Imperial County Planning & Development Services
Planning / Building

Jim Minnick
DIRECTOR

TO: Commissioner Mike Goodsell
Commissioner Eddie Cedeno
Commissioner Dennis Logue
Commissioner Kristopher Haugh

FROM: Jim Minnick, Secretary
Airport Land Use Commission

SUBJECT: Public Hearing to Consider the Proposed Desert Valley Company (DVC) Monofill Expansion Project (Cell 4), General Plan Amendment (GPA) #18-0004, Zone Change (ZC) #18-0005, Amendment to Conditional Use Permit (CUP) #18-0025, and Initial Study (IS) #18-0020, for consistency with the 1996 Airport Land Use Compatibility Plan (ALUCP) (**ALUC 02-21**)

DATE OF REPORT: **February 17, 2021**

AGENDA ITEM NO: 2

HEARING DATE: February 17, 2021

HEARING TIME: 6:00 p.m.

HEARING LOCATION: County Administrative Center
Board of Supervisors Chambers
940 Main Street
El Centro, CA 92243

SECRETARY'S RECOMMENDATION

It is the Secretary's recommendation that the proposed DVC Monofill expansion (Cell 4) project, including General Plan Amendment (GPA) #18-0004, Zone Change (ZC) #18-0005, Amendment to Conditional Use Permit (CUP) #18-0025, and Initial Study (IS) #18-0020, be considered consistent with the 1996 Airport Land Use Compatibility Plan (ALUCP).

SECRETARY'S REPORT

Project Description:

The Desert Valley Company Monofill Expansion Project (Project) proposes to expand the existing Desert Valley Company Monofill (DVCM) by adding a new waste disposal cell (referred to as Cell 4). To accommodate the proposed expansion, the Project will amend its Conditional Use Permit (CUP) No. 05-200; amend its Solid Waste Facility (SWF) Permit No. 13-AA-0022; and amend its Waste Discharge Requirement (WDR) R7-2016-0016 to increase the permitted facility boundary, disposal area, capacity and lifespan of the Class II monofill.

The location of the project site does not currently allow the proposed use, therefore, the applicant has made a General Plan Amendment application to change the land use designation of "Recreation" to "Special Purpose Facility" and a Zone change application from "S-2 Open Space/Preservation" to "M-2 Medium Industrial".

The proposed project has been submitted for the Airport Land Use Commission's review and determination of consistency with the 1996 Airport Land Use Compatibility Plan (ALUCP), although the site is not near or within the vicinity of an Imperial County Airport.

Project Location:

The Desert Valley Company Monofill facilities are located on 181.5 acres of land at 3301 West State Route 86 in Brawley, near the southwest corner of the Salton Sea, southwest of Highway 86 and northwest of the cities of Westmoreland and Brawley. The parcel is identified as APN 019-100-004-000: Latitude 33° 04' 56" N, Longitude 115° 49' 50" W.

General Plan/ALUCP Analysis:

As previously mentioned, the Project site is designated as "Recreation" by the Imperial County General Plan Land Use Element, and is zoned as S-2 (Open Space/Preservation).

The Airport Land Use Compatibility Plan (ALUCP), Chapter 2, "Policies", Section 1.3.2. "Statutory Requirements" states:

"As required by state law, the following types of actions shall be referred to the Airport Land Use Commission for determination or consistency with the Commission's plan prior to their approval by the local jurisdiction:

(a) The adoption or approval of any amendment to a general or specific plan affecting the Commission's geographic area of concern as indicated in Paragraph 1 (Section 21676 (b))..."

(b) The adoption of a zoning ordinance or building regulation which (1) affects the Commission's geographic area of concern as indicated in Paragraph 1 and (2) involves the types of airport impact concerns listed in Paragraph 2 (Section 21676 (b)).

ALUCP's Chapter 2, Section 1.3.3 "Other Project Review" states that "...the specific types of "actions, regulations, and permits" which the Commission shall review include:

(g) Building permit applications for projects having a valuation greater than $500,000..."

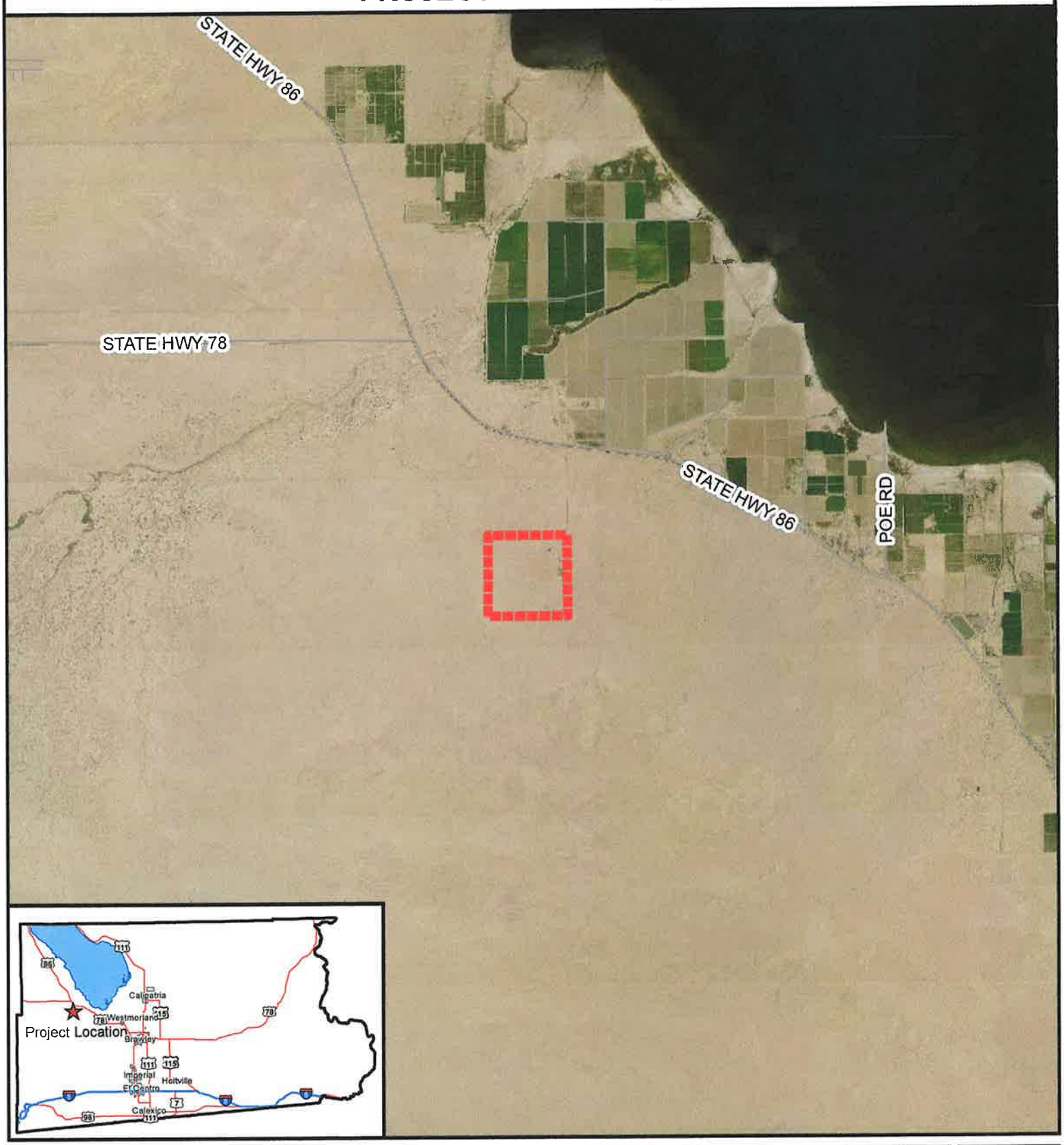
The proposed DVC project will have building permit valuations greater than $500,000.

It is Staff's recommendation that the proposed DVC project including proposed General Plan Amendment (GPA) #18-0004, Zone Change (ZC) #18-0005, Amendment to Conditional Use Permit (CUP) #18-0025, and Initial Study (IS) #18-0020, be considered consistent with the Airport Land Use Compatibility Plan (ALUCP).

Attachment A "Location Map"
Attachment B "General Plan Amendment and Zone Change Figures"
Attachment C "Application Package"

Attachment A.
Location Map

PROJECT LOCATION MAP



DESERT VALLEY COMPANY
GENERAL PLAN AMENDMENT GPA 18-0004
ZONE CHANGE ZC 18-0005
INITIAL STUDY IS 18-0020
CONDITIONAL USE PERMIT CUP 18-0025
APN 019-100-004-000

Project Location

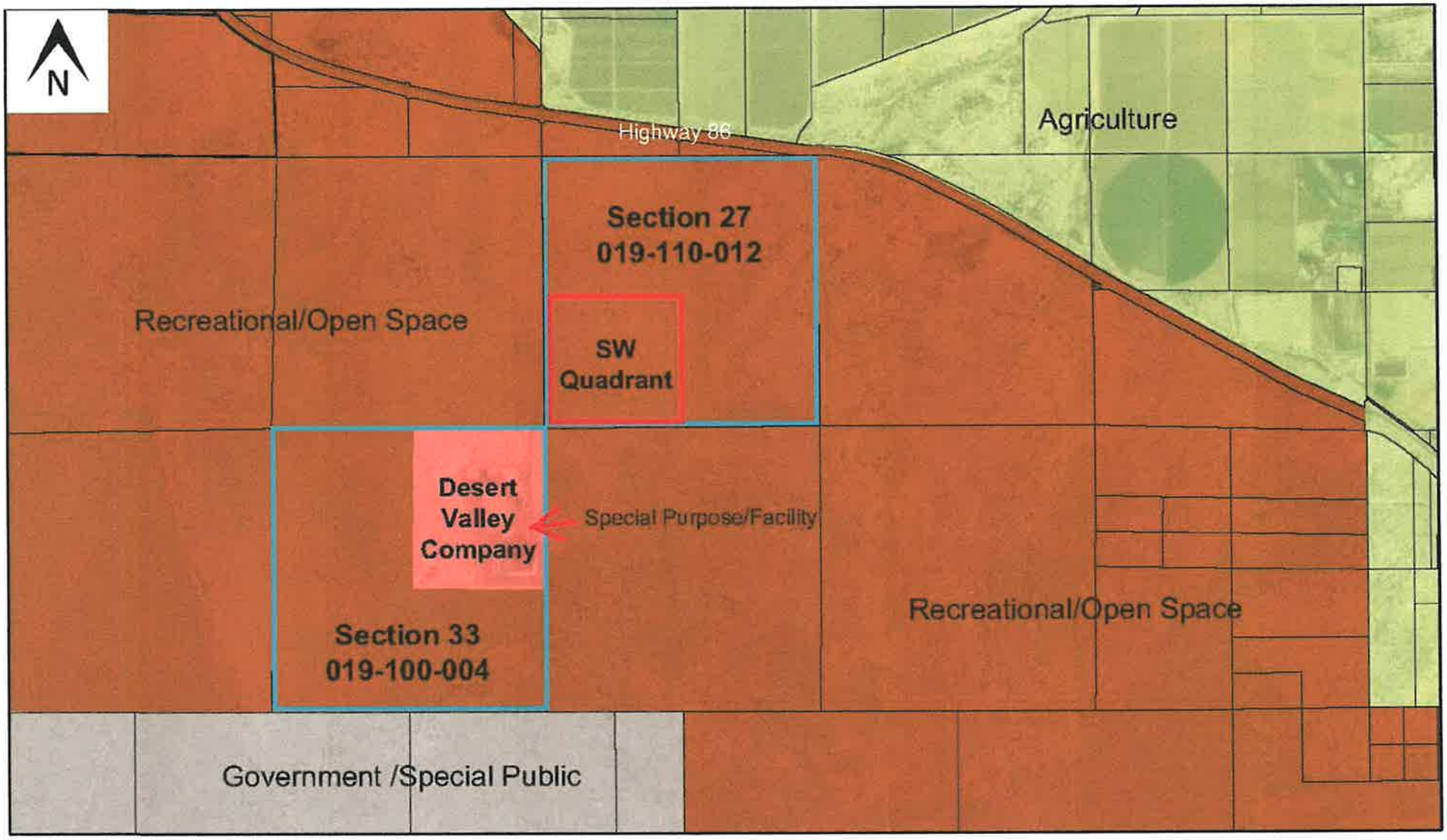
Roads

N

Attachment B.

General Amendment and Zone Change Figures

Land Use Map - General Plan Amendment, Section 27, SW 1/4 & Section 33



Assessor's Parcels (General Plan)
Recreational /Open Space
Agriculture
Special Purpose Facility
Government /Special Public

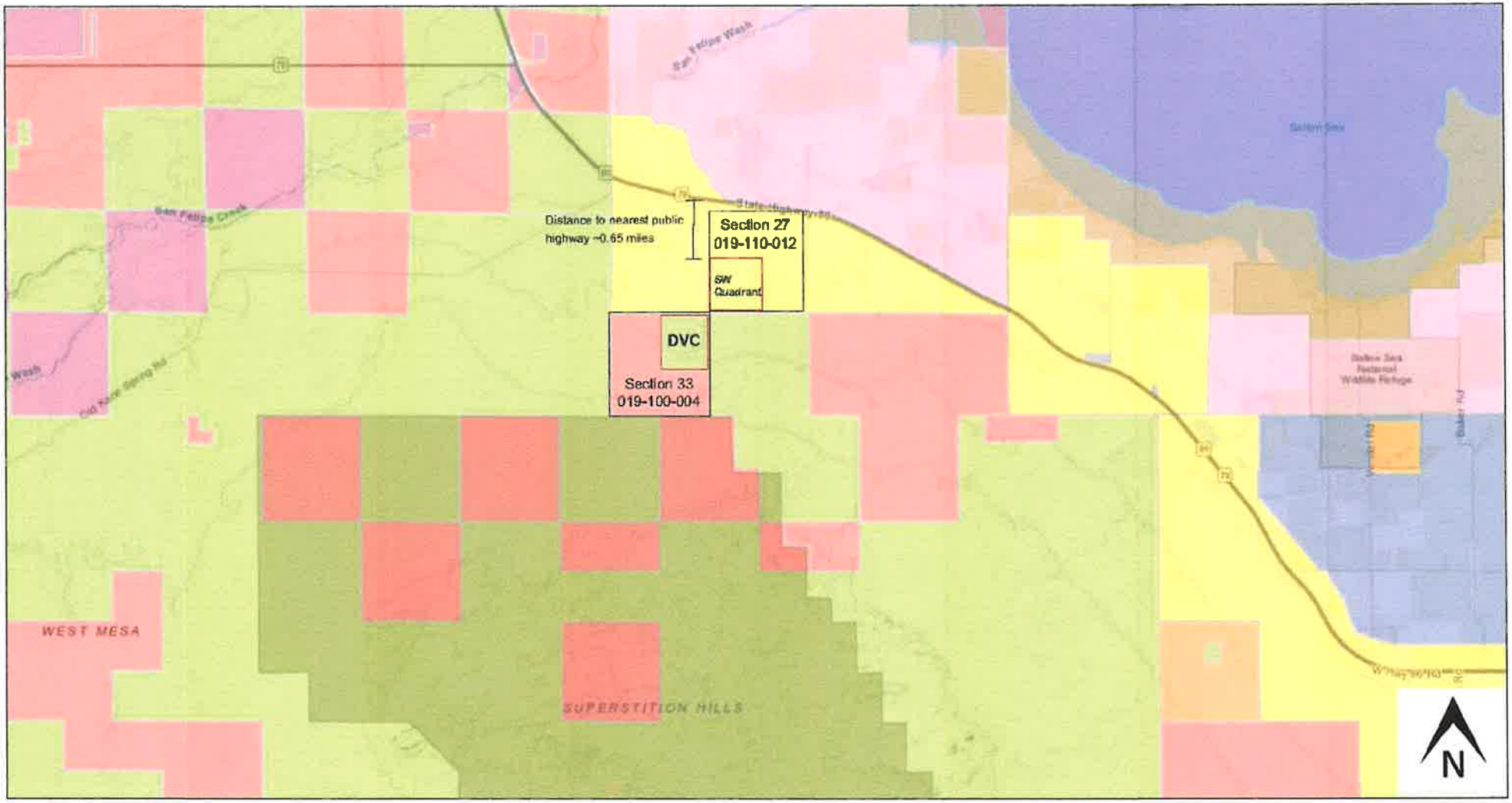
1:36,112

0 0.25 0.5 1 mi

0 0.4 0.8 1.6 km

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Site Plan, Desert Valley Company – Change of Zone Request (Section 27, SW ¼ & Section 33)



September 10, 2018

Land Use Zoning: MILITARY, A-3, A-2, A-2-R, M-2, S-2, BLM, S-1, GS, STATE

1:72,224

0 0.75 1.5 3 mi

0 1 2 4 km

Bureau of Land Management, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA

Legal Descriptions of Section 27 and 33 (Owned by Desert Valley Company)

1. Section 27: Township 12 South, Range 11 East, Southwest 1/4 of Section 27.
2. Section 33: Township 12 South, Range 11 East, Northeast 1/4 of Section 33.

Permitted Area of Disposal within Section 33, Northeast 1/4

DVC Active Disposal Site encompasses **28.9 acres**

Attachment C.
Application Package

December 20, 2019

Mr. Jim Minnick
Imperial County Planning and Development Services 801 Main Street
El Centro, CA 92243
(Submitted Via email and Fed-Ex)

Subject: Update to Request to Amend Conditional Use Permit No. 05-0020 for Desert Valley Company Monofill (DVC) – Cell 4

Dear Mr. Minnick:

Enclosed please find a minor update to the form in Attachment A of the permit application for Conditional Use Permit No. 05-0020 for the expansion of Desert Valley Company monofill. The changes reflect CalEnergy's stated decision in the application document to select Section 33 for the proposed expansion. A hard copy of the attached submittal will also be mailed to your attention.

