.gov/dlrp/wa/Documents/stats_reports/2018%20WA%20Status%20Report.pdf

2020a California Important Farmland Finder. Accessed October 2020. Available online at: https://maps.conservation.ca.gov/DLRP/CIFF/

2020b Earthquake Zones of Required Investigation. Accessed October 2020. Available online at: https://maps.conservation.ca.gov/cgs/EQZApp/app/

2020c Mines Online. Accessed October 2020. Available online at: https://maps.conservation.ca.gov/mol/index.html

2020d Well Finder. Accessed November 2020. Available online at: https://maps.conservation.ca.gov/doggr/wellfinder/#openModal

California Department of Forestry and Fire Protection (CALFIRE)

2020 Fire Hazard Severity Zone Viewer. Accessed November 2020. Available online at: https://egis.fire.ca.gov/FHSZ/

California Department of Resources Recycling and Recovery (CalRecycle)

2020 Niland Solid Waste Site (13-AA-0009). Accessed November 2020. Available online at: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/4184?siteID=596

County of Imperial (County)

1993 General Plan. Available online at: http://www.icpds.com/?pid=571

1997 General Plan: Seismic and Public Safety Element. Available online at: http://www.icpds.com/CMS/Media/Seismic-and-Public-SafetyElement.pdf

2007 General Plan Land Use Map. Accessed October 2020. Available online at: https://icpds.maps.arcgis.com/apps/Viewer/index.html?appid=0b3d07a31d5346919f3ea89ed2bc3940

2008 General Plan – Circulation Element. Available online at: http://www.icpds.com/CMS/Media/Circulation-Scenic-Highway-Element-(2008).pdf

2015 Imperial County Multi-Jurisdiction Hazard Mitigation Plan Update. Available online at: https://firedept.imperialcounty.org/wp-content/uploads/2019/10/ICMHMP.pdf

2016 Imperial County Emergency Operations Plan. Available online at: https://firedept.imperialcounty.org/wp-content/uploads/2019/10/EmergencyOpPlan.pdf

Department of Toxic Substance Control (DTSC)

2020 EnviroStor. Accessed November 2020. Available online at: https://www.envirostor.dtsc.ca.gov/public/

Federal Emergency Management Agency (FEMA)

2020 National Flood Hazard Layer Viewer. Accessed November 2020. Available online at: https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd

Google

2020 Google Maps. Accessed November 2020. Available online at: https://www.google.com/maps

Imperial County Air Pollution Control District (ICAPCD)

2020 Rules and Regulations. Accessed November 2020. Available online at: https://apcd.imperialcounty.org/rules-and-regulations/

Imperial Irrigation District (IID)

2012 Imperial Integrated Regional Water Management Plan. Available online at: https://www.iid.com/water/water-supply/water-plans/imperial-integrated-regional-water-management-plan

2017 Water Conservation Plan. Available online at: https://www.iid.com/home/showdocument?id=17259

State Water Resources Control Board (SWRCB)

2020 GeoTracker. Accessed November 2020. Available online at: https://geotracker.waterboards.ca.gov/

United States Department of Agriculture (USDA)

2020 Websoil Survey. Accessed October 2020. Available online at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

United States Fish and Wildlife Service (USFWS)

2019 Sonny Bono Salton Sea National Wildlife Refuge: Rock Hill Trail Map. Available online at: https://www.fws.gov/uploadedFiles/rockhilltrail.pdf

CONDITIONAL USE PERMIT

I.C. PLANNING & DEVELOPMENT SERVICES DEPT.
801 Main Street, El Centro, CA 92243 (760) 482-4236

- APPLICANT MUST COMPLETE ALL NUMBERED (black) SPACES – Please type or print -

1.	PROPERTY OWNER'S NAME Hudson Ranch Power I, llc	EMAIL ADDRESS jheuberger@energysource.us.com	
2.	MAILING ADDRESS (Street / P O Box, City, State) 409 W. McDonald Rd., Calipatria Ca.	ZIP CODE 92237	PHONE NUMBER 760-996-0313
3.	APPLICANT'S NAME EnergySource Mineral, LLC	EMAIL ADDRESS jheuberger@energysource.us.com	
4.	MAILING ADDRESS (Street / P O Box, City, State) 12544 High Bluff Dr., Suite 320	ZIP CODE 92130	PHONE NUMBER 858-509-0150
4.	ENGINEER'S NAME N A — CA. LICENSE NO.	EMAIL ADDRESS N A	
5.	MAILING ADDRESS (Street / P O Box, City, State) N A	ZIP CODE	PHONE NUMBER

6.	ASSESSOR'S PARCEL NO. see attached	SIZE OF PROPERTY (in acres or square foot) see attached	ZONING (existing) M-2
7.	PROPERTY (site) ADDRESS pending (HR 1 to the east is 409 W. McDonald Rd.)		
8.	GENERAL LOCATION (i.e. city, town, cross street) near the intersection of McDonald Rd. and Davis Rd.		
9.	LEGAL DESCRIPTION (See attached).		

PLEASE PROVIDE CLEAR & CONCISE INFORMATION (ATTACH SEPARATE SHEET IF NEEDED)

10.	DESCRIBE PROPOSED USE OF PROPERTY (list and describe in detail) development of a Mineral Extraction plant using the geothermal brine as the source (see project description attached)	
11.	DESCRIBE CURRENT USE OF PROPERTY	Geothermal Power Plant
12.	DESCRIBE PROPOSED SEWER SYSTEM	Existing approved waste water treatment plant operated by HR 1
13.	DESCRIBE PROPOSED WATER SYSTEM	Existing approved water treatment plant operated by HR 1
14.	DESCRIBE PROPOSED FIRE PROTECTION SYSTEM	combined HR 1 and Minerals operated fire suppression system
15.	IS PROPOSED USE A BUSINESS? ☐ Yes ☐ No	IF YES, HOW MANY EMPLOYEES WILL BE AT THIS SITE?

I / WE THE LEGAL OWNER (S) OF THE ABOVE PROPERTY CERTIFY THAT THE INFORMATION SHOWN OR STATED HEREIN IS TRUE AND CORRECT.

jurg heuberger, SVP Permitting & Comp. — Print Name
6-2-2020 — Date
Signature

Print Name — Date
Signature

REQUIRED SUPPORT DOCUMENTS

A. SITE PLAN
B. FEE
C. OTHER
D. OTHER

APPLICATION RECEIVED BY:		DATE	
APPLICATION DEEMED COMPLETE BY:		DATE	
APPLICATION REJECTED BY:		DATE	
TENTATIVE HEARING BY:		DATE	
FINAL ACTION: ☐ APPROVED ☐ DENIED		DATE	

REVIEW / APPROVAL BY OTHER DEPT'S required.
☐ P. W.
☐ E. H. S.
☐ A. P. C. D.
☐ O. E. S.
☐ _____
☐ _____

CUP # _____

MINOR SUBDIVISION

I.C. PLANNING & DEVELOPMENT SERVICES DEPT
801 Main Street, El Centro, CA 92243 (760) 482-4236

- APPLICANT MUST COMPLETE ALL NUMBERED (black) SPACES – Please type or print -

1.	PROPERTY OWNER'S NAME Hudson Ranch Power I, LLC	EMAIL ADDRESS jheuberger@energysource.us.com	
2.	MAILING ADDRESS 409 W. McDonald Rd., Calipatria, Ca	ZIP CODE 92227	PHONE NUMBER 760-996-0313
3.	ENGINEER'S NAME Precision Engineering & Surveying CAL. LICENSE NO.	EMAIL ADDRESS	
4.	MAILING ADDRESS 799 E. Heil Ave., El Centro, Ca	ZIP CODE 92243	PHONE NUMBER 760-353-2684

5.	PROPERTY (site) ADDRESS 409 W. McDonald Rd., Calipatria, Ca	LOCATION southeast corner of McDonald Rd. and Davis Rd.
6.	ASSESSOR'S PARCEL NO. 020-100-044	SIZE OF PROPERTY (in acres or square foot) 65.06 ac
7.	LEGAL DESCRIPTION (attach separate sheet if necessary) see attached map (PM1 of PM 13-39 being a POR N1/2 SEC 24 T11S-R13E)	
8.	EXPLAIN PURPOSE/REASON FOR MINOR SUBDIVISION Hudson Ranch Power I, LLC is in the process of selling a portion of the land to develop a Mineral Recovery Project, see CUP application also	

9. Proposed DIVISION of the above specified land is as follows:

PARCEL	SIZE in acres or sq. feet	EXISTING USE	PROPOSED USE	ZONE
1 or A	see map	Existing Geothermal Plant	Same	M-2
2 or B	see map	vacant	Mineral Extraction Plant	M-2
3 or C				
4 or D				

PLEASE PROVIDE CLEAR & CONCISE INFORMATION (ATTACH SEPARATE SHEET IF NEEDED)

10.	DESCRIBE PROPOSED SEWER SYSTEM(s)	Existing Waste Water Treatment Plant
11.	DESCRIBE PROPOSED WATER SYSTEM	Existing EHS regulated water treatment Plant
12.	DESCRIBE PROPOSED ACCESS TO SUBDIVIDED LOTS	both parcels will have access from McDonald Rd.
13.	IS THIS PARCEL PLANNED TO BE ANNEXED? ☐ Yes ☒ No	IF YES, TO WHAT CITY or DISTRICT?

I HEREBY APPLY FOR PERMISSION TO DIVIDE THE ABOVE SPECIFIED PROPERTY THAT I ☐ OWN ☐ CONTROL, AS PER ATTACHED INFORMATION, AND PER THE MAP ACT AND PER THE SUBDIVISION ORDINANCE.

I, CERTIFY THAT THE ABOVE INFORMATION, TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT.

Jurg Heuberger/ SVP Permitting/Compliance — 6.2.20 ~~March 10, 2020~~
Print Name (owner) — Date

Signature (owner)

Print Name (Agent) — Date

Signature (Agent)

REQUIRED SUPPORT DOCUMENTS

A. TENTATIVE MAP
B. PRELIMINARY TITLE REPORT (6 months or newer)
C. FEE _____
D. OTHER _____

Special Note:
An notarized owners affidavit is required if application is signed by Agent.

APPLICATION RECEIVED BY:		DATE	
APPLICATION DEEMED COMPLETE BY:		DATE	
APPLICATION REJECTED BY:		DATE	
TENTATIVE HEARING BY:		DATE	
FINAL ACTION: ☐ APPROVED ☐ DENIED		DATE	

REVIEW / APPROVAL BY OTHER DEPT'S required.
☐ P. W.
☐ E. H. S.
☐ A. P. C. D.
☐ O. E. S.
☐ _____
☐ _____

PM# _____

PROJECT DESCRIPTION

1. Introduction

Energy-Source Minerals LLC (E S Minerals), is proposing to construct and operate a commercial lithium hydroxide production plant in the Salton Sea geothermal field known as Project ATLiS. The facility will process geothermal brine from the neighboring Hudson Ranch Power I Geothermal Plant (HR1) to produce lithium hydroxide, and zinc and manganese products which will be sold commercially. The Project facilities will be located in the north half of Section 24 in Township 11 South, Range 13 East, San Bernardino Base and Meridian (SBB&M) as shown on the USGS Niland Quadrangle topographic map (see Figure 1). Also see reginal location Aerial (Figure 1a).

The proposed Project consists of the:

- Construction and operation of a facility to extract lithium, manganese, zinc and other commercially viable substances from geothermal brine and process the extracted substances to produce commercial quantities of lithium, and to the extent possible, manganese and zinc products and other products;
- Construction and operation of brine supply and return pipelines and other associated interconnection facilities with the HR1 power plant;
- Construction of a primary access road from McDonald Road (approximately 500 ft. west of the HR 1 entrance) and an emergency access entrance only from Davis Road;
- Paving of McDonald Road from Highway 111 to English Road;
- Construction of a power interconnection line from the IID/HR 1 switchyard located at the northeast corner of the HR 1 site
- Construction of associated facilities between HR 1 and ES Minerals to facilitate the movement of brine and other services
- Construction of a "laydown yard" that will also support temporary offices during construction as well as serving as a truck management yard during operations, and
- Construction of offices, repair facilities, shipping and receiving facilities and other infrastructure components.

