PROJECT REPORT

TO: ENVIRONMENTAL EVALUATION COMMITTEE

AGENDA DATE: February 8, 2024

FROM: PLANNING & DEVELOPMENT SERVICES

AGENDA TIME: 1:30 PM/ No.1

INFORMATIONAL ONLY

Ormat technologies, Inc. (Dogwood Geothermal Energy Project)

PROJECT TYPE: Conditional Use Permit (CUP) #23-0020, 21 and 22 SUPERVISOR DIST #2

054-250-017-000
059-020-001-000

LOCATION: 855, 602 & 690 Dogwood Rd APN: 054-250-031-000

Heber, CA 92249 PARCEL SIZE: a portion of 439.92AC.

GENERAL PLAN (existing) Heber Specific Plan Area/Urban Area GENERAL PLAN (proposed) N/A

ZONE (existing) A-2-G-SPA (General Agriculture Zone) ZONE (proposed) N/A

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

PLANNING COMMISSION DECISION: HEARING DATE: _____

☐ APPROVED ☐ DENIED ☐ OTHER

PLANNING DIRECTORS DECISION: HEARING DATE: _____

☐ APPROVED ☐ DENIED ☐ OTHER

ENVIROMENTAL EVALUATION COMMITTEE DECISION: HEARING DATE: 02/08/2024

INITIAL STUDY: #23-0026

☐ NEGATIVE DECLARATION ☐ MITIGATED NEG. DECLARATION ☒ EIR

DEPARTMENTAL REPORTS / APPROVALS:

PUBLIC WORKS	☒ NONE	☐ ATTACHED
AG COMMISSIONER	☐ NONE	☒ ATTACHED
APCD	☒ NONE	☐ ATTACHED
DEH/E.H.S.	☒ NONE	☐ ATTACHED
FIRE / OES	☒ NONE	☐ ATTACHED
OTHER	CEO	

REQUESTED ACTION:

(See Attached)

Planning & Development Services
801 MAIN ST., EL CENTRO, CA 92243 442-265-1736
(Jim Minnick, Director)

Initial Study and NOP

Dogwood Geothermal Energy Project

Initial Study #: 23-0026

CUP #s: 23-0020, -0021, and -0022

Imperial County CA

January 2024

[redacted]

Reviewed by:

County of Imperial

Planning & Development Services Department

801 Main Street

El Centro, CA 92243

Prepared by:

HDR Engineering, Inc.

591 Camino de la Reina, Suite 300

San Diego, CA 92108

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Contents

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Introduction

A. Purpose

This document is a ☐ policy-level; ☒ project-level Initial Study for evaluation of potential environmental impacts resulting with the proposed Dogwood Geothermal Energy Project.

B. CEQA Requirements and the Imperial County's Rules and Regulations for Implementing CEQA

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

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

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

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

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

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

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

Pursuant to the County of Imperial's CEQA Regulations, Guidelines for the Implementation of CEQA, depending on the project scope, the County of Imperial Board of Supervisors, Planning

Commission and/or Planning Director is designated the Lead Agency, in accordance with Section 15050 of the CEQA Guidelines. The Lead Agency is the public agency which has the principal responsibility for approving the necessary environmental clearances and analyses for any project in the County.

C. Intended Uses of Initial Study and Notice of Preparation

This Initial Study and Notice of Preparation are informational documents which are intended to inform County of Imperial decision makers, other responsible or interested agencies, and the general public of potential environmental effects of the proposed applications. The environmental review process has been established to enable public agencies to evaluate environmental consequences and to examine and implement methods of eliminating or reducing any potentially adverse impacts. While CEQA requires that consideration be given to avoiding environmental damage, the Lead Agency and other responsible public agencies must balance adverse environmental effects against other public objectives, including economic and social goals.

The Initial Study and Notice of Preparation, prepared for the project will be circulated for a period of no less than 35 days for public and agency review and comments.

D. Contents of Initial Study and Notice of Preparation

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

SECTION 1

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

SECTION 2

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

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

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

SECTION 3

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

E. Scope of Environmental Analysis

For evaluation of environmental impacts, each question from the Environmental Checklist Form is summarized and responses are provided according to the analysis undertaken as part of the Initial Study. Impacts and effects will be evaluated and quantified, when appropriate. To each question, there are four possible responses, including:

1. No Impact: A "No Impact" response is adequately supported if the impact simply does not apply to the proposed applications.
2. Less Than Significant Impact: The proposed applications will have the potential to impact the environment. These impacts, however, will be less than significant; no additional analysis is required.
3. Less Than Significant with Mitigation Incorporated: This applies where incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact."
4. Potentially Significant Impact: The proposed applications could have impacts that are considered significant. Additional analyses and possibly an EIR could be required to identify mitigation measures that could reduce these impacts to less than significant levels.

F. Policy-Level or Project-Level Environmental Analysis

This Initial Study will be conducted under a ☐ policy-level, ☒project-level analysis.

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

G. Tiered Documents and Incorporation by Reference

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

1. Tiered Documents

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

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

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

"Agencies are encouraged to tier the environmental analyses which they prepare for separate but related projects including the general plans, zoning changes, and development

projects. This approach can eliminate repetitive discussion of the same issues and focus the later EIR or negative declaration on the actual issues ripe for decision at each level of environmental review. Tiering is appropriate when the sequence of analysis is from an EIR prepared for a general plan, policy or program to an EIR or negative declaration for another plan, policy, or program of lesser scope, or to a site-specific EIR or negative declaration."

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

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

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

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

2. **Incorporation by Reference**

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

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

- The incorporated document must be available to the public or be a matter of public record (CEQA Guidelines Section 15150[a]). The General Plan EIR is available, along with this document, at the County of Imperial Planning & Development Services Department, 801 Main Street, El Centro, CA 92243 Ph. (442) 265-1736.
- This document must be available for inspection by the public at an office of the lead agency (CEQA Guidelines Section 15150[b]). These documents are available at the County of Imperial Planning & Development Services Department, 801 Main Street, El Centro, CA 92243, Ph. (442) 265-1736.
- These documents must summarize the portion of the document being incorporated by reference or briefly describe information that cannot be summarized. Furthermore, these documents must describe the relationship between the incorporated information and the analysis in the tiered documents (CEQA Guidelines Section 15150[c]). As discussed above, the tiered EIRs address the entire project site and provide background and inventory information and data which apply to the project site. Incorporated information and/or data will be cited in the appropriate sections.

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

The material to be incorporated in this document will include general background information (CEQA Guidelines Section 15150[f])

Environmental Checklist Form

1. **Project Title:** Dogwood Geothermal Energy Project
2. **Lead Agency name and address:** Imperial County Planning & Development Services Department, 801 Main Street, El Centro, CA 92243
3. **Contact person and phone number:** Luis Valenzuela, Planner I, 442-265-1736
4. **Project location:** The project site is located on approximately 125 acres of privately-owned land in the southern portion of Imperial County, California, approximately one mile south of the City of Heber jurisdictional limit and approximately 0.5 miles west from the City of Calexico jurisdictional limit. The project site is within portions of three parcels: Assessor Parcel Numbers (APN) 054-250-031, 059-020-001, and 054-250-017. APN 054-250-31 is within the existing Heber 2 Geothermal Energy Complex (HGEC) located at 855 Dogwood Road, Heber, CA, and APN 059-020-001 and APN 054-250-017 are immediately southeast and east, respectively, of the HGEC.
5. **Project sponsor's name and address:**
   OrHeber 3, LLC, Heber Field Company, LLC, and the Second Imperial Geothermal Company (collectively, the "Applicants", and all wholly owned subsidiaries of Ormat Technologies, Inc. [Ormat])
   6140 Plumas Street
   Reno, NV 89519-6075
6. **General Plan Designation:** Agriculture, Heber Specific Plan Area
7. **Zoning:** A-2-G-SPA (General Agriculture with a Geothermal Energy Zone Overlay in a Specific Plan Area) and A-2-G-U (General Agriculture with a Geothermal Energy Zone Overlay in an Urban Area)
8. **Description of project:** Ormat has filed three separate Conditional Use Permits (CUP) with the County for the construction and operation of various facilities. The three CUP applications consist of the following:

   Dogwood Geothermal Energy Project – CUP No. 23-0020

   - One (1) 25 net megawatt (MW) Integrated Two Level Unit (ITLU) Air Cooled ORMAT Energy Converter (OEC) generating unit
   - Two (2) 20,000-Gallon Isopentane Tanks for Motive Fluid Storage
   - One (1) Project substation for transmission to the grid
   - Ancillary and auxiliary facilities (including, compressed air system and fire prevention system)
   - A seven (7) MW solar photovoltaic (PV) facility dedicated to the Dogwood geothermal plant
   - Medium voltage distribution cable from the Dogwood solar facility to Dogwood geothermal plant (OEC). The cable would be co-located along an existing above ground pipeline.

Heber 2 Solar Energy Project – CUP No. 23-0021

- A fifteen (15) MW solar PV facility dedicated to the Heber 2 geothermal plant

Heber Field Company (HFC) Geothermal Wells and Pipeline Project – CUP No. 23-0022

- Three (3) geothermal production wells
- One (1) new geothermal injection well
- Brine pipelines (approximately 4,500 linear feet)

Collectively, these three CUP applications are herein referred to as the "project."

9. **Surrounding land uses and setting: Briefly describe the project's surroundings:** The project site is surrounded by a mix of agricultural fields, geothermal facilities (Heber 2, Heber South, and Goulds 2), Imperial Solar 1 LLC solar facility, and industrial uses.

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

    - Department of Public Works – Ministerial permits (building, grading, encroachment)
    - Imperial County Air Pollution Control District – Fugitive dust control plan, Authority to construct
    - California Regional Water Quality Control Board – Notice of Intent for General Construction Permit
    - Imperial Irrigation District – Water supply agreement/permit for water use lease agreement

11. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?**

    Yes, the Campo Band of Mission Indians and Fort Yuma-Quechan Indian Tribe. These tribes were sent an AB 52 consultation request letter on January 19, 2024.

Environmental Factors Potentially Affected

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

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

Environmental Evaluation Committee Determination

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

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

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

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

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

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

CALIFORNIA DEPARTMENT OF FISH AND GAME DE MINIMIS IMPACT FINDING:

☐Yes ☐No

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

Jim Minnick, Director of Planning/EEC Chairman

Signature

Date:

Project Summary

Project Location

The project site is located on approximately 125 acres of privately-owned land in the southern portion of Imperial County, California, approximately one mile south of the City of Heber jurisdictional limit and approximately 0.5 miles west from the City of Calexico jurisdictional limit (Figure 1). The project site is on three parcels: Assessor Parcel Numbers (APN) 054-250-031, 059-020-001, and 054-250-017 (Figure 2). APN 054-250-31 is within the existing Heber 2 Geothermal Energy Complex (HGEC) located at 855 Dogwood Road, Heber, CA, and APN 059-020-001 and APN 054-250-017 are immediately southeast and east, respectively, of the HGEC.

1. Dogwood Geothermal Energy Project – CUP No. 23-0020

The proposed Dogwood geothermal power plant would be located within the existing fenceline of the HGEC, operated by the Second Imperial Geothermal Company, a subsidiary of ORMAT which includes the Heber 2, Heber South, and Goulds 2 geothermal energy facilities located at 855 Dogwood Road, Heber, CA (APN 054-250-31). The proposed geothermal power plant is generally located north of Jasper Road and west of South (S) Dogwood Road.

The proposed 7 MW parasitic solar photovoltaic (PV) would be located southeast of the HGEC in the central portion of APN 059-020-001. APN 059-020-001 is located south of East (E) Willoughby Road and east of S Dogwood Road.

2. Heber 2 Solar Energy Project – CUP No. 23-0021

The proposed Heber 2 15 MW parasitic solar PV facility would be located southeast of the HGEC in the northern portion of APN 059-020-001.

3. HFC Geothermal Wells and Pipeline Project – CUP No. 23-0022

The new geothermal production wells and associated pipeline(s) (approximately 4,500 linear feet) will be split between two parcels. Two of these wells would be located within APN 059-020-001 with a small segment of pipeline (approximately 1,000 feet) developed within APN 059-020-001 connecting to the existing pipeline network. A third well would be installed adjacent to an existing geothermal well approximately 1,500 feet due east of the HGEC (APN 054-250-017).

Project Summary

Ormat has filed three separate CUPs with the County for the construction and operation of various facilities. An overview of the project facilities are shown in Figure 3. The three CUP applications consist of the following:

1. Dogwood Geothermal Energy Project – CUP No. 23-0020

The Dogwood Geothermal Plant and Solar Energy Facility includes a 25 net MW geothermal plant and associated ancillary and auxiliary facilities, new substation, 7 MW solar facility, and medium voltage distribution cable from the proposed solar facility to the geothermal plant. These project components are described in detail below and shown in Figure 4.

a. **ORMAT Energy Converter (Geothermal Energy Production Unit):** The proposed ORMAT Energy Converter (OEC) unit would be a two-turbine combined cycle binary unit, operating on a subcritical Rankine cycle, with isopentane as the motive fluid. The OEC system consists

of a generator, turbines, a vaporizer, Air Cooled condensers, preheaters and recuperators, and an evacuation skid/vapor recovery maintenance unit (VRMU) for purging and maintenance events. The design capacity for the unit is 25 MW (net).

b. **Isopentane Storage Tanks:** Two double-walled 20,000-gallon above-ground storage tanks would be installed for motive fluid (isopentane) storage. Numerous safety and fire prevention measures would be installed on/near the ABST, including the following:

   - Concrete foundations with blast walls separating the tank from the OEC.
   - An automated water suppression system.
   - Concrete containment areas.
   - Two flame detectors, which will immediately detect any fire and immediately trigger the automatic fire suppression system.
   - A gas detector, which will immediately detect any isopentane leak and notify the control room (manned 24/7).

c. **Cooling Tower:** A cooling tower array will perform air-cooling operations of the geothermal fluid. The cooling tower will include a series of heat-absorbing evaporators and condensers to capture and transfer heat stored in the geothermal fluid. No water is necessary.

d. **Dogwood Substation:** The proposed Dogwood geothermal plant will require a new substation to step up the low voltage electrical energy generated at the Dogwood geothermal unit to the higher voltage required for commercial transmission. No upgrades to off-site transmission facilities are necessary and the new Dogwood substation will connect directly to the existing point of interconnection with the Imperial Irrigation District (IID) controlled grid. The substation will include a 13.8 kV circuit breaker to protect the electric generator, a minimum of 80 megavolt ampere 13.8 kV/115 kV transformer, and 115 kV potential and current transformers for metering and system protection. A main control building would contain instrumentation and telecommunications equipment located within the within the greater HGEC.

   The substation footprint would measure up to 145 feet by 66 feet and would be surrounded by an eight-foot-tall chain link fence with vehicle and personnel access gates. The surface of the substation would be covered by gravel and the substation equipment would be placed onto concrete foundations.

e. **Parasitic Solar Energy Facility:** A 7 MW solar facility would provide supplemental/auxiliary energy to the proposed Dogwood geothermal plant. The solar facility is classified as behind-the-meter and would provide supplemental energy directly to the Dogwood geothermal unit (OEC). This energy would not enter the transmission grid. The solar facility will effectively reduce the margin between gross and net geothermal energy generation, allowing for the more efficient generation of geothermal energy and to allow more geothermal energy to enter the grid.

f. **Medium Voltage Distribution Line:** The energy generated by the proposed Dogwood solar facility would be collected at an on-site XMD and switch on the western edge of the Heber 2 Project site, adjacent to South (S) Dogwood Road. A medium voltage distribution cable would cross S Dogwood Road and be attached via trays to the existing pipeline that runs west before turning north to cross the Beech Drain and Main Canal at the existing above-ground pipeline span. The cable would continue to follow the existing pipeline alignment and

connect into the new Dogwood OEC. No new footings or foundations are required for the cable trays.

2. **Heber 2 Solar Energy Project – CUP No. 23-0021**

   a. **Parasitic Solar Energy Facility:** A 15 MW solar facility would provide supplemental/auxiliary energy to the existing Heber 2 geothermal plant (Figure 5). The solar facility is classified as *behind-the-meter* and would provide supplemental energy directly to the Heber 2 geothermal unit (OEC). This energy would not enter the transmission grid. The solar facility will effectively reduce the margin between gross and net geothermal energy generation, allowing for the more efficient generation of geothermal energy and to allow more geothermal energy to enter the grid.

      The energy generated by the solar facility would be collected by an on-site XMD and switch and transmitted along via a medium voltage distribution cable (as described above and shown in Figure 4).

3. **HFC Geothermal Wells and Pipeline Project – CUP No. 23-0022**

   a. **Geothermal Production and Injection Wells:** Production wells flow geothermal fluid to the surface, and injection wells are used to inject geothermal fluid from the energy plant back into the geothermal reservoir. Injection ensures the longevity and renewability of the geothermal resource. The Applicant proposes to develop three geothermal production wells, all within the Imperial County Geothermal Overlay Zone. The wells will be sited at three of six potential locations within APNs 059-020-001 and 054-250-017 (Figure 6). The injection well would be installed within the HGEC, immediately next to the proposed Dogwood OEC (Figure 6).

      During well installation, each well pad would accommodate a drilling rig, support equipment, portable bathroom, baker tanks, and project vehicles. Each well pad would be prepared to create a level pad for the drill rig and a graded surface for the support equipment. Stormwater runoff from undisturbed areas around the constructed drill pads would be directed into ditches surrounding the drill pad and back onto undisturbed ground, consistent with BMPs for storm water identified in "Drilling and Operating Geothermal Wells in California" (CalGem PR7S). The site would be graded to prevent fugitive stormwater runoff off the well pad and has been designed to withstand a 100-year storm event.

      Each well would be drilled with a rotary drill rig similar to those used to drill oil and gas wells. The production wells would each be drilled and cased to a design depth of approximately 5,000 feet. Following the cementing of the surface casing, blowout prevention equipment (BOPE) would be installed. During drilling operations, a minimum of 10,000 gallons of cool water and 12,000 pounds of inert, non-toxic barite (barium sulfate) would be stored at each well pad (as appropriate for the type of material) for use in preventing uncontrolled well flow, as necessary.

      Once the well is completed, a well head will be installed and connected to the pipeline network to convey geothermal fluids. A motor control building would be installed next to the well head to provide system controls, sensors, and treatment systems. During normal well field operations, total geothermal fluid production rates are expected to be approximately 15,150 gallons per minute (gpm) at 280°F. Injection would occur at the same approximate levels (i.e., 15,150 gpm) but at lower temperatures of near 170°F.

b. **Geothermal Fluid Pipeline:** As shown in Figure 6, approximately 4,500 feet (0.85 miles) of geothermal fluid production pipeline are proposed for installation on APN 059-020-001. This new segment of pipeline will connect to an existing pipeline collection point that will deliver the geothermal brine to the proposed Dogwood OEC. The well on APN 054-250-017 would connect to the existing pipeline segment adjacent to the proposed well pad site. The pipeline would be used to transport geothermal fluid from the production wells to the power plants.

   Construction of the pipeline network would begin by vertically auguring nominal 24-inch diameter holes into the ground about three to five feet deep at approximately 30-foot intervals along the pipeline route. Two holes for pipeline supports would be drilled at each anchor point. Dirt removed from the holes would be cast on the ground adjacent to each hole. The steel pipe "sleeper" would be placed in the hole and concrete poured to fill the hole slightly above the ground surface.

   After the anchor points are installed, approximately 30-foot-long steel pipe sections would be delivered and placed along the pipeline construction corridor. A small crane would lift the pipe sections onto the pipe supports and temporary pipe jacks so that they could be welded together into a solid pipeline. Once welded and the welds tested, the pipe would be jacketed with insulation and an aluminum sheath (appropriately colored, likely covert green, to blend with the area).

   When completed, the top of the new geothermal pipelines would average three to four feet above the ground surface to accommodate terrain undulations and to facilitate movement of wildlife. Electrical power and instrumentation cables for the wells would then either be installed in steel conduit constructed along the pipe or hung by cable from pipe along the pipeline route.

Environmental Setting

The project site is surrounded by a mix of agricultural fields, geothermal facilities (Heber 2, Heber South, and Goulds 2), Imperial Solar 1 LLC solar facility, and industrial uses.

General Plan Consistency

The proposed project is located within an unincorporated area of the County. The existing General Plan land use designations are "Agriculture" and "Heber Specific Plan Area." The project site is currently zoned A-2-G-SPA (General Agriculture with a Geothermal Energy Zone Overlay in a Specific Plan Area) and A-2-G-U (General Agriculture with a Geothermal Energy Zone Overlay in an Urban Area). The Geothermal Energy Zone allows for "Major Geothermal Projects" to be permitted through a CUP process.