Should you have any questions regarding or require additional information, please do not hesitate to contact me at (760) 348-4200 or by email at Anetha.Lue@calenergy.com.

Sincerely,

D. Anetha Lue Digitally signed by D. Anetha Lue Date: 2019.12.20 14:14:32 -08'00'

D. Anetha Lue
Director, IPP Environmental Services

Attachment

cc: Patricia Valenzuela
Bryan Whitcomb
Jenny Wu
Osvaldo Flores

CALENERGY
OPERATING CORPORATION
7030 Gentry Road, Calipatria, California 92233
Phone: 760-348-4200 Fax: 760-348-2714

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 Desert Valley Company		EMAIL ADDRESS Lenie.Sarion@calenergy.com	
2. MAILING ADDRESS (Street / P O Box, City, State) 7030 Gentry Road		ZIP CODE 92233	PHONE NUMBER 760-348-4200
3. APPLICANT'S NAME CalEnergy Operating Corporation		EMAIL ADDRESS Lenie.Sarion@calenergy.com	
4. MAILING ADDRESS (Street / P O Box, City, State) 7030 Gentry Road		ZIP CODE 92233	PHONE NUMBER 760-348-4200
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 N/A	PHONE NUMBER N/A

6. ASSESSOR'S PARCEL NO. Section 33, NW Quad 019-100- 004	SIZE OF PROPERTY (in acres or square foot) N/A	ZONING (existing) A-2 and S-2
7. PROPERTY (site) ADDRESS 3301 West Highway 86		
8. GENERAL LOCATION (i.e. city, town, cross street) Section 33, NW Quad 019-100-004		
9. LEGAL DESCRIPTION Township 12 South, Range 11 East, Northwest ¼ of ¼ of Section 33, APN 019-100-004		

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

10. DESCRIBE PROPOSED USE OF PROPERTY (list and describe in detail) Construction of Cell IV expanding current Class II, Solid Waste Facility	
11. DESCRIBE CURRENT USE OF PROPERTY	Vacant
12. DESCRIBE PROPOSED SEWER SYSTEM	Existing
13. DESCRIBE PROPOSED WATER SYSTEM	Existing
14. DESCRIBE PROPOSED FIRE PROTECTION SYSTEM	Existing
15. IS PROPOSED USE A BUSINESS? ☒ Yes ☐ No	IF YES, HOW MANY EMPLOYEES WILL BE AT THIS SITE? 8 Employees

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

LENIE SARION — Print Name — 12/20/19 — 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 # _____

November 26, 2018

Mr. Jim Minnick
Imperial County Planning and Development Services 801 Main Street
El Centro, CA 92243
(Submitted Via email and Fed-Ex)

Subject: Resubmission of Request to Amend Conditional Use Permit No. 05-0020 for Desert Valley Company Monofill (DVC) – Cell 4

Dear Mr. Minnick:

Enclosed please find a minor update to the October 10, 2018, revision of the permit application for Conditional Use Permit No. 05-0020 for the expansion of Desert Valley Company monofill. The changes reflect minor clarifications and corrections requested by staff within the planning department. The supplemental reports that were submitted via a computer disk are not included in this version of the document. A hard copy of the attached submittal will also be mailed to your attention.

The fee payments for the permit modification was submitted with the initial August 20, 2018 application; and is thus not include herein.

CalEnergy thanks the department's staff for their feedback on the October 10, 2018, submittal. Should you have any questions regarding or require additional information, please do not hesitate to contact me at (760) 348-4200 or by email at Anetha.Lue@calenergy.com.

Sincerely,

D. Anetha Lue Digitally signed by D. Anetha Lue
Date: 2018.11.26 14:49:05 -08'00'

Anetha Lue
Director, IPP Environmental Services

Attachments

CALENERGY
OPERATING CORPORATION
7030 Gentry Road, Calipatria, California 92233
Phone: 760-348-4200 Fax: 760-348-2714

Cc: Patricia Valenzuela (via e-mail) – Imperial County Planning and Development Services
Diana Robinson (via e-mail) – Imperial County Planning and Development Services
Lenie Sarion
Jon Trujillo
Yanqiu Wu
Sam Rubin
Min Yang
Osvaldo Flores
Environmental File

DESERT VALLEY COMPANY
CELL 4 CONDITIONAL USE PERMIT APPLICATION

CONDITIONAL USE PERMIT #05-0020
3301 WEST HIGHWAY 86
BRAWLEY, CA 92227

SUBMITTTED AUGUST 20, 2018, NOVEMBER 26, 2018 Rev. 2

Table of Contents

Acronyms

APN	Assessor Parcel Number
CalEnergy	Calenergy Operating Corporation
CCR	Code of California Regulationss
CEQA	California Environmental Quality Act
cm/sec	centimeter per second
CUPA	Certified Unifed Program Agency
DVC	Desert Valley Company
ERA	Exceedance Response Action (plan)
gpm	gallons per minute
IC	Imperial County Planning Department
ICPD	Imperial County Planning Department
klbs/hr	Thousand pounds per hour
LCRS	Leachate Collection and Removal System
LDS	Leak Detection System
mg/l	milligrams per liter
MW	Megawatts
NORM	Naturally Occurring Radioactive Materials
PERP	Portable Equipment Registration Program
ppm	parts per million
WDR	Waste Discharge Requirements

1. Executive Summary

The Desert Valley Company is seeking a modification of Conditional Use Permit No. 05-0020 in order to support the permitting activity for the development of a new cell (Cell 4) adjacent to the existing monofill facility. Desert Valley Company owns the Desert Valley Company Monofill (DVC) Facility, which is permitted as a Class 2 solid waste facility under Solid Waste Permit No. 13-AA- 0022 and Conditional Use Permit (CUP) No. 05-0020. The facility is a disposal location for nonhazardous 'filter cake' solids that precipitate from geothermal brine used for power generation at the geothermal facilities owned and operated by CalEnergy Operating Corporation (CalEnergy). Other minor waste streams accepted at the monofill facility are byproducts of the handling of filter cake or waste streams from the development of geothermal wells. These minor waste streams include- drilling mud materials, geothermal contaminated soils and materials, and plastic liners from transporting filter cake. The monofill has one active waste storage cell that is accepting waste - Cell 3. At the current rate of waste disposal at Cell 3, it is projected to reach its design capacity of 1,298,800 cubic yards in 2025. CalEnergy thus needs to construct and have operational Cell 4 by January 2024 in order to allow a transition from the activities at Cell 3 to Cell 4. In initiating this project CalEnergy met with the Imperial County Planning and Development Services (referred to herein as ICPDS or the planning department) on April 25, 2018, and was advised to submit an application to modify the Conditional Use Permit for the monofill. This submittal is intended to initiate that effort. At a following meeting with ICPDS additional details regarding the operation of the facility were requested. In September 2018, CalEnergy updated this application to include additional descriptions of the operation of the facility (in Section 4). CalEnergy also expanded the projected size of the cell to be permitted to allow for future expansion of Cell 4. In addition, an update was provided on CalEnergy's current Siting Studies and areas for future consideration, as shown in Figures 6.

Desert Valley Company and CalEnergy Operating Corporation are both owned by Magma Power Company. CalEnergy conducts business, and is authorized to sign/authorize permits, on behalf of Desert Valley Company.

The standard application form for the expansion of the monofill is included in Attachment A. CalEnergy intends to update this application once initial siting efforts (noted herein) are complete, which is expected to be during 2018. CalEnergy expects that (as with Cells 1 through 3) the Cell 4 project will be subject to reviews under the California Environmental Quality Act (CEQA); therefore, CalEnergy is requesting for Imperial County Planning and Development Services to facilitate and authorize the CEQA review to be completed on CalEnergy's behalf. CalEnergy will therefore be working with the planning department with regard to initiating the CEQA review process.

This application summarizes the information on-hand regarding the impacts of expanding the monofill. The application concludes that the based on the available information the project is not expected to significantly alter impacts from the monofill, or produce a deleterious impact on the environment of the community. As detailed in the application the information contained herein will be updated with siting data when a final site for Cell 4 is selected, and after the final design data for Cell 4 is available. On the contrary the application concludes that the failure to permit an expansion of the landfill would have a direct negative effect on local employment and an indirect negative effect on the availability of renewable energy from CalEnergy's geothermal plants, as the geothermal power generating plants rely on the operation of the monofill for the disposal of waste.

2. *Project Information:*

A summary of the project information related to the addition of a new non-hazardous waste storage cell - Cell 4 - to the existing Desert Valley Company monfill is provided in this section. A summary of the type of project, scope, impact area, proposed buildings and structures, access from adjacent roadways, location of driveway(s), and existing facilities on-site follows:

2.1. Type of Project:

CalEnergy owns and operates the Desert Valley Company Monofill Facility located at 3301 West Highway 86 in Brawley, California. CalEnergy's administrative offices are located at 7030 Gentry Road, Calipatria, California – shown in Figures A-1. CalEnergy is requesting a modification to the existing Conditional Use Permit No. 05-0020 to allow the addition of a waste storage area (Cell 4) to the existing monofill. The CUP 05-0020 permit for the monofill limits the facility to Class 2 waste disposal activities that can only accept certain geothermal non-hazardous waste streams and byproducts generated by CalEnergy's geothermal power plant operations in Imperial County, California. The Solid Waste Facility Permit No. 13-AA-0022 specifies that the following wastes can be accepted at the monofill:

- Geothermal drilling muds and cuttings;
- Geothermal filter cake;
- Soils contaminated with geothermal material; and
- Incidental plastic sheeting (truck bed liners)/materials.

The design of Cell 4 will be consistent with Cell 3, where the liner system will be designed to a Class I hazardous waste standards and other criteria will conform to Class 2 designated waste standards and the facility's permits. Cell 4 will be designed so that it does not have adverse impacts on the environment or on the existing waste stored in Cells 1, 2 and 3. All other aspects of the proposed Cell 4 waste storage area such as operations, maintenance, monitoring, recordkeeping and financial assurances will also be consistent with those of the existing monofill, therefore, the anticipated aspects and impacts of Cell 4 are assessed herein based on the performance of the existing monofill (as described in Section 5).

2.2. Scope of the Project

Cell 4 will be built in two (2) phases – Phase 1 and 2. The first phase of Cell 4 will be comparable in size to Cell 3 with a volumetric capacity of approximately 1.3 million cubic yards, occupying an estimated surface area of up to 50 acres. The construction of Phase 1 will commence immediately upon issuance of the Conditional Use Permit modification requested by this application. Phase I of Cell 4 will receive the waste from Cell 3 when Cell 3 reaches/nears its capacity. Phase 2 of Cell 4 is expected to be similar in size to Phase 1 of Cell 4, however, the construction will commence when there is a demand for additional waste storage capacity.

The projected life of each phase of Cell 4 is based on an estimated design capacity of approximately 1.3 million cubic yards, and a projected disposal rate of 45,454.54 cubic tons per year. The annual cubic tonnage is calculated by dividing the average annual waste disposal tonnage of 60,000 tons/year by an empirically determined airspace utilization factor of 1.32 tons per cubic yard. The approximate life span of Cell 4 is thus calculated to be 28.60 years, based on the total volumetric capacity of 1.3 million cubic yards divided by the average annual disposal rate of 45,454.54 cubic tons per year.

The estimation of the planned project capacity of each phase of Cell 4 is:

- Projected Cubic Tonnage per year: 60,000 tons per year / 1.32 cubic tons per cubic yard = 45,454.54 cubic tons per year.
- Projected Life-Span of Cell 4: 1.3million cubic yards / 45,454.54 cubic tons per year = Life span of 28.60 years.

In addition to the siting and construction of the monofill, in order to be able to permit Cell 4, CalEnergy has determined that the project has the possibility of environmental impacts, which will be mitigated by design and operational standards. Therefore, the project would be subject to permitting under the California Environmental Quality Act (CEQA). Via a separate submittal CalEnergy has requested that the Imperial County Planning and Development Services proceed with the CEQA evaluation for this project.

CalEnergy has also determined that the Conditional Use Permit No 05-0020 will need to be amended and has submitted a draft markup of the permit to show changes that are expected to result from the addition of Cell 4 (see Attachment B). In addition to the modification of the conditional use permit, applications will be submitted to the respective environmental agencies for modification of the permits shown in Table B-1.

Table B-1 – Regulatory Permits to Amend for Cell 4

Permit	**Number**	**Issuing Agency**	**Expiration/Renewal Date**
Conditional Use Permit	05-0020	IC Planning and Development Services	No date stated.
Solid Waste Facility Permit	13-AA-0022	IC Public Health Department	9/28/2020
Authority to Construct and Permit to Operate	2120 B-3	Air Pollution Control District	N/A
National Pollution Discharge Elimination System General Permit	CAS000001	State Water Resource Control Board	Every 5 years
Waste Discharge Requirements	R7-2016-0016	Regional Water Quality Control Board	N/A

Various operating plans and certificates will also have to be amended to reflect the operations of Cell 4 including:

Table B-2 – Regulatory Plans to Amend for Cell 4

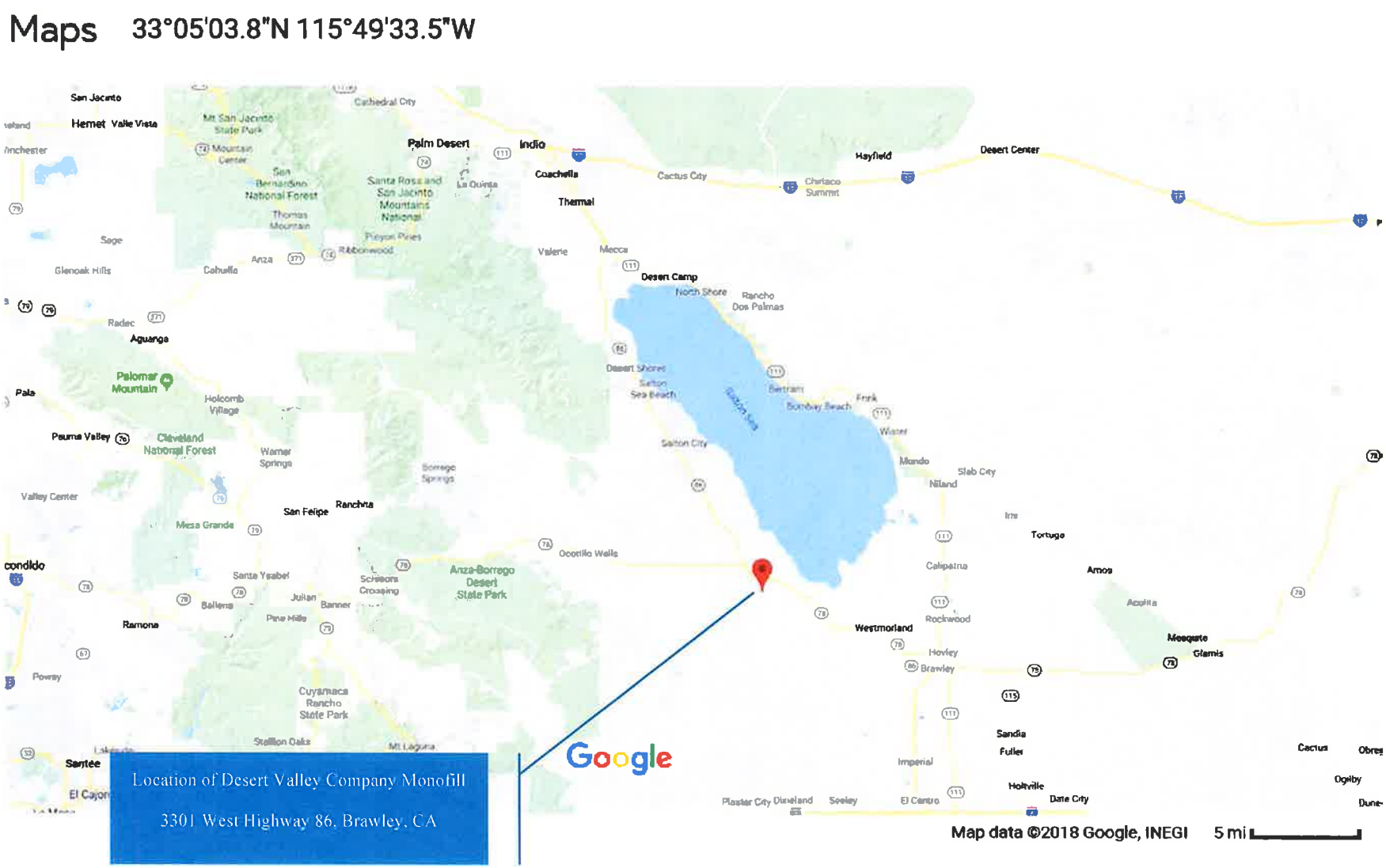
Document/Record	Type	Issuing Agency	Permit or Regulation Related to Plan Number
Certified Unified Program Certificate	Certificate	Department of Toxic Substances Control - CUPA	FA0000598
Hazardous Material Business Plans	Plan	Department of Toxic Substances Control - CUPA	NA

Table B-2 – Regulatory Plans to Amend for Cell 4

Document/Record	Type	Issuing Agency	Permit or Regulation Related to Plan Number
Employee Training Plan	Plan	Imperial County Public Health Department	Solid Waste Permit Facility No. 13-AA-0022
Operation Plan	Plan	Imperial County Public Health Department	Solid Waste Permit Facility No. 13-AA-0022
Joint Technical Document	Plan	Imperial County Public Health Department	Solid Waste Permit Facility No. 13-AA-0022
Closure Plans for Cells 3 & 4	Plan	Imperial County Public Health Department	Solid Waste Permit Facility No. 13-AA-0022
Preliminary Closure & Post-Closure Plan Cell4	Plan	Imperial County Public Health Department	Solid Waste Permit Facility No. 13-AA-0022
Storm-water Pollution Prevention Plan	Plan-	California State Water Resources Control Board	CAS000001

Copies of the existing plans and permits will also be transmitted separately as part of this application as Supplement I.