2. Project Location and Site Access

The ATLiS plant & facilities will be located about 3 miles west-southwest of the community of Niland (see Figure 2) near the southwest corner of the existing HR1 power plant site, on Imperial county parcel APN 020-100-044 (about 65.12 acres) owned by Hudson Ranch Power I LLC. The property is zoned for manufacturing (medium industrial) (M2G-PE), and is located entirely within the existing Salton Sea Geothermal Overlay Zone (see Figure 3). The proposed ATLiS plant site and associated plant facilities would be built within an existing approximately 37–acre project

area, with the addition of the 15 acres located at the southeast corner of Davis Rd. and McDonald Rd., and approximately 40 acres on the south of the current HR 1 plant site.

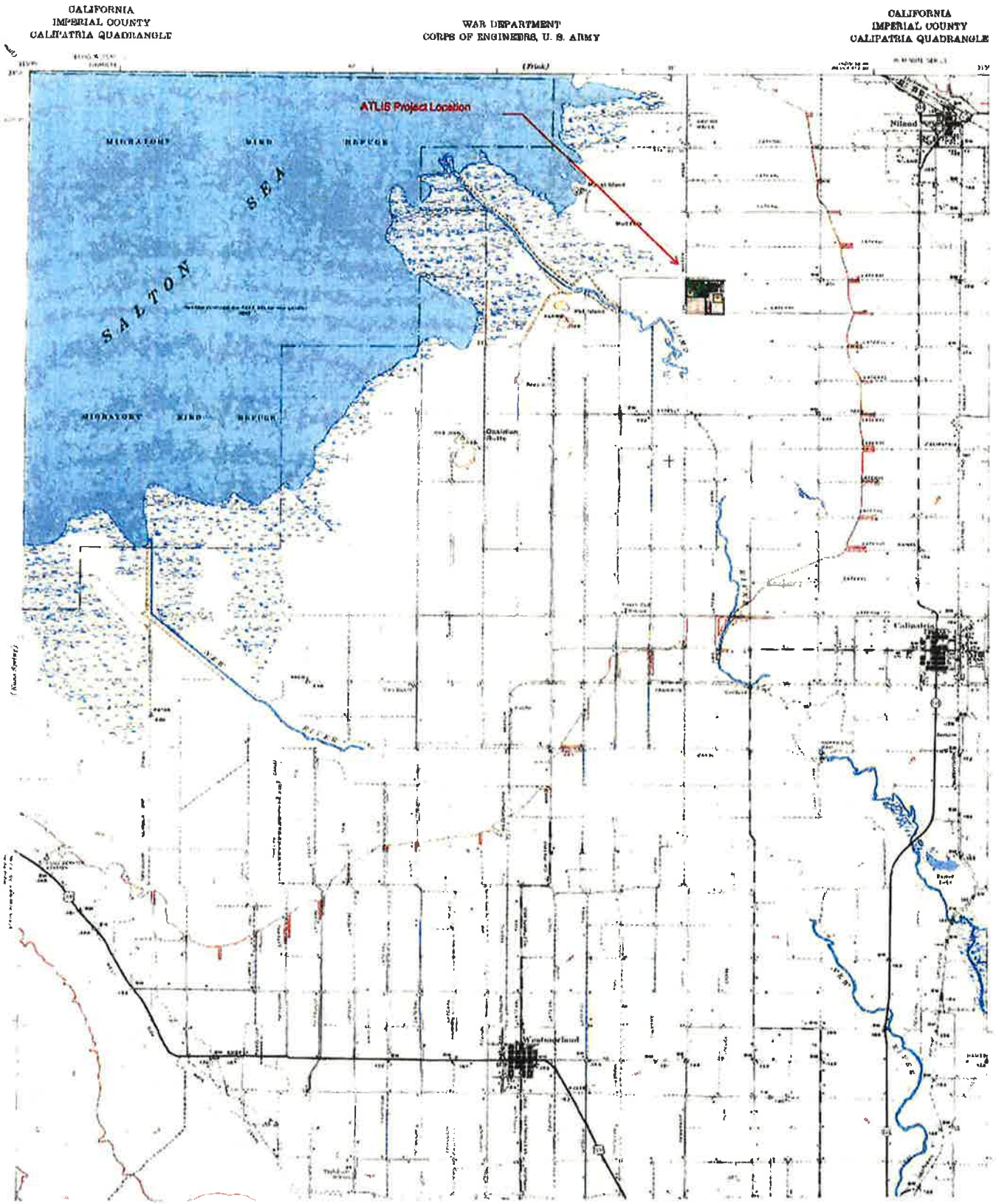

Figure # 1 location map on US QUAD sheet

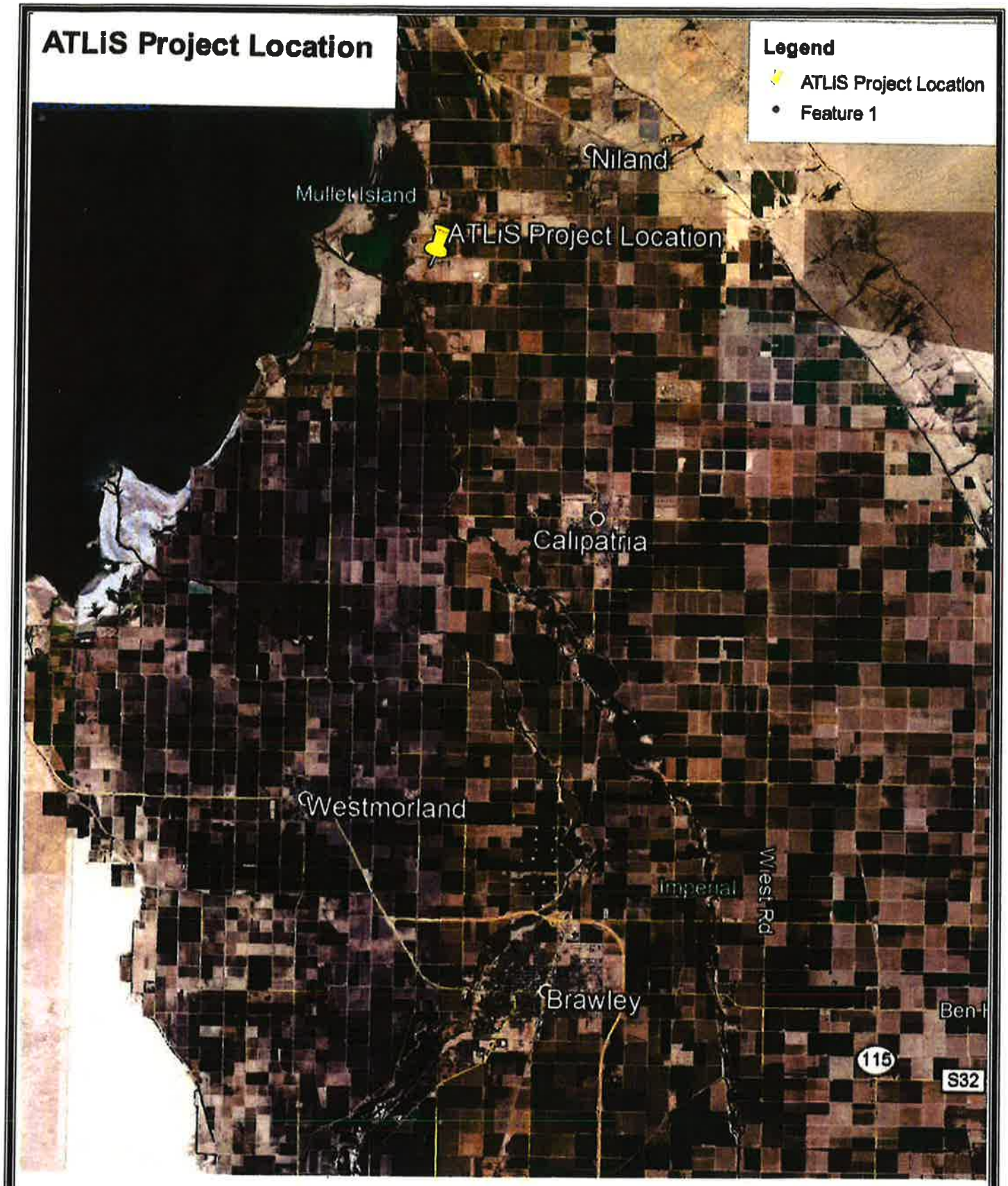

Figure # 1a General location Aerial View