Figure 1. Regional Location

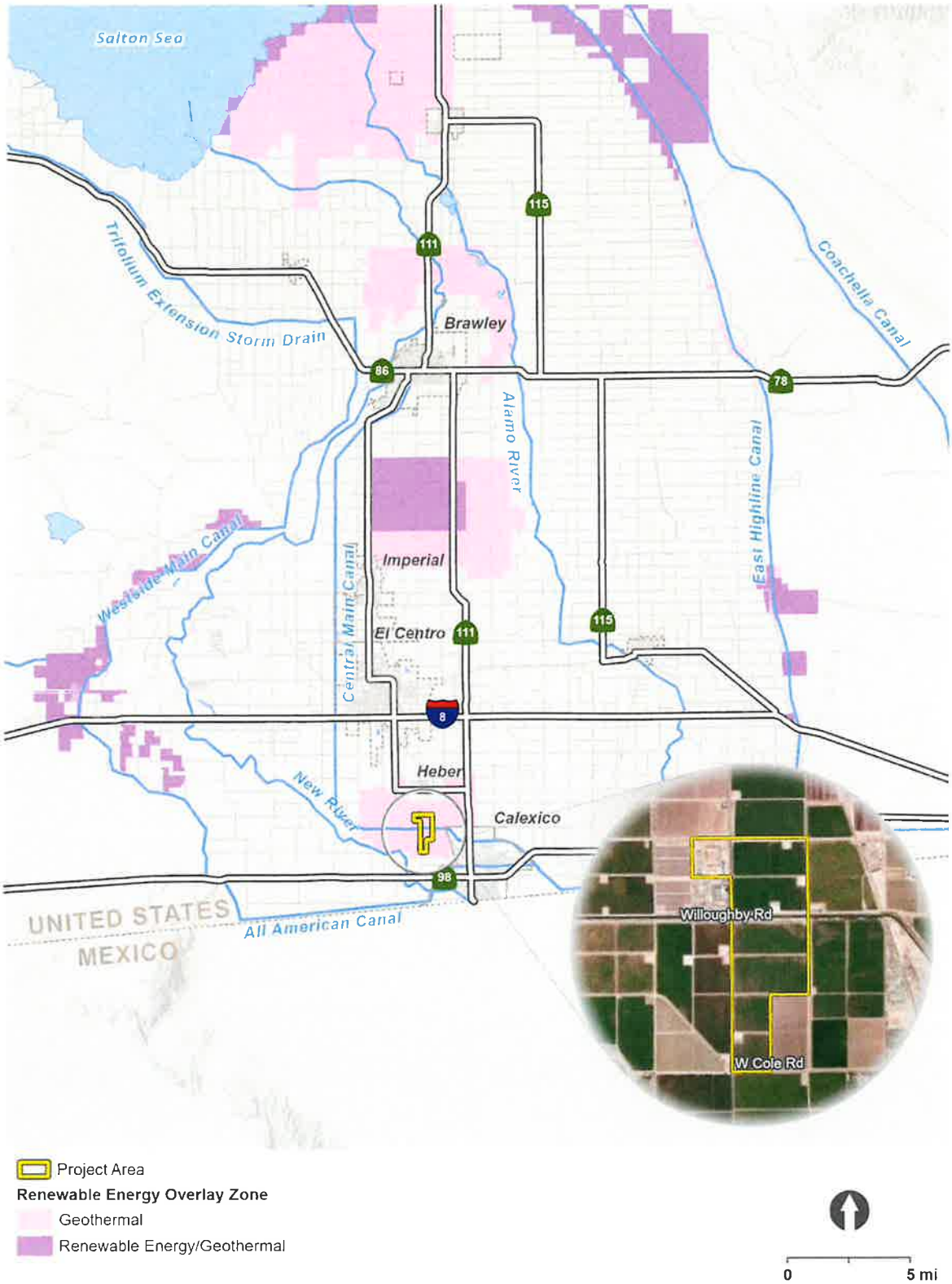


Figure 2. Project Site

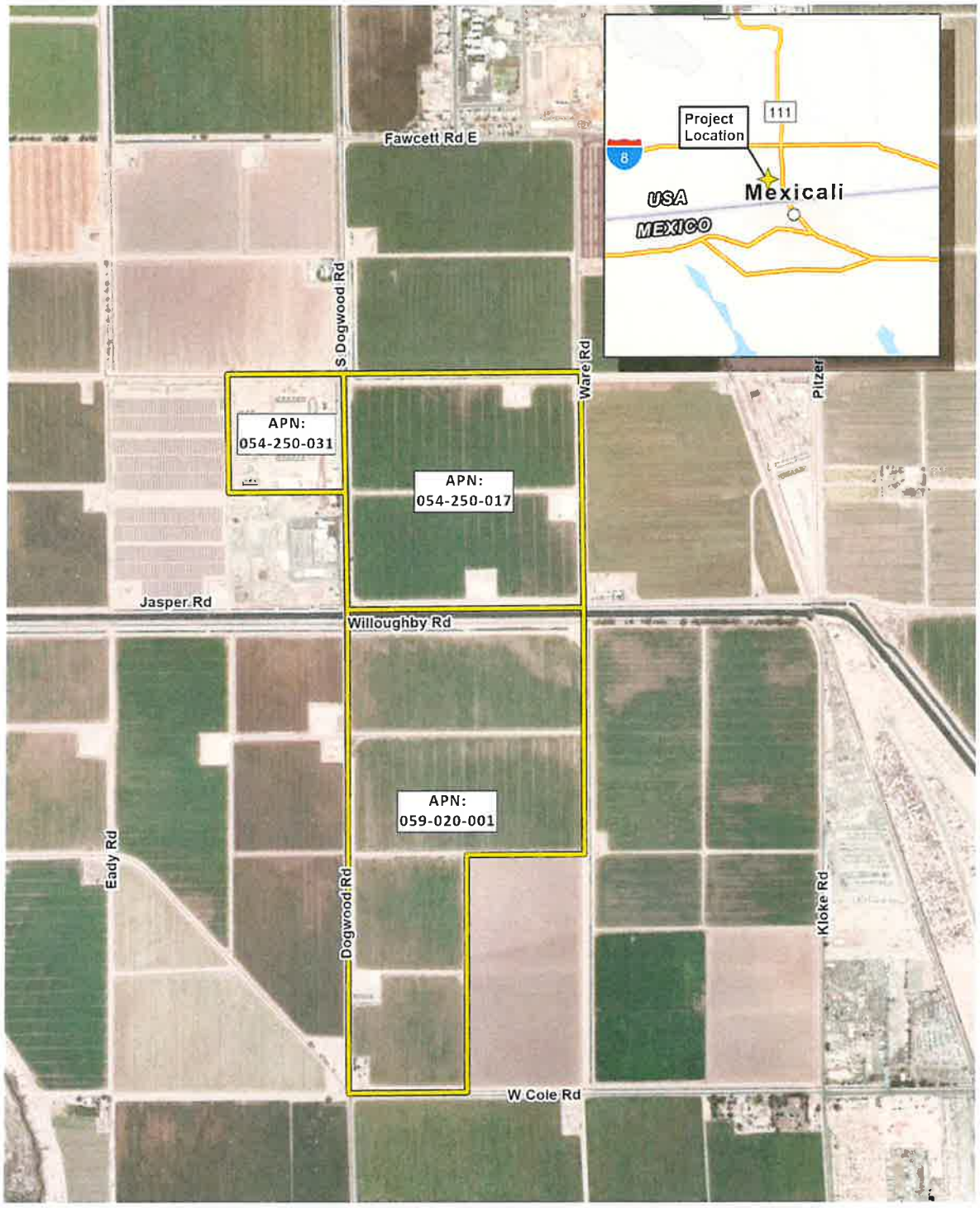


Figure 3. Project Overview

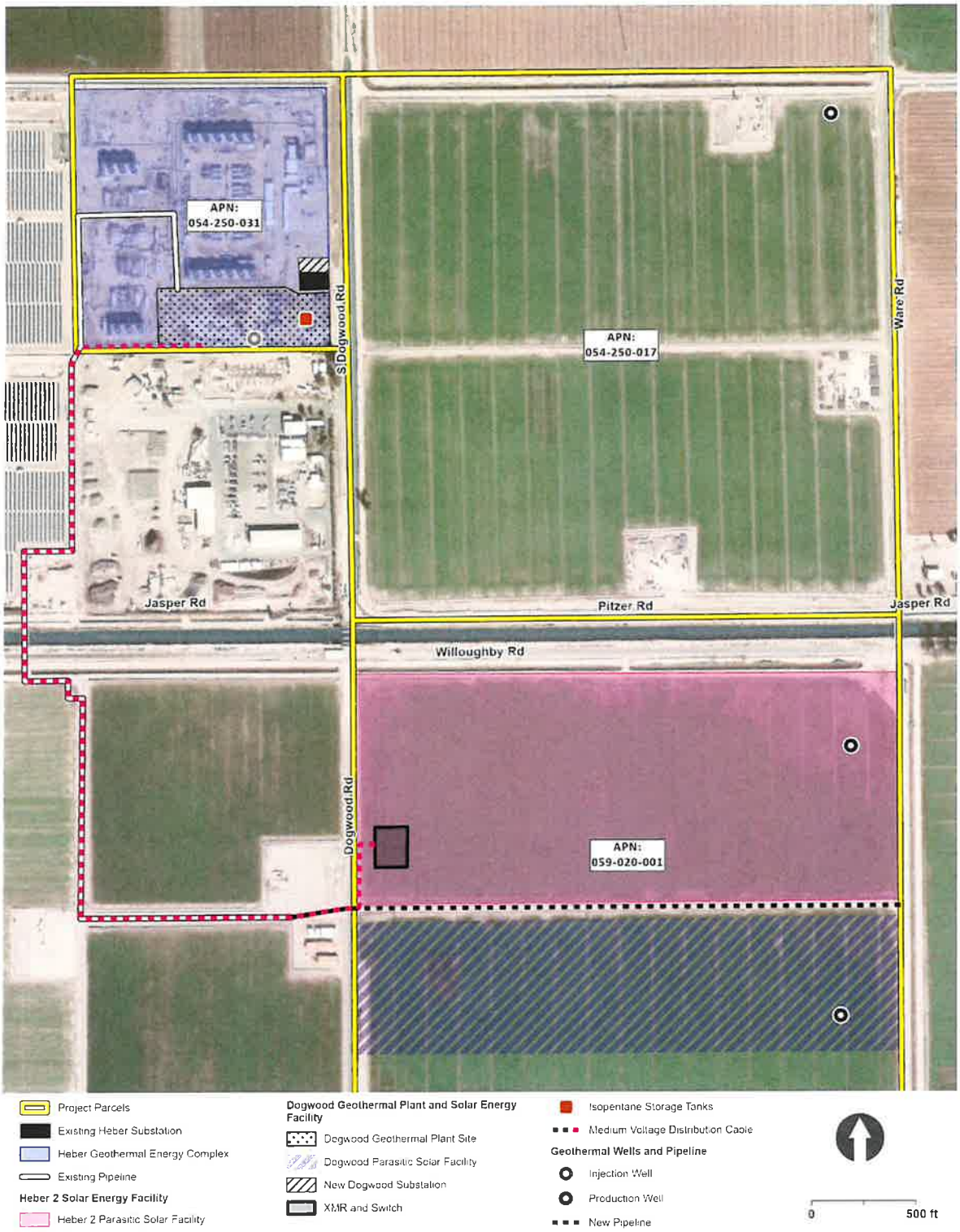


Figure 4. Dogwood Geothermal Plant and Solar Energy Facility Components

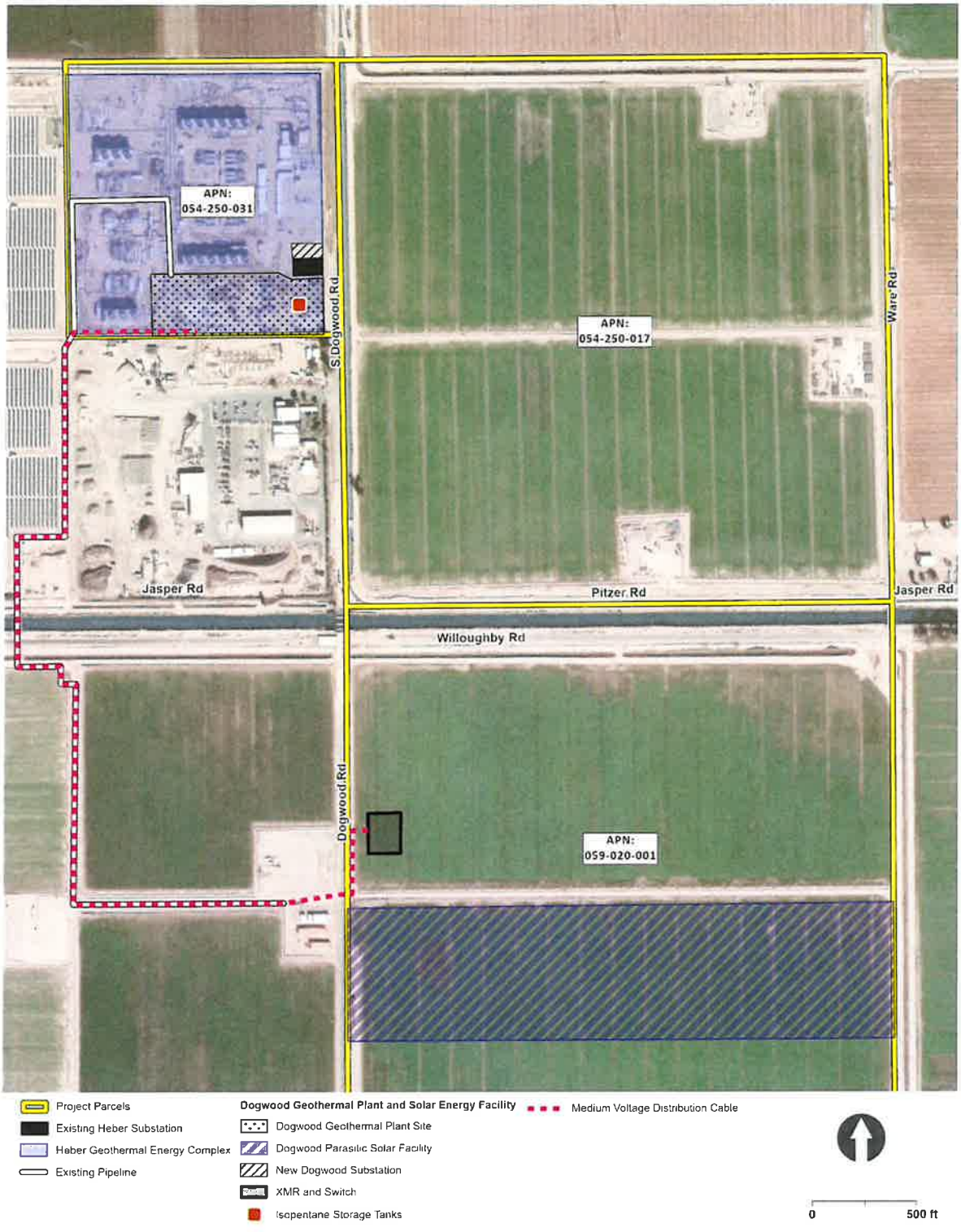


Figure 5. Heber 2 Solar Energy Facility Components

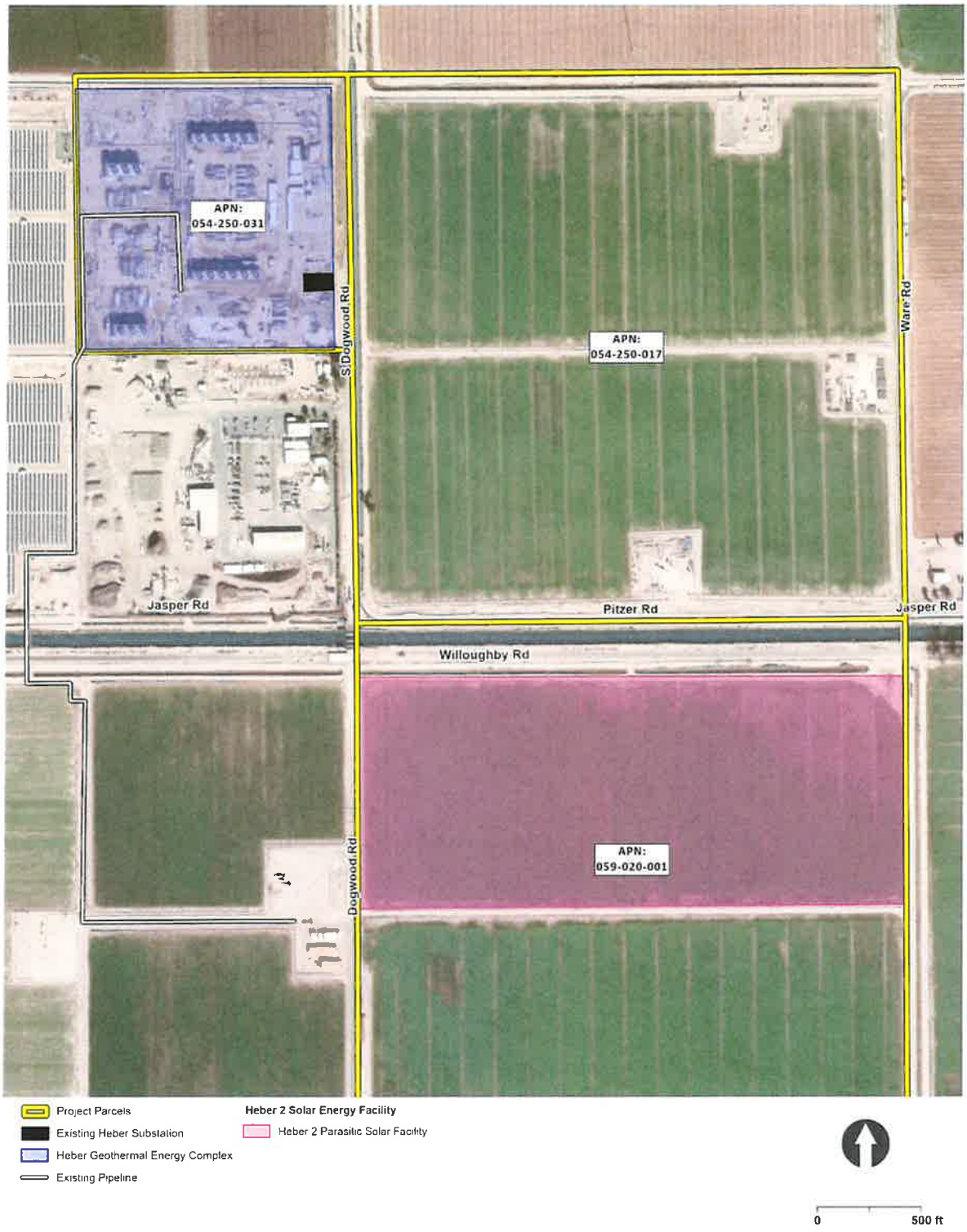
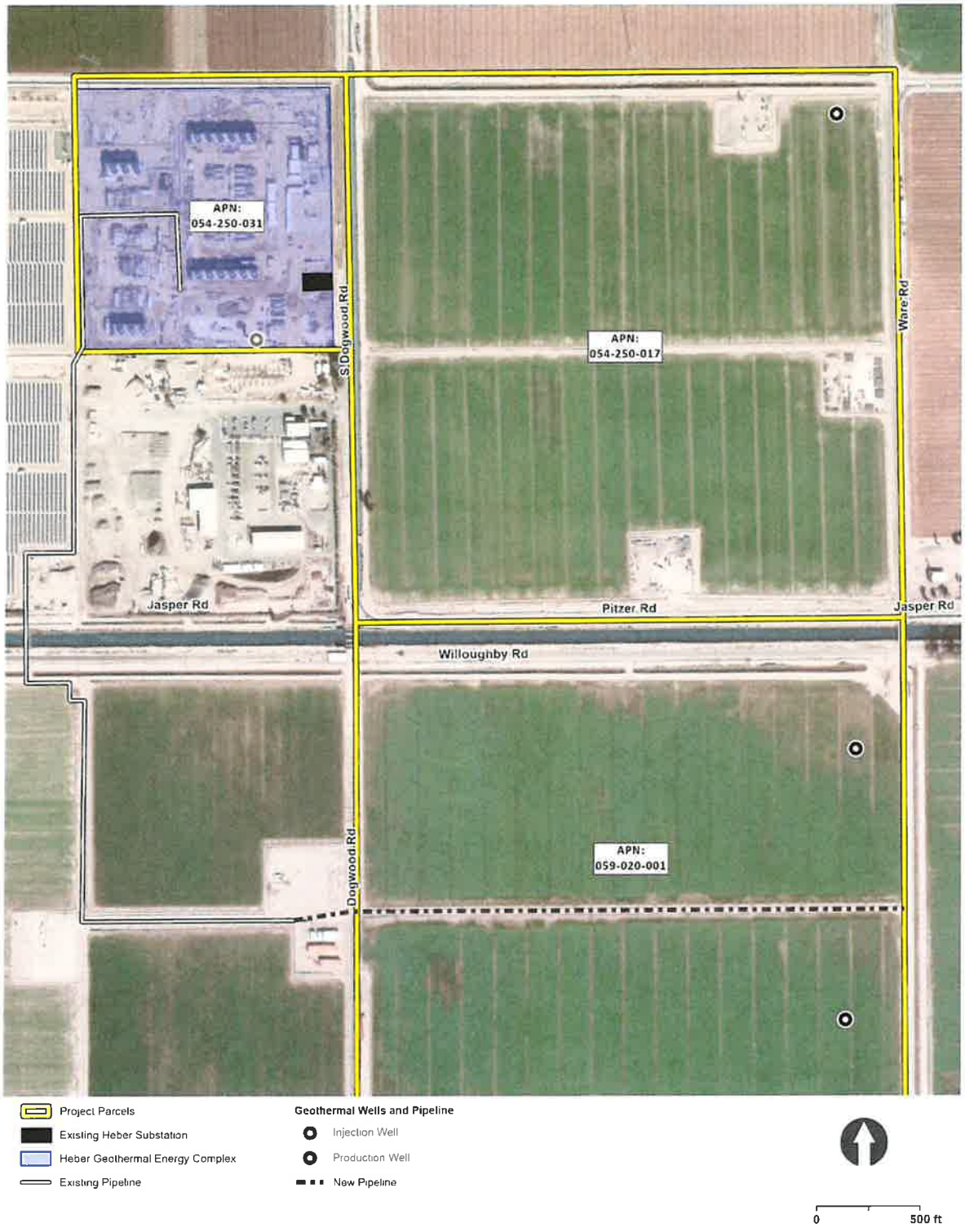


Figure 6. HFC Geothermal Wells and Pipeline Components



Evaluation of Environmental Impacts

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors, as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
    a. Earlier Analysis Used. Identify and state where they are available for review.
    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
    a. The significance criteria or threshold, if any, used to evaluate each question; and
    b. The mitigation measure identified, if any, to reduce the impact to less than significance.

I. Aesthetics

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☒	☐	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☒	☐	☐	☐

Impact Analysis

a) **No Impact.** The project site is not located within an area that has been formally identified as a federal, state, or county scenic vista. No scenic vistas or areas with high visual quality would be disrupted. Thus, no impact is identified for this issue area and no further analysis is warranted.

b) **No Impact.** According to the California Department of Transportation (Caltrans) California Scenic Highway Mapping System (Caltrans 2018), the project site is not located within a state scenic highway corridor, nor are there any state scenic highways located in proximity to the project site. The nearest eligible State scenic highway is the segment of the Sunset Cliffs Boulevard/State Route 98 west of Ocotillo. The project is located approximately 29 miles east of Ocotillo and therefore would not be visible from the project site. The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway. Therefore, no impact is identified for this issue area and no further analysis is warranted.

c) **Potentially Significant Impact.** Although the project site is not located near a scenic highway or designated scenic vista, the proposed project may result in a change to the look and rural character of the area. Therefore, a potentially significant impact is identified for this issue area. A visual assessment will be prepared for the project and this issue will be addressed in the EIR.

d) **Potentially Significant Impact.** The proposed project is located in a rural undeveloped area of Imperial County. There are no established residential neighborhoods immediately adjacent to the project site. Minimal lighting is required for project operation and is limited to safety and security functions. All lighting will be directed away from any public right-of-way; however, there is no heavily traveled public roadway in immediate proximity to the project site. The solar panels will be constructed of low reflective materials; therefore, it is not anticipated that they would result in creating glare. Although the proposed project is not expected to create a new source of substantial light or glare affecting day or nighttime views, a glint and

glare assessment will be prepared for the project and this issue will be addressed in the EIR. Therefore, a potentially significant impact is identified for this issue area.

II. Agriculture and Forestry Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☒	☐	☐	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☒	☐	☐	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☒	☐	☐	☐

Impact Analysis

a) **Potentially Significant Impact.** According to the California Department of Conservation's California Important Farmland Finder, portions of the project site are designated as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland (California Department of Conservation 2020). Therefore, implementation of the proposed project has a potential to result in the conversion of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland to non-agricultural use. This is considered a potentially significant impact, and this issue will be analyzed in further detail in the EIR.

b) **Potentially Significant Impact.** The project site is currently zoned A-2-G-SPA (General Agriculture with a Geothermal Energy Zone Overlay in Specific Plan Areas) and A-2-G-U (General Agriculture with a Geothermal Energy Zone Overlay in an Urban Area). Pursuant to Title 9, Division 5, Chapter 8, the following uses are permitted in the A-2 zone subject to approval of a CUP from Imperial County:

y) Electrical generation plants (less than 50 MW) excluding nuclear or coal fired and meeting requirements in Division 17

z) Electrical substations in an electrical transmission system (500 kv/230 kv/161 kv)

bb) Facilities for the transmission of electrical energy (100-200 kv)

ii) Geothermal test facilities, Intermediate projects, and major exploratory wells, meeting requirements in Division 17

rr) Major Geothermal projects per Division 17

ww) Resource extraction and energy development as per Division 17

aaa) Solar energy electrical generator

Because the project site is located on lands designated for agricultural uses, this issue will be analyzed further in the EIR.

As of December 31, 2018, all Williamson Act contracts in Imperial County have been terminated. The project site is not located on Williamson Act contracted land. Therefore, the proposed project would not conflict with a Williamson Act contract and no impact is identified.

c) **No Impact.** There are no existing forest lands, timberlands, or timberland zoned "Timberland Production" within or immediately adjacent to the project site that would conflict with existing zoning or cause rezoning. Therefore, no impact is identified for this issue area.

d) **No Impact.** There are no existing forest lands within or immediately adjacent to the project site. The proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. Therefore, no impact is identified for this issue area.

e) **Potentially Significant Impact.** Refer to response II. a) above.

III. Air Quality

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☒	☐	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?	☐	☐	☒	☐

Impact Analysis

a) **Potentially Significant Impact.** The project site is located within the jurisdiction of Imperial County Air Pollution Control District (ICAPCD) in the Imperial County portion of the Salton Sea Air Basin. Construction of the proposed project would create temporary emissions of dust, fumes, equipment exhaust, and other air contaminants that may conflict with the ICAPCD's rules and regulations. These temporary construction emissions have the potential to result in a significant air quality impact.

b) **Potentially Significant Impact.** The criteria pollutants for which the project area is in state nonattainment under applicable air quality standards are O_3 and PM_{10}. Air pollutants transported into the Salton Sea Air Basin from the adjacent South Coast Air Basin (Los Angeles County, San Bernardino County, Orange County, and Riverside County) and Mexicali (Mexico) substantially contribute to the non-attainment conditions in the Salton Sea Air Basin. A potentially significant impact is identified for this issue area. The CalEEMod air quality model will be utilized to estimate the project's air quality emissions and the results will be included in the EIR analysis.

c) **Potentially Significant Impact.** The project site is located in a rural agricultural area of Imperial County. The nearest sensitive land use to the project site is a single-family residence located approximately 500 feet northeast of the proposed Heber 2 solar energy facility. Other nearby sensitive receptors include residences located approximately 0.50 miles north of the project site along E Fawcett Road and Heber Elementary School located approximately 0.60 miles north of the project site. This issue is potentially significant and will be addressed in the EIR analysis.

d) **Less Than Significant Impact**. Land uses commonly considered to be potential sources of odorous emissions include wastewater treatment plants, sanitary landfills, food processing facilities, chemical manufacturing plants, rendering plants, paint/coating operations, and concentrated agricultural feeding operations and dairies. The construction and operation of the proposed geothermal, solar, geothermal wells and pipeline are not anticipated to result in odor emissions, and impacts would be less than significant.

IV. Biological Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☒	☐	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☒	☐	☐	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☒	☐	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	☒	☐	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☒	☐	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Impact Analysis

a) **Potentially Significant Impact.** According to the Conservation and Open Space Element of the General Plan (County of Imperial 2016), numerous special-status plants and special status species occur in the County of Imperial, and of particular concern is western burrowing owl. The project site has the potential to support native habitats and/or sensitive species. Burrowing owls and burrows are commonly found along canals and drains. The Central Main Canal, Dogwood Canal, and smaller IID canals and drains traverse the project site. Therefore, the project site has the potential to be used as burrowing owl foraging habitat, as burrowing owls and burrows are commonly found along canals and drains. Thus, a potentially significant

impact is identified for this issue area. A biological resources technical report that will address the proposed project's potential impacts on biological resources will be prepared and this issue will be addressed in the EIR.

b) **Potentially Significant Impact.** Refer to response IV. a) above.

c) **Potentially Significant Impact.** Being situated in an agricultural area, the project site and surrounding areas are traversed by a network of drains, canals, and other irrigation infrastructure administered by the IID, some of which constitute potentially jurisdictional features. An aquatic resources delineation that will address the proposed project's potential impacts on state or federally protected wetlands will be prepared and included in the EIR analysis.

d) **Potentially Significant Impact.** Refer to response IV. a) above.

e) **Potentially Significant Impact .** Refer to response IV. a) above.

f) **No Impact.** The project site is located within the designated boundaries of the Desert Renewable Energy Natural Community Conservation Plan & Habitat Conservation Plan (NCCP/HCP). However, the project site is not located within or adjacent to an Area of Critical Environmental Concern. No impact is identified for this issue area.

V. Cultural Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☒	☐	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☒	☐	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☒	☐	☐	☐

Impact Analysis

a) **Potentially Significant Impact.** The project site has been disturbed by past farming and industrial uses. Thus, the presence of significant or undamaged cultural resources on the project site is unlikely. Although the proposed project is not expected to cause a substantial adverse change in the significance of a historical or archaeological resource, this issue will be analyzed further in the EIR. Therefore, a potentially significant impact is identified for this issue area. A cultural resources report that will address the proposed project's potential impacts on historic and prehistoric resources will be prepared and this issue will be addressed in the EIR.

b) **Potentially Significant Impact.** Refer to response V. a) above.

c) **Potentially Significant Impact.** Although unlikely, there is a potential for unknown human remains to be unearthed during earthwork activities. This issue is potentially significant and will be addressed in the EIR analysis.

VI. Energy

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Impact Analysis

a) **Less than Significant Impact.** The use of energy associated with the proposed project includes both construction and operational activities. Construction activities consume energy through the use of heavy construction equipment and truck and worker traffic. The proposed project will use several energy- and fuel-efficient design features that would help minimize inefficient or wasteful use of energy and increase conservation during construction. The project grading plan and on-site construction equipment would also minimize impacts to the surrounding transportation network that would result from truck traffic associated with soil import/export and mobilization/demobilization. Additionally, implementation and operation of the geothermal and solar facilities would promote the use of renewable energy and contribute incrementally to the reduction in demand for fossil fuel use for electricity-generating purposes. Therefore, the proposed project would generate renewable energy resources and is considered a beneficial effect.

Based on these considerations, the proposed project would not result in significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation. A less than significant impact has been identified for this issue area.

b) **Less Than Significant Impact.** Construction equipment would comply with federal, state, and regional requirements where applicable. With respect to truck fleet operations the USEPA and the National Highway Traffic Safety Administration (NHTSA) have adopted fuel efficiency standards for medium- and heavy-duty trucks. Construction equipment and trucks are required to comply with CARB's regulations regarding heavy duty truck idling limits of five minutes at a location and the phase in of off-road emission standards that result in an increase in energy savings in the form of reduced fuel consumption for more fuel-efficient engines. Because the main objectives of the project are to assist the state in meeting its obligations under California's RPS Program and assist California in meeting the GHG emissions reduction goal 85 percent below 1990 levels in 2045, the project would be consistent with the applicable recommended actions of CARB's 22022 Climate Change Scoping Plan, as well as applicable federal, state, and local policies. The project would assist the State and regulated utility providers to generate a greater portion of energy from renewable sources consistent with the RPS. Therefore, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency during construction and operations. Short-term and long-term impacts would be less than significant.

VII. Geology and Soils

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☐	☒
ii. Strong seismic ground shaking?	☒	☐	☐	☐
iii. Seismic-related ground failure, including liquefaction?	☒	☐	☐	☐
iv. Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☒	☐	☐	☐
d) Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property?	☒	☐	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☒	☐	☐	☐

Impact Analysis

ai) **No Impact.** The project site is not located within or near an Alquist-Priolo Special Fault Study Zone. Therefore, no impact is identified for this issue area.

aii) **Potentially Significant Impact.** The project site is located in the seismically-active Imperial Valley in Southern California and considered likely to be subjected to moderate to strong ground motion from earthquakes in the region. The Imperial Fault Zone is the nearest active fault zone to the project site and is situated approximately 6.7 miles to the east. Due to the project's proximity to the Imperial Fault Zone, seismic hazards related to ground shaking could occur on the project site. Although the project is not designed for human occupancy, the project could pose a threat to emergency personnel. A potentially significant impact has been identified for this issue area. A geotechnical report that will address the proposed project's potential impacts on geology and soils will be prepared and this issue will be addressed in the EIR.

aiii) **Potentially Significant Impact.** Liquefaction occurs when granular soil below the water table is subjected to vibratory motions, such as vibratory motion produced by earthquakes. With strong ground shaking, an increase in pore water pressure develops as the soil tends to reduce in volume. If the increase in pore water pressure is sufficient to reduce the vertical effective stress (suspending the soil particles in water), the soil strength decreases, and the soil behaves as a liquid (similar to quicksand). Liquefaction can produce excessive settlement, ground rupture, lateral spreading, or failure of shallow bearing foundations.

Four conditions are generally required for liquefaction to occur:

1) The soil must be saturated (relatively shallow groundwater).
2) The soil must be loosely packed (low to medium relative density).
3) The soil must be relatively cohesionless (not clayey).
4) Groundshaking of sufficient intensity must occur to function as a trigger mechanism.

All of these conditions may exist to some degree at the project site. Therefore, there is a potentially significant impact associated with liquefaction. A geotechnical report that will address the proposed project's potential impacts on geology and soils will be prepared and this issue will be addressed in the EIR.

aiv) **No Impact.** According to Figure 2: Landslide Activity in the Seismic and Public Safety Element of the General Plan (County of Imperial 1997), the project site is not located in an area that is prone to landslide hazards. Furthermore, the site topography is flat, and no ancient landslides have been mapped in the area. Development of the project would not directly or indirectly cause potential substantive adverse effects, including the risk of loss, injury, or death involving landslides. Therefore, no impact is identified for this issue area.

b) **Less than Significant Impact.** Soil erosion can result during construction as grading and construction can loosen surface soils and make soils susceptible to wind and water movement across the surface. Impacts are not considered significant because erosion would be controlled on-site in accordance with Imperial County standards, including preparation, review, and approval of a grading plan by the Imperial County engineer. Implementation of Imperial County standards would reduce the potential impacts to a less than significant level.

c) **Potentially Significant Impact.** Near surface soils within the project site will need to be identified to determine if these soils are unstable. Therefore, this issue is potentially significant and will be analyzed in the EIR.

d) **Potentially Significant Impact.** Near surface soils within the project site will need to be identified to determine if these soils are unstable. Therefore, this issue is potentially significant and will be analyzed in the EIR.

e) **No Impact.** The project does not include any septic tanks or wastewater disposal systems. Therefore, the project would have no impact on the project site soil and its capacity to adequately support the use of septic tanks or alternative wastewater disposal systems. No Mitigation Measures are recommended.

f) **Potentially Significant Impact.** Many paleontological fossil sites are recorded in Imperial County and have been discovered during construction activities. Paleontological resources are typically impacted when earthwork activities, such as excavation cut into geological deposits (formations) with buried fossils. It is not known if any paleontological resources are located on the project site. The proposed project's potential to impact paleontological resources will be addressed in the EIR.

VIII. Greenhouse Gas Emissions

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

Impact Analysis

a) **Potentially Significant Impact.** The production of greenhouse gas emissions associated with the proposed project includes both construction and operational activities. In the long-term, the project is expected to provide a benefit with respect to reduction of greenhouse gas emissions. However, construction of the project would generate GHG emissions over a two-year construction period. Exhaust emissions would result from construction equipment and machinery as well as from vehicular traffic generated by construction activities. Thus, a potentially significant impact is identified for this issue area. The CalEEMod air quality model will be utilized to estimate the project's GHG emissions and the results will be included in the EIR analysis.

b) **Potentially Significant Impact.** Refer to response VIII. a) above.

IX. Hazards and Hazardous Materials

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☒	☐	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	☒	☐	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☐	☒

Impact Analysis

a) **Potentially Significant Impact.** Construction of the proposed project would require the use of construction vehicles, associated grease, oil, and fuels, and the installation of two 20,000-gallon isopentane tanks. Vehicle fuels, oils, grease, and isopentane motive fluids have the potential to be released into the environment through natural events or human error. This is considered a potentially significant impact and will be addressed in the EIR analysis.

b) **Potentially Significant Impact.** Refer to response IX. a) above.

c) **No Impact.** The project is not located within one-quarter mile of an existing school. The closest school is Heber Elementary School, located approximately 0.60 miles to the north of the project site. Therefore, the project would have no impact on emitting or handling hazardous or acutely hazardous materials substances or waste within one-quarter mile of an existing or proposed school.

d) **No Impact.** Based on a review of the Cortese List conducted in December 2023, the project site is not listed as a hazardous materials site (Department of Toxic Substances Control 2023, State Water Resources Control Board 2023). Therefore, implementation of the project would result in no impact related to the project site being located on a listed hazardous materials site pursuant to Government Code Section 65962.5.

e) **No Impact.** The project is not located within 2 miles of a public airport or a public use airport. The closest airport is Imperial County Airport located approximately 8 miles north of the project site. Therefore, implementation of the proposed project would not result in a safety hazard or excessive noise for people residing or working in the project area. No impact is identified for this issue area.

f) **Less Than Significant Impact.** Imperial County Office of Emergency Services (OES) has provided three plans addressing evacuation and evacuation responsibilities for County Fire, Police, and the OES among other topics related to emergency preparedness that do not identify specific evacuation routes. The project applicant would coordinate any construction activities and use of oversized loads or movement of construction/decommissioning equipment with the Imperial County Department of Public Works (ICDPW) and/or California Department of Transportation (Caltrans) and the El Centro Highway Patrol office. Further, the project will coordinate with the ICDPW for any requested dedication of rights-of-way needed for Dogwood Road for the consideration of existing and any future road needs. Lastly, the project shall file for an encroachment permit for any work or proposed work in the affected County or Caltrans road rights-of-way and for any and all new, altered or unauthorized existing driveway(s) to access the lot or lots and for any proposed road crossings. Thus, the project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan and would result in a less than significant impact.

g) **No Impact.** The project site is located in the unincorporated area of Imperial County. According to the Seismic and Public Safety Element of the General Plan, the potential for a major fire in the unincorporated areas of the County is generally low (County of Imperial 1997). The project site is not located in areas considered wildlands, as the vast majority of the surrounding area is cultivated farmlands. According to the Fire Hazard Severity Zone Viewer provided by the California Department of Forestry and Fire Protection, the project area is not located in or near state responsibility areas or lands classified as very high hazard severity zones (California Department of Forestry and Fire Protection 2023). Therefore, there would be no impact associated with risk involving wildland fires.

X. Hydrology and Water Quality

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☒	☐	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv. impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Impact Analysis

a) **Potentially Significant Impact.** The proposed project has the potential to create urban non-point source discharge (e.g., synthetic/organic chemicals). Potentially significant water quality impacts have been identified and will be addressed in the EIR.

b) **No Impact.** The proposed project would require the drilling of three new geothermal production wells and a new injection well. The production wells would be completed to depths between 1,000 and 4,000 feet.