FIGURE B.1. –LOCATION OF DESERT VALLEY COMPANY MONOFILL



3. Site Plan & Surrounding Area

Information on the site plan for the proposed project site, the surrounding area, and information on the nearest drinking water source and sewer facilities that may be utilized for the proposed development are described in this section, with drawings and related figures in Attachment A. Attachment A also contains the application form for the conditional use permit modification.

3.1. Legal Description of Property & Assessor's Parcel Number

The site plan information is summarized in the completed application form found in Attachment A of this submittal. The project will result in an expansion of the existing monofill, which is comprised of Cells 1 through 3 and located on approximately 181.5 acres[1] within northeast quarter-section of Section 33, Township 12 South, Range 11 East, of the San Bernardino meridian.

The legal description and contacts for the existing and expanded monofill is as follows

Table C-1 – Legal Description of Site

Owner & Operator Name	Desert Valley Company
Physical address	3301 West Highway 86 Brawley. CA 92227
Mailing address	7030 Gentry Road Calipatria, CA 92233
Assessor Parcel Number & Legal description of Cells 1 to 3	• APN: 019-100-004-001 • Northeast ¼, Section 33, Township 12 South, Range 11 East, San Bernardino Meridian°
Site coordinates, Cells 1 to 3	Latitude: 33.08472°, Longitude: - 115.82444
Assessor Parcel Number & Legal Description for Cell 4	Cell 4 Option 1 –: • APN 019-110-012; • Southwest ¼, Section 27, Township 12 South, Range 11 East, San Bernardino Meridian. Cell 4 Option 2 – • APN: 019-100-004-001. • Section 33, Township 12 South, Range 11 East, San Bernardino Meridian, (with minor areas in the adjacent quarter-sections of Section 33) outside of existing landfill.

Additional information to be submitted:
Final site selection for Cell 4 following completion of Phase II siting study.

[1] It is noted that the current Conditional Use Permit shown 160 acres for the existing landfill – Cells 1 to 3. For this project the final area will be updated following the completion of the final siting.

3.2. Site Location-Regional

The Desert Valley Company facility is located in Imperial Valley, southwest of the Salton Sea. Other than the facility, the area is undeveloped and located in a fairly remote, unirrigated portion of the open desert in the western portion of Imperial Valley. The City of Westmoreland is located approximately twelve miles to the east. The Salton Sea is situated approximately four miles distance from the monofill. South of the facility are the Superstition Hills and to the west is open desert. Figures A1 though A5 shows a county overview of the site in relationship to the surrounding area and the CalEnergy geothermal facilities.

3.3. Surrounding Areas

The sections surrounding the monofill property are very similar to Section 33, of the county map, on which the existing monofill is located. Man-made disturbances are evident in some sections but not to a major degree. Kane Springs Jeep Trail crosses Section 29 northeast of Section 33. A power transmission line and its maintenance road cross Sections 27, 28 and 34, running diagonally from northwest to southeast less than a mile from Section 33. No other man-made features are evident in the immediately adjacent sections to the existing or future monofill facility. The most significant development in the area is Route 86, which is located to the north and east of the facility.

Surrounding properties exhibit largely the same desert features as Section 33 – which is sparse vegetation seasonal washes, exposed soil and essentially no man-made projects or uses. Human presence in the area is evidenced by occasional off-road vehicle trails, refuse dumps/litter, and survey points. Some of the areas have more pronounced mesquite hummocks than Section 33 but in general, the area is sparsely vegetated.

There is a wildlife and habitat reserve several miles north of the section (San Sebastian Marsh). The San Sebastian Marsh area is a protected habitat and vehicles are prohibited. This general area supports more diverse vegetation at a higher concentration. Surface water drainage from the Monofill area does not flow toward the reserve

3.4. Site Plan

Table C-2 summarizes preliminary information on the existing property dimensions, size, adjacent roads, canals, right-of-ways, easements, existing and .proposed buildings and structures, access from adjacent roadways, location of driveway(s), and existing facilities on-site. After the location of Cell 4 is finalized the figures in Attachment A will be updated with the final location and coordinates for Cell 4.

Attachment A contains the figures referenced in the sites Table C-2, Section 5 provides a description of the environmental monitoring results for the facility (which are not anticipated to differ from the current impacts observed from the existing operation). Sections 5.5.2 and 5.10 provide a description of the current and planned waste storage cell design criteria.

Table C-2 – Site Plan Summary Descriptions

Project Location:	The impact area for the existing facility, which includes Cells 1 to 3, is Section 33, Township 12 South, Range 11 East, identified as the Assessors' Parcel Number 019-100-04-01. In January 2018, CalEnergy's siting consultant (Fugro) conducted desktop evaluations of two initial areas as possible locations for Cell 4, these being – a) the areas of Section 33 not currently occupied by Cells 1 to 3, and b) the southwest quarter-section of Section 27 of Range 11 East, Township 12 South. As a result of the identification of sensitive areas west of the Northwest quarter-section of Section 33, as of August 2018 the focus of the siting review for Cell 4 has been changed to – a) the remaining areas of Section 33 closest to the existing Cells 1 to 3 (as shown in Figure A.6b), and b) the Southwest quarter-section of Section 27 (which is undeveloped). Figures of the project location are provided in Attachment A, and additional descriptions of the siting studies undertaken to assess impacts and identify the appropriate location for Cell 4 are provided in Section 6.
Proposed Building and Structures	No additional buildings are being proposed for the Cell 4 project during operation. During construction portable office trailers might be placed on the site to accommodate the construction personnel. The facilities at the existing DVC Monofill are intended to be used for the operation of the proposed Cell 4. Additional structures for stormwater containment are expected to be needed for Cell 4 along with additional groundwater monitoring wells and air monitoring stations. Maps showing the location of the buildings and structures currently in place at the monofill are included in Attachment A in the Site Plan drawings of the facility. Design information for Cell 4 has not yet been finalized, however, since Cell 4 will be designed in accordance with Cell 3. The design criteria for Cell 3 are included in Sections 5.5.2 and 5.10. The locations being studied for siting Cell 4 are shown in Attachment A in the series titled "Figure 6".
Access from Adjacent Roadways	The monofill is accessed from Highway 86 by all vehicles entering and leaving the facility. This access route is expected to be unchanged by the addition of Cell 4. There will also be no change to the public roadway Highway 86 - as a result of the construction or operation of Cell 4.
Location of Driveways	The existing private single lane road between Highway 86 and the existing monofill facility is the "driveway" vehicles will continue using to deliver filter cake to the monofill. Minor extensions/modifications to the private roadway will be required in order to access Cell 4. The modifications needed will be determined by the final site location of Cell 4, therefore, the details of the changes to the private driveway are not yet available. The modifications will conform to CUP requirements and/or other regulatory, local, state and federal requirements.

Table C-2 – Site Plan Summary Descriptions

Existing Facilities on Site:	Existing facilities consist of Cells 1 and 2, which are closed, and Cell 3 which is actively receiving waste. Support structures include the office building and a shop and stormwater holding areas. Existing structures for Cells 1 to 3 include: • Single level office and administration building • Two Leachate ponds • Equipment storage building • One (1) water well • Two (2) water storage tanks • Eleven (11) groundwater monitoring wells • Meteorology data collection station • Four (4) air quality total particulate sampling stations • Seven (7) vadose zone monitoring wells. • On-site septic tank /leach field For the addition of Cell 4 the following additional structures are planned for the operation : • New Leachate pond for Cell 4 • Additional air quality particulate sampling stations (to be specified by a future modification of the air permit) • Additional groundwater monitoring wells (to be specified by a future modification of the Waste Discharge Permit) During the construction and studying of Cell 4 the following additional structures are currently anticipated: • New well for water use during construction • Trailers for construction crews • Drilling and excavation heavy equipment • Portable diesel lighting and portable diesel engines

4. Existing Operations

Since the waste management and disposal resulting from the expansion of Cell 4 is expected to be similar to the current impacts from Cells 1 to 3 (since similar design, operational controls and siting requirements will be followed) the results observed from the current operation are provided as evidence of anticipated environmental impacts of the future Cell 4.

4.1. Existing Cells and Supporting Equipment

The Desert Valley Company (DVC) monofill facility began operations in May 1991 in an undeveloped area of western Imperial County. Cell 1 of the monofill was built in 1990, and Cell 2 was built in 1999. Cell 1, Cell 2 and the tie-in area in between these cells were closed and capped in May, 2008. Cell 1 was rated at a 300,000 cubic yard capacity, and Cell 2 was rated at a 214,000 cubic yard capacity, with the tie-in area between the two rated at 27,100 cubic yards. The area of Cells 1 and 2 is approximately 12 acres. Construction of Cell 3 began in the summer of 2004 and was completed in June, 2005. Cell 3 is the only active cell currently receiving waste. In 2015 An updated Preliminary Closure and Post Closure Maintenance Plan for Cell 3 was submitted to and approved by CalRecycle, showing a remaining life of Cell 3 as 11.4 years based on a remaining capacity of 789,644 cubic yards (which is equivalent to 1,042,330 tons), based on data from March 2015. The site is not open for public and/or commercial use at any time.

An Environmental Impact Report (EIR) was prepared for Cells 1 and 2 encompassing an area of 160 acres. This report has a State Clearing House Number of 89032206. The development of Cell 3 relied upon the environmental studies and reports for Cells 1 and 2. In order to authorize the construction of Cell 3 a mitigated negative declaration was certified for Conditional Use Permit No 02-0003 and Zone Change #02-0001. The State Clearing House Number for the Cell 3 CEQA records is 2002121138. Technical Addendum to the Final Environmental Impact Report for the Desert Valley Company, SCH No. 1989032206 was also filed to allow use of alternative truck routes for filter cake deliveries to the disposal site and the use of an alternative truck scale at 701 North Sorenson Avenue in Calipatria, California.

Cell 3 is rated at 1,298,800 cubic yards. Cell 3 encompasses approximately 16.8 acres. The facility also has two leachate ponds with a rated capacity of approximately 400,000 gallons, total. The total site occupies 181.5 acres, of which approximately 68 acres is enclosed by fencing, which surrounds the Monofill cells. 28.9 acres of the site is permitted for disposal[2].

The site is accessed via a single lane road connecting the site to Highway (State Route) 86. The site access road is approximately 1.25 miles long and is asphalt surfaced.

The DVC Monofill Facility classified as a Class 2 storage/disposal site. Each cell has two (2) clay liners and two (2) synthetic liners. The DVC monofill facility was constructed to handle non-hazardous geothermal wastes generated by CalEnergy.

The site consists of the following general improvements:

- Monofill Cells 1 and 2 - Closed as of May, 2008
- Single lane road from State Highway 86 to the Monofill Facility
- Single level office and administration building
- Two Leachate ponds

[2] Desert Valley Company, December 2015, Joint Technical Document for the operation of the monofill.

- Equipment storage building
- One (1) water well
- Two (2) water storage tanks
- Eleven (11) groundwater monitoring wells
- Meteorology data collection station
- Four (4) air quality total particulate sampling stations
- Seven (7) vadose zone monitoring wells.

A series of photos in Attachment C provides a view of the current operation.

4.2. Waste Disposal Operations

The DVC Monofill Facility receives wastes from geothermal power plants operated by CalEnergy Operating Corporation in Calipatria, California. These waste streams consist of geothermal filter cake, drilling mud materials, geothermal contaminated soils and materials, and plastic liners used to line the trailers that are used to transport the waste to the monofill.

The DVC facility typically employs 4 full-time staff. Materials are received at the site (Cell 3) by truck only. The number of daily truck deliveries ranges from 6 to 38 per day; each with an approximate filter cake load capacity of less than 25 tons. Daily tonnage has not exceeded 750 tons per day. Trucks arriving at the DVC facility are inspected prior to off-loading. Sampling of incoming materials continues based upon present sampling and analysis requirements. Subsequent to inspection and sampling, the trucks are cleared for access to the operational cell and offloaded. After off-loading, site equipment is used to grade and compact the materials. Once the material is graded and compacted, the surface is sprayed with a polymer based sealant (Soil Seal), which penetrates the graded surface and creates a stable crust and provides for wind protection. On average, approximately 7,700 gallons (29 m^3) of Soil Seal are applied at Desert Valley Company annually. Activities within Cell 3 are ceased if wind speeds exceed 13 mph, and all site activities which generate fugitive dust are ceased when wind speeds exceed 21 mph.

Table D-1 identifies the geothermal power production plants that generate the waste sent to the monofill; Table D-2 shows the approximate composition of the filter cake waste disposed of at the monofill; and Table D-3 provides a summary of the annual waste tests for the filter cake waste generated during 2017. The material planned for Cell 4 is expected to be consistent with the material currently disposed of in the monofill.

Table D-1 – Geothermal Power Waste Sources Shipped to Monofill

CalEnergy Power Plant	Number of production wells	Brine production flow, nominal (Klbs/hr)	Number of Turbines	Gross Electric generation (MW)	Filter cake generation rate (tons/day)
Region 1	7	15,800	7	197.3	150
Region 2	6	8,200	4	75.5	72
Elmore	4	4,000	1	35.8	40
Leathers.	5	4,300	1	35.8	40

Table D-2 – Typical CalEnergy Filter Cake Composition		
Major Elements	**Probable Compound**	**(Percent)**
Silicon (Amorphous)	(SiO_2+Silicates)	62
Iron	(Fe_3O_4+$FeSiO_4$)	15
Barium	($BaSO_4$+$BaCl_2$)	4
Calcium	($CaSO_4$+$CaCO_3$)	3
Minor Components	**Probable Compound**	**(ppm)**
Sodium	(NaCl)	6,000
Strontium	($SrSO_4$)	6,000
Manganese	($MnSO_4$)	3,500
Potassium	(KCl)	1,300
Arsenic	(AsS_2+$FeAs_2$)	300
Copper	(CuS)	250
Zinc	(Zns)	130
Trace Components	**Probable Compound**	**(ppm)**
Lead	(PbS)	30
Antimony	(SbS)	10
Beryllium	(BeS)	10
Cobalt	(CoS_2)	4
Nickel	(NiS)	1.5
Chromium	(CrS)	1
Silver	(AgS)	0.4
Cadmium	(CdS)	0.2

Table D2 Filter Cake Waste Test Results, 2017

2017 Annual Filter Cake Analysis

Method: EPA 6010B/6020A, STLC Title 22 Metals

Constituent	Units	PQL	Region 1	Region 2	Elmore	Leathers
Mercury	mg/L	0.0278	ND	ND	ND	ND
Antimony	mg/L	0.210	0.801	0.482	0.547	0.643
Arsenic	mg/L	0.152	1.13	1.17	0.548	0.498
Barium	mg/L	0.0116	22.3	7.90	5.85	5.97
Beryllium	mg/L	0.00635	0.0438	0.0140	0.0578	0.0879
Cadmium	mg/L	0.0359	ND	0.0763	0.0624	0.0745
Chromium	mg/L	0.0531	ND	ND	ND	ND
Cobalt	mg/L	0.0445	ND	ND	ND	ND
Copper	mg/L	0.0762	1.19	0.677	1.43	1.19
Lead	mg/L	0.103	0.248	2.29	1.82	2.17
Molybdenum	mg/L	0.0790	ND	ND	ND	ND
Nickel	mg/L	0.0569	ND	ND	ND	ND
Selenium	mg/L	0.257	ND	ND	ND	ND
Silver	mg/L	0.0537	ND	0.123	0.0969	0.276
Thallium	mg/L	0.183	ND	ND	ND	ND
Vanadium	mg/L	0.0781	ND	ND	ND	ND
Zinc	mg/L	0.0281	1.48	10.0	12.7	15.2

Method: EPA 6010B/6020, CCR Title 22 Metals (TTLC)

Constituent	Units	PQL*	Region 1	Region 2	Elmore	Leathers
Mercury	mg/kg	2.50	ND	ND	ND	ND
Antimony	mg/kg	2.13	40.1	52.1	176	242
Arsenic	mg/kg	2.26	77.6	244	376	435
Barium	mg/kg	0.139	2,070	233	72.7	76.8
Beryllium	mg/kg	0.0976	2.83	12.5	25.5	45.5
Cadmium	mg/kg	0.153	2.45	7.29	11.1	12.9
Chromium	mg/kg	0.282	1.75	1.35	2.39	2.47
Cobalt	mg/kg	0.345	ND	1.77	3.84	1.47
Copper	mg/kg	0.570	28.2	28.1	43.7	34.0
Lead	mg/kg	1.52	11.3	34.6	33.9	38.2
Molybdenum	mg/kg	0.256	ND	ND	ND	ND
Nickel	mg/kg	0.347	0.978	ND	ND	ND
Selenium	mg/kg	2.08	ND	ND	ND	ND
Silver	mg/kg	0.580	18.2	22.6	8.19	25.3
Thallium	mg/kg	1.40	ND	ND	ND	ND
Vanadium	mg/kg	0.822	3.27	4.62	9.95	9.92
Zinc	mg/kg	0.318	44.2	160	199	234

PQL : Practical Quantitation Limit

ND : Non-Detected

* Reporting Limits (PQL) vary due to samples weight that are not uniform for each sample (see CalEnergy Report)

Table D3 Filter Cake Waste Test Results, 2017

2017 Annual Filter Cake Analysis

Method: 1010, Flashpoint

Constituent	Units	Region 1	Region 2	Elmore	Leathers
Flashpoint	Degree F	>200	>200	>200	>200