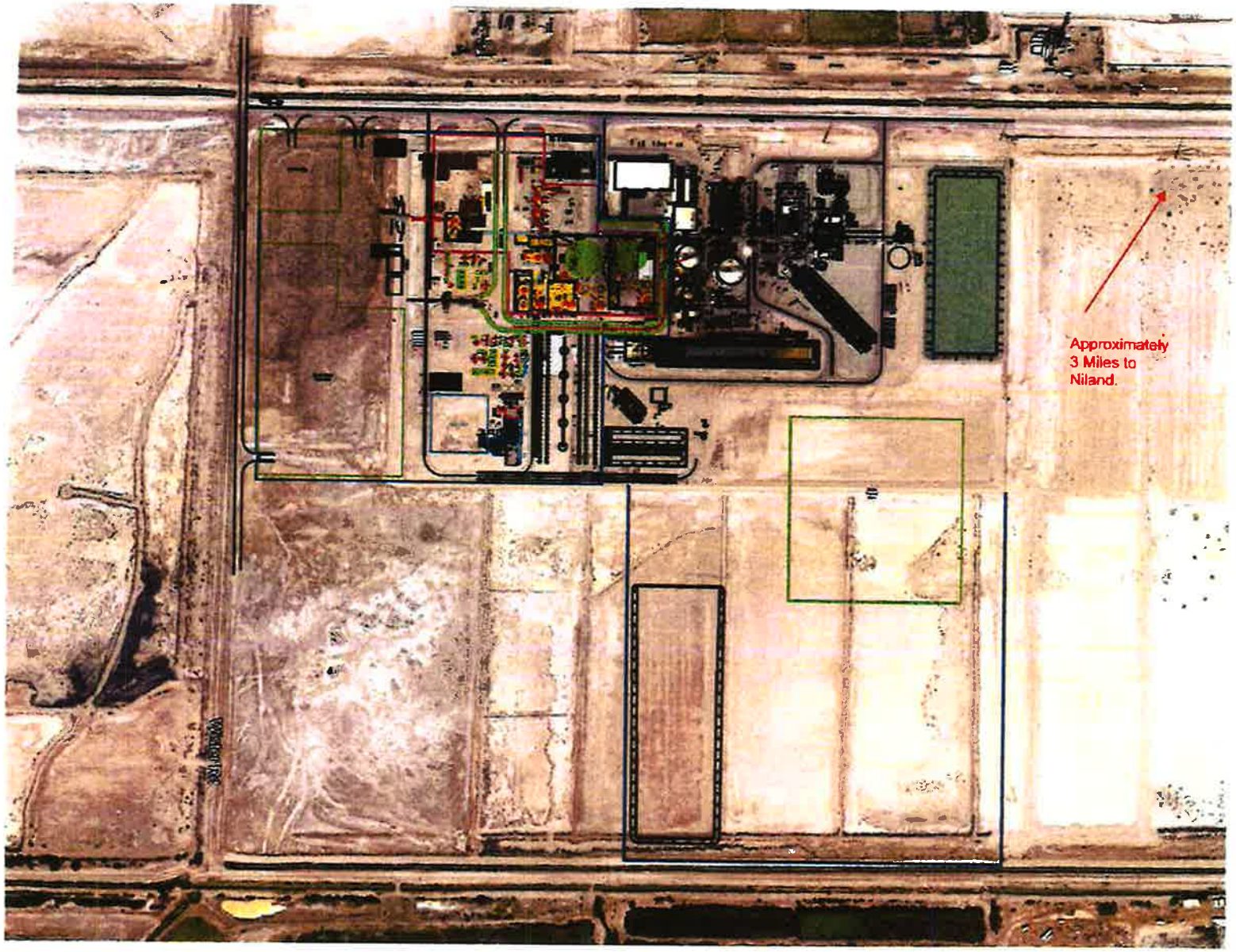

Figure # 2 Site Plan

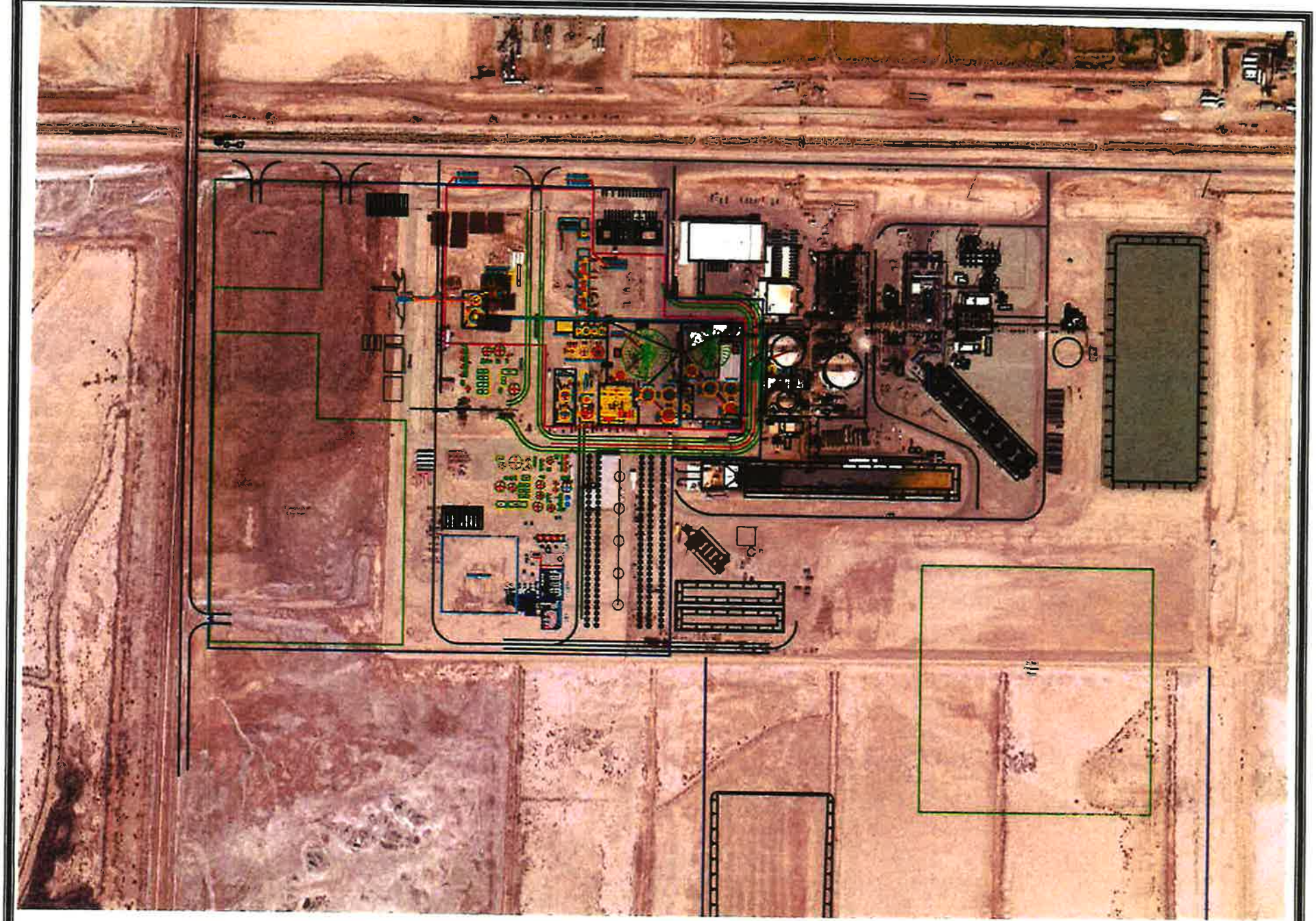

Figure # 2a Site Plan (enlarged)

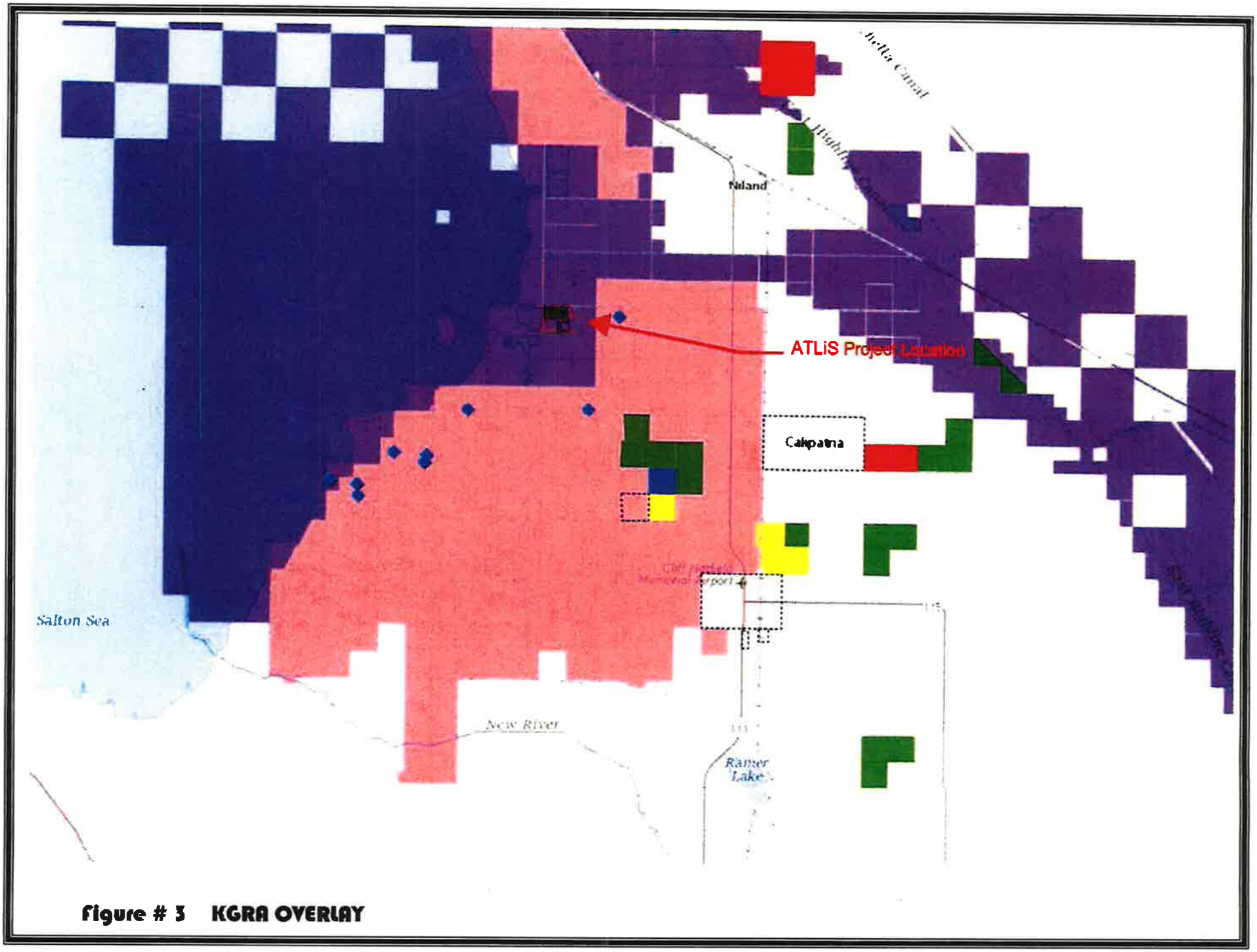

Figure # 3 KGRA OVERLAY

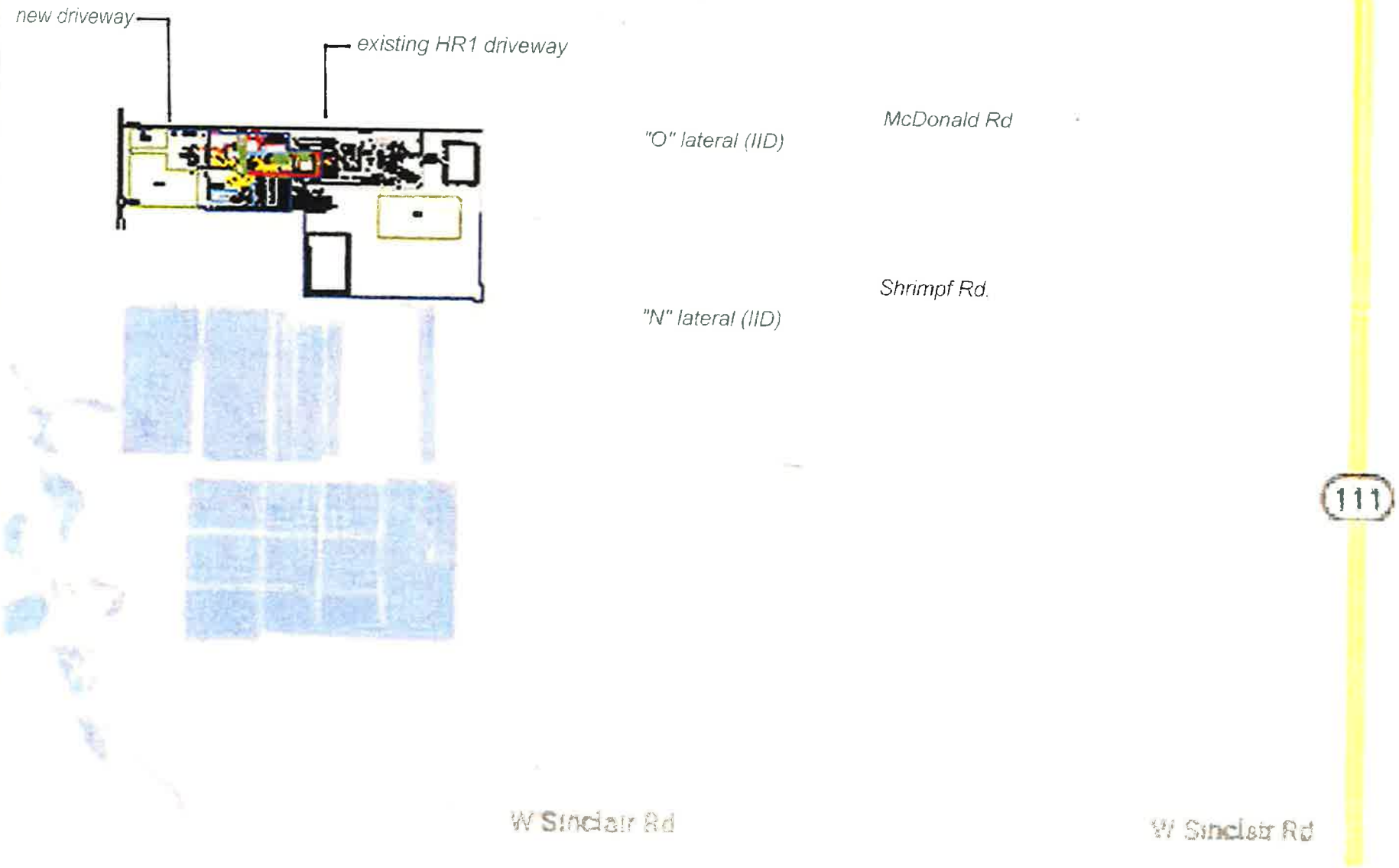

Figure # 4 location & driveways

Figure 5: site plan with all new and existing access and power line

The primary entry driveway that serves as the access to the E S Mineral plant site will be constructed from McDonald Road (see Figure 4 and Figure 5). A secondary access entrance to the plant site will serve as an emergency only access point and will be constructed off Davis Rd. Primary highway access to the proposed ATLiS plant site will be via State Highway 111. ATLiS will obtain encroachment permits from the Imperial County Department of Public Works (ICDPW) for the driveway access. The unpaved portion of McDonald Road between Highway 111 and English Road may be paved.