Casing depths will comply with California Department of Conservation – Geologic Energy Management Division (CalGEM) Regulations (Chapter 4, Article 3, §§ 1723, 2018). The geothermal production wells will bypass any groundwater reservoirs in favor of geothermal aquifers. Any water needed for fugitive dust control, or other BMPs that require water will be obtained through the project applicant's existing IID contract. No groundwater wells will be drilled, nor will the project require the use of ground water. No impact on groundwater supply or recharge would occur.

ci) **Less than Significant Impact.** The proposed project would result in the creation of impervious surfaces. Soil erosion could result during construction and earthmoving as well as during site reclamation. However, the project applicant is required to comply with the Construction General Permit and the Industrial General Permit, as well as Imperial County Land Use Ordinance, Title 9, Chapter 10 – Grading Regulations. County standards and compliance with the NPDES require the creation of a Stormwater Pollution Prevention Plan (SWPPP), and the use of best management practices (BMPs) to reduce impacts to surface and ground water quality attributed to erosion or siltation to a level less than significant. Applicant compliance with Imperial County and State standards would ensure the project does not significantly alter the site's drainage resulting in erosion or siltation on-or off-site, and impacts would be less than significant.

cii) **Less than Significant Impact.** Refer to response X. ci) above.

ciii) **Less than Significant Impact.** Refer to response X. ci) above.

civ) **Less Than Significant Impact.** According to the Federal Management Agency (FEMA) Flood Insurance Rate Map (Panel 06025C2075C), the project site is within Zone X, which is an area determined to be outside the 0.2 percent annual chance floodplain (FEMA 2008). Therefore, the proposed project would not impede or redirect flood flows and this is considered a less than significant impact.

d) **No Impact.** According to the Federal Management Agency (FEMA) Flood Insurance Rate Map (Panel 06025C2075C), the project site is within Zone X, which is an area determined to be outside the 0.2 percent annual chance floodplain (FEMA 2008). In addition, there are no large bodies of water near the project site. The Salton Sea is the closest body of water near the project site and is 28 miles away, and the Pacific Ocean is over 90 miles away. Therefore, the project would not risk release of pollutants due to project inundation by flood, tsunami or seiche. No impact would occur.

e) **Less Than Significant Impact.** No groundwater wells will be drilled, nor will the project require the use of ground water. Any water needed for fugitive dust control, or other BMPs that require water will be obtained through the project applicant's existing IID contract. Furthermore, the project is required to comply with County, State, and Federal water quality standards. The proposed project will not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. This is considered a less than significant impact.

XI. Land Use and Planning

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Impact Analysis

a) **No Impact.** The project site is located in a sparsely populated, agriculturally zoned portion of Imperial County. There are no established residential communities located within or in the vicinity of the project site. The nearest established residential community is located approximately 0.50 miles north of the project site along E Fawcett Road. Therefore, implementation of the project would not divide an established community and no impact would occur.

b) **Less than Significant Impact**. The project site is currently designated by the General Plan as "Agriculture" and is zoned A-2-G-SPA (General Agriculture with Geothermal Overlay Zone in a Special Plan Area) and A-2-G-U (General Agriculture with a Geothermal Zone Overlay in an Urban Area).

Pursuant to Title 9, Division 5, Chapter 8, the following uses are permitted in the A-2 zone:

n) Oil, gas and geothermal exploration meeting requirements specified in Division 17

s) Solar energy extraction generation provided that is for on-site consumption only

Pursuant to Title 9, Division 5, Chapter 8, the following uses are permitted in the A-2 zone subject to approval of a CUP from Imperial County:

y) Electrical generation plans (less than 50 MW) excluding nuclear or coal fired and meeting requirements in Division 17

z) Electrical substations in an electrical transmission system (500 kv/230 kv/161 kv)

bb) Facilities for the transmission of electrical energy (100-200 kv)

ii) Geothermal test facilities, Intermediate projects, and major exploratory wells, meeting requirements in Division 17

rr) Major Geothermal projects per Division 17

ww) Resource extraction and energy development as per Division 17

aaa) Solar energy electrical generator

The County Land Use Ordinance, Division 17, includes the Geothermal Overlay Zone, which authorizes the development and operation of renewable energy projects, with an approved CUP. With an approved CUP the project would conform with the standards presented in the Implementation Ordinance of the Renewable Energy and Transmission Element update. Therefore, implementation of the project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect and impacts would be less than significant.

XII. Mineral Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Impact Analysis

a) **No Impact.** The project site is not used for mineral resource production. According to Figure 8: Imperial County Existing Mineral Resources of the Conservation and Open Space Element of the General Plan (County of Imperial 2016), no known mineral resources occur within the project site nor does the project site contain mapped mineral resources. Therefore, the proposed project would not result in the loss of availability of any known mineral resources that would be of value to the region and the residents of California nor would the proposed project result in the loss of availability of a locally important mineral resource. Thus, no impact is identified for this issue area and no further analysis is warranted.

b) **No Impact.** Refer to response XIII. a) above.

XIII. Noise

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Impact Analysis

a) **Less than Significant Impact.** The Imperial County Title 9 Land Use Ordinance, Division 7, Chapter 2, Section 90702.00 - Sound level limits, establishes one-hour average sound level limits for the County's land use zones. Agricultural/industrial operations are required to comply with the noise levels prescribed under the general industrial zones. Therefore, the proposed project will be required to maintain noise levels below 75 decibels (dB) (averaged over one hour) during any time of day.

The proposed project will also be expected to comply with the Noise Element of the General Plan which states that construction noise, from a single piece of equipment or a combination of equipment, shall not exceed 75 dB, when averaged over an eight-hour period, and measured at the nearest sensitive receptor. Construction equipment operation is also limited to the hours of 7 a.m. to 7 p.m., Monday through Friday, and 9 a.m. to 5 p.m on Saturday. Nevertheless, the proposed project will result in the increase in ambient noise levels during construction. A noise report that will address the proposed project's potential noise impacts will be prepared and this issue will be addressed in the EIR.

b) **Less than Significant Impact.** Groundborne vibration and noise could originate from earth movement during the construction phase of the proposed project. However, significant vibration is typically associated with activities such as blasting or the use of pile drivers, neither of which would be required during project construction. Construction activities most likely to cause vibration include heavy construction equipment and site grading operations. Although all heavy, mobile construction equipment has the potential to cause at least some perceptible vibration when operating close to buildings, the vibration is usually short term and is not of sufficient magnitude to cause building damage. Heavy equipment such as dozers, loaders, and drill rig equipment would not be operated close enough to any residences or structures to cause vibration impact. Operation of the project would not result in vibrations perceptible to nearby receptors. As such, impacts would be less than significant.

c) **No Impact.** The project site is not located within an airport land use plan nor is it within two miles of a public airport or public use airport. The closest airport is Imperial County Airport located approximately 8 miles north of the project site. As such, no impact would occur to people residing or working in the project area related to excessive noise levels.

XIV. Population and Housing

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Impact Analysis

a) **No Impact.** Project construction would likely require a maximum of 35 workers, with an average of 10 to 20 workers after grading excavation. After construction is complete, the facilities would be staffed and maintained by 1-2 onsite employees. It is assumed that the workforce would be from southern California and would likely not require accommodations. The project is sited within the Renewable Energy Geothermal Overlay Zone and the project does not involve the construction of any new housing or commercial areas that would attract new residents to the area, nor does it require the extension of roads or creation of other infrastructure. The project would not appear to induce population growth; therefore, the project would have no impact.

b) **No Impact.** No housing exists within the project site. Therefore, the proposed project would not displace any existing people or housing, which would require the construction of replacement housing elsewhere. No impact is identified for this issue area.

XV. Public Services

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i. Fire Protection?	☐	☐	☒	☐
ii. Police Protection?	☐	☐	☒	☐
iii. Schools?	☐	☐	☒	☐
iv. Parks?	☐	☐	☒	☐
v. Other public facilities?	☐	☐	☒	☐

Impact Analysis

ai) **Less than Significant Impact.** The project is located in an unincorporated area of Imperial County outside of Heber and Calexico, California. The project would not likely impact or displace the location of existing fire protection facilities. The project applicant will have a certified fire engineer review the proposed facilities and existing fire response infrastructure to determine if the existing fire response facilities are adequate or if additional facilities (i.e., hydrants, access points) are necessary. The project will contain a thorough Emergency Response Plan (ERP) created with consultation from the Imperial County Fire Department. The project ERP will address all emergencies likely to occur at the site and requires an Emergency Coordinator who can work with County Fire Protection. The plan contains information vital to emergency responder and engineering methods for protecting flammable isopentane tanks at the project site. Therefore, impacts would be less than significant.

aii) **Less Than Significant Impact.** The project would not likely impact or displace the location of existing police protection facilities. The project would also include public safety mechanisms such as fences and gates to protect the facilities and reduce unauthorized visitations. In addition, there will be a security service that monitors the property. Furthermore, the project applicant would be required to pay their share of local infrastructure improvement costs. Therefore, impacts would be less than significant.

aiii) **Less Than Significant Impact.** The proposed project does not include the development of residential land uses that would result in an increase in population or student generation. Also, the number of construction and operational workers coming to the region is low and is not expected to increase demand for schools or require the construction of new schools. Therefore, impacts would be less than significant.

aiv) **Less Than Significant Impact.** The number of construction and operational workers coming to the region is low and is not expected to increase demand on existing or future parks. Therefore, impacts would be less than significant.

av) **Less Than Significant Impact.** The number of construction and operational workers coming to the region is low and is not expected to increase demand for any public services (such as post offices). Therefore, impacts would be less than significant.

XVI. Recreation

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Impact Analysis

a) **No Impact.** The project would not directly or indirectly increase the number of residents keeping the county compliant with the Quimby Act which requires 5 acres of parkland for every 1,000 residents. Project construction would likely require a maximum of 35 workers, with an average of 10 to 20 workers after grading excavation. After construction is complete, the facilities would be staffed and maintained by 1-2 onsite employees. These workers and employees are anticipated to come from existing populations that live in or commute from the surrounding local community. As there is no increase of residencies or residents, it is reasonably foreseeable that the project would not lead to an increase of use or deterioration of existing neighborhood, regional, or other recreational facilities. Therefore, the project would have no impact on the use or deterioration of existing recreational resources.

b) **No Impact.** The project does not include nor require the construction of a recreational facility as the project does not alter the current ratio of parkland acres to residents. Therefore, the project will have no impact on the construction or expansion of recreational facilities which might have an adverse effect on the environment.

XVII. Transportation

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☒	☐	☐	☐
b) Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☒	☐	☐	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☐	☐	☒

Impact Analysis

a) **Potentially Significant Impact.** Construction of the proposed project would result in a small increase of traffic to the area, which may result in a potentially significant impact. Therefore, a traffic impact study that will address the proposed project's potential impacts on traffic will be prepared, and this issue will be addressed in the EIR.

b) **Potentially Significant Impact.** Section 15064.3(b) of the CEQA Guidelines provides guidance on determining the significance of transportation impacts and focuses on the use of vehicle miles traveled (VMT), which is defined as the amount and distance of automobile travel associated with a project. Given the nature of the project, after construction, there would be a nominal amount of vehicle trips generated by the project. Once the proposed project is implemented, the proposed project would require intermittent maintenance requiring a negligible amount of traffic trips on an annual basis. However minimal, the proposed project would increase the number of vehicular trips related to construction and the need for intermittent maintenance on an annual basis. Therefore, this issue is potentially significant and will be addressed in the traffic impact study and EIR analysis.

c) **No Impact.** The project would not result in any changes to any roads, intersections, streets, highways, nor would it provide any incompatible uses to the street and highway system. All vehicles that would be used for travel to and from the project site would be licensed and comply with all appropriate transportation laws and regulations including obtaining and adhering to provisions of any required permits for oversized loads. As such, no impact related to transportation design hazards would occur.

d) **No Impact.** All proposed facilities would be constructed within the property boundaries of the project site and would not affect emergency vehicle access to the facility or any roadway. Emergency vehicle access is identified and designated at the Dogwood site, and these areas would not be changed as result of the proposed developments. Therefore, no impacts to emergency access to the plant site or surrounding area would occur under the project.

XVIII. Tribal Cultural Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	☒	☐	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☒	☐	☐	☐

Impact Analysis

a-b) **Potentially Significant Impact.** Assembly Bill 52 was passed in 2014 and took effect July 1, 2015. It established a new category of environmental resources that must be considered under CEQA called tribal cultural resources (Public Resources Code 21074) and established a process for consulting with Native American tribes and groups regarding those resources. Assembly Bill 52 requires a lead agency to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project.

In accordance with AB 52, Imperial County, as the CEQA lead agency, sent an AB 52 consultation request letter to the Campo Band of Mission Indians and Fort Yuma-Quechan Indian Tribe on January 19, 2024. This issue will be further analyzed in the EIR.

XIX. Utilities and Service Systems

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☒	☐	☐	☐
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Impact Analysis

a) **Less Than Significant Impact.** Operational use of water resources for the project would be limited to domestic use within operations and maintenance buildings, solar panel washing, and fire protection services. Impacts associated with water facilities would be less than significant. Construction of the proposed facilities would not generate/discharge any wastewater. Chemical additives are not required for the cooling tower operation and therefore there is no waste disposal. Impacts associated with water facilities would be less than significant.

The energy generated by the solar facilities will be collected by an on-site substation and then transferred to the plants via a short transmission cable. The solar facilities will effectively reduce the margin between gross and net geothermal energy generation, allowing for the more efficient generation of geothermal energy and allow more geothermal energy to enter the grid. Before entering the grid, a new substation will be built near the Dogwood plant to step up the low voltage electrical energy generated at the Dogwood geothermal unit to the higher voltage required for commercial transmission. No upgrades to off-site transmission facilities are necessary and the new Dogwood substation will connect directly to the existing point of interconnection with the IID controlled grid. Impacts associated with electric power facilities would be less than significant.

No natural gas facilities are located near the project and no natural gas hookup is required for the project. No impacts associated with natural gas facilities would occur. The project will not have an impact on any telecommunications.

The project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, impacts would be less than significant.

b) **Potentially Significant Impact.** Although water for operations and maintenance buildings, solar panel washing, and fire protection services during project operation is not anticipated to result in a significant increase in water demand/use, IID would provide the water required for operations and maintenance and potable water will be trucked onto the site. Thus, a potentially significant impact is identified for the availability of sufficient water supplies to serve the proposed project for the reasonably foreseeable future. The proposed project's potential impacts on water supplies will be analyzed in the EIR.

c) **No Impact.** The proposed project would generate a minimal volume of wastewater during construction. During construction, portable chemical sanitary facilities will be used by all construction personnel. These facilities will be serviced by a local contractor. In addition, all construction liquids would be disposed of in compliance with all appropriate local, state and federal disposal regulations. The OECs operate on a closed loop, do not consume any water and therefore there is no waste disposal. Therefore, no impacts to the wastewater treatment utility's service capacity would occur.

d) **Less than Significant Impact.** Solid waste generation would be minor for the construction and operation of the proposed project. Solid waste during construction will be disposed of in an approved solid waste disposal site in accordance with Imperial County Environmental Health Department requirements. Waste will be routinely collected and disposed of at an authorized landfill by a licensed disposal contractor. Trash would likely be hauled to the Calexico Solid Waste Site (13-AA-0004) located approximately 1.25 miles southwest of the project site in Calexico, CA. The Calexico Solid Waste Site has approximately 1,561,235 cubic yards of remaining capacity and is estimated to remain in operation through 2079 (CalRecycle 2019). The project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

Additionally, because the proposed project would generate solid waste during construction and operation, they will be required to comply with state and local requirements for waste reduction and recycling; including the 1989 California Integrated Waste Management Act and the 1991 California Solid Waste Reuse and Recycling Access Act of 1991. Also, conditions of the conditional use permit will contain provisions for recycling and diversion of Imperial County construction waste policies. Therefore, a less than significant impact is identified for this issue area.

e) **Less than Significant Impact.** Refer to response XIX. d) above.

XX. Wildfire

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

Impact Analysis

a) **No Impact.** According to the Fire Hazard Severity Zone Viewer provided by the California Department of Forestry and Fire Protection, the project area is not located in or near state responsibility areas or lands classified as very high hazard severity zones (California Department of Forestry and Fire Protection 2023). Therefore, the project would not substantially impair an adopted emergency response plan or emergency evacuation plan. No impact is identified for this issue area.

b) **No Impact.** The project area is not located in or near state responsibility areas or lands classified as very high hazard severity zones (California Department of Forestry and Fire Protection 2023). The Seismic and Public Safety Element of the County General Plan also states that the potential for a major fire in the unincorporated areas of the County are generally low (County of Imperial 1997). The project site is located on flat land, which does not pose a risk due to slope. The County's Multi-Jurisdictional Hazard Mitigation Plan (2021) recognizes and manages events of high winds and other extreme weather in Imperial County. The project would not exacerbate wildfire risks associated with slope or prevailing winds; no impact would occur.

c) **No Impact.** The project area is not located in or near state responsibility areas or lands classified as very high hazard severity zones (California Department of Forestry and Fire Protection 2023). The project will have two double-walled 20,000-gallon isopentane tanks on site which would be equipped with a fire suppression system supported by additional onsite water. This is required by the California Fire Code as adopted by the Imperial County Code. Additionally, the underground interconnection line would be situated along the existing utility lines along Dogwood Road. All infrastructure would comply with existing regulations and would not exacerbate fire risk; no impacts would occur.

d) **No Impact.** According to Figure 2: Landslide Activity in the Seismic and Public Safety Element of the General Plan (County of Imperial 1997), the project site is not located in an area that is prone to landslide

hazards. Furthermore, the site topography is flat, and no ancient landslides have been mapped in the area. The project would not alter the existing drainage pattern surrounding the project site and it would comply with regulations that reduce the potential for excess runoff waters from the project site. The project would not expose people or structures to significant risks as a result of runoff, post-fire instability, or drainage changes, therefore no impact would occur.

XXI. Mandatory Findings of Significance

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒	☐	☐	☐
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

Impact Analysis

a) **Potentially Significant Impact.** The proposed project has the potential to result in significant environmental effects on biological resources and cultural resources, which could directly or indirectly cause adverse effects on the environment. These issues will be further evaluated in the EIR.

b) **Potentially Significant Impact.** Implementation of the proposed project has the potential to result in impacts related to: aesthetics, agricultural resources, air quality, biological resources, cultural resources, geology/soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, transportation, tribal cultural resources, and utilities/service systems. The proposed project has the potential to result in cumulative impacts with regards to the identified issue areas. Cumulative impacts will be discussed and further analyzed in the EIR.

c) **Potentially Significant Impact.** Implementation of the proposed project has the potential to result in impacts related to: air quality, geology/soils, and hazards and hazardous materials. These potential environmental effects could cause substantial adverse effects on human beings. These issues will be further evaluated in the EIR.

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Luis Valenzuela, Planner I

HDR

Tim Gnibus, Principal

Sharyn Hidalgo, Project Manager

Priya Dhupar, Environmental Planner

Anders Burvall, Senior Geographic Information Systems Analyst

Sharon Jacob, Geographic Information Systems Analyst

Katherine Turner, Document Production Administrator

APPLICANT SUBMITTAL

CONDITIONAL USE PERMIT

I.C. PLANNING & DEVELOPMENT SERVICES DEPT.
801 Main Street, El Centro, CA 92243 (442) 265-1736

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

1. PROPERTY OWNER'S NAME Heber Field Company LLC	EMAIL ADDRESS ehelms@ormat.com	
2. MAILING ADDRESS (Street / P O Box, City, State) 947 Dogwood Road, Heber, CA 92249	ZIP CODE 89519-6075	PHONE NUMBER 775-356-9029, ext. 32368
3. APPLICANT'S NAME OrHeber 3 LLC	EMAIL ADDRESS ehelms@ormat.com	
4. MAILING ADDRESS (Street / P O Box, City, State) 855 Dogwood Road, Heber, CA 92249	ZIP CODE 89519-6075	PHONE NUMBER 775-356-9029, ext. 32368
4. ENGINEER'S NAME CA. LICENSE NO.	EMAIL ADDRESS	
5. MAILING ADDRESS (Street / P O Box, City, State) 6140 Plumas Street, Reno, NV	ZIP CODE 89519-6075	PHONE NUMBER 775-356-9029, ext. 32368

6. ASSESSOR'S PARCEL NO. 054-250-31; 059-020-001	SIZE OF PROPERTY (in acres or square feet) ~35 acres	ZONING (existing) A-2-G-SPA
7. PROPERTY (site) ADDRESS 855 Dogwood Road, Heber, CA 92249; and 602 Dogwood Road, Heber, CA 92249		
8. GENERAL LOCATION (i.e. city, town, cross street) Near intersection of Dogwood Road and Willoughby Road		
9. LEGAL DESCRIPTION Track 44, Township 16 South; Range 14 East; SBB&M		

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

10. DESCRIBE PROPOSED USE OF PROPERTY (list and describe in detail) Geothermal energy generation; 7MW parasitic solar facility; underground distribution line (0.3 miles); and Project substation	
11. DESCRIBE CURRENT USE OF PROPERTY	Geothermal energy operations and agricultural cultivation
12. DESCRIBE PROPOSED SEWER SYSTEM	No changes to existing sewer service
13. DESCRIBE PROPOSED WATER SYSTEM	No changes to existing water service
14. DESCRIBE PROPOSED FIRE PROTECTION SYSTEM	Existing fire response system in place
15. IS PROPOSED USE A BUSINESS? ☒ Yes ☐ No	IF YES, HOW MANY EMPLOYEES WILL BE AT THIS SITE? Approximately 10-15, temporarily for construction

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

Elizabeth Helms — Print Name
June 28, 2023 — Date
Signature

Print Name — Date
Signature

REQUIRED SUPPORT DOCUMENTS

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

APPLICATION RECEIVED BY:		DATE		REVIEW / APPROVAL BY OTHER DEPT'S required ☐ P W ☐ E H S ☐ A P C D ☐ O E S ☐ _____ ☐ _____
APPLICATION DEEMED COMPLETE BY:		DATE		
APPLICATION REJECTED BY:		DATE		
TENTATIVE HEARING BY:		DATE		
FINAL ACTION: ☐ APPROVED ☐ DENIED		DATE		

CUP # _____

June 20, 2023

Mr. Jim Minnick
County of Imperial
Planning & Development Services Department
801 Main Street
El Centro, CA 92243

Subject: Conditional Use Permit Application for the Dogwood Geothermal Energy Project
855 Dogwood Road (APN 054-250-31) and 602 Dogwood Road (APN 059-020-001), Heber, CA

Dear Mr. Minnick:

OrHeber 3 LLC (Applicant; and wholly owned subsidiary of Ormat Technologies, Inc.) proposes to develop a new 25-megawatt (MW; net generation) geothermal energy facility supported by a 7MW parasitic solar field and 0.3-mile underground medium voltage distribution cable (Project). The Project is proposed on APN 054-250-31 and APN 059-020-001, on/near the existing Heber geothermal energy complex (HGEC) located at 855 Dogwood Road, Heber, CA. The Project site is within the Imperial County Geothermal Overlay Zone that allows for *Major Geothermal Projects* to be permitted via a Conditional use Permit (CUP) process (Imperial County General Plan; Renewable Energy and Transmission Element of County of Imperial General Plan, 2015). This Application seeks the issuance of a CUP for the Dogwood Project. The following facilities are proposed for development:

- One (1) Integrated Two Level Unit (ITLU) Air Cooled Ormat Energy Converter (OEC) generating unit
- Two (2) 20,000-Gallon Isopentane Tanks for Motive Fluid Storage
- One (1) Project substation for transmission to the grid
- Ancillary and auxiliary facilities (including, compressed air system and fire prevention system)
- A seven (7) megawatt (MW) solar photovoltaic field dedicated to the Dogwood geothermal plant
- Underground/buried medium voltage distribution cable from Dogwood solar facility to Dogwood geothermal plant (OEC) (and from Heber 2 solar facilities to Heber 2 OEC)

Enclosed is one original CUP Application with ink signatures, two hard copies of the CUP Application, and one digital copy (CD) of the CUP Application. The enclosed application includes the following items:

- CUP Application Form and Fee
- Site Plan, Facility Integration Diagram, and Process Diagram (20 copies)
- Imperial County Planning & Development Services (ICPDS) General Indemnification Agreement
- Attachment A - Project Description, Map Set, and General Plan (Zoning) Conformance
- Attachment B - Site Photographs
- Attachment C - Spec Sheets for OEC units
- Attachment D - Water Quality Management Plan
- Attachment E - Imperial County Reclamation Plan

We are presently working on the necessary technical reports and CEQA Checklist (Initial Study for the *Whole of the Action*, including the proposed Dogwood Geothermal Energy Project, Heber 2 Solar Energy Project, and Heber Field Company Geothermal Wells and Pipeline Project) and intend to submit to the County in July. Thank you and please contact me if you have any questions regarding the Project or this CUP Application.

Sincerely,

Alissa Sanchez
Senior Manager, Environmental Permitting
Ormat Nevada, Inc.
PHONE: (775) 356-9029 (ext. 32234)
EMAIL: asanchez@ormat.com

Enclosures

IMPERIAL COUNTY PLANNING & DEVELOPMENT SERVICES
GENERAL INDEMNIFICATION AGREEMENT

As part of this application, applicant and real party in interest, if different, agree to defend, indemnify, hold harmless, and release the County of Imperial ("County"), its agents, officers, attorneys, and employees (including consultants) from any claim, action, or proceeding brought against any of them, the purpose of which is to attack, set aside, void, or annul the approval of this application or adoption of the environmental document which accompanies it. This indemnification obligation shall include, but not be limited to, damages, costs, expenses, attorney fees, or expert witness fees that may be asserted by any person or entity, including the applicant, arising out of or in connection with the approval of this application, whether or not there is concurrent negligence on the part of the County, its agents, officers, attorneys, or employees (including consultants).

If any claim, action, or proceeding is brought against the County, its agents, officers, attorneys, or employees (including consultants), to attack, set aside, void, or annul the approval of the application or adoption of the environmental document which accompanies it, then the following procedures shall apply:

1. The Planning Director shall promptly notify the County Board of Supervisors of any claim, action or proceeding brought by an applicant challenging the County's action. The County, its agents, attorneys and employees (including consultants) shall fully cooperate in the defense of that action.

2. The County shall have the final determination on how to best defend the case and will consult with applicant regularly regarding status and the plan for defense. The County will also consult and discuss with applicant the counsel to be used by County to defend it, either with in-house counsel, or by retaining outside counsel provided that the County shall have the final decision on the counsel retained to defend it. Applicant shall be fully responsible for all costs incurred. Applicant shell be entitled to provide his or her own counsel to defend the case, and said independent counsel shall work with County Counsel to provide a joint defense.

Executed at Reno Nevada on June 28, 2023

APPLICANT

Name: OrHeber 3 LLC

By _____
Elizabeth Helms

Title Corporate Secretary

Mailing Address:

6140 Plumas St
Reno, NV
89519

REAL PARTY IN INTEREST
(If different from Applicant)

Name _____

By _____

Title _____

Mailing Address:

_____
_____
_____

ACCEPTED/RECEIVED BY _____ Date _____

PROJECT ID NO _____ AP N ___-___-___

S:\FORMS _ LISTS\General Indemnification FORM 041516.doc

Attachment A

Project Description, Map Set, and General Plan (Zoning) Conformance

Catalyst
ENVIRONMENTAL SOLUTIONS

INTRODUCTION

OrHeber 3 LLC (Applicant; and wholly owned subsidiary of Ormat Technologies, Inc.) proposes to develop a new 25-megawatt (MW; net generation) geothermal energy facility supported by a 7MW parasitic solar field and 0.3-mile interconnection line (Project). The Project is proposed on APN 054-250-31 and APN 059-020-001, on/near the existing geothermal energy complex located at 855 Dogwood Road, Heber, CA. The Project site is within the Imperial County Geothermal Overlay Zone that allows for *Major Geothermal Projects* to be permitted via a Conditional use Permit (CUP) process (Imperial County General Plan; Renewable Energy and Transmission Element of County of Imperial General Plan, 2015). This Application seeks the issuance of a CUP for the Dogwood Project. The following facilities are proposed for development:

- One (1) Integrated Two Level Unit (ITLU) Air Cooled Ormat Energy Converter (OEC) generating unit
- Two (2) 20,000-Gallon Isopentane Tanks for Motive Fluid Storage
- One (1) Project substation for transmission to the grid
- Ancillary and auxiliary facilities (including, compressed air system and fire prevention system)
- A seven (7) megawatt (MW) solar photovoltaic field dedicated to the Dogwood geothermal plant
- Interconnecting interconnection line from Dogwood solar facilities to Dogwood geothermal plant (OEC)

PROJECT LOCATION & ACCESS

The proposed facilities would be located on APN 054-250-31 and APN 059-020-001, near the existing Heber Geothermal Energy Complex (HGEC) located at 855 Dogwood Road, Heber, CA. All proposed facilities are located within the Imperial County Geothermal Overlay Zone that allows for *Major Geothermal Projects* (Imperial County General Plan; Renewable Energy and Transmission Element of County of Imperial General Plan, 2015) (**Site Location** figure below). The HGEC is comprised of three stand-alone geothermal power plants: Heber 2, Heber South, and Goulds 2, and is completely devoted to geothermal energy generation.

The Dogwood geothermal plant would be located within the HGEC (APN 054-250-31) in an area currently used for materials storage and supporting operations. The development area for the Dogwood Project is completely disturbed from energy generation operations and devoid of any vegetation, surface waters, or existing facilities that would require relocation or demolition (**Attachment B – Site Pictures**).

The Dogwood solar photovoltaic facility would be located immediately southeast of the HGEC (APN 059-020-001). The proposed solar facility would provide auxiliary power directly to the proposed Dogwood OEC. Because the power generated by the solar facility would not enter the grid, but serve as a parasitic load facility, the Dogwood solar facility is considered *behind-the-meter*. The energy generated by the solar facilities will be collected by an on-site switch and short interconnection line segment (approximately 2,500 feet along Dogwood Road) to the Dogwood geothermal plant (**Figure 2 - Site Plan** below).

Interstate 8 (I-8; Kumeyaay Highway), located approximately 4.5 miles directly north, provides primary highway access to the HGEC. Dogwood Road stems off of I-8 and provides immediate site access. From the south, Willoughby Road runs west-east approximately 1,700 feet from the site and connects to Dogwood Road, providing immediate site access. Traffic flow is often irregular in this area.