Method: EPA 9045C, Soil and Waste pH

Constituent	Units	Region 1	Region 2	Elmore	Leathers
pH	pH units	4.7	6.1	4.9	5.1

Method: SW-846-7.3.3-H_2S Released from Waste

Constituent	Units	Region 1	Region 2	Elmore	Leathers
Reactive Sulfide	mg/Kg	<2.0	<2.0	<2.0	<2.0

Method: SW-846-7.3.3-HCN Test Method to Determin HCN Released from Waste

Constituent	Units	Region 1	Region 2	Elmore	Leathers
Reactive Cyanide	mg/Kg	<0.50	<0.50	<0.50	<0.50

Method: 8260B Volatile Organic Compounds

Constituent	Units	Region 1	Region 2	Elmore	Leathers
VOC Analytes*	ug/Kg	ND	ND	ND	ND

*Please refer to the cover letter of the report for information on the result for Bromomethane (non-Title 22 VOC)

Fish Bioassay

Constituent	Units	Region 1	Region 2	Elmore	Leathers
Fish Bioassay	mg/L	750	750	750	750
	Status	0% Mortality	0% Mortality	0% Mortality	0% Mortality

Gross Alpha,Beta and Gamma Analysis

Constituent	Units	Region 1	Region 2	Elmore	Leathers
Gross Alpha	pCi/g	22.00	4.11	7.03	5.77
Gross Beta	pCi/g	20.5	<6.10	8.35	7.40
K 40	pCi/g	<3.27	7.89	6.96	7.91
Co 60	pCi/g	<0.30	<0.12	<0.07	<0.085
Cs 137	pCi/g	<0.41	<0.148	<0.077	<0.092
Ra 226	pCi/g	14.40	5.59	0.27	0.413
Th 228	pCi/g	12.10	4.98	0.324	<0.407
Th 234	pCi/g	<5.54	3.10	0.987	2.73

MDA : Minimum Detaction Activity
ND : Non-Detected

4.3. Financial Assurance & Operating Liability

The state's regulations require landfill owners/operators that are not state or federal entities to provide adequate financial assurance of their ability to perform closure of the landfill, and to carry out all required post-closure site care and corrective actions. Regulations require that these financial estimates and

assurances be updated whenever conditions arise which may result in an increase or decrease in the estimated costs of closure, post-closure care, or performance of any corrective action. DVC has obtained and updated bonds to provide financial assurances for the monofill throughout the life of the facility. The most recent cost estimates submitted to CalRecycle for DVC provided assurances against the following cost exposures (estimated in 2018 dollars): $5,808,429 for closure of the monofill, $2,970,407 for 30 years of post-closure maintenance, and $290,591 for any water or non-water corrective actions[3].

In addition as required by the Conditional Use Permit the facility maintains financial liability insurance with environmental impairment coverage. Coverage in the amount of $2,500,000 has been obtained and maintained; which names Imperial County Planning and Development Services as an additional insured under the policy.

[3] Costs of non-water corrective action exceeded those for water release corrective action; therefore financial assurance coverage was based on the cost of possible non-water damage. Water Release Corrective Action Costs were estimated by Veizades & Associates in 2015 at $222,075, while costs for non-water damage corrective action were estimated by Geosyntec consulting in 2015 at $ 279,000. Costs are escalated annually using the inflation factors prescribed by CalRecycle. Cost estimates by Geosyntec and by Veizades & Associates are contacted in the appendix to the Joint Technical Document for the landfill, which is submitted as Supplement I.

5. *Environmental Impacts*

Potential environmental impacts of the construction and operation of Cell 4 are identified in this section.

5.1. Aesthetics

The monofill is bounded by open land on 3 sides and is adjacent to Highway 86 on the North side. However the facility is sufficiently distanced from Highway 86 such that it is not easily viewed by vehicles traveling along the highway. Furthermore the tan color of the waste disposed of at the site blends into the treeless sandy desert landscape, with rock outcroppings, such that the monofill blends with the background and does not present a negative visual impact. A series of photographs of the existing site are provided in Attachment C.

The addition of Cell 4 to the existing monofill is not expected to alter the aesthetic impacts of the operation.

5.2. Agricultural Resources

The areas proposed for the expansion of the monofill are owned by CalEnergy and a not used for farming.

5.3. Water & Sewer Supply

Drinking water to the monofill is supplied by a commercial bottled water provider.

Water for sanitary uses and dust suppression at the facility is supplied by an onsite well that is limited to withdrawal rate of approximately 8.5 acre-feet per year, based on the estimated flow of 5.269 gallons per minute (see Section W of the Conditional Use Permit). The facility complies with the limit for water usage. During 2017 annual water usage at Desert Valley Company was 3.58 acre-feet. For the expansion of the facility the usage rate from the onsite well(s) is expected to be increase slightly once Cell 4 becomes operational. The increase will be due to maintaining cover and repairs on 3 closed cells (Cells 1, 2, and 3) instead of the current 2 closed cells. However, water usage or the future active cell (Cell 4) is expected to be similar to the current active cell (Cell 3). During construction of Cell 4 it is anticipated that the usage rate will increase, therefore, as part of the design of Cell 4 a determination will be made of the quantity and quality of water needed for the construction project, and the source from which the water will be supplied. At present it is anticipated that an additional/second water supply well will be installed to provide additional water during construction and that water usage will return to slightly above current levels after the completion of the construction of Cell 4 and the closing of Cell 3. The availability of tertiary/reuse water from any available nearby sources will be investigated as an option/supplement to supply water for the construction phase of the project. This assessment will be completed as a water supply study. A preliminary assessment is planned to be completed in early 2019.

Additional information to be submitted:
A water supply assessment will be conducted to assess the quantity, quality, and source of water needed for the construction phase of the project; and to demonstrate that the post-construction expansion will not have significant impacts on historical water usage rates. The assessment results will be submitted to the planning department for use in the CEQA review.

Documentation of past compliance with water usage requirements is provided by the following supplemental report (SR) (contained in Supplement II) to this submittal:

SR #1 - 2017 Annual conditional use compliance and water use report.

Sewage treatment for the existing monofill is provided onsite by a leach field. For the expanded facility no changes or notable increases in volumes are anticipated as a result of operating the expanded facility. The existing septic tank/leach field for Cells 1 to 3 will be used for the support services for the operation of Cell 4.

5.4. Air Quality

5.4.1. Air Monitoring Requirements

Condition S5 of Section S of the Conditional Use Permit, and Air Permit 2120 (issued by the Imperial County Air Pollution Control District), regulate air emissions from the facility.

The Conditional Use Permit requires:

- Air monitoring systems to measure the amount of any air contaminants, and measurement of ambient particulates.
- Compliance with the air permit issued by the Imperial County Air Pollution Control District
- Monitoring of works for radiological exposure and limiting the dose of exposure to 1.25 REM per calendar quarter, and quarterly radiological assessments.
- Installation of a weather station to record wind speed and direction.
- Halting operations at the monofill when wind speeds exceed 13 miles per hour, daily use of a chemical sealant to prevent dusting from the waste, and cessation of all earth moving whenever wind speeds exceed 21 miles per hour.

The air permit further requires that:

- The facility comply with the Rule 800, of the Imperial County Air Pollution Control District to reduce dusting from roadways, waste storage areas, and waste storage trailers.
- Radon must be measured every 3 years.

All conditions of the permits have been met during past years with no deviations or non-compliance reported. A supplemental submittal (Supplement II) is provided with the following reports documenting compliance data for the facility:

SR #2 - 2018 DVC Radon Test (of annual landfill gas testing commencing one (1) year after closure of the cell).

SR #3 - June 2018 quarterly report of air samplers and personnel radiological monitoring results.

5.4.2. Mobile Sources

The monofill has minor emissions of nitrogen-oxides and volatile organic compounds resulting from the combustion of diesel fuel in off-road equipment used to stack the waste. In addition, emissions along the highway are generated by the trucks transporting waste to the facility. The onsite equipment and transport of waste material to the site will not be altered by the addition of Cell 4.

5.4.3. Emissions During Construction

Since an area of more than 5 acres will be disturbed during construction, a Dust Control Plan will be developed for the construction project and submitted to the Imperial County Air Pollution Control District for approval at least 10 days prior to the start of construction. Actions to mitigate dusting during construction will include:

- Pre-water site unless it is already wet, or if there would be an adverse reaction from the application of water such as water runoff from the site. Where water cannot be used other control measures should be undertaken to keep opacity below 20%.
- Phase work to minimize the amount of disturbed surface area at any one time
- During work, apply water or chemical stabilization (as needed to avoid opacities exceeding the 20%).
- During work, construct wind barriers (as needed to avoid opacities exceeding the 20%).
- Cease work when wind gusts exceed 25 miles per hour.
- Avoiding tracking-out of material unto public roads by vehicles.
- Daily inspections and cleanup.

Additional diesel powered equipment will be onsite during construction; which will be permitted locally, or registered under California's Portable Equipment Registration Program (PERP). Emissions from the construction operation will be limited in duration and impact, and will be confined to the period during which Cell 4 is being constructed and Cell 3 is being closed. Furthermore, during construction dust control will comply with Rule 800 of the Imperial County Air Pollution Control District's regulations.

5.5. Groundwater Impacts

The CEQA process, and by extension the approval of this conditional use permit application, requires that the effects of a project on local and regional hydrology, flooding, and water quality be addressed in a project's impact analysis. The anticipated hydrology effects of Cell 4 are based on the results observed for the operation of the existing monofill as described in this application. Hydrological and water quality monitoring results for the existing operation are described in this Sections 5.5.1 and 5.5.3, and stormwater/flooding monitoring results are described in Section 5.6.

5.5.1. Groundwater Conditions

A 2016 review of the groundwater monitoring at DVC conducted by RPS Iris Environmental summarizes groundwater conditions at the monofill as follows:

> "DVC is located in Imperial County, California, in Imperial Valley, southwest of the Salton Sea and north of the Superstition Hills. This region of Imperial Valley, a flat, featureless playa floor, is almost entirely below sea level. The elevation at DVC and the surrounding land is approximately 100 feet below mean sea level. The topography in the vicinity of the DVC is relatively flat and slopes gently down to the north. Typical of desert climates, annual precipitation within Imperial Valley is highly variable. Mean annual precipitation is between 3 to 5 inches per year (Hely et al. 1964). Temperatures range between 41 degrees Fahrenheit (°F) to more than 105°F during the summer months. Total net infiltration is expected to be insignificant/very low.
>
> Imperial Valley is part of the Salton Trough which extends from San Gorgonio Pass southeast to the Mexican border, including the Gulf of California and beyond the tip of the Baja California

Peninsula. The Salton Trough is a faulted basin with bordering mountain slopes defined by fault planes of members of the San Andreas Fault system. The surrounding mountains are largely faulted blocks of the Southern California batholith granitic rocks of Mesozoic age, overlain by fragments of an earlier metamorphic complex of various ages dating back to Precambrian time. The valley is also laced with major members of the San Andreas Fault system that experience minor to moderate earthquakes. At the bottom of the valley lies the Salton Sea, the largest man-made lake in California (formed during a 1905 incident). The lake does not have an outlet to the ocean, because the valley lies below sea level (Singer 1998).

The valley basin contains sedimentary fills of sands and gravel up to 15,000 feet in thickness that accumulated during the Cenozoic time. Most of these sediments are only partially consolidated into sandstones and conglomerates. The fill increases in thickness from north to south. The layers slope gently down-valley and contain several important aquifers, such as the Coachella Aquifer. The aquifers of the valley are zones of relatively coarse-grained alluvial materials deposited during the cool, wet years of Pleistocene time. These sediments are the products of intensive erosion of the surrounding mountains during that time. The erosional debris was brought to the valley floor by the various stream channels that drained the San Bernardino, San Jacinto, and Santa Rosa Mountains (Singer 1998).

The Coachella aquifer is shaped as a cone with the apex at San Gorgonio Pass and the base merging into the Salton Sink. This elongated structure contains a thick sedimentary sequence with granitic bedrock defining its sides. The sediments lap against the granitic margins, sloping to the central axis from both sides, then thickens and becomes more deeply buried as the trough opens to the south (Singer 1998).

DVC is located on the west side of the Imperial Valley, just north of the Superstition Hills. According to Balderman Consulting, Inc.'s 2002 report on Geology and Seismicity, Proposed Cell 3 (2002 Balderman), DVC is underlain by units of the Pleistocene Brawley and/or Pliocene Borrego Formations, lake bed sequences consisting mostly of clay beds and other fine-grained sediments. The two formations are often separated by alluvial gravels. Reports prepared for the area, including a 1989 Report of Geologic Investigations by Balderman and the 2002 Balderman report, have divided the units beneath DVC into eight geologic units, informally designated as Qb1 through Qb8, with number designation increasing with depth. The units dip generally northward. Qb6 is the deepest unit observed beneath Cells 1 and 2. Units beneath Cell 3 include Qb3 through Qb8."

5.5.2. Cell 3 & 4 Design – Hydrological Constraints

With respect to the existing Cell 3, as stated in the Joint Technical Document for the facility, it has been designed and constructed so that the ground and surface waters will have no effect on the cell and so that the cell (including any hypothetical releases) will not affect any groundwater or surface waters.

There is no perennial surface water within more than a mile of the site; the only surface water in this area is stormwater, consisting of the ephemeral sheet flow and the runoff in intermittent streams during or immediately after the infrequent precipitation events. The Cell 3 design includes a compacted soil diversion berm along the south and west (up-gradient) sides of the cell/unit. This berm is designed to divert surface-water flows and to avoid any effects on the cell from the occasional flows of surface water. The monofill is designed to withstand the probable maximum precipitation of the 100-year storm.

Surface drainage will not contact the waste. Aside from dust control, the only water contacting the waste would be direct precipitation.

The monofill is designed, constructed, and operated to ensure that precipitation does not create runoff from the waste cells. During the operating period, any precipitation or other water contacting the waste is contained within the cell. Any water or other liquid ponded on the waste is promptly removed and transferred to the on-site leachate holding pond or to an above ground tank. After the operating period, the cells will be closed and covered with a cap equivalent to the coverage provided by a 2-foot clay layer and a 40-mil HDPE liner. The cap will prevent precipitation from contacting the waste.

Groundwater would have no effects on Cell 3 the waste, liner, and other engineered components of the Unit are designed to be well above the underlying groundwater.

The only present beneficial use of groundwater in the site area is at the existing monofill facility. There are no off-site wells within a mile.

The design of Cell 4 has not been finalized; however, it will be equivalent to Cell 3, and it is anticipated that the design will be provided before the end of the Environmental Impact Report.

Additional information to be submitted:
The final design of Cell 4 with - coordinates, areal dimensions, depth, arrangement of liner, and arrangement of leachate collection system - will be submitted following completion of final siting studies. The design information will be submitted to the planning department for use in the CEQA review process.

5.5.3. Groundwater Monitoring Results

The existing waste discharge permit for the facility requires each cell to be constructed with two (2) clay liners, two (2) synthetic liners, a leachate collection and removal system (LCRS), and a leak detection system. The permit further requires that the LCRS for the monofill cells consist of a drain net that is placed on the top of the first synthetic liner. The purpose of the LCRS is to minimize accumulation of liquids on top of the main liner. The LCRS must be inspected weekly and any liquid present is removed and stored in either an above ground storage tank or lined surface impoundment for evaporation. Quarterly inspections of the LCRS are required. The liquid removed is tested for field electrical conductance and pH. For Cell 3 the permit requires that the Leak Detection System (LDS) consist of a drain net located between the two synthetic liners. The LDS is used to assist in determining if a leak exists in the primary synthetic liner. The LDS of Cell 3 must be monitored weekly and any liquid found is removed and stored in either an above ground storage tank or lined evaporation surface impoundment used for the LCRS liquids. The liquid removed is tested for field electrical specific conductance and pH. The design and operation of Cell 4 will adhere to these or equivalent requirements.

In addition to monitoring the cell, monitoring of ground water monitoring wells is required for the existing monofill. Eleven groundwater monitoring wells are currently present at DVC, these being identified as: W01, W09A, W10A, W11, W12, W302, W305, W306, W307, W308, and W309. Quarterly and annual monitoring of the wells have demonstrate that groundwater has been protected. The following results (provided in the supplemental submittal) document the results of groundwater monitoring:

SR #4 - 2014 Annual Waste Discharge Report (which includes a 5-year report of constituents of concern).
SR #5 - 2017 Annual Waste Discharge Report.

In order to update (where necessary) and validate previous hydrological, flooding/stormwater, and water quality assessments, CalEnergy will retain a contractor to conduct a study to review previously submitted hydrological data and answer anew the hydrology and water questions found in Section IX of California's CEQA checklist. The results of this study will also use information from the water supply assessment that will be conducted by CalEnergy contractors (as noted in Section 5.3)

Additional information to be submitted:
A hydrological and water quality assessment will be performed for the monofill to evaluate the impact of the construction and operation of Cell 4. The results of this assessment will be provided to the planning department for input to the CEQA review process.

5.6. Stormwater Protection

5.6.1. Storm-Water Engineering Controls

Like Cell 3, Cell 4 will be designed so that stormwater does not runoff of the waste and impact surrounding areas. In the event that rainwater, or other liquid, is ponded within a cell, it will be promptly removed and transferred to the on-site leachate holding pond or to an above-ground tank. The facility operates under a general permit - National Pollution Discharge Elimination System Stormwater Permit No. CAS000001 - which became effective on July 1, 2015, for the discharge of uncontaminated stormwater runoff from the monofill. DVC conducts monitoring and sampling of stormwater in accordance with the general permit requirements. The general permit imposes the following limits on stormwater management at the monofill.