At the junction of McDonald Rd. and HWY 111, improvements will also be constructed to meet the requirements of the County and CALTRANS. As currently planned these improvements will include;

- Relocation of the IID drain exit structure on the west side of HWY 111
- Relocation of the IID canal gates on the west side of HWY 111
- Northbound left turn lane on HWY 111
- Southbound right turn lane on HWY 111

A short power line will be constructed between the current IID/HR1 switchyard and the plant site along McDonald Rd. to the ATLiS site.

3. Current Use of the Project Area and Adjoining Areas

The location of the ATLiS project is on the existing HR 1 site which was previously permitted for the Geothermal Plant. In addition to the actual power plant, the rest of the land has been used for lay down areas, storage areas and storm water management. The additional land that will be included is an approximate 15-acre parcel located at the southeast corner of Davis Rd. and McDonald Rd. This 15-acre site has been vacant for several decades and was previously used for geothermal testing. Also added to the project site is an approximate 40-acre portion being the east half of the 80 acres directly south of the current HR 1 plant site.

To the west of the site and west of Davis Rd. is generally IID owned vacant marsh land adjoining the Salton Sea. To the north of the site and north of McDonald Rd. is vacant land that that now is mostly used for duck hunting clubs and the location of the production and injection wells for HR 1. To the south is vacant land that has never been in any production and is also the site of numerous" mud-pots".

There are no residential uses within at least two miles of the site.

4. Plant Site Construction

The ATLiS plant site will be constructed to the west-southwest portion of the HR1 power plant site (see Figure 5). Construction will include light grading of approximately 30 acres of land that will include the ATLiS plant site, new entry road off of McDonald Road, and emergency access

road off of Davis Road and, a connection to the HR1/IID electric substation. ATLiS will prepare a grading plan and obtain permits from the County Public Works Department and Building Division of the County Planning and Development Services Department for encroachment, grading and building permits, as needed. The plant site driveway, parking and maneuvering areas will be constructed to County standards (generally a minimum of three (3) inches of asphaltic concrete paving or higher quality material).

4.1 Site Grading, Drainage and Flood Control

The entire project area is fairly level. The proposed ATLiS plant site drainage design in general will flow toward a possibly shared stormwater retention basin on the south-east side of the HR 1 site. The stormwater retention basin may be a shared facility with the HR1 power plant site. Alternatively, if a shared facility cannot be developed ATLiS will construct its own retention basin near the south end of its parcel. The buildings and equipment will be constructed on foundations with the overall site grading scheme designed to route surface water around and away from all equipment and buildings. The stormwater drainage system is sized to retain 3 inches of precipitation in a 24-hour period (100-year storm event) and to comply with applicable local codes and standards. Buildings and equipment will be constructed in a manner that provides protection from such a 100-year storm.

Storm water flows will be directed to the retention basin via ditches, culverts and/or swales. Spill containment areas and sumps subject to spills of immiscible chemicals would be drained to an returned the dilution water tank. There is no plan to discharge any drain or storm water off-site. Any oil contamination spills would be collected with absorbent pads and disposed as required by law. The plant site would be graded and constructed so that all process spills would drain into area drains that would be reprocessed into the system, excess process spills would drain into the brine pond. Clean water from the oil/water separator will be delivered to the ATLiS site for beneficial use.

The plant site will either be constructed to an elevation above the Imperial County designated special flood hazard for lands near the Salton Sea, or have the existing berm extended to the outer perimeter of the site. The western portion of the plant is located within the Federal Emergency Management Agency (FEMA) "Zone A" flood zone, in which there is a one percent annual chance of flooding. However, an earthen flood protection berm was originally constructed on the west and south sides of the HR1 property to prevent flooding of the site. A administrative Flood Plan permit was approved for the HR 1 site. The plant site facilities will be located within the existing HR1 flood protection berm. No off-site discharge of any waters will be allowed and all of it will be managed on site.

4.2 Structures

The ATLiS plant site will include construction of the following buildings and structures

- Plant offices (which will house offices and meeting rooms) [Note: as an option, offices for both plants may be incorporated into one building];
- Operations and employee facilities (which will house offices for supervisors, meeting rooms, breakroom/lunch room, locker/shower rooms); [Note: these may all be in once building with the main offices]
- Maintenance shop, materials warehouse (which will house plant maintenance equipment and supplies, and shops such as machine, paint, welding and electronic);
- Materials warehouse (which will store equipment, reagents, etc.);
- Electrical building(s) (which will house motor control centers, electric power switchgear and metering to provide power for plant operations);
- Emergency generator building;
- Two reagent storage and preparation buildings;
- Chemical laboratory building (which will contain a wet chemistry laboratory and analytical instruments for analysis of in-process and finished products);
- Filter press sheds (which will house filter presses. Lithium (Li) product production building (which will house the proprietary technology for manufacturing the lithium carbonate and lithium hydroxide products);
- Lithium (Li) product handling, packaging and warehouse buildings (which will house the filtration and drying equipment for the Li products and bagging and palletizing of finished products);
- Manganese product handling, production, and warehouse building (which will house the filtration and drying equipment for the Mn product and bagging and palletizing of finished products);
- Zinc product handling, production, and warehouse building (which will house the filtration and drying equipment for the Zn product and bagging and palletizing and storage of finished products);
- Calcium oxide (CaO) silo and slacker;
- Limestone stockpile and solution tanks
- HCL offloading and storage tank(s)
- Gate (guard) house; and
- Cooling tower
- The sewage from this plant will be processed by the HR 1 sewer treatment plant, hence no further permitting is required.
- Potable water will be provided from the HR 1 permitted water treatment plant via an agreement between the plants. An application to modify the HR 1 plant by using both the existing approved plant and the former Simbol plant will be made to EHS by HR1.

The product production, handling and warehouse buildings will be about 80 feet tall, and the various other components of the plan may be as high as 100 feet tall.

4.3 Impurity Removal and Product Extraction Facilities

The impurity removal and the product extraction process areas will be constructed within designated areas of the plant site on concrete pad(s) with a containment curb. These process areas may not be located within a building but will consist of a series of interconnected tanks and pipelines. The arrangement of these facilities is part of the proprietary ATLiS technology. All structures will however be permitted through the County and meet or exceed the most recent adopted codes.

4.4 Product Production Facilities

Product production facilities consisting of a series of interconnected tanks and pipelines will also be constructed on the site. The processing facilities will also be erected within designated portions of the plant site on concrete pad(s) with a concrete containment curb or in designated buildings. The arrangement of these facilities is also part of the proprietary ATLiS technology.

4.5 Pipe Rack and Process Pipelines

A pipe rack will be constructed from the ATLiS process area to the HR1 site. A post clarifier brine delivery pipeline from HR1 to the ATLiS process area and a depleted brine return pipeline from the process area to HR1 will be constructed on one or more pipe racks. A steam/steam condensate delivery pipeline will also be constructed on the pipe rack. ATLiS will be responsible for returning the depleted barren brine to the HR1 site. Additional delivery or return pipelines may also be constructed onto the pipe rack as needed to handle the different fluids transported.

The delivery and return pipelines will be constructed with minimal usage of flanged connections to reduce the potential for pipe leaks. Automatic valves will be integrated into the pipeline system which would close quickly in the event of a pipe rupture to minimize the size of any potential spill. An Emergency Response Plan will be prepared and implemented should a fluid spill event occur.

4.6 Fire Water and Freshwater Pond

The ATLiS plant will share with HR 1 the fire suppression system, and the freshwater storage containment pond. The fire suppression system will be re-designed to accommodate the overall fire protection obligation to both plants along with the necessary controls. The raw water storage pond currently located on the east side of the HR 1 plant will continue to receive canal water from the IID "O" lateral. However, a backup delivery line will also be installed from the "N" lateral located about a ¼ mile south of the plant. This redundancy is necessary for two reasons, first when IID does maintenance work on canals they can be out of service for several days and second in the event of a natural interruption such as an earthquake that may render the "O" lateral out of service. The Imperial County Fire Department will be consulted as appropriate to

review and approve the proposed fire water and freshwater pond facilities. It is contemplated that a 500,000-gallon fire water tank will be included.

4.7 Stormwater Retention Basin

The Project may share the HR1 stormwater retention basin. The retention basin will be engineered and constructed to contain the combined stormwater storage requirements of both the HR1 and ATLiS plant sites. If a shared facility cannot be done for technical, legal or other reasons then ATLiS will construct its own basin on the far south side of the parcel.

4.8 Security Fence and Landscaping

A nominal six-foot-high chain-link security fence topped with three-strand barbed wire will be constructed around the ATLiS plant site. The fence will be constructed to meet County standards for obscured fencing around processing areas. Due to security issues required for the HR 1 power plant and because of the interconnectivity between HR 1 and ATLiS, security protocols for both plants will be similar in nature.

4.9 Substation and Power Line Facilities

Up to 8MW of electrical power will be needed for the ATLiS operations. The power will be purchased from the IID. ATLiS will construct an electrical substation on the ATLiS property.

An emergency diesel generator will be used to keep vital ATLiS plant systems operating during power outages. (See figure 6)

5 Production Plant Operations

The ATLiS plant will utilize post-secondary clarifier brine produced from the geothermal fluid management activities on the neighboring HR1 power plant site as the resource process stream for the commercial production of lithium hydroxide monohydrate (LiOH•H2O), or more commonly LIOH, and zinc and manganese products. The production operations will consist of the following general processing steps which are also summarized in a flow diagram (see Figure 6). The production processing steps may be altered over time as production methods and efficiencies evolve and new or revised product lines are developed at the facility. The arrangement of the processing equipment is part of the proprietary technology developed for the plant site.

- Impurity removal
- Lithium Extraction as Lithium Chloride (LiCl)
- Conversion and Processing of LiCl to Lithium Products
- Drying and Packaging of Lithium ProductsZinc Extraction and Processing to Zinc Products
- Manganese Extraction and Processing to Manganese Products

- Offsite Product Shipping

Each of the general processing steps is discussed further below. After processing of the geothermal brine the depleted barren brine will be returned to HR1.

5.1 Impurity Removal

Post heat extraction geothermal brine from the secondary clarifier of the HR1 power plant site will be transported via pipeline to the impurity removal process area on the ATLiS plant site. A nominal 7000 gallons per minute (gpm) of the brine will be processed by the facility. This projected process rate is used as the basis for the estimates provided throughout this Project description, but the actual rate of brine eventually processed on the site will be optimized to take advantage of the available facilities on the HR1 and ATLiS plant sites.

Iron (Fe) and silica (SiO_2) will be removed from the brine followed by the removal of the manganese (Mn) and zinc (Zn) in a two-stage process. The separated iron-silica material, and the manganese-zinc material will be dewatered in the Filter Press sheds. The mineral depleted brine will then be transported via pipeline to the Lithium Extraction process area.

The separated iron-silica material will be initially managed as a waste stream. The waste material will be collected and analyzed in conformance with appropriate laboratory testing protocols to ensure that it is handled and disposed of in an appropriate manner (see Section 12).

If and when in the future, opportunities exist to use this material, ATLiS plans to market iron-silica material as an additional product(s) to be shipped to a third party(ies) for use in other industrial processes, and it will no longer be a waste but a product. The market for the iron-silica material is currently being developed. Based on average production rates at the target nominal process rate of 7000 gpm, approximately 136200 metric tons of iron-silica material will be produced annually (see Section 15.2 for estimates of the daily truck traffic).