PROJECT OBJECTIVES

The objectives of the Dogwood Project are to:

- Develop a geothermal power plant with minimal disturbance footprint and environmental impacts by siting the facility on an existing disturbed industrial site.

- Develop clean, renewable geothermal energy in the Heber Geothermal Zone pursuant to the Imperial County General Plan.
- Provide renewable baseload energy and capacity to assist the State of California with meeting the objectives of Senate Bill 100 (100% Clean Energy Act of 2018) and the State's Renewables Portfolio Standard program.

PROJECT BENEFITS

As provided in the list below, the Dogwood Project would provide significant state and local benefits, including, but not limited to:

- Increasing the employment base of Imperial County by creating both construction and operations positions, pursuant to Goal 2 of the Imperial County Strategic Plan (2020).
- Increasing the Imperial County tax base.
- Displacing fossil fuel consumption within the State.
- Meeting the State's climate change goals by reducing emissions of greenhouse gases associated with electrical generation.
- Promoting stable retail rates for electric service.
- Meeting the State's need for a diversified and balanced energy generation portfolio.
- Meeting the State's resource adequacy requirements.
- Contributing to the safe and reliable operation of the electrical grid, including providing predictable electrical supply, voltage support, lower line losses, and congestion relief.

SITE DESCRIPTION & SURROUNDING USES

Surrounding land uses in the Project vicinity are primarily for industrial facilities, energy facilities, and agricultural cultivation. Solar energy facilities and agricultural cultivation are directly west; a construction/aggregates company is adjacent to the south; agricultural operations are present to the north and east; and, geothermal well pads and pipelines are present throughout the local vicinity. Imperial Irrigation District (IID) irrigation canals are also present throughout the Project vicinity.

The Dogwood geothermal energy facility would be located within the existing HGEC in an area currently used for materials storage and is completely devoid of any vegetation or surface water features (**Attachment B – Site Pictures**). The site of the solar facilities is presently used for cultivation, geothermal wells, and geothermal pipelines.

ZONING & PROJECT CONFORMANCE

The Project site is zoned as A-2-G-SPA, which includes the Geothermal Overlay Zone (G) and allows for "Major Geothermal Projects" to be permitted through a CUP process. The Heber SPA is intended "to allow for commercial, residential, industrial, renewable energy and other employment-oriented development in a mixed used orientation" (Land Use Element of the Imperial County General an, 2015; emphasis added). Therefore, the proposed Project conforms to the standards and goals set forth in the Imperial County General Plan and the Renewable Energy and Transmission Element of County of Imperial General Plan (2015).

PROJECT DESCRIPTION

The Applicants propose the following actions:

- One (1) Integrated Two Level Unit (ITLU) Air Cooled Ormat Energy Converter (OEC) generating unit

- Two (2) 20,000-Gallon Isopentane Tanks for Motive Fluid Storage
- One (1) Project substation for transmission to the grid
- Ancillary and auxiliary facilities (including, compressed air system and fire prevention system)
- A seven (7) megawatt (MW) solar photovoltaic field dedicated to the Dogwood geothermal plant
- Underground medium voltage distribution cable from Dogwood solar facilities to Dogwood geothermal plant (OEC)

Site Preparation

The Dogwood geothermal (OEC) site was developed and graded during the original construction of the Heber Geothermal Energy Complex (HGEC) in 1992, and its current condition is exposed dirt and gravel. To ensure the proposed facilities are situated on safe and stable surfaces, minor excavation and compaction activities would be performed. The top 18 inches of the Project Site's exposed soil would be removed, extending approximately 5 feet beyond the proposed facilities. A minimum of 18 inches of CalTrans Class 2 aggregate based will be placed and compacted to the appropriate density (ASTM D1557). On-site soil that has been piled during excavation will be used as backfill material, as necessary. Only those soils free of debris and deleterious matter would be used as backfill material. The proposed facilities would be placed on shallow-spread footers and wall footers to support the structures. All site preparation and fill placement activities will be monitored by a qualified geotechnical engineer to detect undesirable materials and/or site conditions that may arise during site preparation.

The site of the solar facilities is currently used for alfalfa cultivation. After the crops are collected, the site would be cleared and a chain-link security fence would be installed around the solar construction site. The site would then be graded and rolled in order for construction equipment to be staged and operated.

As provided in Table 1 below, the total project disturbance from the proposed development is approximately 100 acres. The figures below provide a site plan of the proposed facilities and brief descriptions of each facility are provided below.

Table 1 – Dogwood Project Disturbance Estimate

Facility	*Disturbance (Acres)*
Geothermal Energy Facilities and Project Substation	0 acres (site is already completely disturbed)
Solar Field	35 acres
Underground Distribution Line	5 acres
TOTAL	**40 acres**

Proposed Facilities

ORMAT Energy Converter (Geothermal Energy Production Unit)

The proposed ORMAT Energy Converter (OEC) unit is a two-turbine combined cycle binary unit, operating on a subcritical Rankine cycle, with isopentane as the motive fluid. **Attachment C** provides technical facility specifications for the OEC. The OEC system consists of a generator, turbines, a vaporizer, Air Cooled condensers, preheaters and recuperators, and an evacuation skid/vapor recovery maintenance unit (VRMU) for purging and maintenance events. The design capacity for the unit is 25 MW (net).

Example Pictures of Proposed ORMAT Energy Converters (OECs)

Isopentane Storage Tanks

Two double-walled 20,000-gallon above-ground storage tanks would be installed for motive fluid (isopentane) storage. Numerous safety and fire prevention measures will be installed on/near the ABST, including:

- Concrete foundations with blast walls separating the tank from the OEC.
- An automated water suppression system.
- Concrete containment areas.
- Two flame detectors, which will immediately detect any fire and immediately trigger the automatic fire suppression system.
- A gas detector, which will immediately detect any isopentane leak and notify the control room (manned by 24/7).

The Project design includes a thorough list of fire prevention, design, and safety measures, which are described in greater detail below in the *Environmental Protection Measures* section below.

Examples of Proposed Isopentane Storage Tank

Cooling Tower

An air-cooling tower array will perform air-cooling operations of the geothermal fluid. The cooling tower will include a series of heat-absorbing evaporators and condensers to capture and transfer heat stored in the geothermal fluid.

Example of Proposed Air-Cooling Tower

Parasitic Solar Energy Facilities

A seven (7) megawatt solar field would provide supplemental/auxiliary energy to the Dogwood geothermal plant. These solar facilities are classified as *behind-the-meter* and would provide supplemental energy directly to the Dogwood geothermal unit (OEC), this energy would not enter the transmission grid. The solar facilities will effectively reduce the margin between gross and net geothermal energy generation, allowing for the more efficient generation of geothermal energy and to allow more geothermal energy to enter the grid. The energy generated by the solar fields would be collected by an on-site by a XMD and switch and transmitted along a short interconnecting cable line (approximately 0.3 mile) on Dogwood Road to the Dogwood OEC.

Underground Medium Voltage Distribution Cable

The energy generated by the Dogwood solar facility would be collected at an on-site XMD and switch on the western edge of the site adjacent to South (S) Dogwood Road. The energy would be transmitted along a short underground medium voltage distribution cable running north approximately 0.3 miles along the western edge of APN 059-020-001 and over the Central Main Canal via an above canal cable tray. The line would be strung on 66-foot-high new monopoles in the ROW for Dogwood Road. The line would go underground (approx. 75 ft) crossing S Dogwood Road then continue north adjacent to S Dogwood Road for approximately 400 feet before connecting to the Dogwood OEC.

Project Substation

The Project will require a new substation to step up the low voltage electrical energy generated at the Dogwood geothermal unit to the higher voltage required for commercial transmission. No upgrades to off-site transmission facilities is necessary and the new Dogwood substation will connect directly to the existing point of interconnection with the Imperial Irrigation District (IID) controlled grid. The substation will include a 13.8 kV circuit breaker to protect the electric generator, a minimum of 80 megavolt ampere 13.8 kV/115 kV transformer, and 115 kV potential and current transformers for metering and system protection.

Water Use and Source

Water required for facility construction activities, including grading and dust control, will be obtained from the applicant's existing contract with IID. Up to 5,000 gallons per day (gpd) of water will be required for the first 2-4 months of development of the facility. Approximately 2,000 gpd will be consumed during the remaining development schedule of approximately 12-18 months. Thus, approximately 1.1 million gallons of water (10.1 acre-feet) will be used on-site during construction. Once operating, up to approximately 325 gpd (0.36 acre-feet per year) of non-potable water will be required and provided by the applicant's existing IID contract/allocation.

The Project will not require additional water from the Imperial Irrigation District (IID) for operations and will be covered under the existing contract.

Construction Schedule

As provided in the table below, the Project is anticipated to take 14 months to install, test, and become fully operational. Construction will commence immediately after all permits are secured.

Project Phasing Table

Project Activity/Phase	Duration	Total Duration
Site Preparation	1 months	14 months
Project Construction	9 months	
Substation Development and Interconnection	2 months	
Testing	1-2 months	

Construction Equipment and Noise

Heavy construction equipment, including drill rigs, drilling equipment, semi-truck trailers, flatbed trucks, forklifts, excavators/bulldozers, roller, and cranes will be used to deliver and place the proposed facility equipment on the Project Site. Smaller powered hand tools, such as drills, compressors, and welding equipment will also be used. Employee vehicles will be used to transport workers to the Site and parked at the designated parking locations.

During construction, noise emissions will be periodic and temporary, depending on the use of heavy equipment. Smaller hand tools will be used consistently during the construction phase.

Construction activities will be limited to 7:00am through 7:00pm. Construction noise from Project development will not exceed the County threshold of 75 decibels at any time of (County of Imperial Codified Ordinances § 90702.00 – Sound Level Limits). There are no sensitive receptors (i.e., schools, churches, hospitals, parks, etc.) in close proximity (i.e., within 1 mile radius) to the Site. The closest residence is approximately 3,600 feet (approximately 2/3 mile) to the east.

Abandonment

As included in the enclosed Reclamation Plan Application, at the end of the useful life, all equipment and facilities would be properly abandoned and dismantled. A Site Abandonment Plan (SAP), in conformance with Imperial County and CalGEM requirements, would be prepared and implemented. The SAP would describe the proposed approach to facility abandonment, equipment removal, disposal, and site restoration. All above-ground equipment will be dismantled and removed from the entire HGEC (including Dogwood OEC). The surface of the site would be restored to conform to approximate pre-Project land uses (e.g., agriculture or open space).

Environmental Protection Measures

All ORMAT and contractor personnel will be informed of ORMAT's policy regarding environmental protection, safety plans, and emergency response protocols. Collectively, these measures minimize unintended impacts and events as result of facility construction and operation.

Surface and Ground Water Quality

- A Water Quality Management Plan (WQMP) will be prepared for both the construction and operations phases of the Project. The WQMP includes numerous "good housekeeping" and preventative

maintenance, employee training, safe handling/storage, and spill response measures to prevent and minimize any unintended releases.

- The site will be designed and prepared to provide adequate stormwater conveyance and/or infiltration.
- Any spills or unintended releases of chemicals used during Project construction and/or operation will be cleaned up with the appropriate materials (i.e., absorbent pads, foams/gels) and the affected area remediated to prevent contact with groundwater resources.
- No vehicle fueling or maintenance will take place on exposed soil.

Wildlife

- Speed limits of 5 mph will be observed on the site in order to minimize dust and avoid collision and incidental mortality of local wildlife.
- Pre-construction surveys will occur to ensure the absence of any sensitive species, including burrowing owl.

Vegetation

- Vegetation control, including invasive species eradication, will be implemented to prevent growth under or near the proposed facilities.

Air Quality

- The Project will adhere to the Imperial County Air Pollution Control District's (ICAPCD) Regulation VIII, Fugitive Dust Rules, which are designed to mitigate PM10 emissions during construction.
- ORMAT shall submit a Construction Dust Control Plan and notify the ICAPCD 10 days prior to the start of any construction activities.
- Any equipment breakdown resulting in air emissions shall be reported to ICAPCD and promptly corrected (within 24 hours when possible).
- To minimize unnecessary emissions, Project equipment and worker vehicles shall be turned off when not in use and not left idling.
- Water shall be applied to the development site and during preparation and construction to control fugitive dust.
- Earth moving work shall be completed in phases (as necessary) to minimize the amount of disturbed area at one time.
- Construction vehicles and heavy equipment that use non-surfaced facility roads and areas will be restricted to 5 mph to control fugitive dust.
- During windy conditions, barriers shall be constructed and/or additional watering will occur to minimize fugitive dust.
- Vehicle access shall be restricted to the disturbance area via signage and/or fencing.
- Equipment shall be operated according to best practices and maintained according to design specifications.
- The OEC shall be tested and inspected for leaks annually using specialized leak detection equipment to confirm proper function and high isopentane recovery rates.

- Construction equipment shall be equipped with an engine designation of EPA Tier 3 (Tier 3) if commercially available and feasible. If a Tier 3 engine is not certified for a particular piece of equipment or not commercially available, then the equipment shall be either equipped with a Tier 2 engine or equipped with retrofit controls to reduce exhaust emissions of nitrogen oxides (NOx) and diesel particulate matter (DPM) to no more than Tier 2 levels. Prior to the issuance of a grading permit, ORMAT will submit a list of all construction equipment, including off road equipment, by make, model, year, horsepower, expected/actual hours of use, and EPA to the County Planning and Development Services Department and ICAPCD.
- The Project shall implement the following measures as part of its construction Best Management Practices (BMPs): providing Valley Fever awareness training for workers; providing respirators to workers when requested, including the provision of necessary training; use of closed-cab earth-moving vehicles equipped with HEPA-filtered air systems; employee testing for Valley Fever as needed; and conducting earth-moving activities downwind of workers when possible.

Cultural Resources

- The Project site is entirely disturbed so the probability of encountering an unanticipated cultural resource is low. As a safeguard, project construction personnel will monitor areas during surface disturbing activities. In the event any potential cultural or archaeological resources (e.g., bones, ceramics) are discovered, all construction affecting the discovery site will be suspended immediately until a qualified archaeologist has reviewed the findings. An Unanticipated Discoveries Plan will be prepared prior to resuming construction.

Waste Management

- Workers will be required to properly dispose of all refuse and trash to prevent any litter on the Project site.
- During construction, portable chemical sanitary facilities will be used by all construction personnel. These facilities will be serviced by a local contractor.
- All construction wastes, liquid and solid, will be disposed of in compliance with all appropriate local, state, and federal disposal regulations.
- Solid waste will be disposed of in an approved solid waste disposal site in accordance with Imperial County Environmental Health Department requirements. Waste will be routinely collected and disposed of at an authorized landfill by a licensed disposal contractor.

Fire Prevention

- An Emergency Response Plan covering possible emergencies (e.g. blow-outs, major fluid spills, impacts due to earthquakes, and other emergencies) shall be maintained. At least one Emergency Coordinator, responsible for coordinating all emergency response measures, will be on call and able to quickly reach the Project at all times. The Emergency Coordinator shall be thoroughly familiar with all aspects of the Emergency Response Plan and have the authority to commit the resources needed to carry out the contingency plan. Adequate personnel and equipment shall be available to respond to emergencies and to ensure compliance with CUP conditions, including appropriate first aid employee training and other provisions during Project construction and operation. All construction equipment will be equipped with exhaust spark arresters.

- Safety Data Sheets for all known chemicals of concern will be maintained and available to workers and first responders.
- Personnel will not be allowed to smoke outside of designated areas.
- A list of emergency phone numbers will be available onsite.
- Adequate firefighting equipment (i.e., a shovel, a pulaski, standard fire extinguisher[s], and an ample water supply) will be kept readily available at each active construction site.
- Vehicle catalytic converters (on vehicles that enter and leave the construction site on a regular basis) will be inspected often and cleaned of all flammable debris.
- All cutting/welding torch use, electric-arc welding, and grinding operations will be conducted in an area free from vegetation. An ample water supply and shovel will be on hand to extinguish any fires created from sparks. At least one person in addition to the cutter/welder/grinder will be at the work site to promptly detect fires created by sparks.
- The isopentane tank will be equipped with an automated water suppression system.
- The isopentane tank will include a concrete foundation and additional concrete containment areas.
- The isopentane tank will be equipped with two flame detectors, which will immediately detect any fire and immediately trigger the automatic fire suppression system and the horn and strobe system.
- The isopentane tanks will be equipped with a gas detector, which will immediately detect any isopentane leak and notify the control room (manned by 24/7).
- A survey and analysis of the proposed fire suppression and detection equipment will be performed by a certified fire protection engineer to evaluate the proposed fire response system's performance. An evaluation of the proposed fire suppression and detection equipment in conjunction with existing equipment will also occur. A full report of findings will be provided to Imperial County Fire Department for review.
- An approved automatic fire detection system shall be installed as per the California Fire Code as adopted by the Imperial County Code. All fire detection systems shall be installed and maintained to the current fire code and regulations adopted by Imperial County.
- Fire Department access roads and gates will be in accordance with the current fire code adopted by Imperial County and the facility will maintain a Knox Box or a similar, Department-approved device for Site access.

Noise

- Diesel equipment used for drilling within 1,000 feet of any residence shall have hospital-type mufflers. Well venting and testing at these wells shall be accompanied by the use of an effective muffling device or "silencer".

Geotechnical and Geologic Hazards

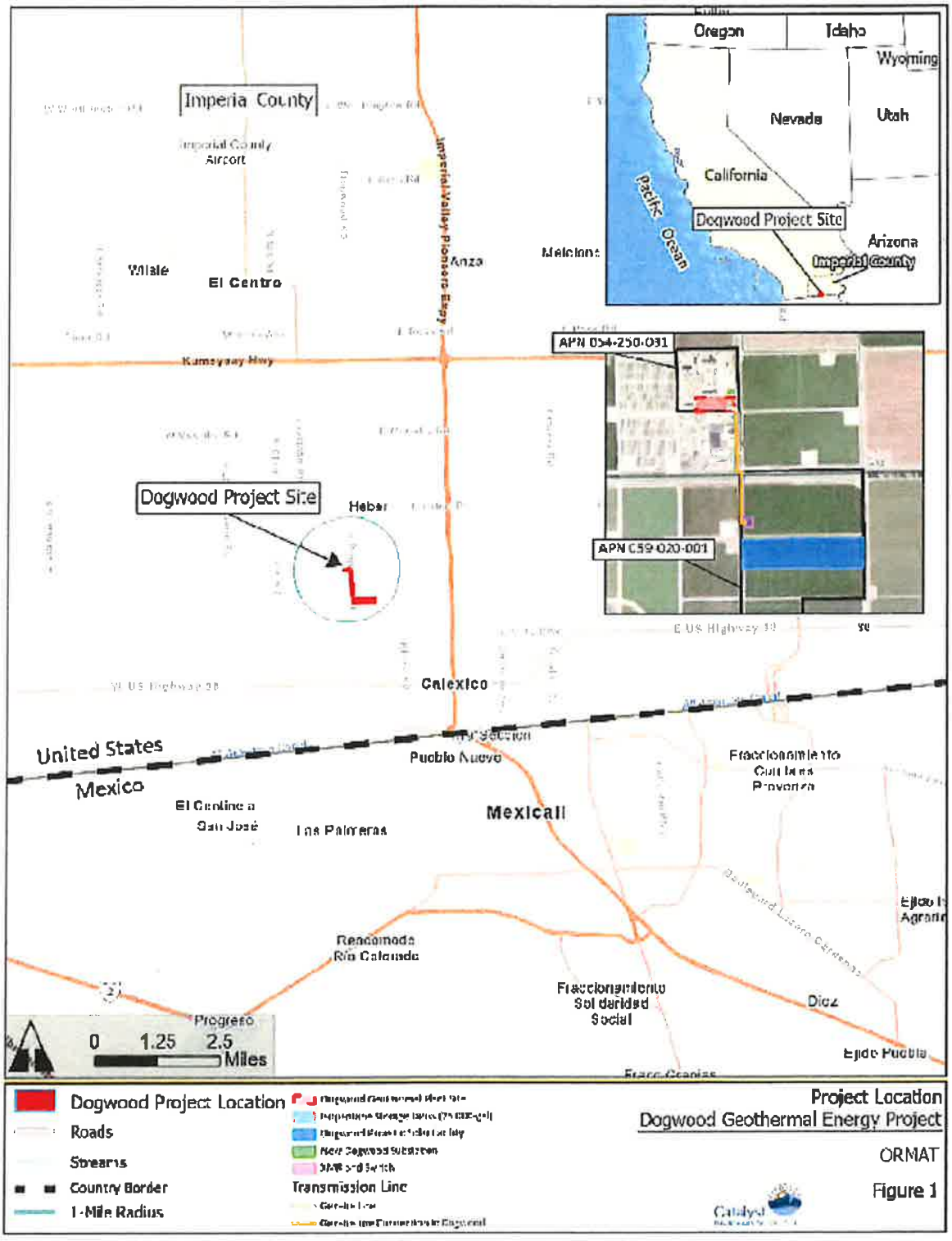
- A formal geotechnical investigation of the Site's soil characteristics, seismic conditions, stormwater infiltration, site stability, and potential for liquefaction will be developed.

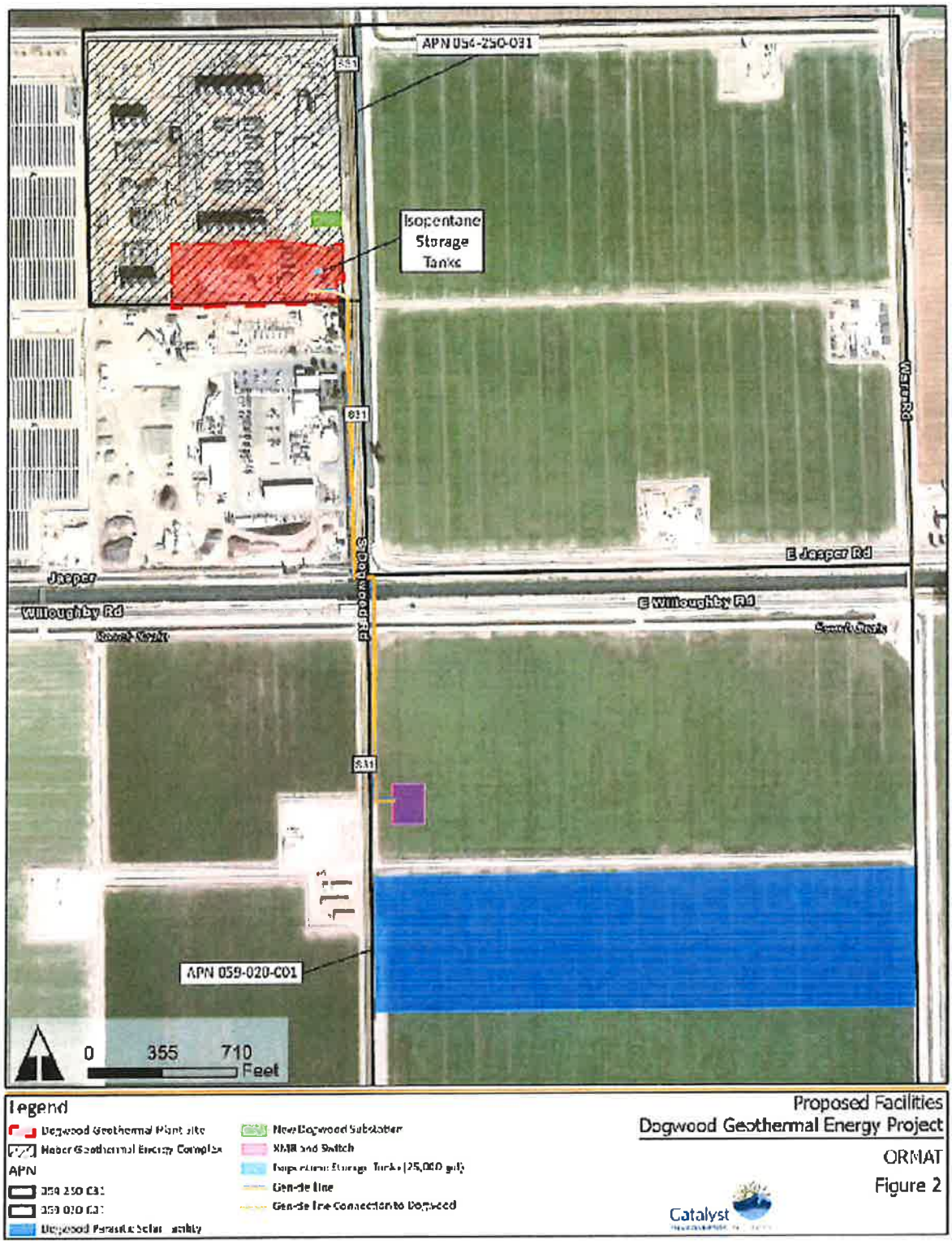
Public Health and Safety

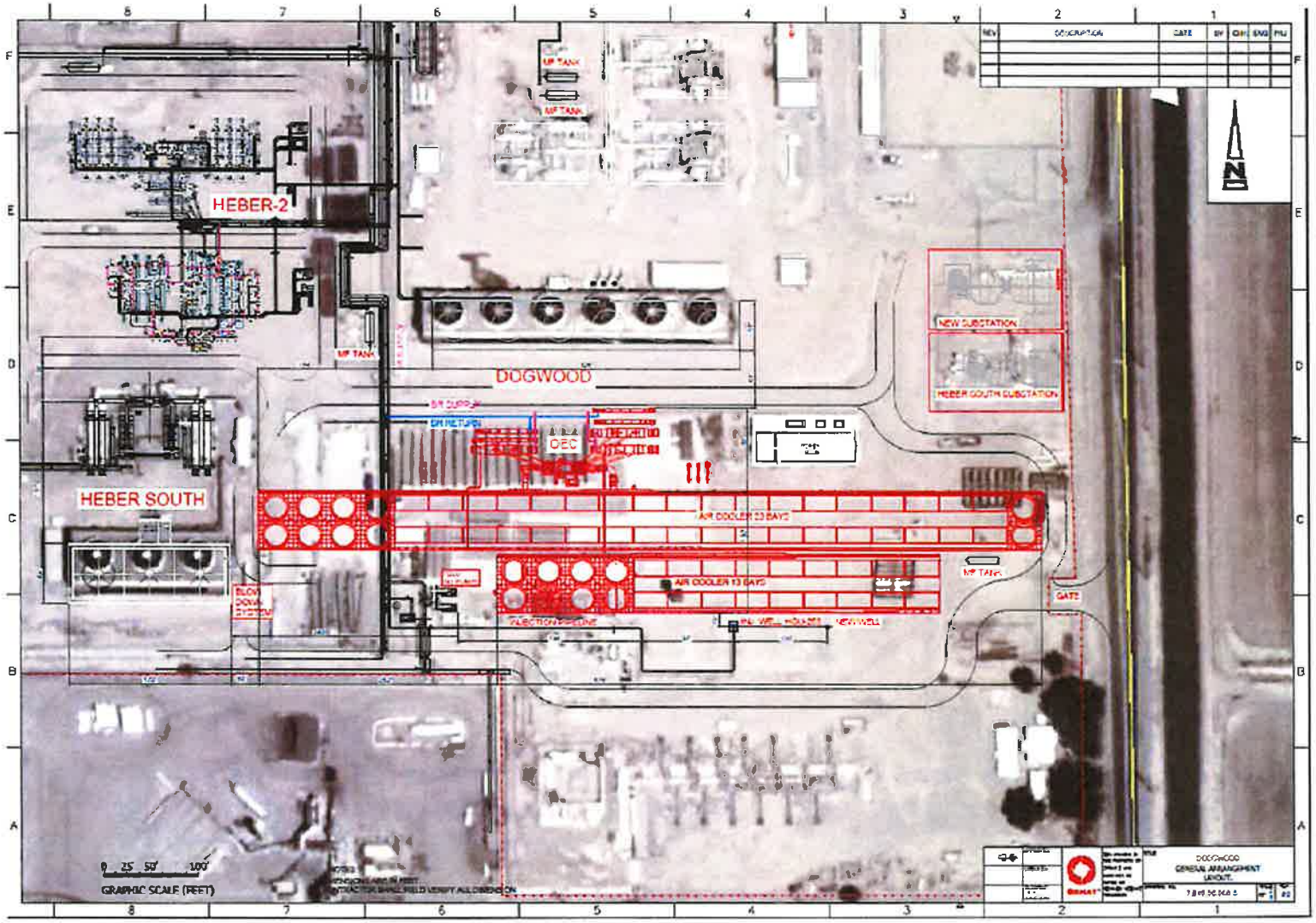
- The Site is fenced to prevent unauthorized people from accessing and tampering with the geothermal facilities, and to prevent wildlife from entering the facility.
- Signage, such as "No Trespassing" and "Danger – High Voltage" warnings, will continue to be posted at the Site to provide notice to unauthorized people to keep out.
- A Hazardous Materials Business Plan (HMBP) will be prepared and submitted to the California Department of Toxic Substances Control (CDTSC), as the Certified Unified Program Agency (CUPA) for Imperial County.
- ORMAT will designate an employee to serve as the on-call Emergency Coordinator who fully comprehends the ERP and would be prepared to enact the ERP in the event of an emergency.
- Minor leaks or spills of fluids from construction equipment will be quickly contained and cleaned up.
- All hazardous materials will be used, transported, and disposed of in accordance with applicable safe handling and disposal regulations.