Table E-1

General Permit Limits	Annual Numerical Action Limit	Instantaneous Maximum Numerical Action Limit
Iron (mg/L)	1.0	N/A
pH*	N/A	<6.00 or >9.0
Total Suspended Solids (mg/L)	100	400
Total Oil & Grease (mg/L)	15	25

A site-specific Stormwater Pollution Prevention Plan has been developed and adhered to for the operation of the site. For the existing monofill, annual stormwater monitoring for prior years has demonstrated that the facility does not have a deleterious effect on stormwater; however, more recent results have been subject to interference as concentrations of iron above the Numeric Action Limits have been observed. Background concentrations of iron have also been above the Numeric Action Limits in the state's general permit. In response, an Exceedance Response Action Plan was developed for the facility in 2017. Evaluation of the facility by a Qualified Industrial Stormwater Professional concluded that the elevated levels of iron are not resulting from the operation of the monofill but from other sources. The Level 2 ERA Action Plan Report dated December 8, 2017, which was submitted to the State Water Resources Control Board (state water board) recommends the removal of the automatic samplers and the use of grab sampling as it was concluded

that the automatic samplers had the potential of exceeding the holding times and thus skewing qualitative analytical results.

Given the arid nature of the area there is limited stormwater monitoring data. A summary of past stormwater monitoring data is provided in the Level 1 Exceedance Response Action Evaluation and Report prepared for the site in 2016 (see Supplement II) for the following file:

SR #6 - Level 1 Exceedance Response Action Evaluation and Report

5.6.2. Stormwater Best Management Practices

The stormwater pollution prevention plan included in Supplement I identifies the Best Management Practices that are used at the existing mono-fill, and which will be adhered to during the operation of Cell 4, to contain chemicals and prevent oil spills or soil sediments from impacting stormwater. These practices include:

- Good housekeeping.
- Supervision of chemical and material loading/unloading areas, and the use of drip pans during material transfers.
- Containment of liquid storage tanks.
- Maintenance of fleet vehicles, in order to avoid vehicle fluid leakage.
- Application of Soil Seal chemical to waste piles at the end of each day to prevent dust transport, and the adherence to the air permit and air regulations to control dust.
- Ensuring spill response readiness, in the event of a release.
- Sediment and erosion control design features and daily inspection of the site to ensure rapid repair of any observed/impending areas of erosion.

A Notice of Intent will be filed for the proposed Cell 4 requesting the addition of Cell 4 to the state's general stormwater permit. The design for Cell 4 and an associated stormwater sampling system will ensure that the facility does not produce deleterious effects on stormwater, and that reliable stormwater sampling results can be obtained. As noted previously, final design details for Cell 4 are pending and will be provided by CalEnergy's consultant.

5.6.3. Stormwater Construction Permit

Since the area to be disturbed for the construction project exceeds 5 acres it is anticipated that a Notice of Intent will be required and filed for the Cell 4 construction project, in order to comply with California's general stormwater construction permit (National Pollution Discharge Elimination System General Permit No. CAS000002). In addition, a request for coverage under the state's Industrial General Permit 2014-0057-DWQ, and which regulates landfills, might also be required. A determination will be requested from the State Water Resource Control Board on the stormwater permit(s) that will regulate the construction project. Regardless, a new/updated Stormwater Pollution Prevention Plan (SWPPP) will be required for the construction project (detailing the controls to be implemented during the construction project). Reporting of stormwater management activities related to the construction project will also be required. Stormwater management during construction will thus be designed and implemented to mitigate effects from the construction project.

As noted in Section 5.6 CalEnergy's contractor will conduct a hydrological assessment that will update previous stormwater studies conducted for the monofill, upon which the site's stormwater pollution prevention plan and current monitoring program is based. In addition to validating past submittals, the study will answer anew the CEQA checklist question on whether or not construction or operation the project will. "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?" As noted previously, this report will be submitted the planning department for input to the CEQA review process.

5.7. Hazards & Hazardous Materials

5.7.1. Hazardous Materials

The facility is also subject to California's Hazardous Materials Business Plan requirements, specified by Sections 2729 to 2732 of Title 19 of the California Code of Regulations (CCR). The regulations require:

- Annual updates of the site's chemical inventory to the Department of Toxic Substances Control, (as the State Emergency Response Commission and the Local Emergency Planning Committee).
- An Emergency Response Plan to minimize the impact of any possible releases.
- Training of employees on emergency response procedures.

The current inventory of chemicals on site (shown in Figure A-6a) are not expected to increase markedly due to the addition of Cell 4. Chemical storage is localized nearby the Administrative offices. Chemical tanks and drums are provided with impermeable containment. As described in the section on "Air Quality", Soil Seal chemical is the only chemical used widely across the waste storage operation for stabilizing the surface of the waste geothermal material and thereby preventing dust. With the addition of Cell 4 the business plan for the site will be updated to reflect any changes in hazardous materials.

5.7.2. Seismic Hazards

The site is in a seismically active area that contains several major active faults and which has experienced a number of large earthquakes during historic times, thus the siting of Cell 4 is being conducted in consideration of this hazard in order to avoid negative impacts of seismic activity. As shown in the siting activities outlined in Fugro's siting plan (submitted separately as Supplement III) siting is being conducted so as to minimize potential impacts from faults. Cell 4 will also be designed to meet seismic and liner requirements for a Class I hazardous waste landfill (which are intended to mitigate the impacts of seismic activity). As noted previously the design information for Cell 4 will be developed after the final site selection. The "Phase 1 Biological, Cultural, and Geological Constraints Report" by Fugro consultants (which is submitted separately as part of Supplement III) provides an updated review of seismic hazards along with results on a new three-dimensional geologic map of the monofill. The model will be updated as the siting effort is being completed. In addition to the siting and design of the landfill, the Conditional Use Permit requires on-going monitoring of the site for seismic activity.

The existing facility operates under a seismic monitoring program approved by the Imperial County Public Works Department. The data from the monitoring is reported monthly to regulatory agencies. Initially the installation of a Kinemetrics Accelerograph model SSA2 monitor was approved. On December 19, 2006, Desert Valley Company upgraded the seismic detection system by replacing the Kinemetrics Accelerograph with a Kinemetrics Etna Digital Recorder. In 2017, the unit recorded one seismic event. A seismic report was submitted previously with the monthly report for March 2017.

The facility has financial assurances to provide coverage for any seismic damage that might occur at the facility. Appendix 17 of the Joint Technical Document for the landfill shows an estimate of $279,000 in the "Non-Water Release Corrective Action Plan Cost Estimate for Financial Assurance", which prepared in 2015 by Geosyntec consultants. The plan and evaluation of potential damage is provided as a separate transmittal as Supplement I of this submittal.

5.7.3. Radiological Hazards

As a result of the Naturally Occurring Radioactive Materials (NORM), which is a characteristic of the waste disposed of at the monofill, workers stationed at the site are monitored to ensure that they are not subject to any impacts from radiation as a result of their work at the site. The monofill operates in conformance with a "Radiation Monitoring Plan", which is part of the Operating Plan for the monofill (provided in Supplement I of this submittal). The Radiation Monitoring Plan requires issuing a film-badge/dosimeter to all Desert Valley Company employees at the monofill. This film-badge/dosimeter will be worn when employees are present at the facility. The badges are collected, analyzed and reported quarterly. A sample report is included as a supplement to this submittal (filename "SR #3 - June 2018 quarterly report of air samplers and personnel radiological monitoring results.")

In addition to the monitoring of personnel, the solid waste permit issued by the Imperial County Public Health Department (acting for CalRecycle) requires annual NORM analyses of the waste disposed of at the monofill for gross alpha, gross beta and gamma spectroscopy). Sample results are provided in Table D3.

Since the construction of Cells 1 and 2 the monofill has been monitored for radon as described in the section on "Air Quality". Most monitoring has found zero gas pressure at the landfill and zero or negligible gasses released from the landfill. The monofill is not expected to pose a threat with respect to radon, however, monitoring for radon will continue in accordance with the air permit issued by the Imperial County Air Pollution Control District.

Since the operation of the monofill no adverse effects from NORMS have been observed for employees and no abnormal levels of NORM have been observed in the annual waste analyses.

5.7.4. Other Hazards

Due to the remote, low-terrain, and desert location of the facility it has not and is not expected to be subject to any of the following hazards:

- Landslides
- Mudflows
- Tsunami
- Volcanic hazards
- Seiche
- Floods
- Vehicle or pedestrian traffic
- Explosions

5.8. Wildlife & Biological

A biological survey was conducted in 1989 of the northern half of Section 33. In addition a biological survey was conducted for a small area of Cell 3 that was not included in the earlier biological survey, when Cell 3 was being developed in 2002. These early studies identified the Flat-tailed Horned Lizard as a California Species of Concern. The Flat-tailed Horned Lizard is a protected species which means it cannot be taken or processed without a permit from the Department of Fish and Game. DVC has in place a management plan of mitigation measures to ensure minimal impact to the Flat-tailed Horned Lizard. DVC proposes to have the Horned Lizard or other species that might have entered the area since the last biological survey. A 2001 survey by URS consultants (which was included in the 2002 Conditional Use Permit application) found that the Flat-tailed Horned Lizard was present in low abundance and that only one scat per hour per transect was detected by the URS survey.

The Conditional Use Permit specifies mitigation measures to reduce potential flat-tailed horned lizard mortality, including:

- Requiring the access roads to the monofill to be paved in order to eliminate the amount of time the flat-tailed horned lizard spends on roads.
- Screening the project site to reduce flat-tailed horned lizards entering the landfill area.

In addition to the Conditional Use Permit, the Joint Technical Document for the site contains an Operating Plan that contains a 'Flat-tailed Horned Lizard Management Plan' that specifies additional measures to prevent harm to wildlife, which among other requirements related to areas that might have active streams require that:

- Established washes, going through project, if diverted, shall be rejoined downstream.
- Geotextile material shall be placed between subgrade soil and base material at streamed crossings.
- For the initial year following construction the facility was required to plant at least six mesquite trees, along the south side of diversion berm, and maintain the trees for at least one year.
- Disturbance of washes shall be kept to a minimum.

With the addition of Cell 4 no changes to the wildlife or biological conditions are expected, however, the biological survey will be redone in the area of the final Cell 4 site. A desktop biological survey was performed in December 2017 by Hernandez Environmental Services as a preliminary step in identifying the possible presence of sensitive species. The screening biological survey conducted by Hernandez is included in the draft 'Phase 1 Biological, Cultural, and Geological Constraints Report' included in Supplement III of this submittal. The screening work will be completed in future phases of the siting work by CalEnergy's consultants. The final biological resources report prepared by CalEnergy's consultant will provide sufficient information to respond to the questions in Section IV of the CEQA guidelines checklist.

Additional information to be submitted:
A final biological survey in the area selected for Cell 4 will be completed as part of the final site selection of Cell 4. These results will be provided to the planning department as part of the CEQA review process.

5.9. Cultural Resources & Tribal Cultural Resources

The potential for cultural resources at the site were initially assessed in 1990. A cultural resources technical report was made and filed with the Imperial County Planning and Development Services during that period. Mitigation has been achieved by avoiding culturally sensitive areas. Desert Valley Company allows off-road vehicular traffic only as required to conduct surveys of the property. A draft 'Phase I Cultural Resource Report' was conducted in December 2017 by Brian F. Smith and Associates, Inc. for the northwest quarter of Section 33 and the southwest quarter of Section 27 of the site. The report is included in Supplement III of this submittal. Similar to the 1990 study, cultural resources were identified in the 2017 survey where the archaeological survey found 11 recorded sites and 10 isolates within the areas studied. The draft study further states that a site testing program would be required to generate data to determine if the archaeological sites are significant for the purpose of the CEQA review.

Since the areas being studied have been changed to the northeast quarter of Section 33, while study on the southwest quarter of Section 27 continues, some of the initial draft studies will need to be redone. These studies will be completed by CalEnergy's contractor, and will include a review for Tribal Cultural Resources.

CalEnergy's consultant will complete the identification of cultural and archaeological features that was initiated in 2017, with additional site assessments for the final location for Cell 4. The final report will incorporate the initial surveys conducted to date, include final site surveys and research, and respond anew to the questions in Section V of the CEQA checklist. The contractor's assessment will include any **publicly available** information to assess impacts to "tribal cultural resources", and will respond to the questions in Section XVII of the CEQA checklist, conditioned upon the basis that tribes may wish to tribal cultural resources therefore input from the state and planning department will be required to complete this assessment. That is, CalEnergy's consultant will not directly request information from Tribes on archaeological or cultural resources at the site but the consultants will instead rely on publicly available information.

> ***Additional information to be submitted:***
> ***In order to finalize the siting of Cell 4 the initial archaeological studies for Section 33 will be completed for the northeast quarter of Section 33, and site testing needs to be conducted in order to determine cultural resources that are CEQA-significant.***
>
> ***In order to demonstrate lack of impact to cultural, archaeological and tribal cultural resources an assessment report will be completed by CalEnergy's contractor and submitted to the planning department as input to the CEQA review process***

5.10. Geological & Soils

The CEQA review process for the approval of this project, and by extension the approval of this permit application, requires that the project's impact on geology and soils be assessed. In addition, in order to site the landfill CalEnergy needs to conduct such studies, therefore, CalEnergy's contractor will complete the geological and soils review required by CEQA and submit those study results to the planning department for input into the CEQA process.

For the siting of Cell4, desktop geological surveys were conducted by Fugro consulting and a draft 'Geological Screening Report, DVC Cell 4' was issued by Fugro in January 2018. While overall Cell 4 project and the existing landfill meet Class II requirements, the Cell 4 siting criteria will adopt Class I standards for avoiding active faults and for the design of the landfill liner system. These requirements are noted in the January 2018 report by Fugro, which notes that in order to satisfy the requirements of the State Water Resource Control Board Class I solid waste facilities requires a setback of 200 foot from any known Holocene active fault is required. Fugro's report further indicates that faults might be present in the areas studied – which were the northwest quarter of Section 33, and the southwest quarter of Section 27, as it concludes that, "our analysis identified: 1) several mapped faults that project towards the quadrants of interest; 2) several lineaments that may be fault-related, and more notably, 3) areas where continuous marker beds within the Brawley Formation appear to be un-broken, suggesting positive evidence for the absence of fault displacement in localized areas." In order to confirm the location of faults the report recommends that Phase 2 studies involving the collection of geophysical data and fault trenching investigation be performed. Phase 2 geophysical data collection commenced in the summer of 2018, and is documented in an August 2018 report by Fugro consulting titled, "Phase 2, Site Geologic Review, DVC Cell 4 Project'. The report concludes that boreholes and additional seismic surveys are needed to conclude the geological and soils assessments. These additional activities are expected to commence in October 2018.

The report also summarizes the following requirements of California Code of Regulations, Title 23, Section 2530 for siting Class I and II landfills/units (which will be adhered to for siting Cell 4). The regulations as applied to Cell 4, will impose the following geological constraints:

i. Unit must be underlain by natural geologic materials having permeability of 10^{-6} cm/sec or less (e.g., clay), or an equivalent liner system.
ii. Units must be located outside the area of a 100-year flood.
iii. Units must have a 200-foot setback from any known Holocene fault.
iv. Units must be designed, constructed and maintained to preclude failure from tidal waves[4].
v. Waste shall be a minimum of 5 feet above the highest anticipated ground water level[5].
vi. Site must not be subject to rapid geological change.
vii. No impact to significant cultural features, rare and endangered species, sensitive or unique habitats.

The 2017 geological screening report is included as Appendix C of the 'Phase 1 Biological, Cultural, and Geological Constraints Report', which is included in Supplement III of this submittal. The draft 'Phase 2: Site Geologic Review, DVC Cell 4 Project' is also included in Supplement III of this submittal. Additional study results are being submitted to the planning department as the evaluations proceeds. The final geological and soils assessment report will incorporate the submittals made to date, and provide sufficient information to respond to the questions in Section VI of the CEQA checklist.

[4] Tidal waves are unlikely, except along the shore of the Salton Sea, an area which would also be eliminated by the groundwater depth requirement in item (v) of the list.
[5] With the exception of areas near the shore of the Salton Sea, groundwater levels are deeper than 5 feet throughout the Imperial Valley

Additional information to be submitted:
In order to finalize the siting of Cell 4 additional geological screenings and investigations will be completed by CalEnergy's contractor at the candidate sites and at the final site selected for Cell 4. The investigations should be completed by the first quarter of 2019.. In addition to being used for the siting of Cell 4 the studies will be expanded and formatted, to provide responses to the CEQA evaluation process. Study results are being submitted to the planning department as data is being collected and analyzed.

5.11. Land Use/Planning & Housing

5.11.1. Imperial County Land Use plan

As shown in Figure A-5b the location for the existing monofill for Cells 1, 2 and 3 is identified as a "special purpose facility", and surrounding areas are planned as "Recreation/Open Space" area by the Imperial County Land Use Plan (which is part of the Imperial County General Plan). Cell 4 would be sited on Section 33 or Section 27, adjacent to the existing cells, which would require an amendment of the county's land use plan to designate the southwest quarter or Section 27 and the remaining quarters of Section 33 as areas for the use of "special purpose facilities". An application is therefore being submitted as a supplement to this application – Supplement IV – to request the amendment of the county's Land Use Plan. A special purpose facility as defined in the Land Use Plan is an area where:

> "Permitted uses are subject to approval of a Conditional Use Permit and include Class I, II, and III solid and liquid waste facilities, prisons, and general aviation airports, or sites approved for those purposes. It is the intent of this designation that such proposed and existing facilities be protected from encroachment by development or incompatible land uses."

The expansion of the monofill would result in the expanded boundary being abutted by 'recreation/open access areas' to the north, east and west, and by an area designated as 'government/special public' to the south.