5.2 Lithium Extraction as LiCl

The treated brine will be fed to a lithium extraction process located within the Lithium Extraction process area on the ATLiS plant site. This area will be outside on a concrete pad. The area will contain proprietary lithium extraction media. Lithium from the brine will be retained on the extraction media. A lithium chloride (LiCl) product stream will be produced from the extraction process. The LiCl will be transported via pipeline from the Lithium Extraction area into the Lithium Purification process area. Impurities will be removed from the LiCl product stream and handled as nonhazardous waste. The purified LiCl will then be concentrated in an evaporator or equivalent process.

5.3 Conversion and Processing of LiCl into Lithium Products

The purified, concentrated LiCl will be transported via pipeline from the Lithium Purification area to the Lithium Product Production Building. Proprietary technology will be used to convert the LiCl and then into Li_2CO_3 and then into LiOH product stream.

5.4 Drying and Packaging of Lithium Products

The LiOH product stream will be transported to a Lithium Product Handling, Production and Warehouse building where the crystals will be separated from the lithium-rich process fluid in a dewatering system. LiOH crystals will be dried, sized and cooled.

5.5 Packaging of the Lithium Products

The dried lithium products will be packaged, palletized, staged, and loaded into trucks for distribution in the Lithium Product Handling, Production and Warehouse buildings. The dried lithium products will be loaded into bulk bags in a bagging station. Packaging is expected to be 500 kg to 1,000 kg super sacks. Potential particulate matter emissions from product handling operations are discussed in Section 6.2.

5.6 Extraction of Zinc and Manganese

Zinc/manganese filter cake will be acid leached, separated and purified int a two-part solvent extraction process. The separated steams will each then be dried and packaged for further processing by others.

5.7 Manganese (Mn) Extraction and Processing to Mn Products

The manganese removed by the solvent extraction process will be precipitated into manganese oxides/hydroxides products, then dewatered in filter presses into wet cake product. The products will be transported to the Manganese Product Handling, Production and Warehouse building for further handling, packaging, and offsite shipment to market.

5.8 Product Shipping to Offsite Markets

The ATLiS plant may produce multiple products for offsite shipment to market by truck. The average annual amount of product shipped out of the plant is estimated at 19,000 metric tons of lithium product 10,000 to 20,000 metric tons of zinc product(s), and up to 60,000 metric tons of manganese product(s), Products will be transported by freight truck on existing roadways to shipping distribution point(s). Other products of the production operations may be generated by the proprietary technology on the plant site and would also be shipped offsite to market by truck.

Trucking will generally be to markets in the greater Los Angeles basin and the markets in Arizona and Texas.

6 Air Pollutant Emissions

6.1 Construction Emission Sources and Control

During site construction, the Project will implement a dust control plan consisting of best management practices to control dust. Fugitive dust generation during site construction activities will be minimized by frequent watering. Vehicle traffic on unpaved onsite access roads would also be kept below 15 miles per hour. The Project would comply with the applicable Imperial County Air Pollution Control District (ICAPCD) regulations including, but not limited to, Rule 801 (Construction and Earthmoving Activities), Rule 803 (Carry-Out and Track-Out), Rule 804 (Open Areas) and Rule 805 (Paved and Unpaved Roads).

An assessment of air pollutant emissions that would result from Project construction activities was conducted using the California Emission Estimator Model (CalEEMod) and other emission estimating tools. The findings of this construction emission assessment are provided as a Supplemental Site-Specific Investigation submitted with this Project Description. The assessment demonstrated that the criteria air pollutant emissions during construction would not exceed the "Thresholds of Significance for Construction Activities" (Table 4) of the ICAPCD.

6.2 Plant Operations Emission Sources and Control

Small quantities of criteria air pollutants, criteria air pollutant precursors and hazardous air pollutants would be released into the atmosphere from the ATLiS plant extraction, processing and packaging equipment during normal plant operations. Small quantities of combustion emissions would also be released to the atmosphere from the emergency diesel engines during testing and any emergency operations. A Permit to Construct and a Permit to Operate would be obtained, as required by the ICAPCD, for the facility stationary air pollutant emission sources and air pollutant control equipment. Warehouse/yard vehicles (forklifts and manlift) would be propane-powered to minimize combustion emissions from these non-stationary sources.

The following paragraphs describe the principal operational emission sources, abatement equipment and emission control methods that will be incorporated into the ATLiS plant and operations.

Cooling Tower: The ATLiS plant will utilize a small cooling tower that will operate at a relatively low circulation rate. The cooling tower will be designed and operated to minimize particulate emissions. Dissolved solids in the circulating cooling water would be released to the environment as particulate emissions via "drift" (small water droplets that become entrained in the air stream leaving the cooling tower). Drift eliminators are designed to capture the water droplets in the

cooling tower air stream and prevent their escape by causing the droplets to change direction, lose velocity and fall back into the circulating cooling water. Particulate emissions from the ATLiS cooling tower will be minimized by maintaining a low total dissolved solids (TDS) concentration in the circulating water by removing a slipstream of the higher TDS circulating cooling water as blowdown and replacing it with the lower TDS canal water; and by controlling cooling tower drift losses by using high efficiency drift eliminators, which are considered best available control technology (BACT) for cooling tower drift. The cooling tower blowdown will be used within the process dilution water. Cooling tower particulate emissions are estimated at 4.37 lbs./day and 0.80 tons/yr.

Operating Equipment and Emission Abatement: Other plant operating equipment will also be designed and operated to minimize particulate and other air pollutant emissions. Small quantities of particulates will be released from the loading and unloading of the dry materials in open areas, as well as chemical storage silos and tanks; and the drying, transfer and packaging of the lithium, and zinc/manganese products.

Drying, transfer and packaging the lithium and zinc/manganese products would create minimal fugitive particulate matter which, in each case, would be collected by a wet scrubber, baghouse or other dust collector to prevent the loss of product, as well as to minimize particulate emissions to the atmosphere. The estimated controlled particulate emissions from these production processes are 0.97 lbs./day or 0.17 tons/yr. The Lithium Product Handling Buildings' and Packaging and Warehouse Buildings' air will also be filtered and operated with a negative pressure to further prevent dust emissions from these operations. As an alternative Nitrogen Gas may be used to create a positive pressure system.

The loading of bulk dry reagent chemicals into storage silos or tanks is typically done pneumatically, which can release particulate matter into the atmosphere. These silo or tank loading particulate emissions would be controlled using fabric filter units called "bin vents," which are typically installed on top of silos, or other dust collectors to prevent the loss of reagent, as well as to minimize particulate emissions to the atmosphere. Bin vent fans induce a draft which directs any particulate emissions to the fabric filter. Dust collected on the filters or the other types of dust collectors is discharged back into the appropriate silo. Bulk dry chemicals removed from the silos or tanks are discharged into wet processes which would not result in particulate emissions. As a group, the emissions from the loading of the bulk dry reagent from open areas and from silos and tanks is estimated at 0.07 lbs./day and 0.01 tons/year.

The offloading of concentrated HCL would produce HCl vapor emissions from the storage tank(s). Scrubbers will be installed on the storage tanks to control HCl vapor emissions from the storage tank, resulting in controlled HCl emissions estimated at 12.5lbs/day and 3.72 tons/year.

Emergency Generators: The plant will install, test and operate a 600 horsepower (hp) diesel-fueled emergency generator to provide backup power for critical plant control systems in the event of a power outage. Similarly, the plant will install, In combination with HR 1 a 62 HP fire water pump that will provide fire flow to both plants. In conformance with applicable regulations, the 600 hp emergency generator will be operated less than 80 hours per year for maintenance and/or testing purposes, and the 62 hp firewater pump generator will also be operated less than 80 hours per year for maintenance and/or testing purposes (40 CFR Part 89, Control of Emissions of Air Pollution from Nonroad Diesel Engines). The emergency engines will meet BACT for emission of oxides of nitrogen (NOx) and sulfur content in fuel will be limited. Assuming annual use of 500 hours per year, NOx emissions from these two engines combined are estimated to not exceed 3.87 lbs./day and 0.97 tons/yr

6.3 Greenhouse Gas (GHG) Emissions

Reference Technical Study

7. Fluid Discharges and Containment

7.1. Discharges

There will be no process wastewater discharges to land or waters from the ATLiS plant. Depleted brine will be delivered to the HR1 power plant site for beneficial use by HR1 through subsurface injection and re-pressurization of the geothermal reservoir.

Process equipment will be contained in curbed areas. The curbed areas will provide secondary containment and will be sized to contain the largest potential spill that could occur within the respective areas. The largest potential spill is considered to be the volume of the largest tank within each curbed area. Each curbed area of the ATLiS plant site will contain at least 110% of the volume of the largest fluid storage vessel within each respective containment area. In the event of a spill, the spilled liquid will be removed from the concrete aprons by suction and/or pumps and managed appropriately.

No major spills outside of the secondary containment areas are expected. ATLiS will prepare an Emergency Response Plan (ERP) which will address emergency spill response. ATLiS will maintain equipment and supplies on site to respond to small spills that could occur outside of the secondary containment areas and prevent both hazardous and nonhazardous fluid discharges from the plant site. Sanitary waste from the ATLiS plant will be collected in a septic tank which will initially digest the sewer effluent. Liquid waste will be pumped to a waste water treatment system on the neighboring HR1 facility. Sludge retained in the septic tank will be pumped by licensed contractors as needed and transported to a sanitary water treatment plant. No sanitary waste will be released on the project area.

7.2. Stormwater

Stormwater from the ATLiS plant site will be directed into the stormwater retention basin shared with HR1 on the east side of the plant site. The stormwater runoff will be contained on site and will be managed using any one, or any combination, of the following methods: (a) allowed to evaporate or percolate into the soil; (b) released for non-Project beneficial use onto the undeveloped portion of the ATLiS parcel; and/or (c) pumped from the stormwater pond into the freshwater pond for onsite uses. The collected stormwater runoff in the stormwater retention basin will be sampled and analyzed for quality and compatibility prior to releasing or removing the stormwater runoff from the stormwater retention basin as described above.

Under most conditions, stormwater will be removed from the retention basin within 72 hours. In the unlikely event that conditions prevent removal of accumulated stormwater from the retention basin within 72 hours, then measures will be implemented to control mosquito breeding in the basin consistent with the requirements of the Imperial County Health Department, Environmental Health & Consumer Protection Services, Vector Control Program. If necessary a Mosquito Abatement Plan will be prepared.

8. Electrical Power

For the ATLiS plant, up to 8 MW of electrical power needed for the operations which will be purchased from the IID. A new power line will be constructed to the ATLiS plant site from a the current IID/HR1 substation located near the northeast corner of the HR1property. Electrically driven equipment including a power distribution unit will be installed at the neighboring HR1 facility to deliver geothermal brine, steam/steam condensate and no condensable gas to ATLiS. The power distribution unit will be provided power via a distribution line from either the ATLiS electrical building or the IID/HR 1 substation.

A 600 hp emergency diesel generator will be used to keep vital plant systems operating during power outages.

9. Fire Protection and Safety Systems

A 500,000 gallon fire water storage tank will be constructed adjacent to the HR 1 water storage pond. A new fire water system to serve both HR 1 and ATLiS will be constructed near the storage tank. The ATLiS fire protection system will be equipped with quick connect hose bibs; an underground fire main and surface distribution equipment such as yard hydrants and hose houses; monitors around the perimeter of the cooling tower; automatic sprinklers for the buildings, if needed; and a complete detection and alarm system. Fire hydrants will be looped with no dead ends. The firewater supply and pumping system will provide an adequate quantity of fire-fighting water. A 62 hp diesel-fueled firewater pump will be available on site. The systems

will be designed in accordance with federal, state, and local fire codes; occupational health and safety regulations; and other jurisdictional codes, requirements, and standard practices.

Facility roadways will provide emergency vehicle access to every building and major structure on the plant site and substation consistent with County Fire Department requests.