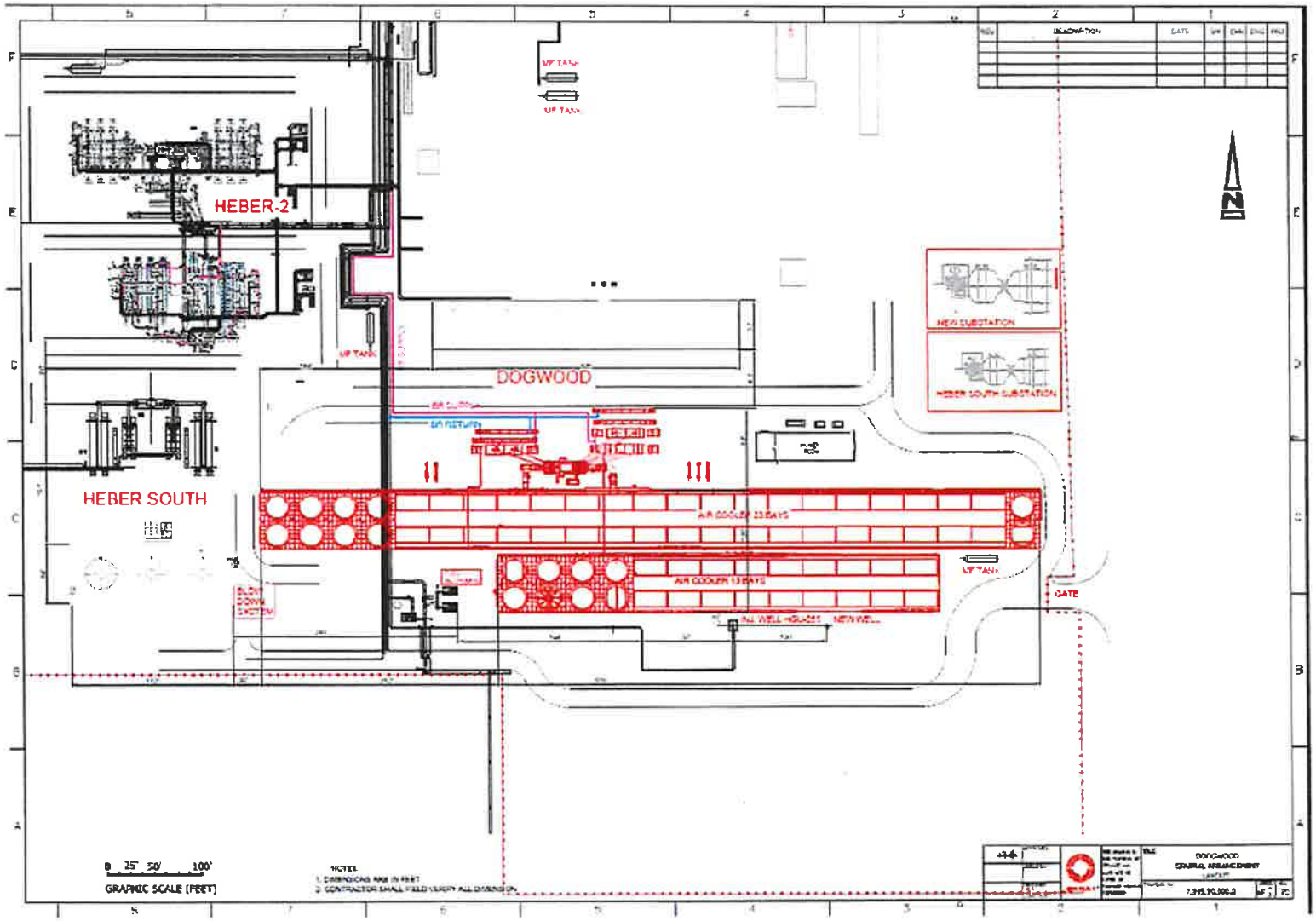
Traffic and Transportation

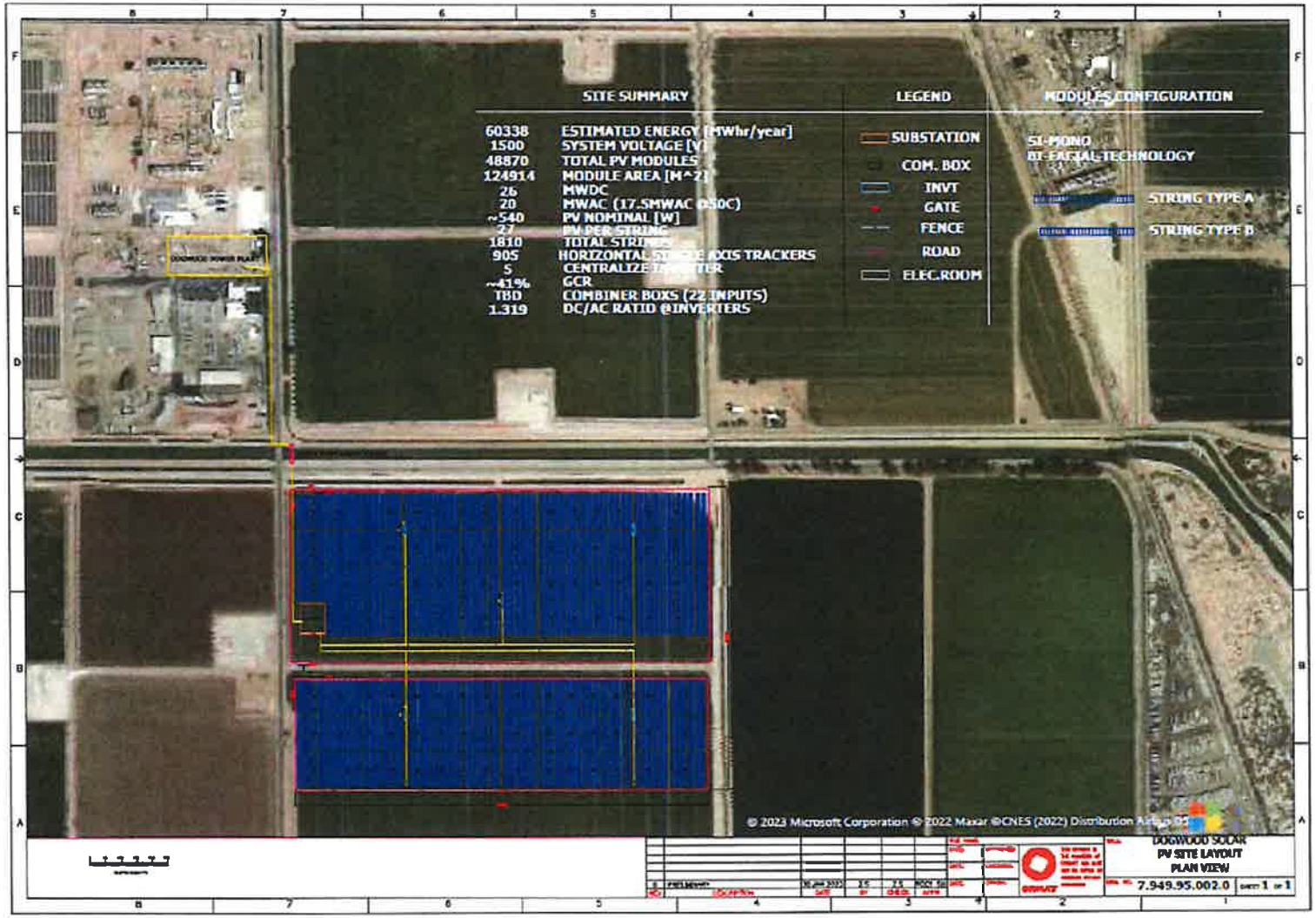
- Project personnel will coordinate that movement of any required oversized load on Imperial County roads with the Imperial County Department of Public Works (ICDPW) and/or on State highways with the California Department of Transportation (CalTrans) and the El Centro California Highway Patrol office. Transportation of oversized equipment will be minimized to the greatest extent feasible. Oversized equipment and/or large vehicles which impose greater than legal roads on riding surfaces, including bridges, shall require a transportation permit.
- The Project shall consider traffic safety in transporting equipment and materials to the permitted facilities to include temporary signs warning motorists on adjacent roadways and flagmen shall be used when equipment is being brought to and from the plant and wellfield sites.
- The Project shall coordinate with DPW for any requested dedication of rights-of-way needed for Dogwood Road for the consideration of existing and any future road needs.
- The Project shall file for an encroachment permit for any work or proposed work in the affected County or CalTrans road rights-of-way and for any and all new, altered or unauthorized existing driveway(s) to access the lot or lots and for any proposed road crossings.

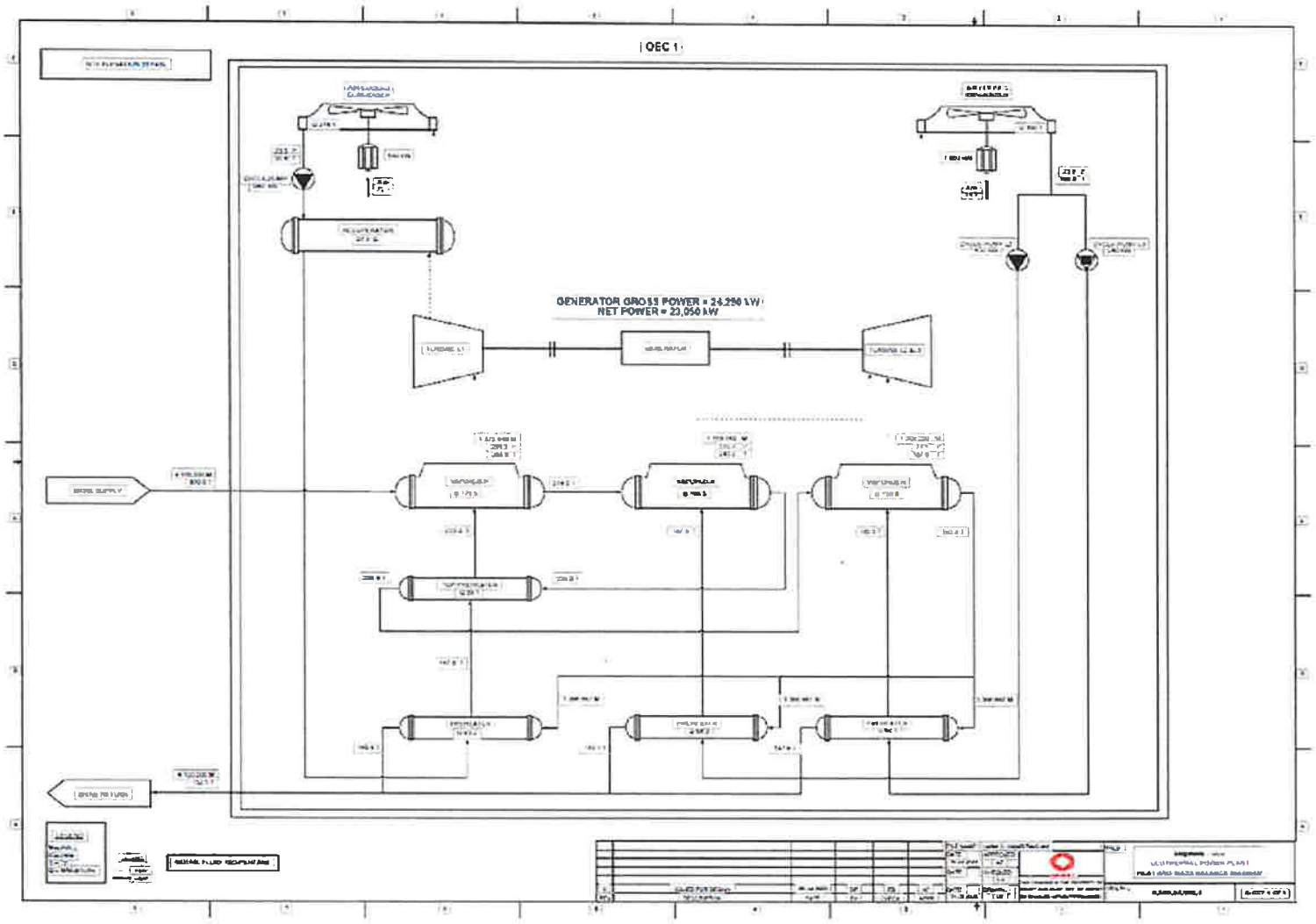

Imperia County
Imperial County Airport
Imperial Valley Pioneers Expy
Oregon
Idaho
Wyoming
Nevada
Utah
California
Pacific Ocean
Dogwood Project Site
Arizona
Imperial County
Meloland
Anza
Wiale
El Centro
Kameyaay Hwy
APN 054-250-031
APN 059-020-001
Dogwood Project Site
Heber
E US Highway 80
W US Highway 80
Calexico
United States
Mexico
Pueblo Nuevo
El Centinela
San José
Las Palmeras
Mexicali
Fraccionamiento Cumbres Provenza
Rancho Rio Colorado
Fraccionamiento Solidaridad Social
Diaz
Ejido Puebla
Progreso
0 1.25 2.5 Miles
Dogwood Project Location
Roads
Streams
Country Border
1-Mile Radius
Transmission Line
Project Location
Dogwood Geothermal Energy Project
ORMAT
Figure 1
Catalyst


APN 054-250-031
Isopentane Storage Tanks
E Jasper Rd
Willoughby Rd
E Willoughby Rd
APN 059-020-001
0
355
710
Feet
Legend
Proposed Facilities
Dogwood Geothermal Energy Project
ORMAT
Figure 2
Catalyst


HEBER-2
HEBER SOUTH
DOGWOOD
OEC
NEW SUBSTATION
HEBER SOUTH SUBSTATION
AIR COOLER 23 BAYS
AIR COOLER 13 BAYS
GATE
GRAPHIC SCALE (FEET)


HEBER-2
DOGWOOD
HEBER SOUTH
AIR COOLER 13 BAYS
AIR COOLER 13 BAYS
GATE
GRAPHIC SCALE (FEET)


SITE SUMMARY
60338 ESTIMATED ENERGY [MWhr/year]
1500 SYSTEM VOLTAGE [V]
48870 TOTAL PV MODULES
124914 MODULE AREA [M^2]
26 MWDC
20 MWAC (17.5MWAC @50C)
~540 PV NOMINAL [W]
27 PV PER STRING
1810 TOTAL STRINGS
90S HORIZONTAL SINGLE AXIS TRACKERS
5 CENTRALIZE INVERTER
~41% GCR
TBD COMBINER BOXS (22 INPUTS)
1.319 DC/AC RATIO @INVERTERS
LEGEND
SUBSTATION
COM. BOX
INVT
GATE
FENCE
ROAD
ELEC.ROOM
MODULES CONFIGURATION
SI-MONO
BI-FACIAL TECHNOLOGY
STRING TYPE A
STRING TYPE B
© 2023 Microsoft Corporation © 2022 Maxar ©CNES (2022) Distribution Airbus DS
DOGWOOD SOLAR
PV SITE LAYOUT
PLAN VIEW
7.949.95.002.0


GENERATOR GROSS POWER = 24,250 kW
NET POWER = 23,050 kW

Attachment B

Site Photographs

Catalyst
ENVIRONMENTAL SOLUTIONS

Photo Map

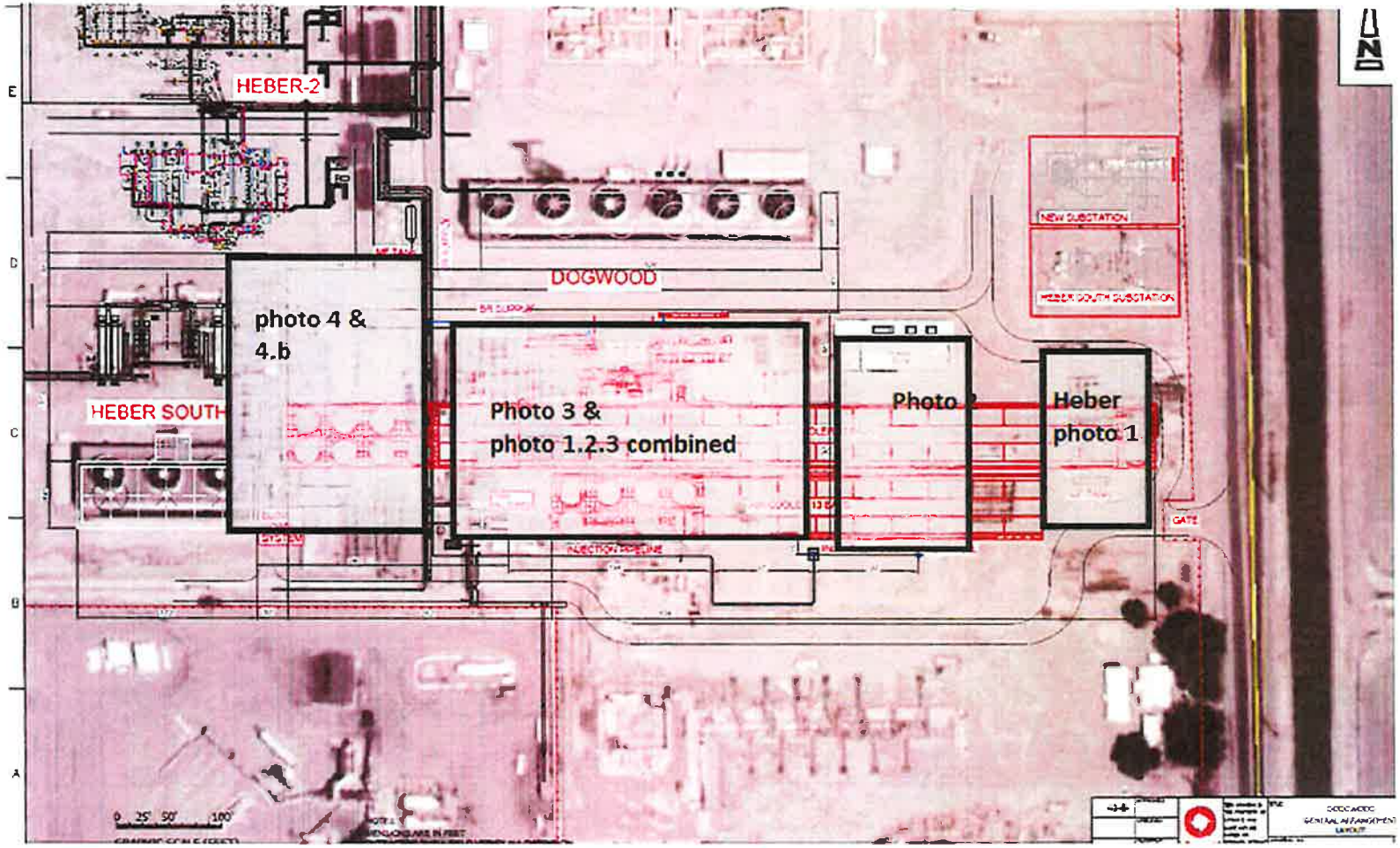

HEBER-2
DOGWOOD
HEBER SOUTH
photo 4 &
4.b
Photo 3 &
photo 1.2.3 combined
Photo 2
Heber
photo 1
NEW SUBSTATION
HEBER SOUTH SUBSTATION
GATE
0 25' 50' 100'

Photo 1

Photo 2

Photo 3

Photo 4

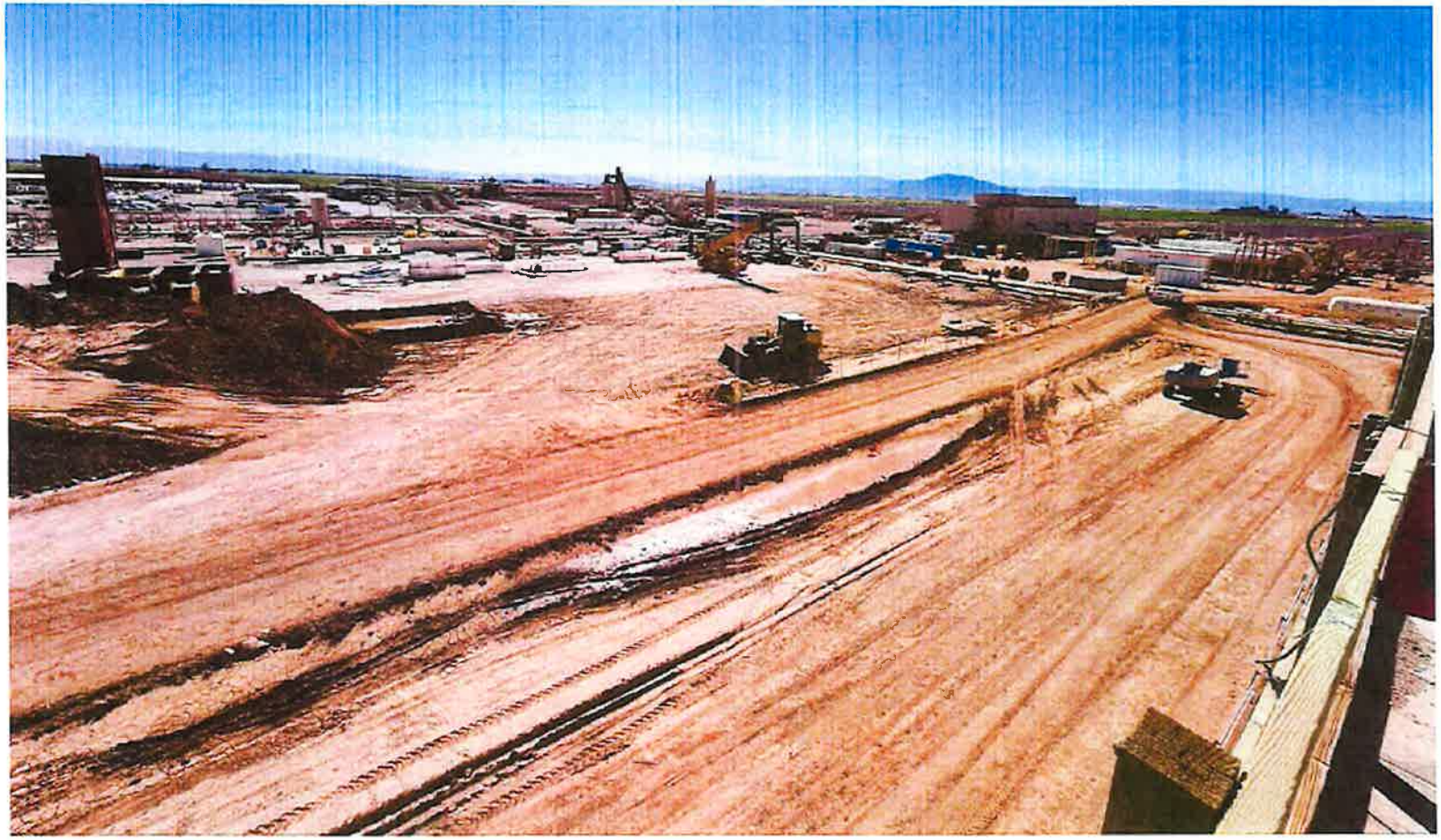
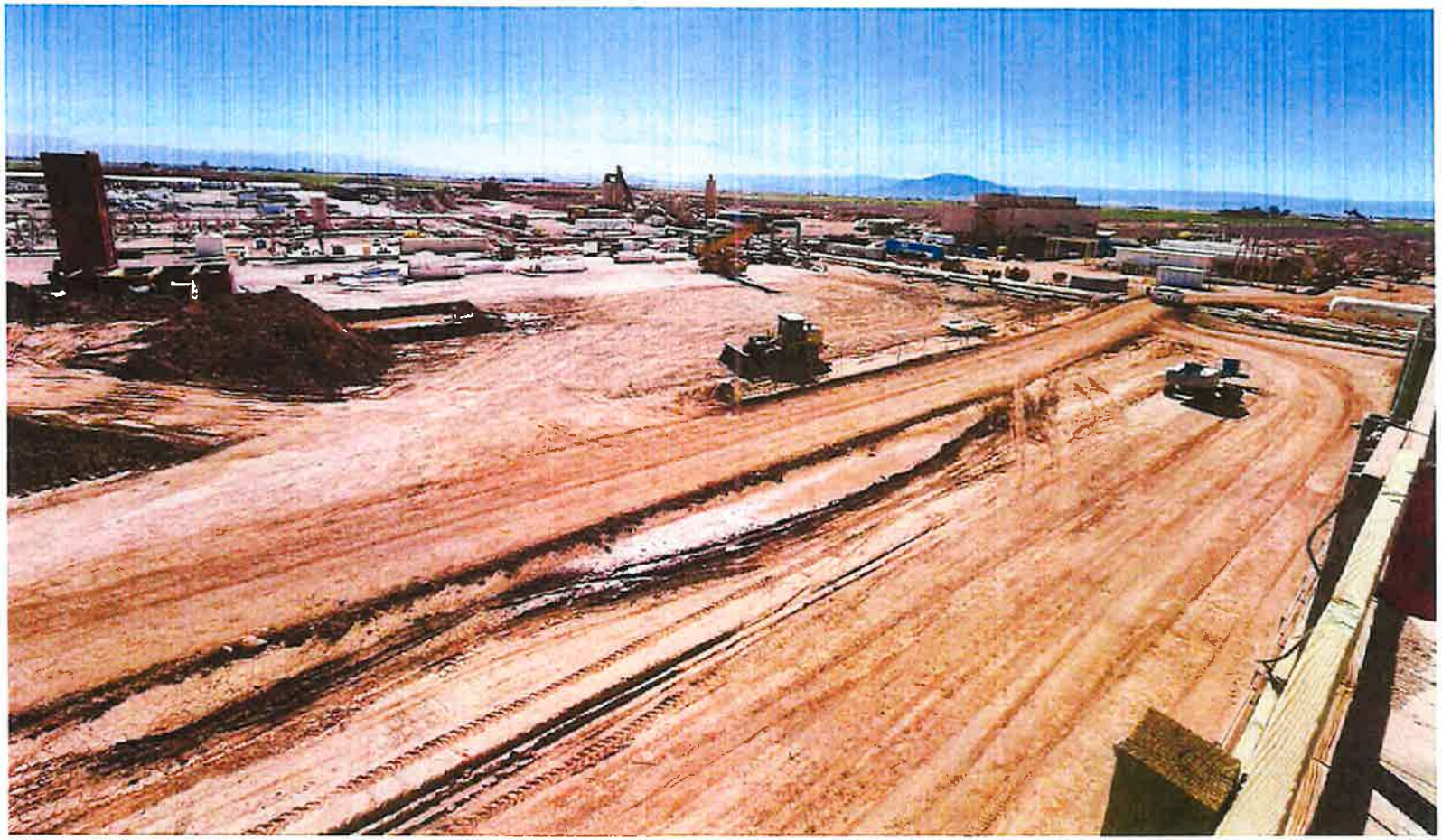


Photo 5 (1,2,3 combined)



Solar Field Sites

Solar Field Sites

Solar Field Sites

Solar Field Sites

Attachment C

Spec Sheets for OEC Units

Catalyst
ENVIRONMENTAL SOLUTIONS

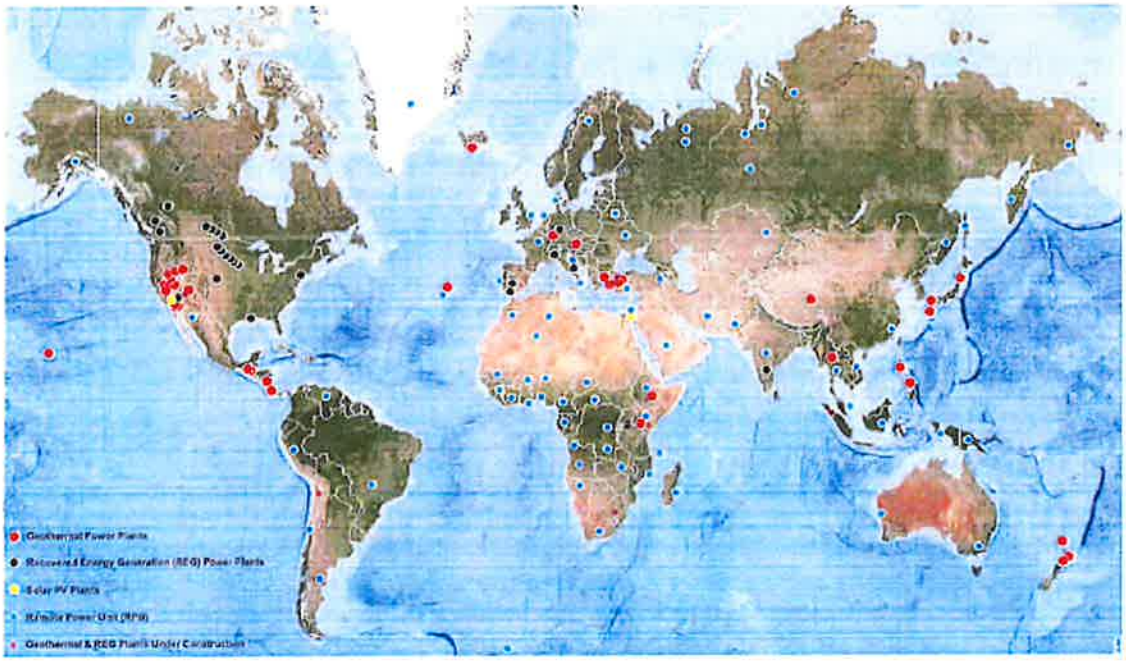
A. INTRODUCTION

A.1. About Ormat

Ormat is a global leader in development, supply and operation of state-of-the-art environmentally sound alternative energy power plants, matched to resources available locally.

Ormat has pioneered the use of organic fluids as the power system's motive fluid. These systems are generally referred to as Organic Rankine Cycle (ORC) systems. For over 55 years, Ormat's power plants have been supplying clean, reliable, cost effective and sustainable electricity to power grids on five continents, from Iceland to New Zealand, from Canada to The Andes, and from Hawaii to Japan. Ormat's power plants have been built in areas that otherwise would be forced to depend on expensive, environmentally unfriendly fossil fuels.

Ormat Technologies, Inc. is a public company traded on the New York Stock Exchange, under the symbol "ORA" and is headquartered in Reno, Nevada.