5.11.2. Zoning

As shown in Figure A-5a the location for the existing monofill for Cells 1, 2 and 3 is zoned as "M-2" and the surrounding area to the south and west is zoned as "S-2', the area to the north is zoned "A-2", and the area to the east is zoned 'M-2". The appropriate uses of these zones are as follows:

- M-2: Medium Industrial
- S-2: Open Space Preservation
- A-2: General Agricultural Zone

In order to allow Cell 4 to be sited to the west and south of Cell 3 most of the remainder of Section 33 will need to be rezoned to M-2, and the expanded monofill will be abutted by areas zoned with similar zonings as the current facility (i.e. M-2 and A-2 areas). In order to allow Cell 4 to be sited in the southwest quarter of Section 27 that area would need to be rezoned from A-2 to M-2, and the expanded monofill would be surrounded by similar zoning as the current facility (i.e. M-2 and A-2 areas). An application is therefore being submitted as a supplement to this application – Supplement IV – to request the amendment of the county's zoning designation for Sections 27 and 33.

5.11.3. Compatibility

If/when the potential areas for siting the landfill are re-designated to "special purpose" the county's Land Use Element shows that this designation is "conditionally compatible" with areas zoned as A-2, S-2, and M-2 (as shown by Table 4 of the Land Use Element for Imperial County). Therefore the re-designated areas would be compatible with the surrounding areas.

5.11.4. Housing

A change in the designation of Section 33 and 27 from "Recreation/Open Space" to "special purpose facility" will not affect housing in the area. The Imperial County 'Housing Element" indicates the one house per acre would have been allowed on recreational areas (as shown in Table E-2. Given that CalEnergy owns the monofill property, CalEnergy has no intention using the property for housing, and there is no housing currently located on the property, the project will not affect housing in the area.

Table E-2, Imperial County "Housing Element" Goals

Area Designation	Housing Goal
Recreation/Open Space	The maximum allowed residential use for Open Space/Recreation is one residence per acre. Greater densities may be permitted by a specific plan encompassing at least 160 acres for appropriate recreation-oriented residential development where adequate facilities and services for such use exist or can be provided.
Industrial (which is similar to a 'Special purpose facility')	Industrial land uses within this category consist of heavy manufacturing land uses located in areas with the necessary supporting infrastructure and located away from conflicting existing or planned land uses. Residential land uses are limited to one single-family dwelling unit if appurtenant to a permitted industrial or commercial use and occupied by a caretaker, custodian, or night watchman when on the same lot as the industrial use and only upon the issuance of a conditional use permit by the Planning/Building Department or the Planning Commission.

5.12. Population

The initial Environmental Impact Report for the monofill in 1990 concluded that, "The project site is located in a relatively unpopulated area of the county, with the closest permanent residence 2 miles away. Most of the population of Imperial County lives in the seven incorporated cities within the county. The largest of these cities is El Centro, which had an estimated 1988 population of 29,667, which represented 27 percent of the people in the county. Calexico's population in 1988 was 19,030 people, which represented 17 percent of the county's population. Brawley also has less than 17 percent of the county's 1988 population with 18,659 residents within its city limits. The populations of the cities of Holtville and Imperial were 4986 and 4305, respectively, in 1988. Calipatria's population of 2782 represented 2.5 percent of the county's total population, while the number of residents in Westmorland was 1893, or 1.7 percent of the total population (WESTEC 1989b). Westmorland is the closest incorporated city in the project area."

Data from 1988 and 2000 shows that the population of all nearby cities have increased, as shown by the 2010 United States Census, as shown in Table E-3.

Table E-3, Population Growth in Nearby Cities

	Distance to Monofill	1988	2010 U.S. Census	Population Growth
Brawley	Monofill location	18,659	24,953	34%
Westmoreland	6 miles	1893	2225	18%
Imperial	10 miles	4305	14,758	243%
Calipatria	12 miles	2782	7,705	177%
El Centro	15 miles	29,667	42,598	44%
Salton City	17 miles	978 (in 2000)	3,763	285%
Holtville	23 miles	4986	5,939	19%
Calexico	24 miles	19,030	38,592	103%

The expansion of the facility is not expected to alter potential environmental impacts from the facility therefore it should not affect continued population growth in the area.

5.13. Transportation/Traffic

Traffic flow to and from the facility will be unaffected by the expansion of the facility once the facility is operational. During construction of Cell 4 a minor increase in vehicles and construction equipment accessing the site will occur. Permits will be obtained for use of the public roads as needed during the construction period.

5.14. Recreation

The expansion of the monofill will not affect recreational use of nearby areas on land not owned by CalEnergy.

5.15. Mineral Resources

The expansion of the monofill will not affect access to mineral resources in any areas of the county.

5.16. Public Services

The expansion of the monofill will not affect access to public services in any areas of the county.

5.17. Noise

The monofill is subject to noise ordinances established by the City of Brawley and the Imperial County Board of Supervisors. Section 90702 of Title 9, of the Land Use Ordinance for the County of Imperial, limits general industry to a noise limit of 75 decibels (based on a one-hour average). Operation of the facility does not result in noise that can be detected at the nearby Highway 86 (which is approximately 1 mile away from the active area of the monofill), and the nearest dwelling is approximately 2 miles away from the site resulting in an even lesser potential for noise impacts. The expansion is not expected to change the existing noise in the area. During construction noise levels are expected to increase slightly due to the presence of onsite engines and additional vehicles; however, levels are not expected to disturb residents or wildlife.

5.18. Greenhouse Gas Emissions

The monofill currently purchases power from the local utility. Power consumption is not expected to increase as a result of the expansion of the facility with the addition of Cell 4. During construction the use

of heavy duty vehicles for the construction project will result in a minor and temporary increase in greenhouse gas emissions. Fuels are not combusted on site therefore the facility does not emit greenhouse gasses directly from onsite stationary sources.

6. *Project Status: Environmental Studies & Schedules*

6.1. Previous Environmental Studies

Prior to 2016, environmental studies were conducted as part of the 1988 Site Selection Process for Cells 1 and 2. Cell 3 was sited as a result of additional reviews that took place in 1997. Information on those historical studies can be provided upon request.

6.2. Current Siting Studies

For this application to expand the monofill with the addition of Cell 4 CalEnergy has retained consultants to perform the biological, cultural and geological studies for the siting of the landfill. The information from these studies will also contribute to the permitting effort required by the California Environmental Quality Act. Detailed activities as described by the siting consultant, Fugro are:

Table F-1 Post-2016 Environmental Siting Studies (by Fugro consultants)
Phase 1: Constraints study (complete) •Focus on NW ¼ Sec. 33 and entire Sec. 27 •Desktop review of geologic and biologic constraints •Cultural field survey of known sites
Phase 2: Siting investigations (in progress) •Focus on entire Sections 33 and 27 •Key criterion = Active faults •Site Investigations - – Geophysical survey of SW¼ of Section 27: completed April 25, 2018 – Rare plant survey of Section 27: completed July 30, 2018 – Lidar and imagery survey of DVC area: completed July 3, 2018 – Jurisdictional delineation of Sections 27and 33: completed August 16, 2018 – Geologic mapping of Sections 27 and 33: Completed August 16, 2018 – Site geologic review and 3D model: Completed August 16, 2018 – Geophysical screening campaign, with calibration boreholes: Target October 2018 – Fault trenching: Target November 2018 – Data analysis and site selection: Target December 2018 •Site selection by December 2018
Phase 3: Site characterization (pending) •Focus on site footprint •Starting in winter of 2019

6.3. Future Environmental Studies

In the course of completing the siting work CalEnergy will complete, and submit to the attention of the Imperial County Planning Department, technical studies to determine the impact (or lack thereof) of the project on:

A. Biological resources (which are currently being assessed).
B. Cultural resources including historical/archaeological (which are currently being assessed).
C. Geological/geotechnical features and soils (which are currently being assessed).
D. Hydrological features and groundwater including water quality (which will be assessed in 2019).
E. Water supply assessment (which will be assessed in 2019).

CalEnergy will provide the Planning Department with updated schedules for completion of these studies, when contractors for the work are issued.

Additional information to be submitted: ***Updated schedules for completion of environmental studies.***

6.4. Project Timeline

CalEnergy will require the use of Cell 4 by 2025 and wishes to commence initial permitting via the California Environmental Quality Act (CEQA) review process as soon as possible. The project milestones anticipated are shown in Table F-2.

7. Conclusion

Based on the review and preliminary site work conducted thus far, no environmental impacts have been identified to indicate that the expansion of the monofill will alter the significance of environmental aspects or impacts associated with the operation of the facility. In contrast, the expansion of the facility will allow the continued employment of the less than 10 personnel on site, and the more than 200 employees currently employed at CalEnergy's geothermal plants, since without a location for the disposal of waste continued operation of the geothermal plants will be hindered. An interruption in the operation of the geothermal plants would also affect the renewable energy available for sale within the state at a time when California (via Senate Bill 100) has established a goal of having 100 percent of electricity supplied by eligible renewable energy resources by 2045.

It is noted herein that studies required by the California Environmental Quality Act (CEQA) have not yet been completed to finalize the significance of the expansion and that the design and design related information (such as water supply for the construction project) have not yet been identified. This information will be provided as updates/supplements to this application, and to the CEQA permit process, as soon as the information is available.

Table F-2, Estimated Project Schedule & Status

Activity		Lead	Start, estimated	End, estimated	Status
1	Phase I Siting: Desktop geologic, biologic constraints & cultural field surveys of known sites	Fugro (CalEnergy's Consultant)	11/1/17	8/16/18	Completed
2	Phase II Siting: Target areas for further study and conduct field investigations	Fugro (CalEnergy's Consultant)	4/25/18	Dec 2018	In progress
3	CEQA Draft EIR & Environmental Impact Studies	Imperial County Planning and Development Services, with input from all agencies	Oct 2018	Apr 2020	Initiated
3a	Phase III Siting: Site characterization & Geotechnical Investigation	CalEnergy's consultant	Jan 2019	Mar 2019	
3b	Cell 4 Design (following Step 3a)	CalEnergy's consultant	Mar 2019	May 2019	
3c	Completion of biological, cultural, hydrological, and water supply studies	CalEnergy's consultant	Jan 2019	To be determined	Some studies in progress
4	CEQA Public Review, Final EIR & Notice of Determination (following Step 3)	Imperial County Planning and Development Services, with input from all agencies	Apr 2020	Apr 2021	
5	Permitting – CUP	Imperial County Planning and Development Services	Aug 2018	Oct 2022	Initiated
5a	Permitting – Solid waste, air, waste discharge, stormwater, building and other permits.	All agencies	May 2021	Oct 2022	
6	Construct DVC Cell 4	CalEnergy	Dec 2022	Nov 2024	

ATTACHMENT A - APPLICATION FORM

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 Desert Valley Company		EMAIL ADDRESS Lenie.Sarion@calenergy.com	
2. MAILING ADDRESS (Street / P O Box, City, State) 7030 Gentry Road		ZIP CODE 92233	PHONE NUMBER 760-348-4200
3. APPLICANT'S NAME CalEnergy Operating Corporation		EMAIL ADDRESS Lenie.Sarion@calenergy.com	
4. MAILING ADDRESS (Street / P O Box, City, State) 7030 Gentry Road		ZIP CODE 92233	PHONE NUMBER 760-348-4200
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 N/A	PHONE NUMBER N/A

6. ASSESSOR'S PARCEL NO. Section 33, NW Quad 019-100- 004 Section 27, SW Quad 019-110- 012	SIZE OF PROPERTY (in acres or square foot) N/A	ZONING (existing) A-2/S-2
7. PROPERTY (site) ADDRESS 3301 West Highway 86		
8. GENERAL LOCATION (i.e. city, town, cross street) Section 33, NW Quad 019-100-004 or Section 27, SW Quad 019-110-012		
9. LEGAL DESCRIPTION Township 12 South, Range 11 East, Southwest ¼ of Southwest ¼ of Section 27, APN 019-110-012 and Township 12 South, Range 11 East, Northwest ¼ of ¼ of Section 33, APN 019-100-004		

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

10. DESCRIBE PROPOSED USE OF PROPERTY (list and describe in detail) Construction of Cell IV expanding current Class II, Solid Waste Facility		
11. DESCRIBE CURRENT USE OF PROPERTY Vacant		
12. DESCRIBE PROPOSED SEWER SYSTEM Existing		
13. DESCRIBE PROPOSED WATER SYSTEM Existing		
14. DESCRIBE PROPOSED FIRE PROTECTION SYSTEM Existing		
15. IS PROPOSED USE A BUSINESS? ☒ Yes ☐ No	IF YES, HOW MANY EMPLOYEES WILL BE AT THIS SITE? 8 Employees	

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

Digitally signed by Lenie A. Sarion
Date: 2018.08.20 13:05:56 -07'00'

Print Name _____ 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 # _____

Site Plan Checklist

ICPD Guidance on Site Plan	DVC Cell 4 Information Response
a. Be drawn to scale upon substantial paper, 11" x 14" (min.) - (20 copies must be submitted.)	See figures referenced in this table. *The final site plan will be provided following final site selection.* Copies will be provided electronically, in addition to 2 hard copies, in lieu of providing 20 electronic copies.
b. Show name of owner, legal description and Assessor's Parcel Number	• See Section 3.1 of this submittal
c. Show adjacent property uses and approximate distances to nearest structures c.	• See Figures A1 to A5 of the attachment • See Section 3.2 & 3.3 of this submittal
d. Show existing property dimensions, size, adjacent roads, canals, right-of-ways, easements, etc.	• See Figures A.6 of the attachment • See Section 3.4 of this submittal
e. Show all existing and proposed structures (both above and below ground) location of sewer and water systems.	• See Figures A.6 series of this attachment • See Photos in Attachment C
f. Indicate name of person preparing site plan	The name of the persons preparing drawings are shown on the drawings. In instances where the company name is not shown the drawing has been prepared by CalEnergy Once the final location Cell 4 is determined the site maps will be updated by CalEnergy's contractor.
g. Show North orientation	(see figures)
h. Show sufficient dimensions and information for proper evaluation lo be done	(see figures)

Additional information to be submitted:
After the final location of Cell 4 is determined, the site map will be updated by CalEnergy's contractor.