A brush control program will be prepared and implemented on those portions of the ATLiS property that will not be developed as part of the ATLiS plant facilities to mitigate the potential adverse effects of an offsite brush fire. The Imperial County Fire Department will be consulted to review and approve any and all proposed fire equipment, apparatus and related fire prevention plans.

Onsite vehicles (forklifts and manlift) will be propane fueled. A bulk propane tank will be located within a specified fueling area protected from collisions).

Plant operations will be computer controlled and will be designed with redundant safety systems. Personal Protective Equipment (PPE) will be used in specific tasks that require personal protection. These include coveralls, gloves, goggles, Tyvek suits and respirators, as appropriate.

10. Water Supply Source and Requirements

It is estimated that up to 50,000 gallons per day of water will be needed during site construction for fugitive dust control during site grading and construction activities. This water will be purchased from the IID and transported to the site via temporary pipeline or water truck.

Process water will be used for reagent preparation, product washing and cooling tower makeup. Process water will be a combination of steam condensate, cooling tower blowdown, and area washdown water provided by the neighboring HR1 power plant. Additional process water for cooling tower make-up and purified water will be purchased from the IID and taken from the "O" and/or "N" lateral canal under a water purchase agreement with the IID.

Water will be delivered to the freshwater storage pond on the HR1 property east of the HR1 plant site via pipeline from the canal(s). The freshwater pond exists but will be altered to eliminate fire water usage. Canal water will also serve as the source of water for maintenance purposes and firewater for the fire protection system. It will be used to charge the cooling tower prior to startup. The freshwater pond will be sized to meet the freshwater storage requirements of the ATLiS plant.

Approximately 90,000 gallons per hour (g/h) or about 2900 acre-feet per year (AFY) of canal water will be purchased from the IID for projected ATLiS cooling water makeup and additional process water. Approximately 112 g/h or about 3 AFY of the canal water to be purchased will be used for potable water purposes, including potable washbasin water, eyewash equipment water,

water for showers and toilets in crew change quarters, and sink water in the sample laboratory. The HR 1 potable water treatment plant has been renovated to accommodate sufficient use and reliability for both plants. This system will be operated under one permit by HR 1 and ATLiS will simply purchase water from HR 1. This is necessary as the state has regulations that limit the number of new treatment plants that can be built.

11. Characteristics of the Process Brine

Brine from the HR1 power plant secondary clarifiers will be provided to the ATLiS plant site. Chemical characteristics of the post-flash clarifier brine are summarized in Table 1.

Table 1: Projected HR1 Clarifier Brine Composition

Constituent	Clarifier mg/L as Ions[1]
Lithium	228.5
Beryllium	0.01
Ammonium	451.1
Sodium	61,369.2
Magnesium	48.9
Aluminum	0.3
Potassium	15,637.1
Calcium	30,073.4
Chromium	0.004
Manganese	1,202.8
Iron	1,443.4
Nickel	0.02
Copper	4.8
Zinc	390.9
Rubidium	84.2
Strontium	541.3
Silver	0.3
Cadmium	1.5
Antimony	1.0
Cesium	15.0
Barium	216.5
Mercury	0.0001
Lead	96.2
Bicarbonate	88.6
Nitrate	0.01
Fluoride	24.1
Sulfate	127.5
Chloride	168,400.5
Arsenic	13.2
Selenium	0.006
Bromine	108.3
Iodine	12.0
Silica	206
Carbon Dioxide	0.1
Boron	384.8

Hydrogen Sulfide 0.0
Benzene 0.0
Total Dissolved Solids 283,323
pH 4.5 to 5.1
Source: Energy Source 2010

1 All numbers are approximate.

12. Hazardous Materials

12.1. Transportation of Hazardous Materials to and from the Project Site

Moderate quantities of hazardous materials, including acids, fuel and other chemicals, would be transported to the Project site during all phases of the Project. Petroleum hydrocarbon fuels, chemical reagents, water treatment chemicals, and smaller quantities of other potentially hazardous chemicals would be transported to the plant site during operations. The Project would also generate hazardous material products and hazardous wastes. These materials would be transported to and from the Project site by licensed hazardous material carriers and hazardous waste transporters.

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 are also responsible for their loads, reporting spills, and initiating appropriate emergency responses to releases of any transported hazardous materials from the point of origin up to the destination of the hazardous material delivery.

ATLiS will communicate with the locally responsible emergency response agencies prior to the shipment of any bulk hazardous materials to or from the Project site. Continuing coordination and communications with these agencies relevant to hazardous material shipments will be undertaken as required by the agencies. ATLiS will also develop an Emergency Action Plan (EAP) for responding to spills or releases of hazardous substances by hazardous material carriers within the project area. This Plan shall conform to all applicable federal, state, and local requirements for notifications, reporting, and emergency response of hazardous substance release incidents. The Plan will also provide for cleanup of the spilled substances and site reclamation if required. In the unlikely event of a hazardous materials spill during transportation of materials to or from the plant site, ATLiS will cooperate with the responsible agencies and provide all available information and knowledge about the materials to facilitate the spill response cleanup and spill site remediation.

12.2. Hazardous Materials Used During Construction

Hazardous materials expected to be used during construction include: unleaded gasoline, diesel fuel, oil, lubricants (i.e., motor oil, transmission fluid, and hydraulic fluid), solvents, adhesives, and paint materials. There are no feasible alternatives to these materials for construction or operation of construction vehicles and equipment, or for painting and caulking buildings and equipment.

The construction contractors will be responsible for assuring that the use, storage and handling of these materials will comply with applicable federal, state, and local standards; including licensing, personnel training, accumulation limits, reporting requirements, and recordkeeping.

12.3. Hazardous Materials Used During Operations

The Project will develop and implement an Emergency Response Plan (ERP) and a Hazardous Materials Business Plan (HMBP). The ERP and the HMBP will be provided to the Imperial County Fire Department/Office of Emergency Services (OES), and the Certified Unified Program Agency (CUPA) for Imperial County (the local California Department of Toxic Substances Control office) for review and approval prior to plant operations. The ERP and HMBP will 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.

Portable bins or other storage containers will be on site for storage of maintenance lube oils, chemicals, paints, and other construction materials, as needed. Secondary containment will be provided in all petroleum hydrocarbon and hazardous material storage areas.

Safety showers and eyewash stations will be provided in or adjacent to chemical storage and use areas. Safety equipment will be provided for personnel use if required during chemical containment and cleanup activities. All personnel working with chemicals will be trained in proper handling and emergency response to chemical spills or accidental releases. Water hose connections will be provided near chemical storage and feed areas to flush spills and leaks, and absorbent materials will be stored on site for spill cleanup.

13. Solid Wastes

The construction and operation of the facility will generate both nonhazardous and hazardous wastes (see Table 2). All project solid wastes (nonhazardous or hazardous) will be disposed of at an approved waste disposal facility authorized to accept such waste.

Table 2: Representative Projected Solid Waste Streams

Waste Stream	Waste Classification	Treatment
Projected Construction Waste Streams:		
Scrap wood, steel, glass, plastic, paper, calcium silicate insulation, mineral wood insulation	Nonhazardous	Waste disposal facility
Empty hazardous material containers drums	Recyclable	Recondition or recycle
Oily rags generated during normal construction activities; lube oil flushes	Hazardous	Waste disposal facility
Spent batteries; lead acid	Hazardous	Recyclable Recycle
Spent batteries; alkaline type, Sizes AAA, AA, C and D	Hazardous	Waste disposal facility
Sanitary waste-portable chemical toilets, construction office holding tanks, septic tank	Sanitary	Pumped by licensed contractors and transported to sanitary water treatment plant
Projected Plant Operating Waste Streams:		
Iron-Silica Waste Filter Cake	Potentially hazardous[1]	Waste disposal facility
Carbonate	Nonhazardous	Waste will be reused
Lead sulfide	Hazardous	Waste disposal facility
Used hydraulic fluids, oils, grease, oily filters	Recyclable Hazardous	Recycle
Spent batteries; lead acid	Recyclable Hazardous	Recycle
Laboratory Waste	Hazardous[1]	Waste disposal facility
Used oil	Recyclable Hazardous	Recycle
Oily rags	Hazardous	Waste disposal facility

[1] Waste will be sampled and characterized before being transported to an offsite waste disposal facility authorized to accept the wastes

13.1. Nonhazardous Wastes

Inert solid waste from construction activities may include lumber, excess concrete, metal, glass scrap, and empty nonhazardous containers. Management of these wastes will be the responsibility of the construction contractor(s). Typical management practices required for nonhazardous waste management include recycling when possible, proper storage of waste and debris to prevent wind dispersion, and weekly pickup and disposal of wastes to local Class III landfills. The total amount of nonhazardous solid waste to be generated by the proposed ATLiS construction activities would be similar to that generated for typical commercial construction

which is estimated to be between 1.5 and 2.5 pounds per square foot at large commercial construction sites (California Integrated Waste Management Board 2002). Waste generation at construction sites is site-specific but it is consistent enough to be used as a baseline for estimation purposes. Conservatively assuming as much 2.5 pounds of construction waste per square foot over the nominal 32-acre project area will be generated during ATLiS construction activities, then up to about 1,750 tons of nonhazardous construction waste could be generated.

Office waste and general refuse will be removed by a local approved sanitation service.

13.2. Hazardous Wastes

Hazardous wastes may be generated over the course of construction as a result of spills of hazardous materials used during construction, empty hazardous material containers or spill cleanup wastes. Hazardous materials expected to be used during construction include paints, oil and lubricants, solvents, and welding materials. Used oil will be recycled, and oil or heavy metal contaminated materials (e.g., filters) requiring disposal will be transported to an offsite waste disposal facility authorized to accept the waste. Scale from pipe and equipment cleaning operations will be disposed of in a similar manner.

It is estimated that about 115,000 metric tons per year of iron-silica material could be generated from plant operations at the full 7,200 gpm geothermal brine flow rate. Most of the iron-silica stream may be converted to a product stream(s) after plant operations begin; however, a portion of the iron-silica material will be managed as a waste). All hazardous wastes generated during facility construction and plant operations will be handled and disposed of in accordance with applicable laws, ordinances, regulations, and standards. Any hazardous wastes generated during construction will be collected in hazardous waste accumulation containers near the point of generation and moved daily to the contractor's 90-day hazardous waste storage area located on site. The accumulated waste will subsequently be delivered to an authorized waste management facility. Hazardous wastes will be managed and disposed of properly in a licensed Class I waste disposal facility authorized to accept the waste.

14. Work Force and Schedule

14.1. Construction Work Force and Schedule

Project construction would begin when all necessary permits are obtained. Construction would occur in three phases over an intermittent 24–month period on a 5 or 6 days per week work schedule with an estimated construction work force of about 200-250 workers at peak periods. Construction is tentatively projected to be completed in Q2 2023. Construction workers will commute to the site and there will be no on-site housing of construction workers. Construction

parking will be in the laydown area which will be at the southeast corner of Davis Rd. and McDonald Rd.

14.2. Plant Operations Work Force and Schedule

ATLiS operations will begin as soon as construction activities are completed. Beginning with startup operations, the ATLiS - plant is expected to be operated by a total staff of approximately 62 full-time, onsite employees. Plant operations will continue 24-hours/day, 7-days/week. It is projected that up to 40 employees will be on site at any given time with 24 day-staff employees and two rotating shifts of 16 additional employees overlapping the day-staff and covering nights, weekends and holidays.

15. Traffic

15.1. Construction Traffic

It is estimated that on average 20-25 trucks per day will travel to and from the ATLiS construction site, except during site grading when about 50-60 trucks will travel to and from the ATLiS construction site. An average of 100 workers will commute to the plant site during site construction (see Table 3). (see Figure 7)

15.2. Plant Operations Traffic

It is estimated that approximately 24 trucks per day will travel in and out of the SmCP-1 plant site during normal operations. The truck traffic includes about ten (10) trucks per day of outgoing products, including one (1) truck load of dry lithium product (Li_2CO_3 and/or LiOH), two (2) truckloads of 31% HCl product, three (3) truckloads of zinc product(s), and four (4) truckloads of manganese product. Truck traffic also includes about eight (8) truck deliveries of reagent chemicals; cooling tower treatment chemicals (corrosion inhibitors, antiscalants, and/or biocides); consumptive media; product packaging materials; and fuel. The estimate also includes six (6) trucks of outgoing waste generated on the site (see Table 3).