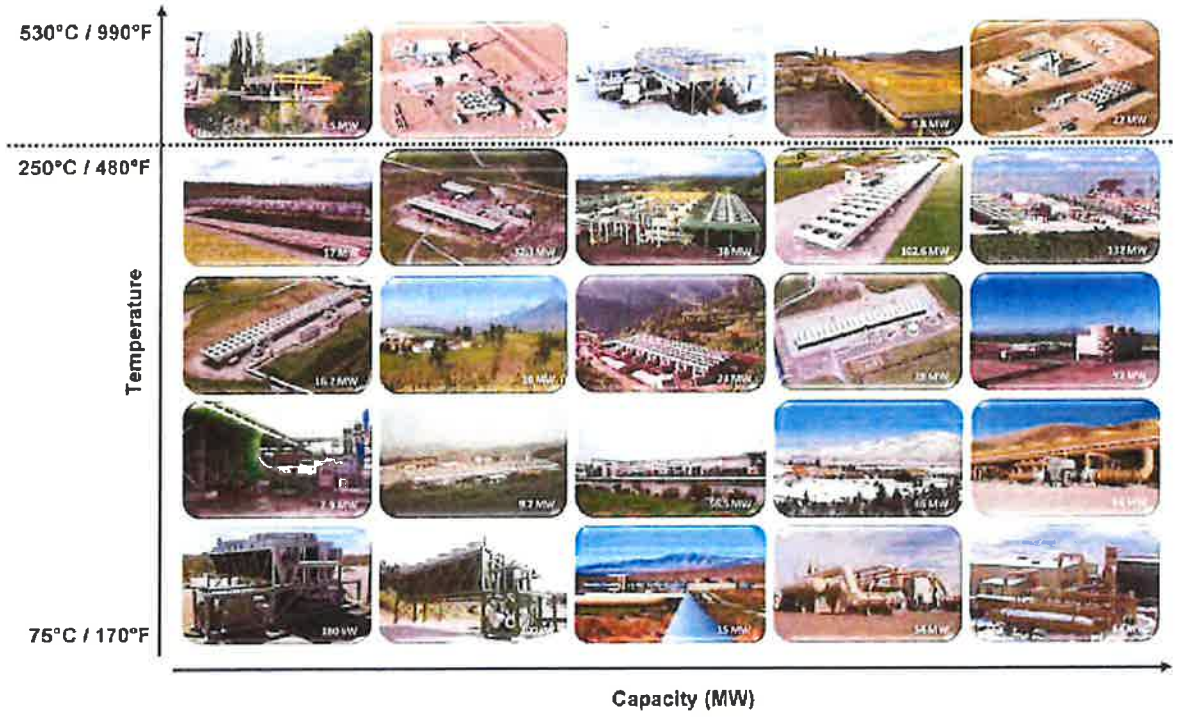


Selection of geothermal, REG, RPU and solar power plants installed and under construction by Ormat worldwide

A.2. The Power of Experience

Ormat offers unique renewable power solutions based on the ORMAT® Energy Converter (OEC), a power generation unit which converts low, medium and high temperature heat into electrical energy. With 77 US patents (and 9 patents pending), the OEC is a state-of-the-art implementation of the Organic Rankine Cycle (ORC) technology that we have refined and perfected through more than 30 years of use under the most challenging conditions. Ormat's flexible, modular solutions are all based on the OEC, specifically designed for customized power plant options. Ormat has built over 3,270 megawatts of power plants (3,010MW installed and 260MW under construction) and over 3,000 remote power units across 77 countries and 6 continents. We have actual practical experience with ORCs ranging in size from 250kW to 125MW. Ormat's experience in designing, commissioning and operating large plants with multiple OEC units is among the benefits we bring to our customers. The ability to provide full operational control to an entire power plant makes the difference between providing a solution and merely providing products.

Over 3,270 MW (3,010MW installed and 260MW under construction), 180 Plants, 300 ORC Units, and 50 million hours of Ormat Energy Converter experience



A.3. The ORMAT® Energy Converter (OEC)

The OEC is a power unit specifically designed to best utilize the available heat sources at a wide range of temperatures. The major components of the OEC are heat exchangers, turbine-generator set, water/air-cooled condenser(s) and feed pump(s).

The OEC is a field proven, mature commercial product operating worldwide. The OEC is an Organic Rankine Cycle power generation system utilizing geothermal fluid, solar or waste heat to produce electrical energy, designed for outdoor installation and remote control unattended operation. Ormat has successfully installed geothermal and industrial power plants, based on the OEC technology with an accumulated experience of millions of operating hours.

The OEC's Competitive Edge:

Environmentally benign motive fluid

The OEC utilizes an environmentally benign Hydrocarbon motive fluid with a negligible GWP and ODP.

Flexibility to best fit the requirements

Ormat OEC units are designed to fit the specific site conditions of the given application (heat source and environmental characteristics), thus providing the best fit solution to the customer's needs, and optimizing the efficiency and cost effectiveness of the electrical generation.

Modular Approach

The OEC units vary in sizes to suit the many different power heat sources available. The OECs can generate electric power between 250kW to over 50MW per unit. The OECs can be linked together to fit the needs of larger size plants.

A key component in our multi OEC plants is the Plant Control System which comprises the unit control and the Central Station Control. The purpose of the Central Station Control (CSC) and HMI (Human Machine Interface) systems are to enable the plant operator to monitor and control the entire system, including the OECs, and the balance of plant from a central control room.

Condensing near atmospheric pressure

The thermodynamic properties of the motive fluid provide much higher condensing pressures than comparable steam systems. By operating at condensing pressures near atmospheric, the turbine requires shorter blades and the ingress of air into the system is significantly minimized. The latter feature mitigates the need for vacuum maintenance.

Not susceptible to freezing

The freezing point of the motive fluid is below -100°C. This feature eliminates the requirement to implement controls and procedures to prevent freeze-up within the condenser, the heat exchangers and the piping.

Moisture-free turbine expansion

Unlike its steam turbine counterpart, the OEC turbine remains dry under all expected working conditions (a thermodynamic consequence of the hydrocarbons' 'drying fluid' saturation curve). This eliminates the possibility of erosion damage to the turbine's buckets and nozzles. Thus, the OEC can accommodate part load operation and large transients more effectively than steam systems.

High turbine efficiency at low speed and low output

Due to the motive fluid's low sonic velocity, the OEC yields high turbine efficiency at 1500 or 1800 RPM (50 or 60 Hz) without a gearbox, increasing plant output while reducing costs.

Synchronous generators

Synchronous Generators above 1MW are the state-of-the-art solution preferred by utilities as they allow for the ability to support and stabilize the grid voltage and frequency, regulate the output voltage and VAr's, and can operate with a wide voltage regulation range. Further, synchronous generators do not require complex and costly capacitor banks.

Remote, unattended operation

OECs have compiled an exemplary reliability record wherever Ormat has applied them. These OECs do not require 24/7 manning nor a licensed steam plant operator. These two features result in the ability to operate OEC plants in a remote, unattended mode.

Water-free cooling

Air cooled OECs operate on a closed loop, do not consume any water and are therefore free of the environmental consequences that accompany water based systems. Chemical additives are not required for the cooling tower operation and therefore there is no waste disposal. The plant has a much lower profile than a conventional condensing steam turbine with water cooled condenser and wet cooling towers, and has the advantage of never producing a visible plume resulting in a low visual profile that blends into the surroundings with minimal impact to the landscape.

Note: Water-cooled units are also designed and supplied by Ormat.

High Performance with Minimal Environmental Impact

Ormat's modular power plants are designed to be environmentally friendly. Air-cooled condenser technology enables us to re-inject almost 100% of all extracted geothermal fluids, thereby avoiding the use of geothermal steam condensate or external water resources for cooling and preventing the need for chemical additives. The 100% re-injection also sustains reservoir life and productivity. Due to the low profile of the air-cooled condensers and the lack of any plumes from water cooling towers, both environmental and visual impacts are minimized.

Field proven high availability and reliable performance

Ormat OEC's have field proven performance with very high rates of availability - Ormat binary cycle plants have demonstrated the highest average plant availability in today's market. This is a critical factor, as it drives the pay back, proves the maturity of the system and its components, defines the quality of the generated electricity, quantifies the O&M cost, and lowers the investment risk. Ormat's committed performance is contractually guaranteed and confirmed by predefined performance tests.

Low maintenance

Ormat OECs are proven to require minimal maintenance resulting in high availability, low maintenance and low operational costs.

A.4. Engineering Expertise

Ormat prides itself on being actively involved in the development of alternative energy thermal power systems and designing ORC systems since 1965, over 5 decades. Ormat's Engineering department is divided into the following disciplines: Thermodynamics, Rotating Equipment, Process Eng., Mechanical Eng. & Piping, Heat Exchange & Pressure Vessels. Ormat's Project department is divided into: Project managers, Project engineers, Sites managers, Startup & commissioning engineers. Our engineering and design staff have extensive experience allowing for best design of each application. The in-depth knowledge gained from our operations in a variety of different applications gives our company its competitive edge.

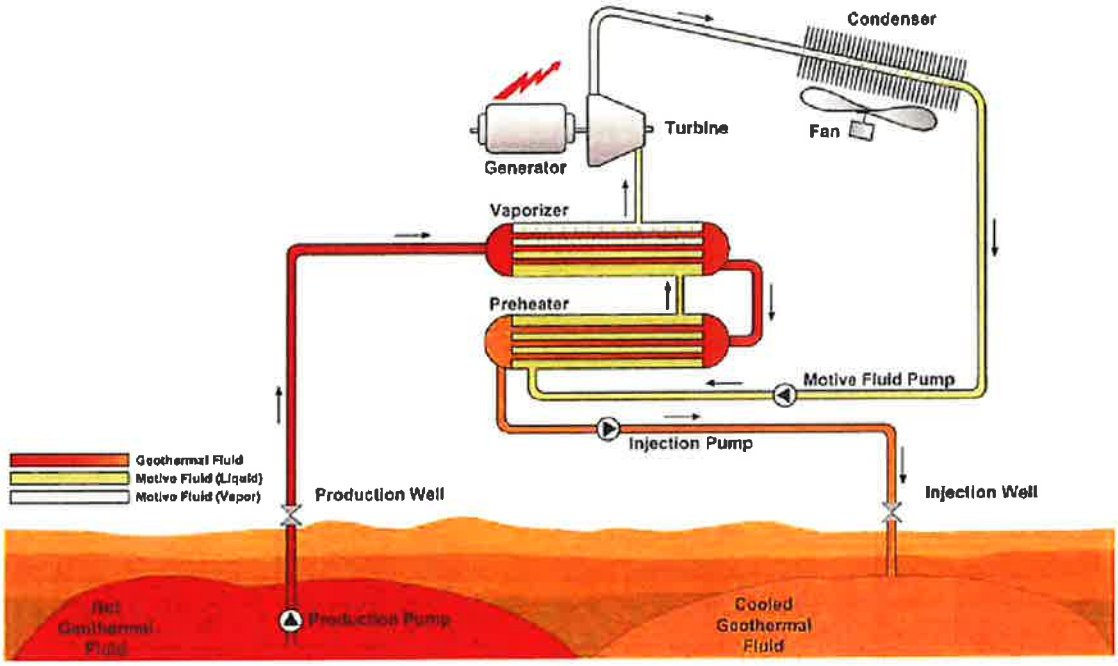
A.5. Technology Leadership

Ormat OEC design is flexible, and our products are customized for the maximum utilization of the heat source in the specific site condition and cooling method (air or water). The OEC major components are designed and manufactured in-house. The heat-exchangers, turbine and condensers are all customized and built in accordance to the specific characteristics of the heat source. Therefore we can utilize the heat source directly or indirectly using intermediate thermal fluid: steam, hot water, hydro carbons, flue gasses, acid liquids, kilns dirty flue gasses and more.

In recent years, there has been a need to improve the efficiency of power production from heat sources in general and from industrial heat sources in particular. One of the methods to accomplish this which has been developed recently is to utilize Waste Heat available in industrial complexes and facilities. By doing so, energy is recovered from the waste heat and power is generated. Ormat has developed over the last few years a power plant unit for this purpose. At present, several such generating unit systems comprising a Recovered Energy Generation (REG) system are operating in the US, Canada and in other countries around the world.

The following diagram shows a typical air-cooled OEC for a geothermal application (the air-cooled condenser in this diagram could be replaced by a water-cooled condenser).

Air-Cooled Binary Geothermal Power Plant



Abbreviation:

CSC	Central Station Control
HMI	Human Machine Interface
OEC	ORMAT® Energy Converter
ORC	Organic Rankine Cycle
TAS	Technical Advisory Services
GWP	Global Warming Potential
ODP	Ozone Depletion Potential

B. TECHNICAL PROPOSAL

B.1. PROCESS DESCRIPTION

B.1.1. General Description

The Air-cooled ORMAT® Energy Converter (OEC) unit proposed to Novus Earth Energy Operations Inc. for the Novus Earth Energy - Hinton geothermal plant will generate electrical power utilizing the geothermal fluid from a deep-well closed loop (with 80% water and 20% environmentally friendly glyco)l at Hinton, Alberta, Canada, while synchronized to the grid.

B.1.2. Process Description

B.1.2.1. Thermodynamic Cycle - ORMAT® Energy Converter (OEC)

The OEC proposed is comprised of all equipment and controls required to convert geothermal heat into useful electric power.

The major components of the OEC consist of heat exchangers, turbine, generator, lubrication and sealing systems, air-cooled condenser and motive fluid cycle pump. The module also includes automatic and manual control valves, instrumentation (gauges, switches and transmitters), internal piping, and power and control boards.

Operation process of the OEC is based on the Organic Rankine Cycle, in which an organic fluid absorbs heat from a heat source, causing the motive fluid to evaporate, the motive fluid then expands in the turbine thus dropping in pressure and temperature and producing rotational shaft power by transforming kinetic energy gained by the vapor's expansion process.

The low-pressure vapor flows to the condensers via a recuperator, condenses and is pumped back into the preheater/vaporizer via the recuperator in its liquid state by a feed pump. The fluid is heated in the preheater to a temperature close to the boiling temperature and in the vaporizer the organic fluid reaches the boiling point and vaporizes

B.1.2.2. Cooling

The cooling media for the motive fluid condenser is air.

B.1.2.3. Heat and Mass Balance

The preliminary heat and mass balance of the process is provided in the Appendix, section C.1.3 (Drawings).

B.1.3. Description of the ORMAT® Energy Converter (OEC)

The OEC is fully automatic operating power generation equipment, which generates electrical power from various heat sources.

The OEC incorporates a mechanical subsystem and an electrical subsystem:

B.1.3.1. Mechanical Subsystem

The mechanical subsystem consists of the thermal-mechanical energy transfer equipment and includes heat exchangers, condenser, turbine, oil system and feed pump as well as motive fluid piping, automatic control and safety relief valves, level, pressure and temperature controls and pneumatic piping.

B.1.3.2. Electrical Subsystem

The electrical subsystem consists of the mechanical-electrical energy transfer equipment and includes a generator, power and control boards.

B.1.3.3. Control Subsystem

The control subsystem is based on a programmable logic controller (PLC) which can accept all discrete (logic) and analog signals coming from the system components, process (compute) them according to a dedicated program (software), and send back logic or analog output signals (commands). The unit includes a personal computer with dedicated application used by the operator to operate the OEC and monitor its functions locally and remotely.

B.2. DESIGN CONDITIONS AND PERFORMANCE SPECIFICATIONS

Site Conditions:	
Minimum/Maximum air temperature	-15°C/40°C(1)
Elevation above sea level	500m
Seismic zone	TBD
Heat Source and cooling Design Point Conditions:	
Heat source:	
Hot brine flow(2)	360 t/h
Hot brine inlet/outlet temperature	120°C/60°C
Cooling:	
Ambient temperature (dry bulb)	0.6°C(1)
Performance Specifications at Design Point Conditions:	
Net Generator output at generator terminals	3,150 kW
Net output available to Client(3)	2,850 kW
Other main OEC Specifications:	
Generator type	Synchronous, with power factor 0.85 Lagging
Generator voltage / Frequency	6.6 kV / 60 Hz
Noise level	95 dB(A) at one (1) meter distance from source of noise (noise reduction is possible at an additional cost)

(1) Assumed value – client to verify.
(2) 100% liquid.
(3) Net output available to Client = Net Generator output less auxiliaries within Supplier's scope.

Notes:

1. Correction curves for changes from the design point conditions in the ambient air temperature, heat source flow rate and heat source temperature will be provided by Ormat after contract execution.
2. The design and construction of the OEC units are done based on the geothermal fluid (heat source) parameters – flow rate and temperature of the brine as presented by the Client. The material selection of the heat exchangers, the design velocity of the geothermal fluid in the tubes and other design parameters are the result of Supplier's best engineering judgment and are based on years of field experience.
   However, as the chemical composition was not presented, and due to the nature of any geothermal reservoir, there may be changes in chemistry and other parameters, existence of chemicals that are not presented and unknown operation conditions. Supplier cannot guarantee the system against scaling and corrosion and not against the necessity of periodic heat exchangers cleaning.

B.3. SYSTEM INTERFACES

Element		Interface
a.	Heat Source	As per the H&M balance diagram(1)
b.	Electrical	
	b.1 Generator output – 6.6 kV	Generator breaker's outlet terminals and generator terminals
	b.2 Aux. power supply – 480V	MCC main breaker terminal
c.	Control and instrumentation (24V DC)	PLC terminals, equipment terminals and JBs terminals (where applicable)
d.	Instrument air	OEC's Instrument air connection port for each consumer
e.	Ormat HMI System and Client's Station Control	Communication port at the Ormat HMI computer
f.	Motive fluid drain/fill	Motive fluid equipment drain/fill flanges
g.	Structural	On top of foundations (foundations including anchor bolts and embedded plates to be constructed by Client)

(1) Appendix, section C.1.3 (Drawings).

B.4. STANDARDS

The equipment is designed in accordance with Ormat standards and the following international standards for the indicated items:

Turbine	Manufacture standard (PARA-ASME)
Materials	ASTM (ASME for pressure vessels) / PED or equivalent
Pressure piping	ASME B 31.1 & B 31.3 / PED
Pressure vessels	ASME Sec VIII Div. 1 including U stamping (TEMA C for heat exchangers) / PED
Steel structure	AISC / EN10025
Feed pumps	Manufacture standard (PARA-API 610)
Valves	ANSI / API or DIN
Generator	NEMA MG1 / IEC 60034
Generator circuit breaker, MCC	NEMA / IEC
Electric work, motors	NEMA / IEC
Control and Instrumentation	ISA / IEC
Instrument units	BU / SI
Classification of Hazardous Area for Electrical Equipment	U.S. National Electrical Code (NEC) Class I Div. 2, Group D or IEC classification Zone 2 Gas Group IIA or Atex Zone 2 Gas Group IIA
Hot dip galvanizing	Supplier standard
Painting system for un-insulated piping and equipment operating at temperatures lower than 120°C (250°F)	Supplier standard
Painting System for Insulated Heat Exchanger, Piping and Equipment	Supplier standard

Note: Should multiple standards be available, Ormat reserves the right to choose one at its own discretion.

Attachment D

Water Quality Management Plan

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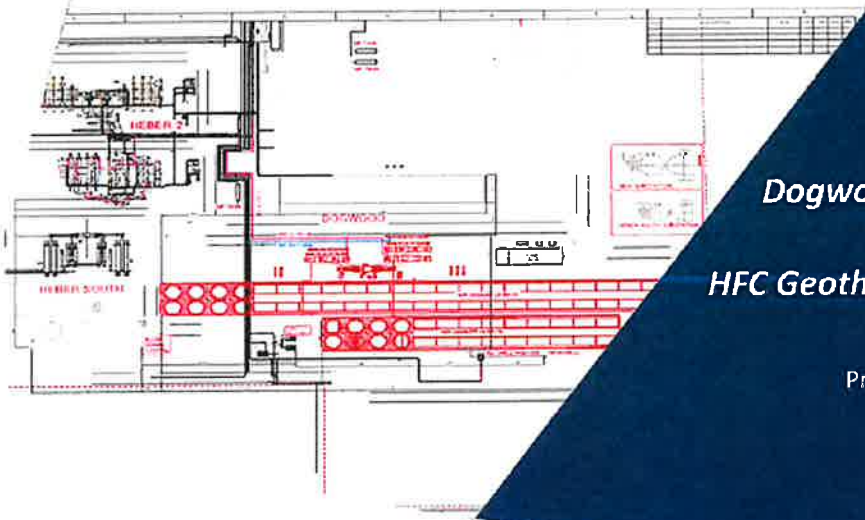
ENVIRONMENTAL SOLUTIONS



Water Quality Management Plan

Dogwood Geothermal Energy Project
Heber 2 Solar Energy Project
HFC Geothermal Wells & Pipeline Project

Prepared for: Imperial County Planning and Development Services

Submitted by: ORMAT

June 20, 2023

Innovative solutions for a complex world

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Document Information

Prepared for	OrHeber 3 LLC, Heber Field Company, and the Second Imperial Geothermal Company (collectively, the Applicants, all wholly owned subsidiaries of Ormat Technologies, Inc.)
Project Name	Dogwood Geothermal Energy Project, Dogwood Solar, and Heber 2 Solar Facilities APN 054-250-031; APN 059-020-001; APN 054-250-017
Address	ORMAT 6140 Plumas Street Reno, NV 89519-6075
Project Manager	Ben Pogue bpogue@ce.solutions
Project Engineer	Paden Voget, P.E. pvoget@ce.solutions State of California Professional Engineer #69238
Date	June 10, 2023

Professional Certification

Water Quality Management Plan

Dogwood Geothermal Energy Project, Dogwood Solar, and Heber 2 Solar Facilities

This report has been prepared by Catalyst Environmental Solutions Corporation under the professional supervision of the Principal(s) and/or staff whose signature(s) appear hereon.

The scope of work and specifications are presented in accordance with generally accepted professional engineering practice and those of the California State Water Resources Control Board Order No. 2013-001-DWQ. There is no other warranty either expressed or implied.

Paden Voget, PE
State of California Professional Engineer #69238

June 2023

Project Owner's Certification

This Water Quality Management Plan (WQMP) has been prepared for OrHeber 3 (OH), LLC, Heber Field Company, LLC (HFC), and the Second Imperial Geothermal Company (collectively, the Applicants, all subsidiaries of Ormat Technologies, Inc. [ORMAT]) by Catalyst Environmental solutions. The WQMP is intended to comply with the requirements of the County of Imperial and the Phase II Small MS4 General Permit Imperial Valley Watershed. The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of the site consistent with the Phase II Small MS4 Permit and the intent of the County of Imperial and the unincorporated community of Heber. Once the undersigned transfers its interest in the property, its successors in interest and the city/county/town shall be notified of the transfer. The new owner will be informed of its responsibility under this WQMP. A copy of the approved WQMP shall be available on the subject site in perpetuity.

"I certify under a penalty of law that the provisions (implementation, operation, maintenance, and funding) of the WQMP have been accepted and that the plan will be transferred to future successors."

Project Data			
Permit/Application Number(s):	New CUP for Dogwood Geothermal Energy Project New CUP for Heber 2 Solar Energy Project Amendment to CUP No. 06-0028 for the HFC Geothermal Wells & Pipeline Project	Grading Permit Number(s)	N/A
Tract/Parcel Map Number(s):	APN 054-250-031 APN 059-020-001 APN 054-250-017	Building Permit Number(s)	N/A
CUP, SUP, and/or APN:			06-0028 (for HFC)
Owner's Signature			
Owner Name:	Elizabeth Helms		
Title:	Corporate Secretary		
Company:	ORMAT		
Address:	6140 Plumas Road, Reno, NV		
Email:	ehelms@ormat.com		
Telephone:	775-356-9029 ext. 32368		
Signature:	 Date:		June 28, 2023

ACKNOWLEDGMENT

STATE OF NEVADA)
)
COUNTY OF WASHOE)

On June 28, 2023, before me, a Notary Public, personally appeared Elizabeth Helms, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the attached **PROJECT OWNER'S CERTIFICATION** and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person or entity on behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Notary Public

ANGELA MICKIEL ARGUELLO
NOTARY PUBLIC
STATE OF NEVADA
COUNTY OF WASHOE
No. 97-2924-2 MY APPT. EXPIRES AUGUST 11, 2025

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Tables

Figures

SECTION 1 Project Description

OrHeber 3, LLC, Heber Field Company, LLC, and the Second Imperial Geothermal Company (collectively, the Applicants, and all subsidiaries of Ormat Technologies, Inc. [ORMAT]) proposes to develop a new 25-megawatt (MW; net generation) geothermal energy facility (Dogwood Project), Dogwood Solar, and Heber 2 Solar Parasitic Facilities. Proposed developments would occur on Assessor Parcel Numbers (APNs) 054-250-31; APN 059-020-001; and APN 054-250-017, near the existing geothermal energy complex located at 855 Dogwood Road, Heber, California. The Project site(s) is within the Imperial County Geothermal Overlay Zone that allows for Major Geothermal Projects to be permitted via a Conditional use Permit (CUP) process (Imperial County General Plan; Renewable Energy and Transmission Element of County of Imperial General Plan, 2015). The following facilities are proposed for development, provided by the Applicant:

Dogwood Project (OrHeber 3, LLC) – New CUP

- One (1) Integrated Two Level Unit (ITLU) Air Cooled ORMAT Energy Converter (OEC) generating unit
- Two (2) 20,000-Gallon Isopentane Tanks for Motive Fluid Storage
- One (1) Project substation for transmission to the grid
- Ancillary and auxiliary facilities (including, compressed air system and fire prevention system)
- A seven (7) megawatt (MW) solar photovoltaic field dedicated to the Dogwood geothermal plant
- Underground medium voltage distribution cable from Dogwood solar facilities to Dogwood geothermal plant (and Heber 2 solar facilities to the Heber 2 OEC)

Heber 2 Parasitic Solar Energy Facilities (Second Imperial Geothermal Company) – Amendment to CUP No. 19-0017

- A fifteen (15) MW solar photovoltaic field dedicated to the Heber 2 geothermal plant
- Interconnecting cable line from Heber 2 solar facilities to Heber 2 geothermal plant

Wells and Pipeline (Heber Field Company, LLC) – Amendment to CUP No. 06-0028

- Up to six (6) new production wells (3 sited, 3 unsited)
- One (1) new injection well
- Brine pipelines

As provided in **Table 1** below, the total project disturbance from the proposed development is approximately 124 acres. **Figure 1** and **Figure 2** provide a site plan of the proposed facilities and brief descriptions of each facility are provided below.

Table 1. Dogwood Project Area of Disturbance Estimate

Facility	Disturbance (Acres)
Geothermal Energy Facilities and Project Substation	5 acres (site currently completely disturbed)
Solar Field and Connection Line	~ 95 acres
Production and Injection Wells and Connecting Pipeline	~ 24 acres
TOTAL	**124 acres**

The Project will result in approximately 1,400 square feet of area converted to impervious surface area resulting from installation of equipment footings/foundations. Although some minor grading will be performed for the installation of the parasitic solar fields, the existing drainage pattern of the sites will not be altered from existing conditions. Accordingly, the Project will not result in a change to the existing grade and stormwater flows and drainage will not be altered from existing conditions. **Figure 3** illustrates the existing drainage facilities in the vicinity of the Project. **Figure 4** provides a site plan of the proposed facilities.

1.1.1 Geothermal Production and Injection Wells

Heber Field Company (HFC) owns and operates the geothermal wells and pipeline network that provides geothermal fluid/brine to the entire Heber Geothermal Energy Complex (HGEC), which includes the existing Heber 2, Heber South, and Goulds II geothermal power plants. HFC holds a CUP (No. 06-0028) for this wellfield and through a CUP amendment process, the new production and injection wells and pipelines are proposed to be added to this existing CUP. HFC proposes to develop up to six production wells. Three of these wells are sited to support the new Dogwood geothermal facility. **Figure 1** provides the locations of the three Dogwood wells. HFC is also seeking to permit three unsited wells that would be developed in the future. The unsited wells would be developed within one-mile of the HGEC and not near any sensitive receptors. HFC would anticipate construction in close proximity to an existing well pad and pipeline connections. The surrounding area is predominantly agricultural and the unsited wells would likely convert a small amount for geothermal production or injection use (approximately 1.5 acres of disturbance per well pad).

The production wells would be completed to depths between 1,000 and 4,000 feet, averaging approximately 3,500 feet. Casing depth will comply with California Department of Conservation – Geologic Energy Management Division (CalGEM) Regulations (Chapter 4, Article 3, §§ 1723, 2018) and vary depending on the total depth of the well. After the production well is completed, a well head will be installed and connected to a transmission pipeline that will convey geothermal fluid to the Dogwood Project (as discussed below). An industrial grate will be placed over the well to prevent falls. An insulated electric conductor running from the OEC to the wellheads along the connecting pipelines will supply electricity to the wellhead pump motors. During normal well operations, total geothermal fluid production rates are expected to be approximately 8,000 gallons per minute (gpm) at 280°F. One new injection well would be installed directly adjacent to the Dogwood plant. This well would also be owned and operated by HFC. This well is designed to provide direct service to the Dogwood Project, in addition to the available capacity in the existing HFC injection well/system. Injection will occur at the same approximate levels (i.e., 8,000 gpm) but at lower temperatures of approximately 170°F.

1.1.2 Geothermal Fluid Pipeline

A short segment of new pipeline is proposed within the solar energy fields to collect and deliver the new geothermal fluid/brine from two of the new production wells. This new pipeline would connect to the existing pipeline network to deliver fluid/brine to the Dogwood plant. Construction of the pipeline segment would include auguring 24-inch diameter holes into the ground about three to five feet deep at approximately 30-foot intervals along the pipeline route. When complete, the top of the new geothermal pipelines will average three feet above the ground surface. Electrical power and instrumentation cables for the wells may also be installed in steel conduit constructed along the pipe.

1.1.3 ORMAT Energy Converter (Geothermal Energy Production Unit)

The proposed ORMAT Energy Converter (OEC) unit is a two-turbine combined cycle binary unit, operating on a subcritical Rankine cycle, with Isopentane as the motive fluid. The OEC system consists of a generator, turbines, a vaporizer, Air Cooled condensers, preheaters and recuperators, and an evacuation skid/vapor recovery maintenance unit (VRMU) for purging and maintenance events. The design capacity for the unit is 25 MW (net).

1.1.4 Isopentane Storage Tanks

Two double-walled 20,000-gallon above-ground storage tanks would be installed for motive fluid (isopentane) storage. Numerous safety and fire prevention measures will be installed on/near the ABST, including:

- Concrete foundations with blast walls separating the tank from the OEC
- An automated water suppression system.
- Concrete containment areas.
- Two flame detectors, which will immediately detect any fire and immediately trigger the automatic fire suppression system.
- A gas detector, which will immediately detect any isopentane leak and notify the control room (manned by 24/7).

1.1.5 Cooling Tower

A cooling tower array will perform air-cooling operations of the geothermal fluid. The cooling tower will include a series of heat-absorbing evaporators and condensers to capture and transfer heat stored in the geothermal fluid.

1.1.6 Parasitic Solar Energy Facilities

Two separate solar photovoltaic energy fields are proposed – a seven (7) megawatt solar field to provide supplemental/auxiliary energy to the Dogwood geothermal plant and a fifteen (15) MW solar field to provide supplemental/auxiliary energy for the Heber 2 geothermal plant. These solar facilities are classified as behind-the-meter and would provide supplemental energy directly to the Dogwood and Heber 2 geothermal units (OECs), this energy would not enter the transmission grid. The solar facilities

will effectively reduce the margin between gross and net geothermal energy generation, allowing for the more efficient generation of geothermal energy and to allow more geothermal energy to enter the grid. The energy generated by the solar fields would be collected on-site by a XMR and switch and transmitted along a short interconnecting cable line (approximately 1,000 feet) on Dogwood Road to the Dogwood and Heber 2 OECs.