FIGURE A-1A – SITE LOCATION, ACCESS ROADWAYS & SURROUNDING AREAS

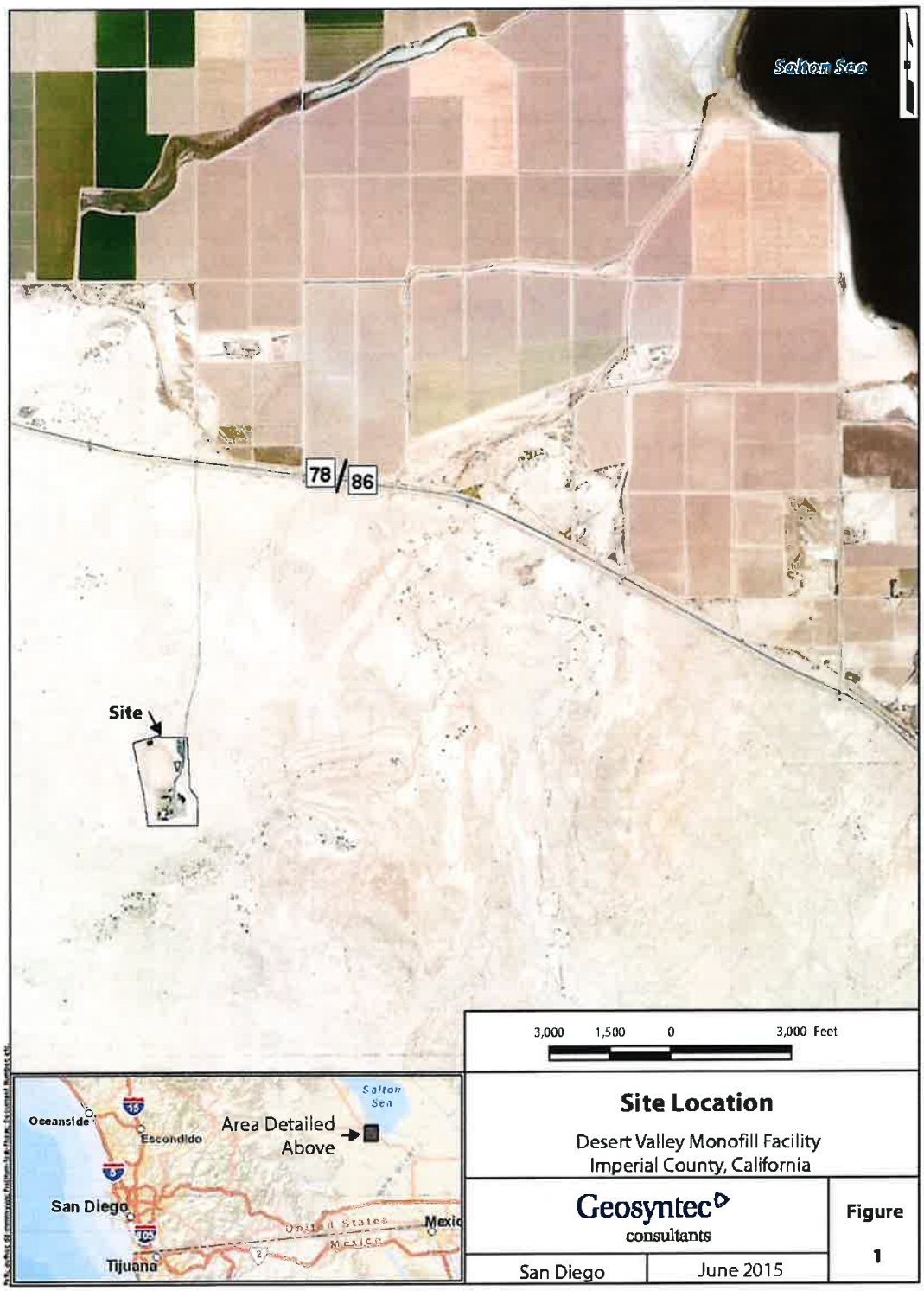


FIGURE A-1B – SITE LOCATION, ACCESS ROADWAYS & SURROUNDING AREAS

FIGURE A-1C –SITE LOCATION, TOPOGRAPHIC OVERVIEW

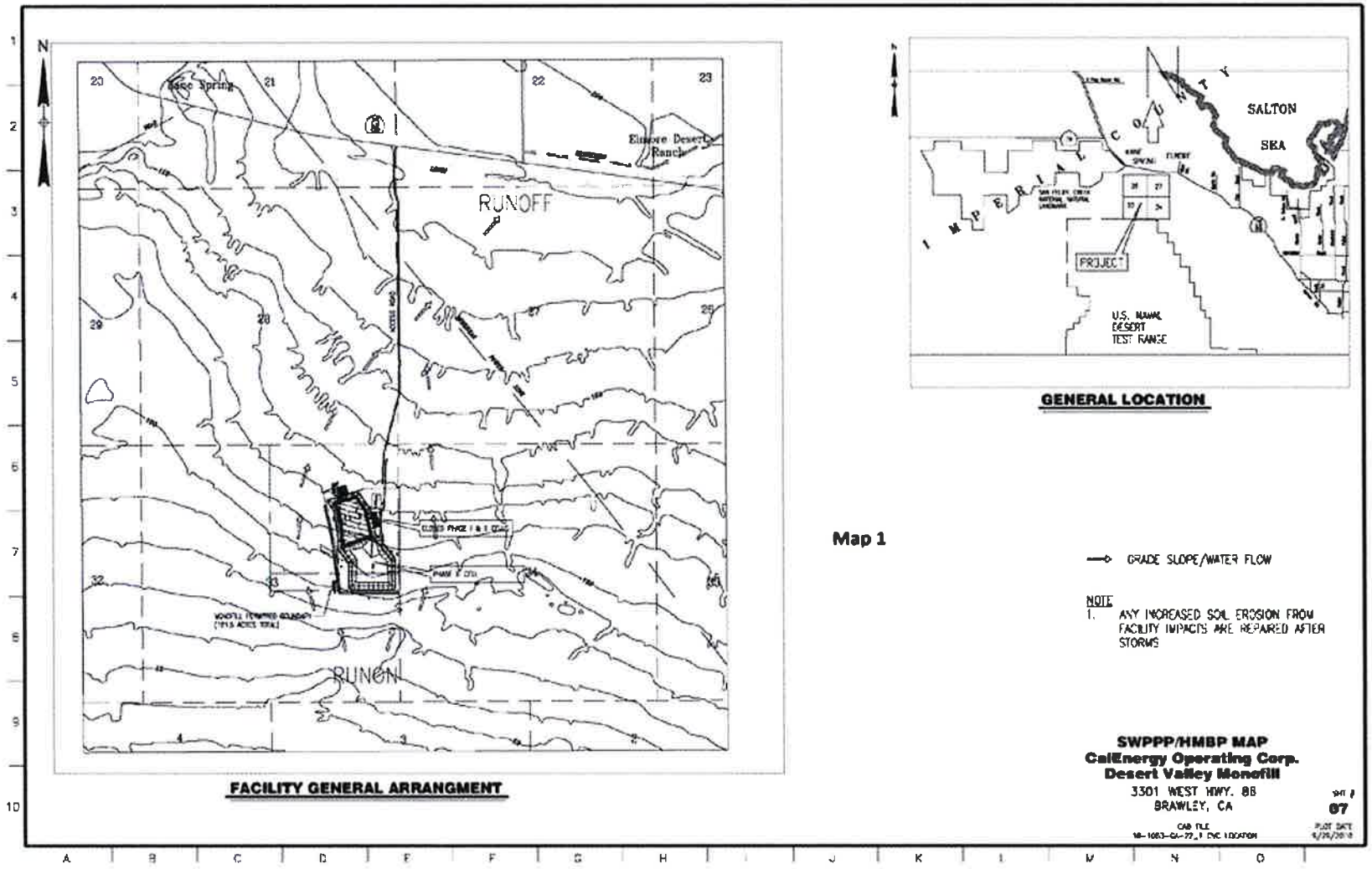


FIGURE A. 2 – SITE PLAN, DVC ACCESS ROAD

FIGURE A. 3 – SITE SURROUNDINGS, CANALS

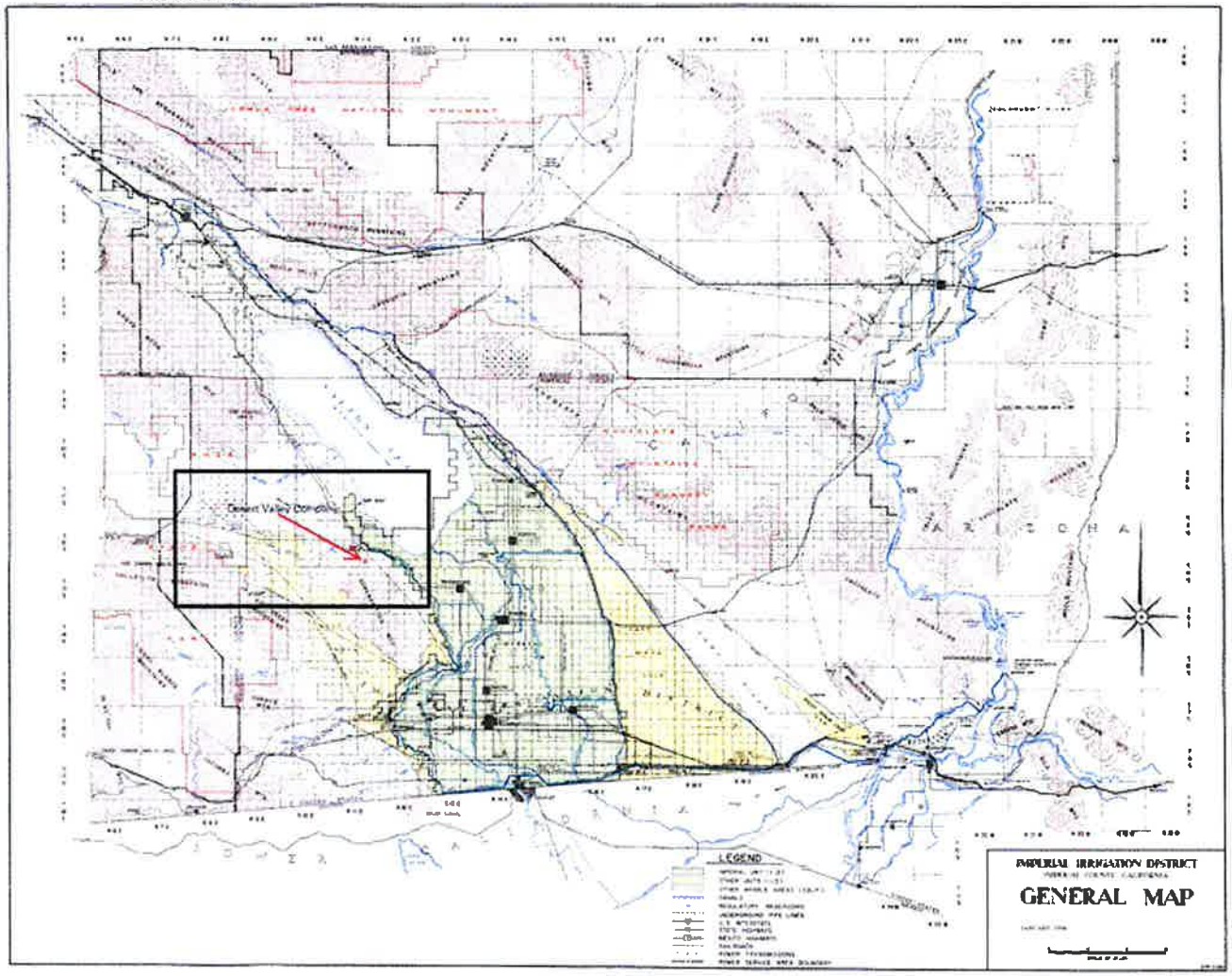
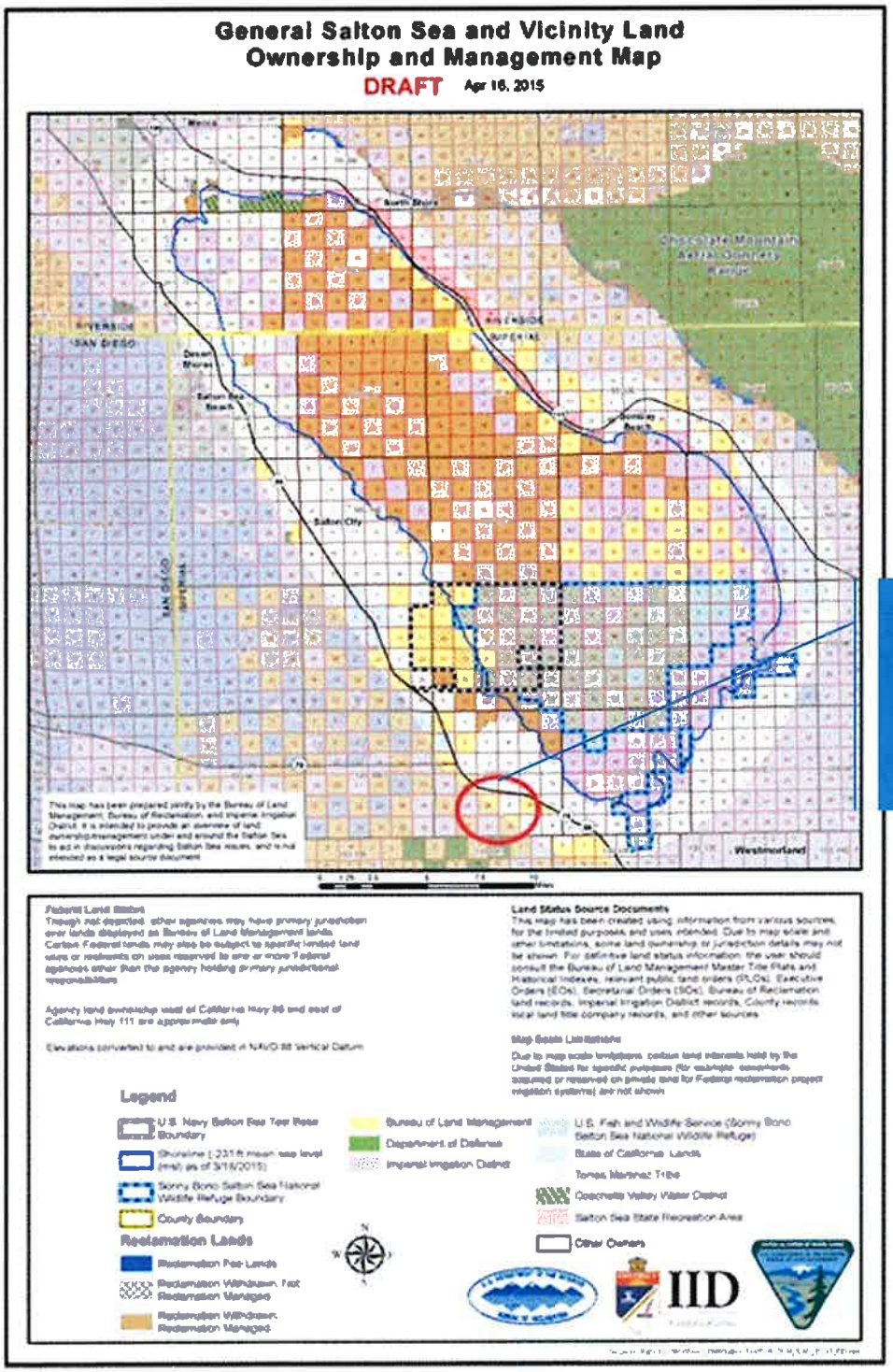
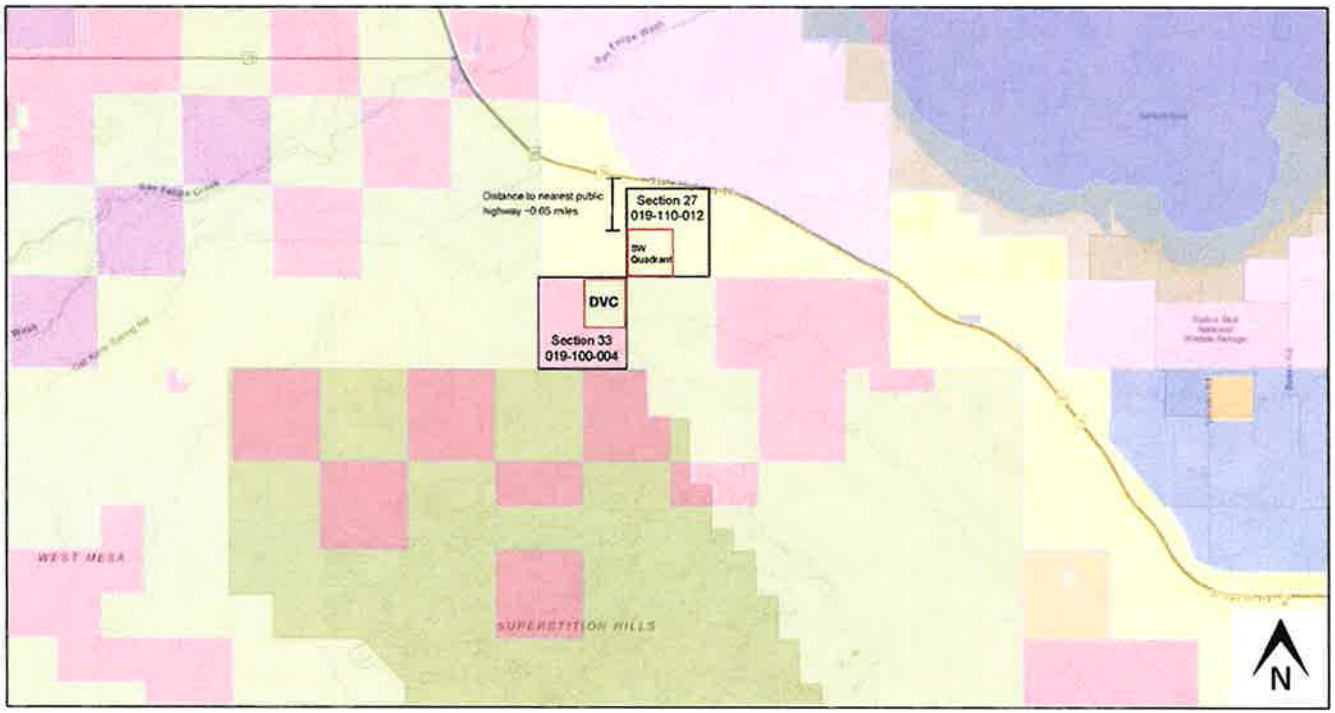


FIGURE A.4 – SITE SURROUNDINGS, ADJACENT LAND USE & OWNERSHIP



CalEnergy operates on Sections 33 and 27 and is adjacent to BLM and DOD undeveloped land

FIGURE A-5A – EXISTING ZONING DESIGNATIONS - FOR DESERT VALLEY COMPANY



September 10, 2018
Land Use Zoning MILITARY A-3 A-2 A-2-R M-2 S-2 BLM S-1 GS STATE

1:72,224
0 0.75 1.5 3 mi
0 1 2 4 km

Bureau of Land Management, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA

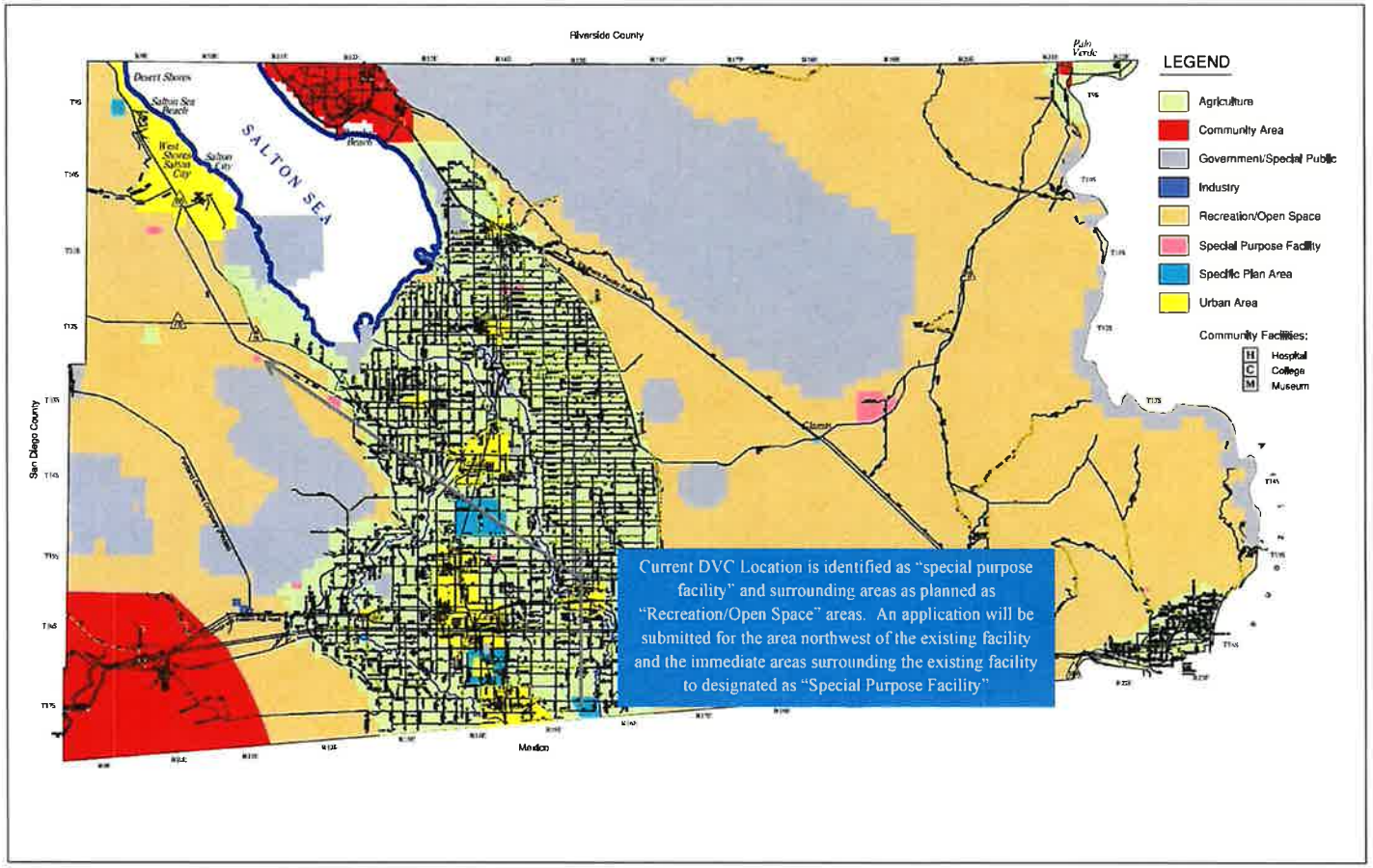
Legal Descriptions of Section 27 and 33 (Owned by Desert Valley Company)

1. Section 27: Township 12 South, Range 11 East, Southwest 1/4 of Section 27.
2. Section 33: Township 12 South, Range 11 East, Northeast 1/4 of Section 33.