Table 3: Projected ATLiS Construction and Operations Traffic

Transported Materials/Workforce Daily Trips

Construction:

Site Grading Period Only 50-60

Other Construction Periods100

Total Construction Truck Traffic: 25 to 60

Average Daily Construction Workforce Traffic: 100

Operations: (See traffic study)

Reagent Deliveries

Lithium Product Shipping
Zinc Product Shipping
Manganese Product Shipping
Hydrochloric Acid Product Shipping
Outgoing Waste Transport

Total Operations Truck Traffic:

Average Daily Operations Workforce Traffic: 40

Products will be transported by freight truck on existing roadways to shipping distribution point(s). Imperial County highways that may potentially be used during product and waste shipping include State Routes 78, 86, 111 and/or 115; and/or Interstate Highway 8 to appropriate highways and other surface roadways nearer the shipping distribution points. Recycled materials and waste streams will be transported by licensed waste haulers via these same roadways to appropriate recycling centers or disposal facilities in California, Nevada, Arizona and/or Utah authorized to accept the respective nonhazardous or hazardous materials/wastes in conformance with applicable laws and regulations for the respective materials/wastes being transported.

Additional traffic will result from the plant staff commuting to the site and periodic contractor and maintenance vehicles. Mobile equipment operating on the plant site will include about 1-2 propane-powered forklifts, one (1) propane-powered manlift, 8full-size pickup vehicles and a diesel-powered fork truck or similar tow motor. A propane fuel storage area will be located on the plant site (see Figure 5).

16. Site Restoration

The projected life of the ATLiS plant is a nominal 30-40 years. ES Minerals will prepare a Site Abandonment Plan in conformance with Imperial County requirements, for consideration by the Planning Commission prior to project approval. This plan would describe the proposed equipment dismantling and site restoration program in conformance with the wishes of the respective landowners/lessors and Imperial County requirements in effect at the time of abandonment and would be implemented at the end of ATLiS plant operations. ES Minerals will provide the County with a bond if required, letter of credit or other acceptable surety which guarantees restoration of the land at the ATLiS plant site to its condition prior to development.

17. Environmental Protection Measures

17.1. Site Construction Environmental Protection Measures

All ATLiS plant construction contractor personnel will be informed of, and trained to conform to, ES Minerals policy regarding undue degradation of the environment. These measures are

intended to prevent all unacceptable impacts from occurring as a result of the proposed short-term and temporary construction operations.

Fire Prevention: The ATLiS construction site and access road will be cleared of all vegetation. The cleared areas will be maintained during construction operations. Fire extinguishers will be available around the construction site. Personnel will be allowed to smoke only in designated areas. A brush control program will be prepared and implemented on those portions of the ATLiS project area parcel that will not be developed as part of the ATLiS plant to mitigate the potential adverse effects of an offsite wildfire during plant construction or operations. The Imperial County Fire Department will be consulted to review and approve any and all proposed fire equipment, apparatus and related fire prevention plans.

Surface and Ground Water Quality Protection: ATLiS will comply with all California Regional Water Quality Control Board, Colorado River Basin Region (CRWQCB) requirements to protect water resources. The Project will also submit additional encroachment permit applications to the IID for roads and activities that may occur in IID rights-of-way, and will comply with the IID permit conditions to protect irrigation channels and water delivery facilities in the area.
Required permits would be obtained from the IID for any construction water to be produced from IID canals. The project will file a Notice of Intent to comply with the requirements of the State Water Resources Control Board's (SWRCB) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities.

Any runoff from the plant site will be discharged into the stormwater retention basin (see Section 7.2). The site is designed to maintain and manage all storm water on site with no off-site discharge.

Prevention of Soil Erosion: Where fill is needed in the construction of the plant site or access road it will be provided. Runoff will be channeled to the stormwater retention basin to minimize erosion. In addition, the Project will adopt relevant CRWQCB best management practices (BMP), if necessary, to further prevent soil erosion. A Drainage and Grading Plan will be prepared identifying the BMP that will be implemented. The Drainage and Grading Plan will be submitted to the Imperial County Department of Public Works (ICDPW) for review and approval prior to site construction.

Air Quality Protection: An application will be submitted to the ICAPCD for an Authority to Construct permit for the site construction activities and any operational equipment or emission sources requiring a permit. The Project will comply with the ICAPCD permit conditions of approval to limit emissions from the Project activities.

A Fugitive Dust Suppression Plan will be prepared. Fugitive dust generated during construction and use of the plant access road will be minimized by watering as necessary. To further reduce fugitive dust emissions, vehicle traffic on plant roads will be kept below 15 miles per hour. The

Project will comply with any requirements concerning emissions of air pollutants from plant facilities and internal combustion emission sources.

Prevention of Excessive Noise: The maximum projected noise sources during project construction would be from heavy construction equipment -- projected to be 83 dBA at 50 feet. Similarly, the maximum projected noise source during operations would be the cooling tower – projected to be 86 dBA at 5 feet. To abate noise pollution, mufflers will be utilized on engine-driven equipment during both construction and plant operations.

Protection of Public Health and Safety: In addition to the emergency contingency plans, public health and safety will be protected through instructions to work crews and contractors regarding compliance with regulations.

Protection of Fish, Wildlife and Botanical Resources: Direct impacts to wildlife habitat and botanical resources will be minimized by clearing only the area required for site construction. Brush control on neighboring portions of the ATLiS project area will be conducted in a manner that will minimize adverse effects on resident wildlife. Fish habitat will be protected through prevention of erosion. Baseline Biological Resources and Burrowing Owl Surveys of the areas of potential surface disturbance for the Project were prepared. In addition, protocol surveys for Yuma clapper rail (YCR) and Southwestern willow flycatcher (SWF) were completed in conformance with U.S. Fish and Wildlife Survey protocols over the entire ATLiS property. No YCR or SWF occurrences were noted on the ATLiS plant site.

Protection of Cultural Resources: The entire ATLiS development area has been completely disturbed by early agricultural operations and through the construction of the Hudson Ranch Power I, llc plant. No cultural or paleontological resources are known to occur in the area. Baseline Cultural Resources Surveys of the entire ATLiS development area and transmission line corridor were prepared.

Construction Wastes: Solid waste materials (trash) and construction waste will be deposited at an authorized landfill by a disposal contractor. Any petroleum hydrocarbon or hazardous wastes or empty containers/drums that may be generated during construction activities will be either recycled or managed as hazardous waste in conformance with applicable waste management and disposal requirements. Portable chemical sanitary facilities will be used by all personnel during construction. These facilities will be maintained by a local contractor.

Environmental Monitoring During Construction: During site construction, regular, routine visual inspections of the plant site and access roads will be conducted by Project personnel to quickly detect and correct any problems that could lead to adverse environmental effects. Inspections of the development site will also be made in conjunction Imperial County Building Inspection(s) of the site.

17.2. Plant Operations Environmental Protection Measures

Additional environmental protection measures have been adopted as part of the long-term plant operations to reduce the potential adverse effects of the ATLiS plant. All ATLiS employees and onsite contractor personnel will be informed of, and trained to conform to, ATLiS' s policy regarding undue degradation of the environment. These measures are summarized in Table 4.

Table 4: Environmental Protection Measures Adopted for the ATLiS Plant

Project Feature	Description
Air Quality	
Fugitive Dust Suppression Plan	Specifies detailed list of control measures to reduce fugitive emissions from operational and maintenance activities, including but not limited to watering of unpaved roads, vehicle speed limits, windbreaks, transport container covers, cleaning and sweeping procedures.
Exhaust Emissions Control Program	Specifies detailed list of control measures to minimize exhaust emissions during operation of the project, including but not limited to fuel use, engine maintenance, and procedures.
Cooling Tower Emission Program	Maintain low total dissolved solids content of the circulating cooling tower, and utilize high efficiency drift eliminators to minimize particulate emissions.
Process Equipment Emission Control	Process equipment emission control includes: • Mist eliminators for water vapor during venting • Filter press operations will be conducted in enclosures to control particulates • Off-gas vapor scrubbers from the HCl production process • Baghouse dust collectors or the equivalent will be used to minimize these emissions from dry reagent transfer and making systems • The Lithium Production and Packaging Buildings' air will be filtered and a negative pressure will be maintained to prevent fugitive dust emissions **The limestone storage will be with a three-side enclosed area and be sprayed with water to minimize emissions.**
Filter Cake Storage Fugitive Emissions Control	Incorporates handling procedures to control the potential fugitive emissions of particulate matter, including direct loading into storage containers, and tarping to keep the cake dry.
Emergency Generators/Fire Pump Emission Control Program	Emergency generators will meet all current regulatory emission standards. The sulfur content of fuel used will meet the current California Air Resources Board (CARB) standards. Maintenance and testing operation of each emergency generator will not exceed 50 hours per year.
Operating & Maintenance Equipment Emission Control Program	Will control this equipment by meeting any applicable road or non-road 2001 emissions standards, as amended, and maintaining the equipment with manufacture's recommended procedures.
Potential Temporary Emissions Control Program	Will control potential temporary emissions by limiting the operation of temporary sources. Changes to process operations will undergo review for their environmental impact before adoption.
Geology	
Seismic Effects	The development facilities will be built in accordance with the applicable Imperial County Building Code and/or California Building Code requirements. Building permits would be obtained for the Project from the County prior to commencement of plant construction. No human-occupied structures would be placed across the trace of an active fault, and no human-occupied structure would be placed within fifty feet of the trace of an active fault or within a seismic special studies zone without a geologic report, satisfactory to the State Geologist, demonstrating that no undue hazard would be created by the construction or placement of the structure.
Agriculture	

Conversion of Agricultural Land to Another Land Use	A Land Evaluation and Site Assessment (LESA) of the Hudson Ranch Power I, llc site was undertaken prior to the development of the Geothermal plant, which showed that the impact of the conversion of the existing agricultural land to another use that would result from the Project was below the level of CEQA significance.
Water Resources and Erosion Control	
Water Conservation	Use of steam condensate from HR1 to minimize water demand from outside sources when possible. Water will be internally recycled to the extent practical.
Construction-Phase Erosion Control Plan	An erosion control plan will be used at the site during the construction phase to control sediment-laden runoff and ensure the integrity of the stormwater collection system during construction. The plan will use control measures, as necessary, such as grass-covered swales and ditches, stabilized construction entrances, gravel-covered construction lay down area, silt fencing, and seeding of the disturbed area. Specifically, runoff from all affected areas will be diverted to the erosion control measures before discharging off site.
Stormwater Retention Basin	The plant site will be graded to direct uncontained surface water runoff toward a stormwater retention basin. A master storm water retention basin supporting both the Geothermal Plant and the Mineral Plant may be developed.
Stormwater Retention Basin Berm	The stormwater retention basin will be protected by a berm to prevent offsite flooding into the basin.
Protective Pipeline Design and Detailed Inspection Routine	Brine delivery pipelines will be constructed of appropriate materials to prevent accidental releases. The pipelines will be routinely inspected to prevent potential releases.
Biological Resources	
Avoidance of Drainages	Drainages and riparian areas will be avoided wherever practicable to reduce impacts to sensitive habitats.
Placement of Facilities	Facilities will be placed on developed/disturbed lands to avoid additional impact to sensitive habitats.
Cultural	
Routing	Routing will be implemented if necessary to avoid potentially eligible cultural resources sites.
Paleontology	
None	No paleontological resources are expected to be encountered on the site.
Land Use	
Project Siting	Selected site is located in a Geothermal Overlay Zone near existing and proposed geothermal facilities. The site is zoned for manufacturing which allows for major geothermal resource development projects and medium-sized industrial projects.
Socioeconomics	
Employment	The plant will provide local employment opportunities during both construction and plant operations.
Traffic and Transportation	
County Roads	ES Minerals will work with the County Public Works Department as needed.
Noise	
Engines	Mufflers will be utilized on engine-driven equipment during plant operations. No large noisy equipment will be used during plant operations.
Visual	
Structure Color Fencing	An earthen color will be used on all project facilities where appropriate to blend more naturally with the brown and tan hues within the existing setting. Fencing will be constructed of non-reflective materials or will be treated or painted to reduce