1.1.7 Project Substation

The Project will require a new substation to step up the low voltage electrical energy generated at the Dogwood geothermal unit to the higher voltage required for commercial transmission. No upgrades to off-site transmission facilities is necessary and the new Dogwood substation will connect directly to the existing point of interconnection with the Imperial Irrigation District (IID) controlled grid. The substation will include a 13.8 kV circuit breaker to protect the electric generator, a minimum of 80 megavolt ampere 13.8 kV/115 kV transformer, and 115 kV potential and current transformers for metering and system protection.

1.1.8 Water Use and Source

Water required for facility construction activities, including grading and dust control, will be obtained from the applicant's existing contract with IID. Up to 5,000 gallons per day (gpd) of water will be required for the first 2-4 months of development of the facility. Approximately 2,000 gpd will be consumed during the remaining development schedule of approximately 12-18 months. Thus, approximately 1.1 million gallons of water (10.1 acre-feet) will be used on-site during construction. Once operating, up to approximately 325 gpd (0.36 acre-feet per year) of non-potable water will be required and provided by the applicant's existing IID contract/allocation. Water required for well drilling would typically average 50,000 gpd. Water necessary for these activities would be obtained from local irrigation canals in conformance with IID requirements. Alternatively, a temporary pipeline from the respective irrigation canal could be used for water delivery to the well site. Any temporary pipeline would be laid on the surface immediately adjacent to the access road. The Project will not require additional water from the Imperial Irrigation District (IID) for operations and will be covered under the existing contract.

1.2 SITE LOCATION

The Site includes approximately 4 acres within the Heber quadrangle of the U.S. Geological Survey (USGS) 7.5" topographic map, and sits within Township 16 South, Range 14 East of the San Bernardino Base and Meridian in Imperial County, California.

1.3 LAND USE AND TOPOGRAPHY

The Project is located on private lands owned by ORMAT in southern Imperial County as shown in **Figure 1**. The Proposed development includes approximately 124 acres within APN 054-250-31; APN 059-020-001; and APN 054-250-017, near the existing geothermal energy complex located at 855 Dogwood Road, Heber, California. The Project site is zoned as A-2-G SPA, for General Agriculture (A-2), Geothermal Overlay Zone (G), and in the Heber Specific Plan Area (SPA). The Project site lies at an elevation of approximately 5 feet below mean sea level (msl) in the Imperial Valley region of the California low

desert. The surrounding properties lie on terrain, which is flat, part of a large agricultural valley. The existing geothermal energy complex is devoid of vegetation and is actively disturbed as part of the ongoing energy generation operations at Heber 2. The sites identified for the Dogwood Parasitic Solar Facility, Heber 2 Parasitic Solar Facility, and production wells are currently actively cultivated agricultural fields. Adjacent properties consist of agricultural land to the north and a solar farm to the west.

1.4 SITE GEOLOGY, HYDROGEOLOGY, AND SOILS

The part of Imperial County containing Heber lies within the Pliocene to Holocene, Q Geologic Unit (McCrink et al. 2011). Three natural geomorphic provinces underlay Imperial County, including the Peninsular Ranges, the Colorado Desert, and the Mojave Desert. The Colorado Desert geomorphic province spans central Imperial County and contains the Salton Sea and the Imperial valley. This Basin and Range province, sometimes referred to as the Salton Trough, is composed of a low-lying barren desert basin located between alluvium-covered, active branches of the San Andreas Fault containing Cenozoic sedimentary rocks and alluvial, lacustrine, and eolian deposits. The surface of sediments in the middle of the trough are about 275 feet below sea-level (bsl) (Digital Desert 2019).

Surface water in the area of the Site consists of canals and agricultural drains operated and maintained by the Imperial Irrigation District. Canals adjacent to the Project Site include Date Drain No. 3 and Beech Drain as illustrated in **Figure 3**. These canals ultimately drain to the Alamo River, a tributary to the Salton Sea. Surface runoff within the Project Site occurs primarily as sheetflow across the lot generally to the north, eventually flowing into the adjoining ditches.

The regional groundwater flow direction within the Imperial Valley is toward the Salton Sea, a closed basin with a surface elevation of approximately 225 feet below sea level. Groundwater flow in the Project area flows in a general northwest direction.

Dry lean silty clays dominate the project site surface extending to approximately 4 to 5 feet below ground surface (bgs). These silty clays are underlain by moist stiff clays from approximately 6 feet to 38-40 feet bgs. Silty clay to clayey silt dominate 40-50 feet bgs to the extent of geotechnical exploration (Landmark 2019).

1.5 HYDROMODIFICAITON APPLICABILITY

As discussed above, the Project would result in less than 1,400 square feet of impervious area from pre-Project conditions. For construction of the parasitic solar fields, limited grading is proposed for the Project that would not result in changes to the permeability of the site nor alter the existing drainage patterns. As such, the post-development runoff volume, time of concentration, and peak flow velocity would not be altered from that of the pre-development condition.

1.6 POTENTIAL STORMWATER POLLUTANTS

Table 2 summarizes expected stormwater pollutants of concern based on land use and site activities.

Table 2. Pollutants of Concern

Pollutant	Potential to Impact Stormwater (Y/N)	Additional Information and Comments
Pathogens (Bacterial/Virus)	N	--
Nutrients – Phosphorous	N	--
Nutrients - Nitrogen	N	--
Noxious Aquatic Plants	N	--
Sediment	Y	Overland flows over unpaved surface may result in sediment in stormwater runoff
Metals	Y	Leaks/spills in Project area may result in metals in stormwater runoff
Oil and Grease	Y	Leaks/spills in Project area may result in oil and grease in stormwater runoff
Trash/Debris	Y	Improperly disposed of trash/debris may result in trash in stormwater runoff
Pesticides/Herbicides	N	--
Other	N	--

SECTION 2 Best Management Practices

This section describes the Best Management Practices (BMPs) that will be implemented and maintained throughout the life of the project. The BMPs will be used to prevent and minimize water pollution that can be caused by stormwater runoff. **Table 3** details the BMPs selected to be implemented at the Project site based on the potential pollutants. Note that the OEC, isopentane tanks, cooling tower, and substation are located within the existing operational footprint and is subject to the existing policies and programs implemented by ORMAT for the facility as would the proposed development outside of the existing HGEC. Because the Project does not propose any changes to the existing stormwater volume, peak flow velocity, time of concentration or drainage patterns, no structural BMPs are proposed.

Table 3. Non-Structural Source Control BMPs

Pollutant Source	Pollutant	BMP	Existing?	New/Revised?
Stormwater run-on and runoff	Erosion, sediment, contaminated stormwater	• Stabilize drainage with rocks, gravel, vegetation, or riprap • Provide perimeter control to isolate sediment (loose dirt). Includes earthen berms, fiber rolls, silt fence, etc.	X	
Vehicle Track Out	Sediment, Dust	• Provide tracking control devise • Conduct street sweeping	X	
Work Areas	Trash	• Regularly monitor and clean trash • Provide employee training for good housekeeping	X	
Equipment Areas (OECs, ITLUs, pipes)	Isopentane, sediment	• Control drainage patterns with berms • Use water truck for dust control • Conduct routine inspections	X	X
Stored materials and equipment maintenance	Oil, grease, hydraulic fluid, anti-freeze, metals	• Provide good housekeeping training • Store materials in secondary containment • Spill kit and response training	X	

In addition to the activities listed above, ORMAT follows all approved operational guidelines that are currently in place. Temporary and permanent soil erosion control BMPs will be implemented in conformance with the BMP Fact Sheets provided in the California Stormwater Quality Association (CASQA) Stormwater Best Management Practice Handbook – Industrial and Commercial (2019).

2.1 NON-STRUCTURAL BMPS

The following are prevention practices utilized to minimize the probability of pollution of stormwater discharge.

2.1.1 Good Housekeeping

As a component of this program, good housekeeping practices are performed so that facility is kept in a clean and orderly condition. Proper housekeeping practices include:

- Periodic cleanup of equipment, as needed, based upon facility inspections,
- Sweeping impervious surfaces, as needed, based upon facility inspections,
- Proper waste disposal practices and covering of waste storage areas at all times,
- Proper storage and covering of materials at all times,
- Removal of any oil-stained soil/gravel, especially around equipment locations and loading areas,
- Cleaning of significant oil and grease stains on surfaces that drain to the stormwater drainage areas, and
- Cleaning the exterior of oil containers on hydraulic machinery upon discovery of an accumulation of hydraulic fluid.

2.1.2 Preventative Maintenance

As a component of this program, operations and maintenance staff perform preventative maintenance of stormwater management devices to assure their proper operation. Preventative maintenance of stormwater management devices includes the following:

- Cleaning of accumulated sediment, potential contaminants, and debris from the Site;
- Inspection of secondary containment structures as part of the regular daily visual inspections;
- Maintenance and inspection of secondary containment structures, as needed, based upon inspections;
- Daily inspection and maintenance of equipment and associated piping and valves as required by preventive maintenance procedures;
- Inspection and maintenance of rainfall protection coverings for waste storage bins and receptacles on a periodic basis; and
- A comprehensive preventive maintenance schedule is performed on all facility operations equipment as part of routine procedures.

2.1.3 Spill Response

Spill prevention and response is performed according to the facility's SPCC Plan . Copies of this plan are located in the on-site ORMAT office.

A limited amount of spill cleanup equipment is stored onsite. This equipment is found within hazardous material storage areas. Detailed information concerning spill cleanup equipment and resources is included in the SPCC Plan.

The volume of containment areas surrounding each potential source is designed to hold the contents of a spill from the largest vessel / container. The SPCC Plan summarizes the capacity of potential sources and volume of the respective secondary containment areas.

2.1.4 Material Handling and Storage

The primary hazardous material to be stored on-site is isopentane. The additional isopentane will be stored in the appropriately designed (2x) 20,000 gallon above ground storage tanks, as well as the existing (2x) 10,000 gallon tanks for Heber 2 OEC. The isopentane is used as a motive fluid for geothermal energy generation and is not directly discharged, rather is released as an air emission. Therefore, the isopentane would not be directly exposed to stormwater. All other hazardous waste would be stored in 55-gallon drums and other Department of Transportation (DOT) approved packaging within a contained area located on the Site. Stormwater that accumulates within the hazardous material and hazardous waste containment area is collected via vacuum truck and disposed of off-site or recycled back into the production system. A bill of lading, non-hazardous waste manifest or uniform hazardous waste manifest is used to document all such shipments.

2.1.5 Employee Training

A combined annual Storm Water Compliance / SPCC Plan training program is conducted for the Pollution Prevention Team members and operations personnel. Participants undergo stormwater management training for all areas and operations at this facility, as well as reviewing the spill response, control and countermeasure procedures. Other stormwater training is done on an as-needed basis.

2.1.6 Waste Handling/Recycling

At times, product or oily waste streams are transferred from the facility in 55-gallon drums. A bill of lading, non-hazardous waste manifest or uniform hazardous waste manifest is used to document all such shipments. Operations or contractor personnel closely monitor loading of transport vehicles. Collection and satellite accumulation containers for hazardous and non-hazardous waste are kept covered to prevent contact with stormwater. Appropriate spill control equipment and supplies are kept readily available in case of a spill.

2.1.7 Record Keeping and Internal Reporting

All inspection, sampling, maintenance, corrective action records, and any other information that is a part of this plan are maintained at the facility office. All records are maintained for a period of at least three (3) years.

2.1.8 Erosion Control and Site Stabilization

Permanent BMPs used at the existing HGEC facility to prevent soil erosion include routing runoff along earthen swales or drainage areas, and preventing run-off with berms along certain sections of the property line. Temporary BMPs used at the Site to prevent soil erosion include the use of sandbags, crushed rock, and silt fence. These BMPs are used as and where needed, especially in areas that are undeveloped or in the process of being developed.

SECTION 3 Operation and Maintenance Plan

The Dogwood Project is located within APN 054-250-31; APN 059-020-001; and APN 054-250-017, near the existing geothermal energy complex located at 855 Dogwood Road, Heber, California. The following non-structural water quality best management practices (BMPs) are proposed for the Project:

- Good Housekeeping
- Preventative Maintenance
- Spill Response
- Material Handling and Storage
- Employee Training
- Waste Handling/Recycling
- Record Keeping and Internal Reporting
- Erosion Control and Site Stabilization

3.1 MAINTENANCE RESPONSIBILITY

The Heber Field Company (subsidiary of ORMAT) is the property owner and is responsible for BMP maintenance. Since HFC/ORMAT is the owner, no access agreement or easement is necessary to maintain the BMPs. HFC/ORMAT funds will be used to support Operation and Maintenance (O&M) activities to maintain BMP functionality. HFC/ORMAT maintenance staff are expected to perform the maintenance.

3.2 MAINTENANCE ACTIONS AND FREQUENCY

Maintenance actions are generally grouped into two categories: routine and intermittent.

Routine Maintenance

Routine inspections of the Project facilities and grounds will be performed annually. During these inspections staff evaluate if there is significant accumulation of trash, debris, or sediment that would need to be removed. Cleaning is done as needed based on the results of the inspections. The inspection frequency may be adjusted based on experience at the site (e.g., if inspections rarely find any material that needs to be cleaned out, then the inspection frequency can be reduced).

Intermittent Maintenance

Intermittent maintenance activities include more substantial maintenance that is not required as frequently as routine maintenance. The most likely form of intermediate maintenance is removal of sediment from existing drainage infrastructure and detention basins where necessary to maintain the capacity of the basins. Given that the Project Site is pervious and will not be graded or significantly altered and that rain is infrequent in Heber, this type of maintenance is expected to be required approximately once every year.

3.3 MAINTENANCE PROCEDURES

During each maintenance visit, the maintenance crew will evaluate existing drainage paths and infrastructure by inspecting for the maintenance indicators in **Table 4.** When a maintenance indicator is observed, the action described in the "Maintenance Actions" column will be taken.

Note that regardless of the projected maintenance type (routine or intermittent) described in the previous section, when a maintenance indicator is observed, the required maintenance action will be taken. For example, if significant sediment accumulation is observed in year three instead, then the accumulated sediment will still be cleaned out, even though the estimated frequency was once every year.

Table 4. Maintenance Indicators and Actions for BMPs

Typical Maintenance Indicator	Maintenance Action
Erosion due to concentrated stormwater runoff flow	Repair eroded areas and make appropriate corrective measures such as adding berm or stone at flow entry points, or re-grading as necessary.
Accumulated sediment, litter, or debris	Remove and properly dispose of accumulated materials, without damage to stormwater drainage structures.
Standing water	Remove any obstructions or debris or invasive vegetation, loosing or replace top-soil to allow for better infiltration, or minor re-grading for proper drainage.
Obstructed inlet or outlet structures	Clear obstructions.
Damage to structural components such as inlet or outlet structures	Repair or replace as applicable.

SECTION 4 References

California Stormwater Quality Association (CASQA). 2019. Industrial and Commercial Best Management Handbook. 2019.

Digital Desert. 2019. Ecological Sections: Mojave Desert. Available online at: http://digital-desert.com/ecosections/322c.htm).

Landmark Consultants, Inc. (Landmark). 2019. Geotechnical Report Update, Heber 2 Repower Project, Heber, California. Prepared for Ormat Nevada. April 2019.

McCrink, T.P., Pridmore, C.L., Tinsley, J.C., Sickler, R.R., Brandenberg, S.J., and J.P. Stewart. 2011. Liquefaction and other ground failures in Imperial County, California, from the April 4, 2010, El Mayor–Cucapah earthquake: U.S. Geological Survey Open-File Report 2011–1071 and California Geological Survey Special Report 220, 94 p. pamphlet, 1 pl., scale 1:51,440. Available at http://pubs.usgs.gov/of/2011/1071.

Figures

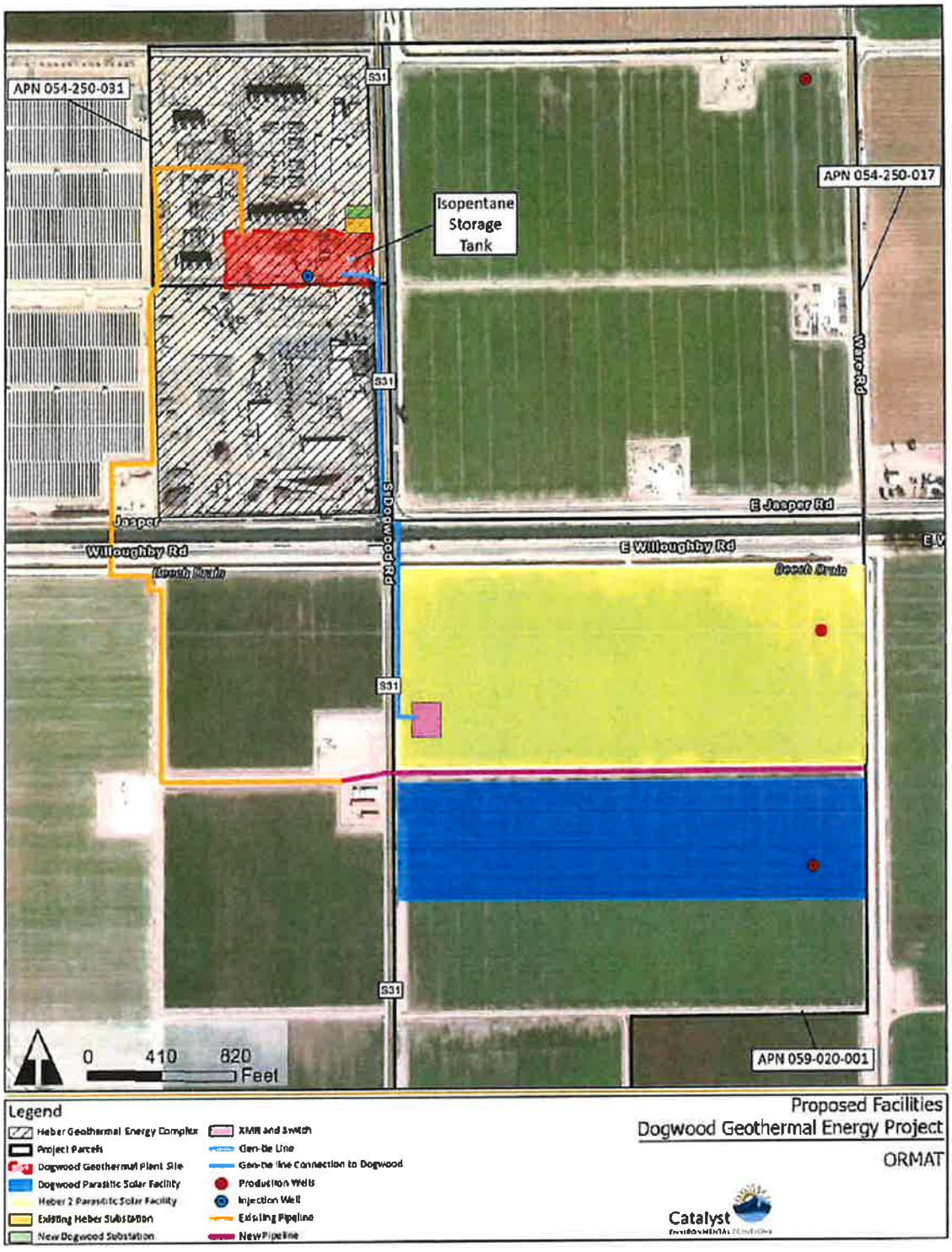


Figure 1. Dogwood Geothermal Energy Project Proposed Facilities

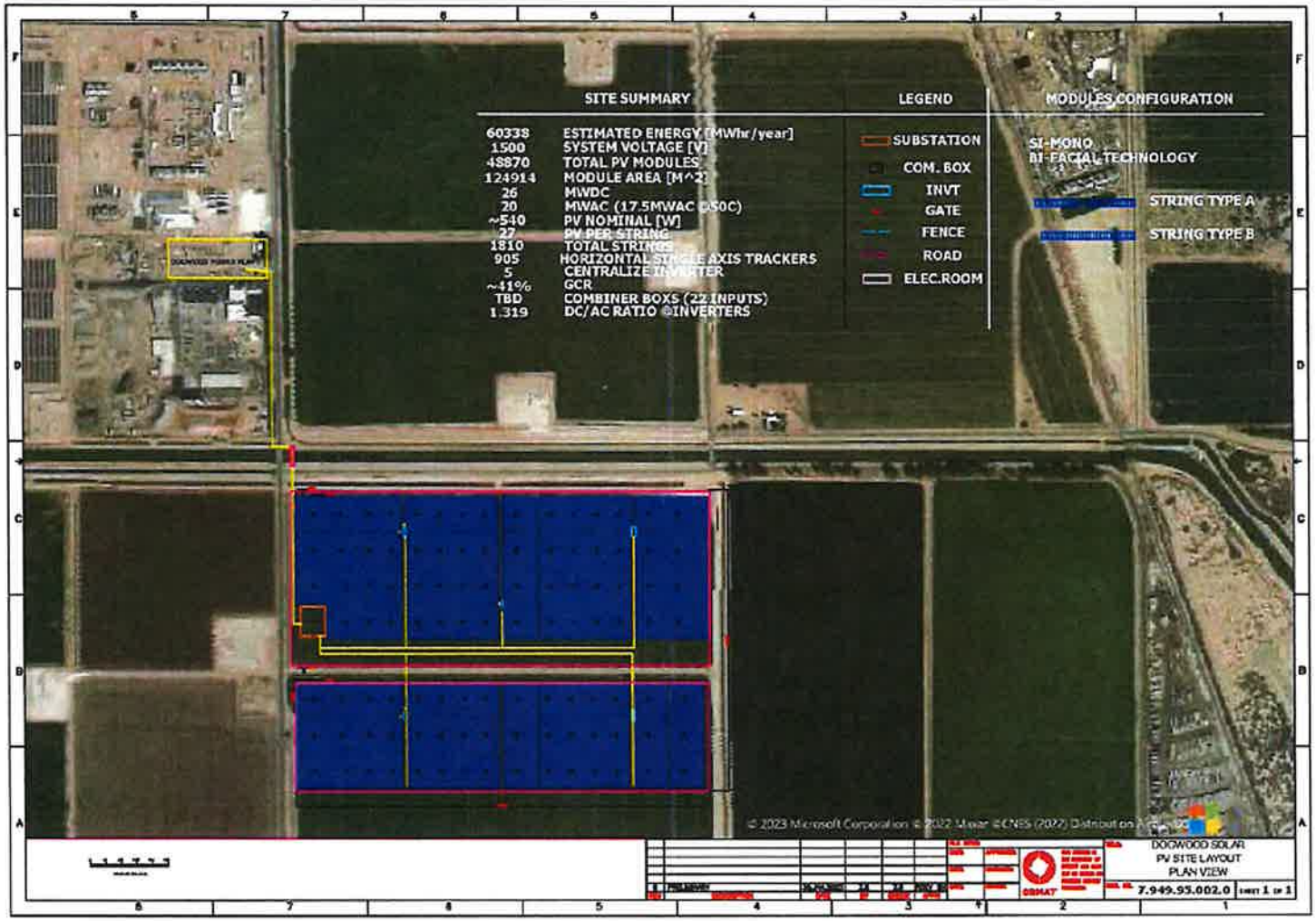


Figure 2. Dogwood and Heber 2 Solar Site Plan

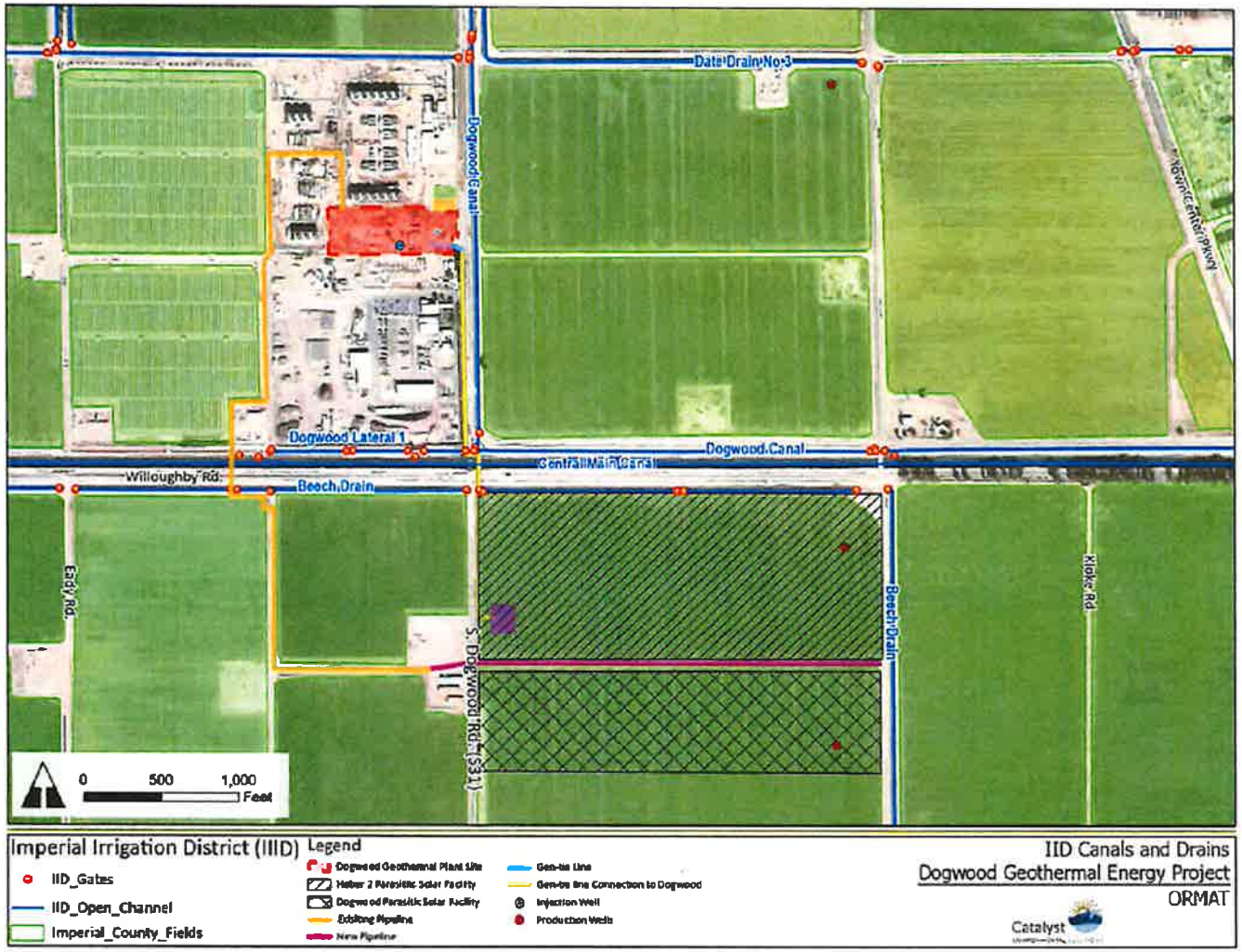


Figure 3. IID Canals and Drains.

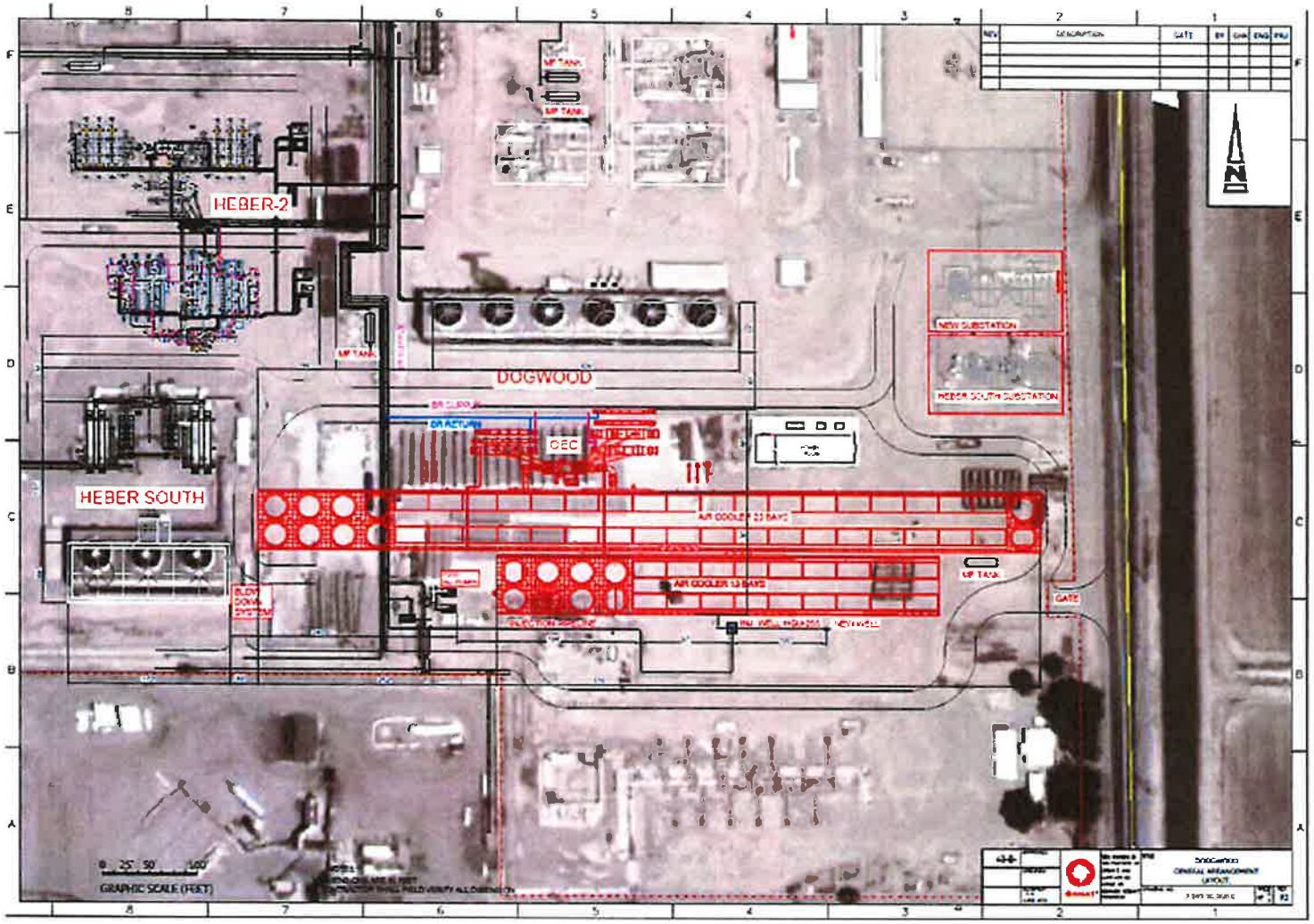


Figure 4. Dogwood Geothermal Site Plan

Attachment E

Imperial County Reclamation Plan

Catalyst
ENVIRONMENTAL SOLUTIONS

IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES DEPARTMENT

Reclamation Plan Application

OWNER, OPERATOR AND AGENT:

1. Applicant (Name, Mailing Address and Telephone Number):
   OrHeber 3 LLC
   6140 Plumas St, Reno NV 89519
   Alissa Sanchez; asanchez@ormat.com; 775-356-9029 ext. 32234

2. Property Owner (s), or owner of Surface Rights (Name, Mailing Address and Telephone Number): [if different from applicant]
   APN 054-250-031 Second Imperial Geothermal Company & APN 059-020-001 Heber Field Company
   C/O Ormat Nevada, Inc. 6140 Plumas St, Reno, NV89519
   Elizabeth Helms, ehelms@ormat.com; 775-356-9029

3. Owner of Mineral Rights (Name, Mailing Address and Telephone Number): [if different than applicant]
   See 2

5. Lessee (Name, Mailing Address and Telephone Number):
   See 1
   APN 059-020-001 James Abatti/ Madjac Farms (until 08/14/2024)
   PO Box 2135 El Centro, CA 92244

6. Operator (Name, Mailing Address and Telephone Number): [if different than applicant]
   See 1
   C/O Ormat Nevada, Inc. 6140 Plumas St. Reno, NV 89519
   Elizabeth Helms, ehelms@ormat.com; 775-356-9029

7. Agent of Process (Name, Mailing Address and Telephone Number):
Ormat Nevada, Inc; Attn: Elizabeth Helms
6140 Plumas Street, Reno, NV 89519
ehelms@ormat.com; 775-356-9029

LOCATION:

8. Legal Description: (must be full legal)
Track 44, Township 16 South, Range 14 East, SBB&M

Assessor Parcel No.: 054-250-31; 059-020-001

Longitude: -115.536088

Latitude: 32.712803

Elevation: near zero

9. Size of the land(s) that will be affected by mining operation. Total acreage:
40 acres

10. Describe existing and proposed access to the mine site: (please be specific)
Geothermal energy operations at existing Heber Geothermal Energy Complex.
Solar site is currently cultivated for alfalfa.