Permitted Area of Disposal within Section 33, Northeast 1/4

DVC Active Disposal Site encompasses 28.9 acres

FIGURE A-5B – EXISTING LAND USE DESIGNATIONS - FOR DESERT VALLEY COMPANY



Imperial County General Plan

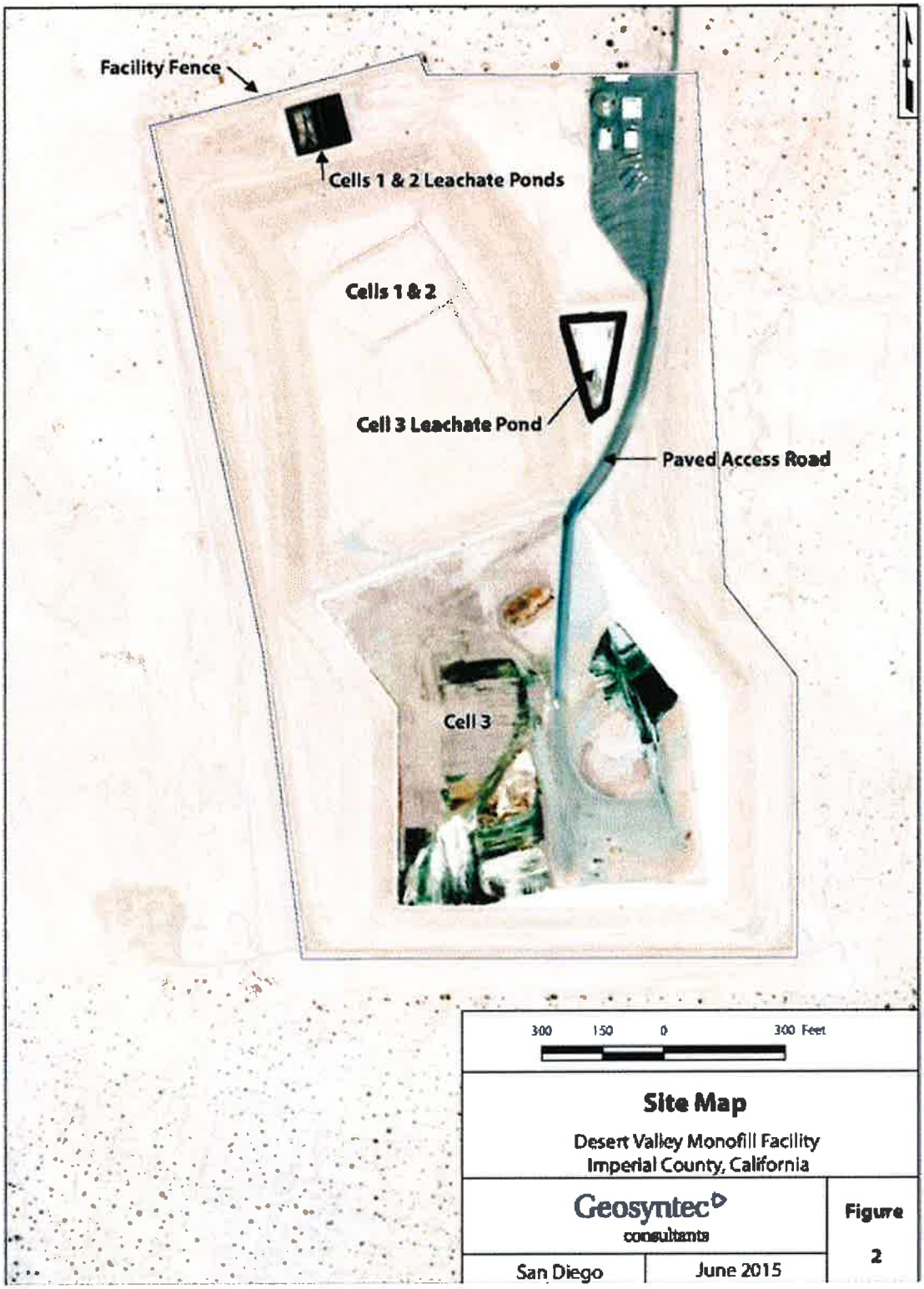
Imperial County Land Use Plan

Updated: March 1, 2007

Adopted November 9, 1993 by the Board of Supervisors through Minute Order # 18.0

Land Use Element

FIGURE A-6A – SITE LOCATION, ON-SITE FEATURES – GENERAL ARRANGEMENT



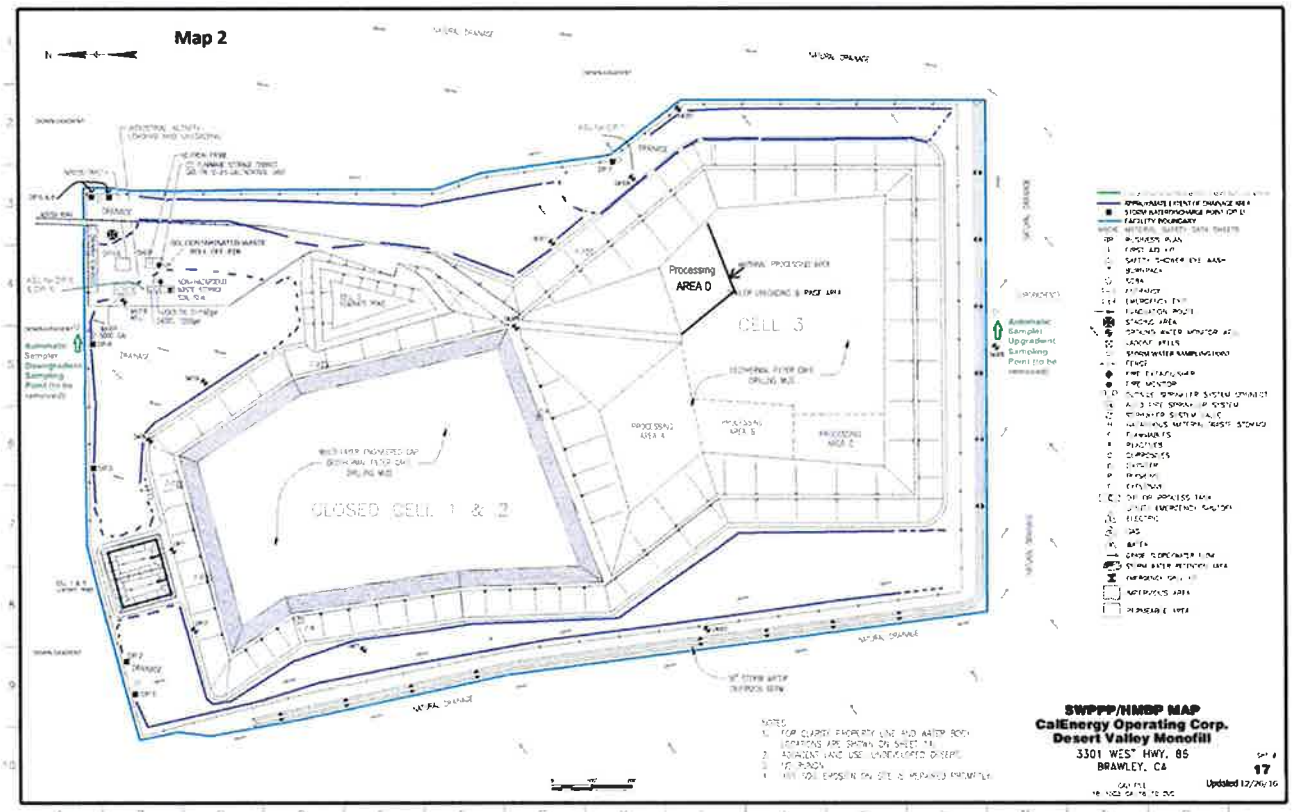


FIGURE A-6A – SITE LOCATION, ON-SITE FEATURES - Distances between Existing Features

Chemical Location	Chemical Name	Maximum Daily Amount	Units
Map B-4	Diesel Fuel No. 2	1000	gallons
Map B-4	Soil Seal Concentrate	1000	gallons
Map B-4	Unspecified Oil Contaminated Items	150	gallons
Map B-4	Lubricating oils, used	90	gallons
Map B-4	Gasoline	10	gallons
Map B-4	Oil	15	gallons
Map B-4	Misc Aerosols	24	cubic feet

FIGURE A-6C – SITE LOCATION, ON-SITE FEATURES -OFFICE AREA & AUXILIARY AREAS

FIGURE A.6A: INITIAL CELL 4 SITING STUDY AREAS – OCTOBER 2018

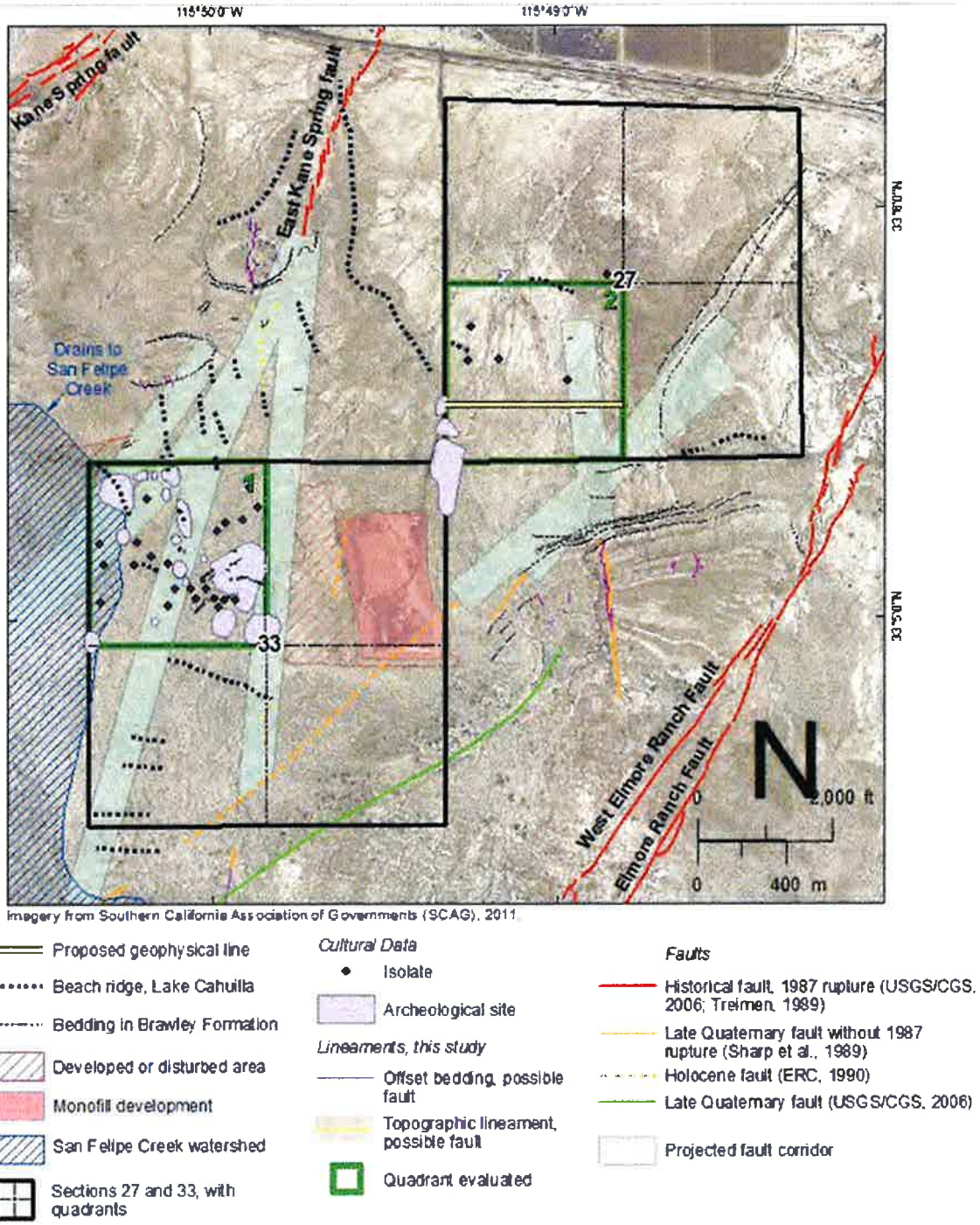


FIGURE A.6B: FUTURE CELL 4 SITING STUDY AREAS – OCTOBER 2018

Photograph of Section 27, Prior to Phase II Siting Study - September 13, 2018

Photograph of Section 33, Prior to Phase II Siting Study - September 13, 2018

ATTACHMENT B – CUP PERMIT MARKUP FOR CELL 4 ADDITION

Please refer to the computer disk provided by CalEnergy that accompanied the August 2018 submittal of this application for the markup of the permit or contact CalEnergy to request an electronic copy by e-mail.

ATTACHMENT C – PHOTOS OF DESERT VALLEY MONOFILL

DVC Monofill Front Entrance – Standing on Highway 86

Monofill waste is not readily visible to vehicles passing by to due raised soil/mound at along property boundary where sign is located.

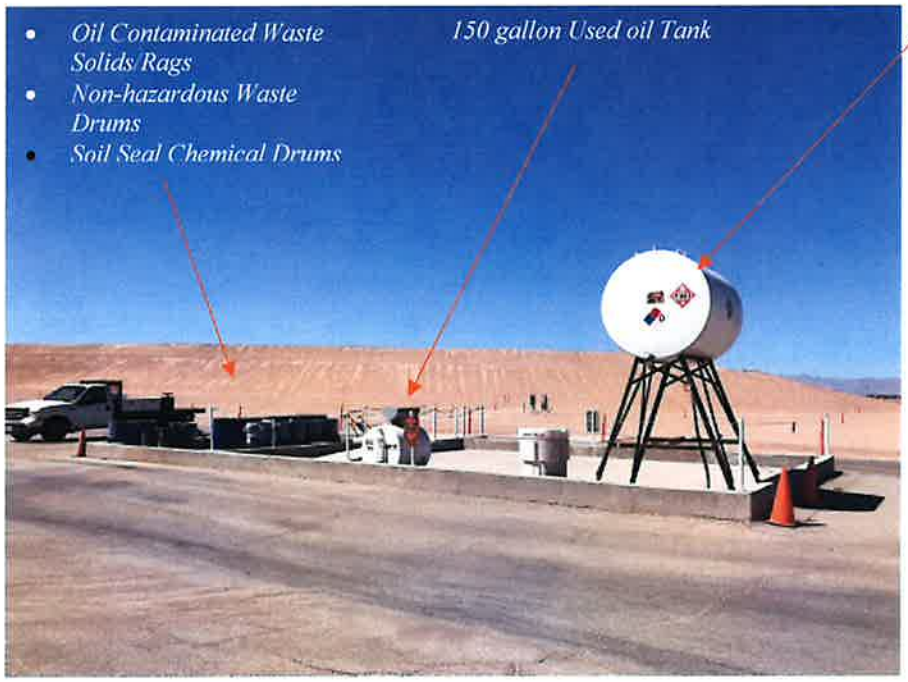
(Below) Private Driveway between Highway 86 and Monofill area

(Below) Driveway Continues to Active Fenced Monofill Area

End of Private Roadway & Start of Waste Storage Cell 3

Front of Administration Office – Will continue to be used following Cell 4 Addition

Hazardous & Non-Hazardous Material Containment



SUPPLEMENT I – PERMITS & PLANS
(Provided as a separate transmittal)

SUPPLEMENT II – SUPPLEMENT REPORTS

(Provided as a separate transmittal)

SUPPLEMENT III – FUGRO'S PHASE I & PHASE II SITING REPORTS
(Provided as a separate transmittal)