	visual effects on sensitive viewing areas. Additionally, reflectivity of surfaces will be reduced by using non-reflective elements where appropriate.
Lighting	Lighting on the plant site will be limited to areas required for operations or safety, will be directed on site to avoid backscatter, and will be shielded from public view to the extent practical. Lighting that is not required to be on during nighttime hours will be controlled with sensors or switches operated such that lighting will be on only when needed.
Waste Materials	
Silica Management and Filter Cake Utilization	Iron-silica waste will be evaluated for use as a potential product stream. Before any filter cake material is removed from the plant site, it will be sampled and laboratory-tested. It will subsequently be either managed as a potential product, recycled or transported to an offsite disposal facility authorized to accept the waste.
Hazardous Materials	
Secondary Containment	Curbed areas will be used where accidental releases of hazardous materials could occur. Containment areas would be drained to appropriate collection areas or neutralization tanks for recycling or offsite disposal. Traffic barriers would protect piping and tanks from potential traffic hazards.
Public Health	
Project Siting	The plant site is in a remote location away from population centers. Process operations are not malodorous. Process operations do not use flammable materials and there is no potential for explosions from the plant processes. Light from the plant site will not impact any residential or sensitive receptors in the plant vicinity.
Worker Safety	
Fire Suppression System	The use of fire extinguishers, fire hydrants/hose stations, sprinkler systems if needed, and smoke detectors will reduce impacts from fires occurring at the site which, in turn, will reduce potential harm to workers.
Adherence to Applicable California Occupational Safety and Health Administration Regulations and Standards	Implementation of Standards safety training, written procedures, inspections, design, medical surveillance and monitoring will prevent or minimize potential impacts from plant operations. These requirements address numerous worker safety issues including emergency action/evacuation, fire prevention, confined space entry, fall protection, hearing conservation, respiratory protection, personal protective equipment, lock-out/tag-out, electrical safety, excavation and trenching, hazard communication, ergonomics, first aid, bloodborne pathogens, cranes and hoists, vehicle/traffic, chemical exposures.
Job Hazard Analyses (JHAs) for Each Job or Task	Will identify any additional hazards associated with a job or task prior to performing that job or task. This will provide an opportunity to evaluate whether additional measures must be taken to minimize impacts from these potential hazards.
Safety Showers and Eyewash Stations	Will provide a means for flushing skin and eyes in cases of chemical splashing, particularly as it pertains to corrosive materials. By providing an immediately available wash station, the contact time and possible injury by these chemicals can be minimized.

17.3. Supplemental Site-Specific Investigations

In addition to the proposed environmental protection measures described above, multiple

site-specific investigations have been completed and others are in process. Appropriate environmental protection measures identified by the baseline surveys and technical studies will be implemented by the Project. The site-specific investigations include studies conducted in prior development along with newer studies:

Water Supply Assessment:
DuBois Design and Engineering. WSA for the ATLiS project April 2020.

Traffic Study:

Linscott , Law and Greenspan, Engineers. 2020 Traffic Impact report for the ATLiS project.

NOTE: The following documents are listed for reference purposes only as they were prepared for a prior project known as Simbol Minerals. While that project did not get developed it was generally on the same site and therefore these documents may provide additional background information. Most if not all of these documents are on file with Imperial County Planning Department.

Cultural (studies completed during prior projects)

ASM Affiliates. 2007. Cultural Resource Survey of the Hudson Ranch 1 Geothermal Project Option Power Plant Site, Imperial County, California. 2007. Letter report to Mr. Dwight L. Carey, Environmental Management Associates. August 13, 2007.
(file name: HR1 Cultural Report-New Power Plant (2007-2008).pdf)

ASM Affiliates. 2011. Cultural Resource Study for the Simbol Sm Calipatria Plant I, Imperial County, California, PN17400. Letter report to Mr. Terry Thomas, Environmental Management Associates. January 24, 2011.
(file name: ASM 2011-01 SmCP1 Cultural Resource Study.pdf)

ASM Affiliates. 2012. Simbol CP-1 Transmission Line Survey, Addendum to Simbol LCCP-1 Survey Report, Imperial County, California. Letter report to Mr. Dwight L. Carey, Environmental Management Associates. January 10, 2012.
(file name: ASM 2012-01 SmCP1 Transmission Line Survey Addendum Rpt.pdf)

Biology

Davenport Biological Services. 2008a. Focused Survey Yuma Clapper Rail for the Hudson Ranch Geothermal I Plant Project, Imperial County, CA. Prepared for Environmental Management Associates. June 10, 2008.
(file name: Davenport 2008-06 HR1 Focused Survey Yuma Clapper Rail.pdf)

Davenport Biological Services. 2008b. Focused Survey Southwestern Willow Flycatcher for the Hudson Ranch Geothermal I Plant Project, Imperial County, CA. Prepared for Environmental Management Associates. July 7, 2008.
(file name: Davenport 2008-07 HR1 Focused Survey SW Willow Flycatcher.pdf)

Davenport Biological Services. 2010a. Focused Survey Yuma Clapper Rail for the Simbol Mining

Development Project, Imperial County, CA. Prepared for Environmental Management Associates. July 6, 2010.
(file name: Davenport 2010-07 SmCP1 Focused Survey Yuma Clapper Rail.pdf)

Davenport Biological Services. 2010b. Focused Southwestern Willow Flycatcher for the Simbol Mining Development Project, Imperial County, CA. Prepared for Environmental Management Associates. July 7, 2010.
(file name: Davenport 2010-07 SmCP1 Focused Survey SW Willow Flycatcher.pdf)

Barrett's Biological Surveys. 2011a. Sm Calipatria Plant I Biological Resources Technical Report, County of Imperial, California. Prepared for Environmental Management Associates. February 2011.
(file name: Barrett 2011-02 SmCP1 Biological Resources Technical Report.pdf)

Barrett's Biological Surveys. 2011b. Simbol South Survey Area Biological Resources Technical Report, County of Imperial, California. Prepared for Environmental Management Associates. July 2011.
(file name: Barrett 2011-02 SmCP1 South Survey Area Bio Resources Technical Rpt.pdf)

Barrett's Biological Surveys. 2011c. Simbol North 80 Acres Biological Resources Technical Report, County of Imperial, California. Prepared for Environmental Management Associates. November 2011.
(file name: Barrett 2011-11 SmCP1 North 80 Acres Bio Resources Technical Rpt.pdf)

Barrett's Biological Services. 2011d. Simbol South Focused Burrowing Owl Preconstruction Survey. December 2011.
(file name: Barrett 2011-12 SmCP1 Preconstruction Owl Survey South 80 Acres.pdf)

Barrett's Biological Services. 2012a. Simbol Burrowing Owl Preconstruction Report, County of Imperial, California. Prepared for Carol J. Bruton, SYMBOL materials. January 2012.
(file name: Barrett 2012-01 SmCP1 Preconstruction Owl Report.pdf)

Barrett's Biological Services. 2012b. SMCP-1 Plant Survey Area, Biological Resources Technical Report, County of Imperial, California. March 2012.
(file name: Barrett 2012-03 SmCP-1 and Davis Road Biological Survey.pdf)

Geotechnical

Landmark Consultants, Inc. 2007. Preliminary Geotechnical Report 49.9 MW Hudson Ranch Geothermal Plant SEC Davis and McDonald Roads, Calipatria, CA. Prepared for Char, LLC. September 2007.
(file name: Landmark 2007-09 HR1 Preliminary Geotechnical Report.pdf)

Landmark Consultants, Inc. 2008. Geotechnical Report 49.9 MW Hudson Ranch Geothermal Plant SEC Davis and McDonald Roads, Calipatria, CA. Prepared for Hudson Ranch Power I, LLC. November 2008.(file name: Landmark 2008-11 HR1 Geotechnical Report.pdf)

Landmark Consultants, Inc. 2009. Foundation Addendum #2 (Piles/Piers) 49.9 MW Hudson Ranch Geothermal Power Plant SEC Davis and McDonald Roads, Calipatria, California. Prepared for Hudson Ranch Power I, LLC. May 27, 2009.
(file name: Landmark 2009-05 HR1 Foundation (Piles-Piers) Addendum 2.pdf)

Landmark Consultants, Inc. 2010. Addendum #3 to Geotechnical Report, Proposed 49.9 MW Hudson Ranch Geothermal Power Plant SEC Davis and McDonald Roads, Calipatria, California. Prepared for Hudson Ranch Power I, LLC. May 12, 2010.
(file name: Landmark 2010-10 HR1 Geotechnical Report -Proposed Addendum 3.pdf)

Burns & McDonnell. 2011. Subsurface Information for the Simbol CP50 Mineral Extraction Facility for Simbol Mining Company. Prepared by Landmark Consultants, Inc. December 2011.
(file name: Burns 2011-12 SmCP1 Subsurface Info Mineral Extraction Facility.pdf)

Agriculture:

Environmental Management Associates. 2012e. Land Evaluation and Site Assessment (LESA) for the Sm Calipatria Plant I Development Area. Prepared for Simbol Inc. March 2012.
(file name: 2160.Sm Calipatria Plant I LESA Assessment V07.pdf)

Hazards

Environmental Management Associates. 2012d. Agency Database Record Search for the Simbol, Inc. Sm Calipatria Plant I Project. Prepared for Simbol, Inc. March 2012.
(file name: Agency Database Record Search SmCP-1 Project V03 (Executed).pdf)

Traffic

Fehr & Peers. 2012. Revised Draft Traffic Impact Study for the SmCP-1 Plant, County of Imperial, California. Prepared for Simbol Materials. March 2012.
(file name: Fehr & Peers 2012-03 Revised Draft SmCP-1 Plant Traffic.pdf)

Air Quality:

Environmental Management Associates. 2012a. Air Pollutant Emission Estimates for the Simbol Calipatria Plant I, Imperial County. Prepared for Carol Bruton, Simbol, Inc.. March 20, 2012.(file name: SmCP-1 Air Pollutant Emission Assessment V05.pdf)

Environmental Management Associates. 2012b. Simbol, Inc. Sm Calipatria Plant I, Imperial County, California, Operational Processes and Air Pollutant Emissions. Prepared for Simbol, Inc. March 2012.
(file name: EMA 2012-03 SmCP-1 Processes and Emissions V08.pdf)

Environmental Management Associates. 2012c. Estimated Greenhouse Gas Emissions Avoided by the Simbol Calipatria Plant I Li_2CO_3 Production for Electric Automobile Batteries. Prepared for Simbol Materials. March 15, 2012.
(file name: EMA 2012-03 GHG Avoided by SmCP-1 Products V03.pdf)

Water

Prior Reference Documents: Pangaea Land Consultants, Inc. 2012. Simbol Calipatria Plant I Geothermal Project, SB 610 Water Supply Assessment. Prepared for Simbol Materials. March 19, 2012.
(file name: Simbol CP-1 WSA.pdf)

Permits that may be required for this project:

1) Imperial County Planning Dept.	Conditional Use Permit
2) Imperial County Building Dept.	Building Permits
3) Imperial County Public Works Dept.	Encroachment Permit(s)

4) Air Pollution Control District	Permit to Construct (PTC)_
5) Air Pollution Control District	Permit to Operate (PTO)
6) Environmental Health Dept. for HR1	Potable Water treatment modified permit
7) CALTRANS	Encroachment Permit
8) IID	Encroachment Permit
9) RWQCB	WDO
10) DTSC/CUPA	Haz Mat. / EPA approvals/permits