GEOLOGICAL BACKGROUND:

11. Mineral commodity to be minded:
N/A

12. General Geological description of the area:
The site is located within the Piliocene to Holocene, Q Geologic Unit. The Colorado Desert geomorphic province spans central Imperial County, where the site is located, often referred to as the Salton Trough. Low-lying barren desert located between alluvium-covered, active branches of the San Andreas Fault.

13. Detailed description of the geology of the actual site in which surface mining is to be conducted:
Site is underlain by Cenozoic sedimentary rocks and alluvial, lacustine, and eloian deposits. Surface sediments are about 275 feet below sea level. The site contains Holtville silty clays (wet) and Imperial-Glenbar silty clay loams (wet).

14. Brief description of the environmental setting of the site and the surrounding areas. Existing land uses, soil, vegetation, ground water elevation and surface water characteristics.
Operational geothermal energy generation area; and, cultivated agricultural lands for alfalfa.

MINING OPERATION AND PRODUCTION:

15. Proposed starting date of operation: October 2024
Estimated life of operation: 15-30 years
Termination Date: 2054
Duration of first phase:
Second phase:
Third phase:
Fourth phase:

16. Operation will be (include days and hours of operation):
Continuous: Continuous operations; 24 hours per day, 7 days per week
Intermittent:
Seasonal:

17. Maximum anticipated annual production (Tons or Cubic Yards):
N/A

18. Total anticipated production:

Minerals:	N/A	cubic yards/tons	0
Tailings retained on site:		cubic yards/tons	0
Tailings disposed off site:		cubic yards/tons	0

Maximum anticipated depth (indicate on map location of benchmarks to verify mine depth):
N/A

19. Describe mining method:
N/A

20. Describe nature of processing and explain disposal of tailings or waste.
N/A

21. Do you plan to use cyanide or other toxic materials in your operations?
No

Do you plan to use or store petroleum products or other hazardous materials on the site?
Yes, - isopentane (2x 20,000 gallon tanks)

Describe refueling and maintenance of vehicles.
Construction equipment/vehicles will be fueled on-site, as necessary. Fuel will be limited to diesel and gasoline for heavy and light equipment. Repairs to construction equipment will be performed on-site by certified mechanics. Spill prevention BMPs and safe handling techniques will be employed throughout the construction phase

MAIN OFFICE: 801 Main Street El Centro, CA 92243 (760) 482-4236 FAX: (760) 353-8338 E-MAIL: planning@imperialcounty.net
ECON. DEV. OFFICE: 836 Main Street El Centro, CA 92243 (760) 482-4900 FAX: (760) 337-8907

22. Indicate the quantity of water to be used, source of water, method of conveyance to the mine site, the quantity, quality and method of disposal of used and/or surplus water. Indicate if water well to be used for mine operation (drilling, reactivation, changing use or increasing volume of water well may require Conditional Use Permit approval).

Water required for facility construction activities, including grading and dust control, will be obtained from the applicant's existing contract with IID. Up to 5,000 gallons per day (gpd) of water will be required for the first 2-4 months of development of the facility. Approximately 2,000 gpd will be consumed during the remaining development schedule of approximately 12-18 months. Thus, approximately 1.1 million gallons of water (10.1 acre-feet) will be used on-site during construction. Once operating, up to approximately 325 gpd (0.36 acre-feet per year) of non-potable water will be required and provided by the applicant's existing IID contract/ allocation. The Project will not require additional water from the Imperial Irrigation District (IID) for operations and will be covered under the existing contract.

23. Describe phases of mining if applicable and concurrent reclamation including time schedule for concurrent activities.

N/A

24. Describe the types of equipment that will be used in the operation, including the estimated average daily trips (ADT) that will be generated by the operation.

Heavy construction equipment, including excavators, trucks, forklifts, rollers, and light duty cranes will be used to deliver and construct the energy facilities. Smaller powered hand tools will also be used. Employee vehicles will be used to transport workers to the site and parked at the designated locations

25. Include the following maps: (NOTE: Without these the application is automatically incomplete.)

(1) Topographic Map with overlay showing proposed area to be mined.

(2) Site Plan showing mine layout and dimensions.

(3) General Vicinity Map showing the location of the mine site in Imperial County.

(4) Cross Section Map.

RECLAMATION:

26. Indicate by overlay of map of Item No. 24, or by color or symbol on map those areas to be covered by the reclamation plan:

Total acreage: 40 acres

27. Describe the ultimate physical condition of the site and specify the proposed use (s) or potential uses of the land after reclamation. Explain if utilities, haul or access roads will be removed or reclaimed.

Operating geothermal power plant and cultivated alfalfa.

28. Describe relationship of the interim uses than mining and the ultimate physical condition to:

(a) Imperial County Zoning Ordinance

(b) Imperial County General Plan

All proposed facilities are within the County's Geothermal Overlay Zone, which allows for major geothermal energy projects. The proposed facilities are consistent with the County General Plan and Zoning/Land Use Element.

29. Notarized statement that all owners of the possessory interest in the land have been notified of the proposed uses or potential uses identified in Item No. 25 (see Attachment "A").

Heber Field Company is a wholly owned subsidiary of ORMAT and no other parties have an interest in the parcel.

30. Describe soil conditions and proposed topsoil salvage plan.

Completely disturbed for geothermal energy generation; and agricultural lands for alfalfa cultivation.

31. Describe the methods, their sequence and timing, to be used in bringing the reclamation of the land to its end state. Indicate on map (Items Nos. 24 and 25) or on diagrams as necessary. Include discussion of the pertinent items listed below.

(a) Backfilling and grading

(b) Stabilization of slopes

(c) Stabilization of permanent waste dumps, tailings, etc.

(d) Rehabilitation of pre-mining drainage

(e) Removal, disposal or utilization of residual equipment, structure, refuse, etc.

(f) Control and disposal of contaminants, especially with regard to surface runoff and ground water

(g) Treatment of streambeds and streambanks to control erosion and sedimentation

(h) Removal or minimization of residual hazards

(i) Resoiling, revegetation with evidence that selected plants can survive given the site's topography, soil and climate:
See Attachment D.

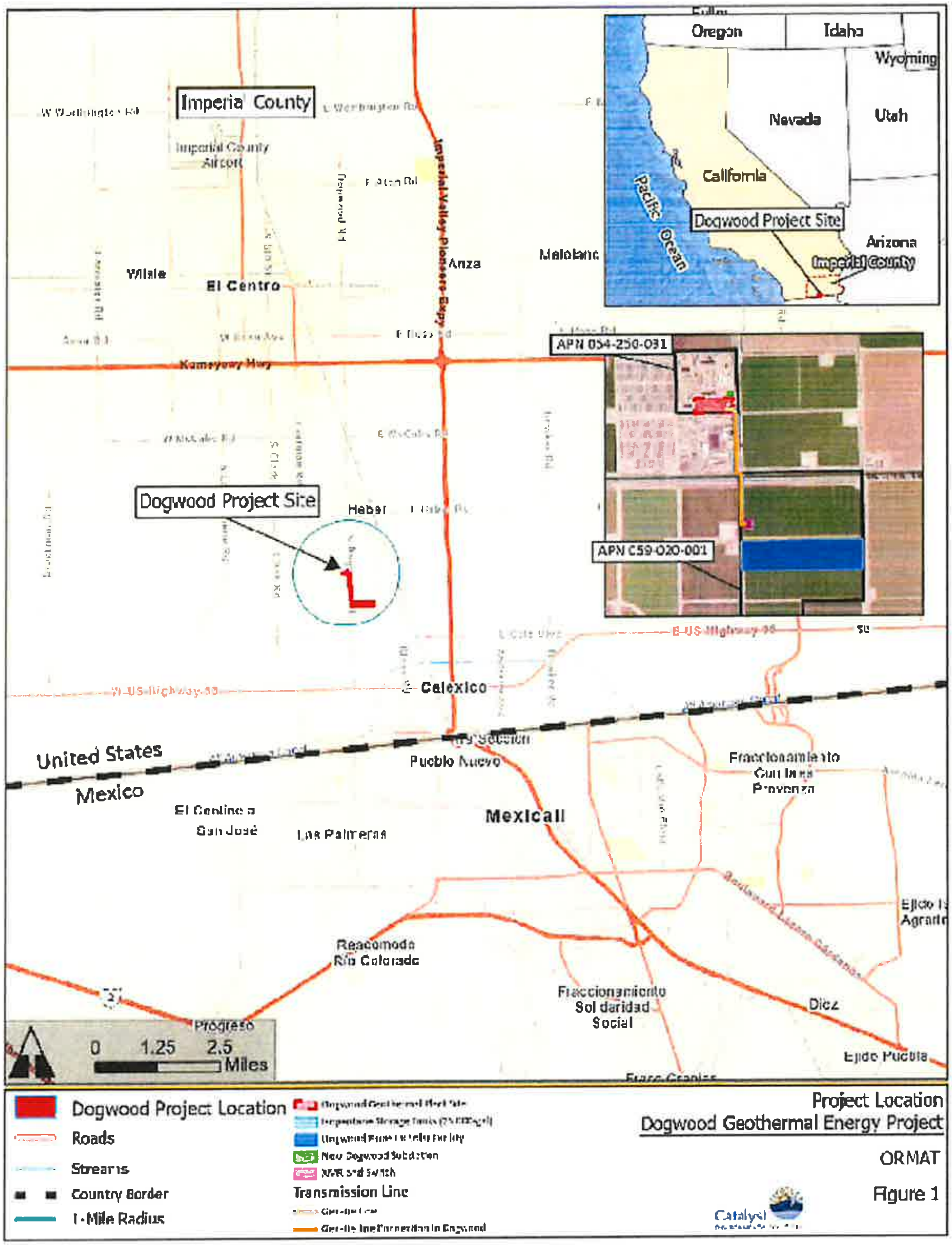
32. If applicant has selected a short term phasing of his reclamation, describe in detail the specific reclamation to be accomplished during the first phase:
Interim reclamation would include using stored topsoil for backfill and spreading materials after the facilities are constructed and some disturbed areas are no longer needed for operations.

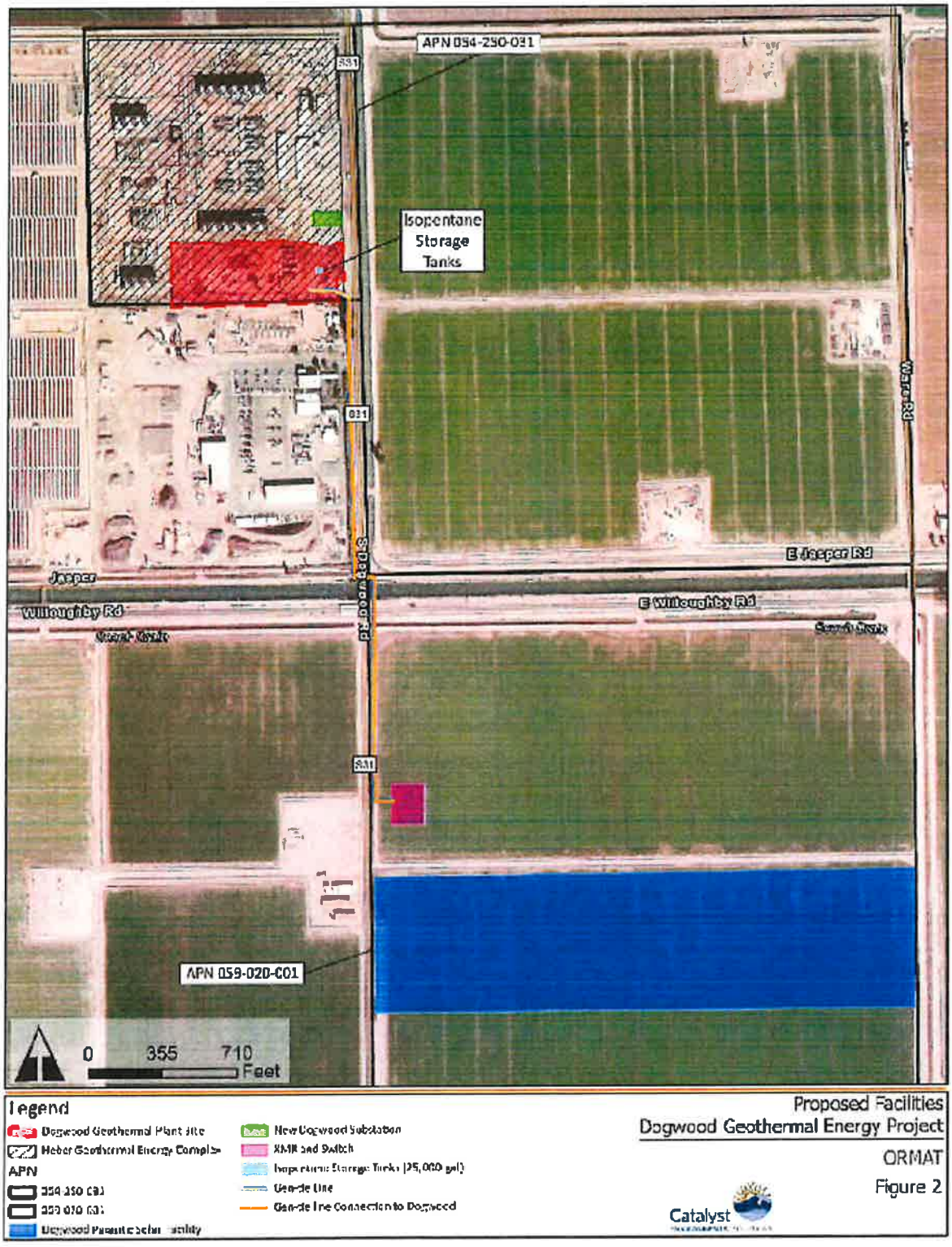
33. Describe how reclamation of this site in this manner may affect future mining at this site and in the surrounding area:
All energy facilities would be removed from the site and lands returned to a natural or arable state.

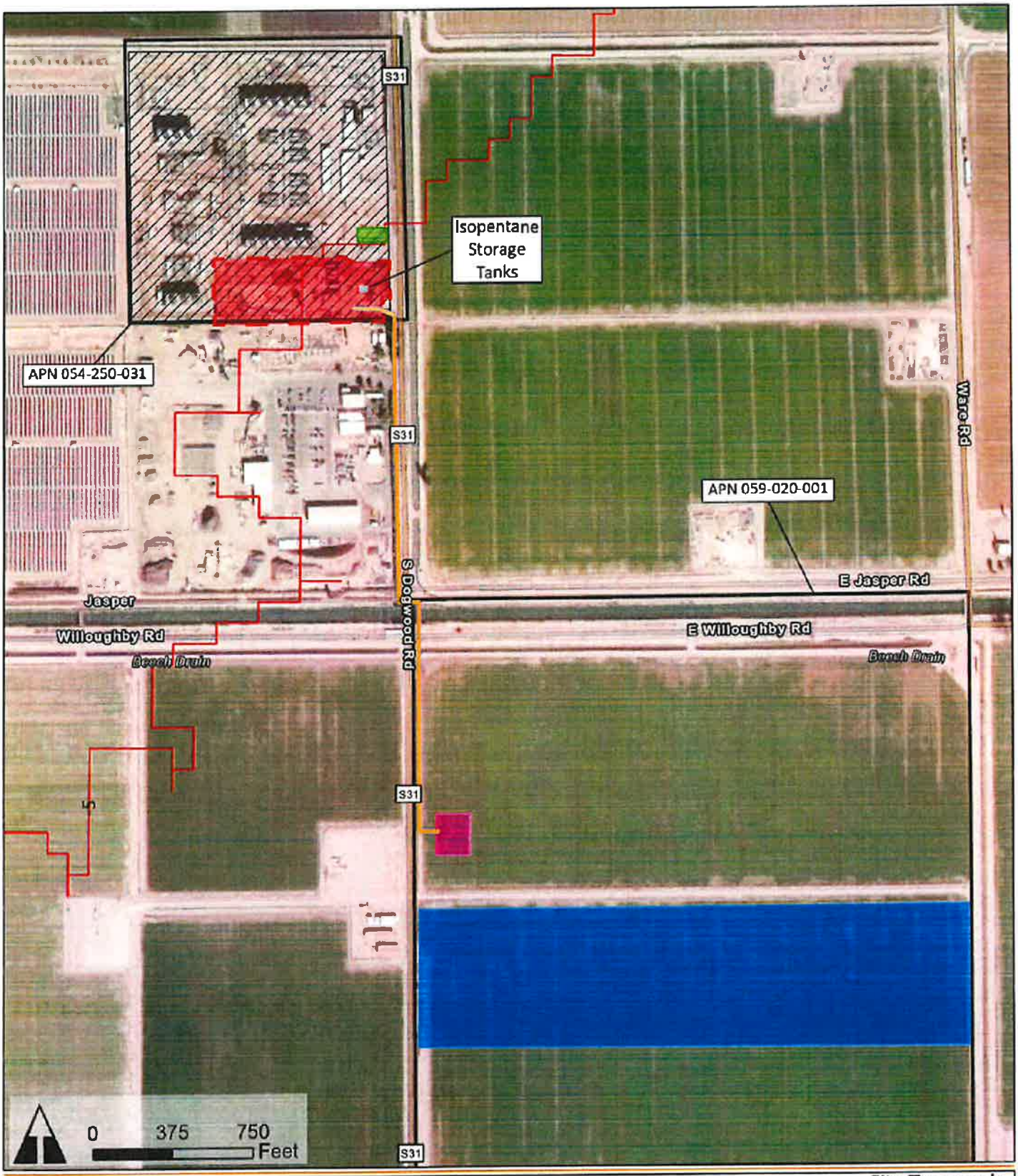
34. Notarized statement that the person submitting the plan accepts responsibility for reclaiming the mined lands in accordance with the Reclamation Plan (Attachment "B"):
Attached

35. Include Reclamation Cost Calculations as Attachment "C":
Attached

36. Describe proposed Revegetation Plan (attach as "Attachment D" if necessary):
See Attachment D.


Imperial County
El Centro
Dogwood Project Site
Heber
Calexico
United States
Mexico
Mexicali
Oregon
Idaho
Nevada
Utah
California
Arizona
Pacific Ocean
Imperial County
APN 054-250-031
APN 059-020-001
0 1.25 2.5 Miles
Dogwood Project Location
Roads
Streams
Country Border
1-Mile Radius
Transmission Line
Project Location
Dogwood Geothermal Energy Project
ORMAT
Figure 1


APN 054-250-031
Isopentane Storage Tanks
Ward Rd
E Jasper Rd
Jasper
Willoughby Rd
E Willoughby Rd
Stutsman Rd
APN 059-020-001
0 355 710 Feet
Legend
Dogwood Geothermal Plant Site
Heber Geothermal Energy Complex
APN
New Dogwood Substation
XMR and Switch
Isopentane Storage Tanks (35,000 gal)
Gen-tie Line
Gen-tie line Connection to Dogwood
Proposed Facilities
Dogwood Geothermal Energy Project
ORMAT
Figure 2
Catalyst

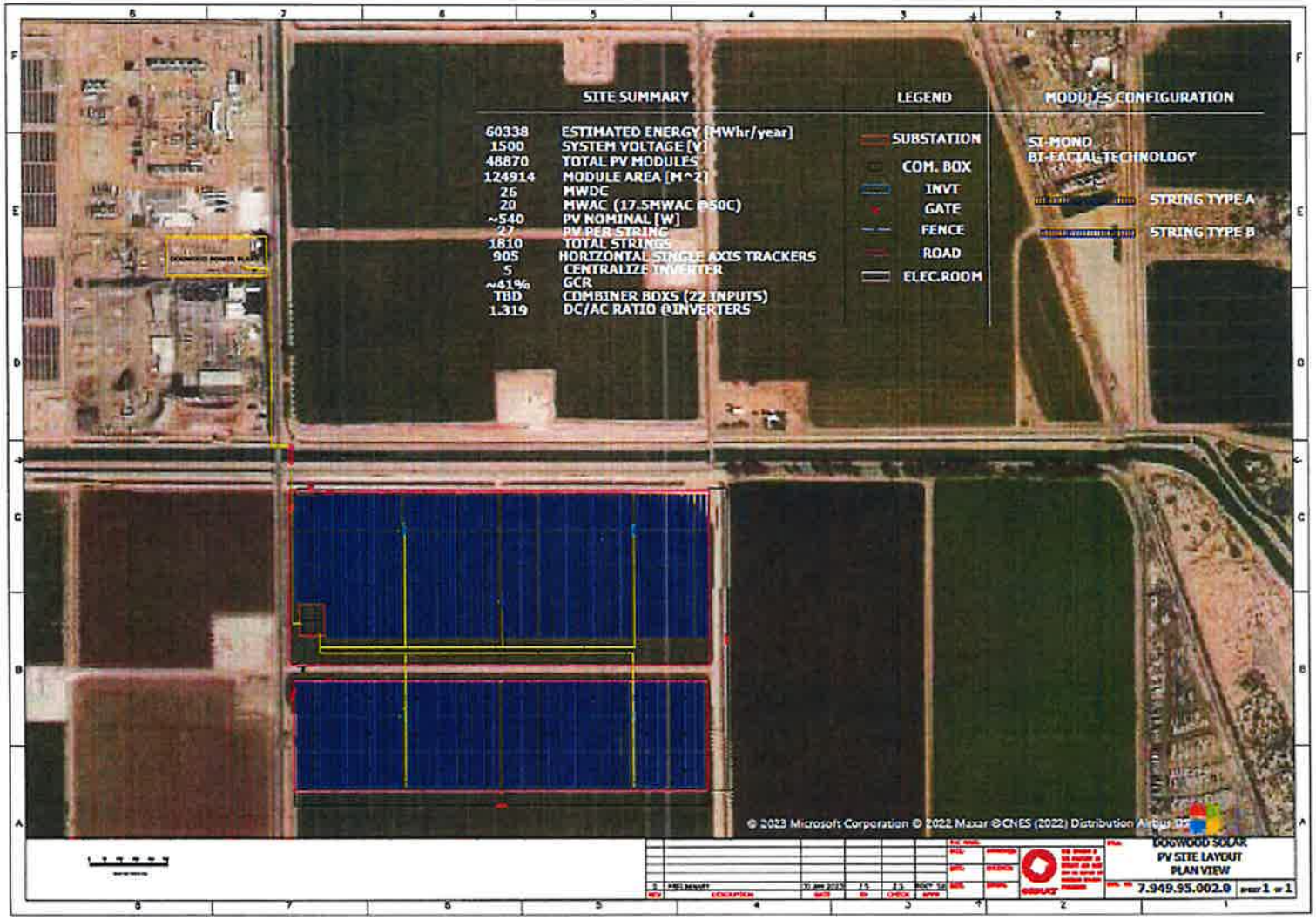


Legend

- Heber Geothermal Energy Complex
- Dogwood Geothermal Plant Site
- Dogwood Parasitic Solar Facility
- New Dogwood Substation
- XMR and Switch
- Gen-tie Line
- Gen-tie line Connection to Dogwood
- Contour Lines (5ft)

Site Topography
Dogwood Geothermal Energy Project
ORMAT

Catalyst


SITE SUMMARY
60338 ESTIMATED ENERGY [MWhr/year]
1500 SYSTEM VOLTAGE [V]
48870 TOTAL PV MODULES
124914 MODULE AREA [M^2]
26 MWDC
20 MWAC (17.5MWAC @50C)
~540 PV NOMINAL [W]
27 PV PER STRING
1810 TOTAL STRINGS
905 HORIZONTAL SINGLE AXIS TRACKERS
5 CENTRALIZE INVERTER
~41% GCR
TBD COMBINER BOXS (22 INPUTS)
1.319 DC/AC RATIO @INVERTERS
LEGEND
SUBSTATION
COM. BOX
INVT
GATE
FENCE
ROAD
ELEC.ROOM
MODULES CONFIGURATION
SI-MONO
BI-FACIAL TECHNOLOGY
STRING TYPE A
STRING TYPE B
© 2023 Microsoft Corporation © 2022 Maxar ©CNES (2022) Distribution Airbus DS
DOGWOOD SOLAR
PV SITE LAYOUT
PLAN VIEW
7.949.55.002.0

ATTACHMENT "A"

STATEMENT OF NOTIFICATION

I, the undersigned, have notified all owners of the possessory interest in the land of the proposed use (s) or potential uses identified in Item No. 26 of the Reclamation Plan.

Signed this 28th day

of June, 2023.

Operator or Operator's Agent

MAIN OFFICE: 801 Main Street El Centro, CA 92243 (760) 482-4236 FAX: (760) 353-8338 E-MAIL: planning@imperialcounty.net
ECON. DEV. OFFICE: 836 Main Street El Centro, CA 92243 (760) 482-4900 FAX: (760) 337-8907

ACKNOWLEDGMENT

STATE OF NEVADA)
)
COUNTY OF WASHOE)

On June 28, 2023, before me, a Notary Public, personally appeared Elizabeth Helms, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the attached **STATEMENT OF NOTIFICATION** and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person or entity on behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Notary Public

ANGELA MICKIEL ARGUELLO
NOTARY PUBLIC
STATE OF NEVADA
COUNTY OF WASHOE
No. 97-2924-2 MY APPT. EXPIRES AUGUST 11, 2025

ATTACHMENT "B"

STATEMENT OF RESPONSIBILITY

I, the undersigned, hereby agree to accept full responsibility for reclaiming all mined lands as described and submitted herein with any modifications requested by the County of Imperial as conditions of approval.

Signed this 28th day

of June, 2023.

Operator or Operator's Agent

ACKNOWLEDGMENT

STATE OF NEVADA)
)
COUNTY OF WASHOE)

On June 20, 2023, before me, a Notary Public, personally appeared Elizabeth Helms, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the attached **STATEMENT OF RESPONSIBILITY** and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person or entity on behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Notary Public

ANGELA MICKIEL ARGUELLO
NOTARY PUBLIC
STATE OF NEVADA
COUNTY OF WASHOE
No. 97-2924-2 MY APPT. EXPIRES AUGUST 11, 2025

ATTACHMENT "C"

RECLAMATION COST ANALYSIS

MAIN OFFICE: 801 Main Street El Centro, CA 92243 (760) 482-4236 FAX: (760) 353-8338 E-MAIL: planning@imperialcounty.net
ECON. DEV. OFFICE: 836 Main Street El Centro, CA 92243 (760) 482-4900 FAX: (760) 337-8907

Catalyst
ENVIRONMENTAL SOLUTIONS

Reclamation Cost Estimate for Dogwood Energy Project

Date: June 20, 2023

RE: **Reclamation Cost Estimate for the Dogwood Geothermal Energy Project**

This cost estimate has been prepared for the Dogwood Geothermal Energy Project and provides a general estimate to perform well abandonment and site reclamation/revegetation for the entire 40-acre disturbance area (including solar field).

Site Reclamation and Revegetation

- Cost of Reclaiming 40 acres

  $10,235[2] (first acre) + 219,765 ($5,635/acre[2] for 39 acres) = **$230,000**

TOTAL COST ESTIMATE: $230,000

References

[1] California Department of Conservation Oil, Gas, and Geothermal Resources. April 2019. California Code of Regulations, Section 1723. Available online at: https://www.conservation.ca.gov/index/Documents/DOGGR-SR-1%20Web%20Copy.pdf

[2] New Mexico Energy, Minerals, and Natural Resources Department. 2013. Guidance for Estimating Reclamation Costs. Available online at: http://www.emnrd.state.nm.us/MMD/MARP/documents/MMD_Part3FAGuidelines_Sept2013.pdf

Reclamation estimates provided in this document were increased by 15% to account for six years of inflation and potential contingency costs.

ATTACHMENT "D"

REVEGATION PLAN

(REVISED MARCH 25, 2005)
JH/lh/S:/forms_lists/reclamation plan aplication

MAIN OFFICE: 801 Main Street El Centro, CA 92243 (760) 482-4236 FAX: (760) 353-8338 E-MAIL: planning@imperialcounty.net
ECON. DEV. OFFICE: 836 Main Street El Centro, CA 92243 (760) 482-4900 FAX: (760) 337-8907

Revegetation Plan for Dogwood Geothermal Energy Project

Date: June 20, 2023

From: Catalyst Environmental Solutions (on behalf of ORMAT)

RE: **Revegetation Plan for the Dogwood Geothermal Energy Project**

INTRODUCTION

OrHeber 3 LLC (Applicant; and wholly owned subsidiary of Ormat Technologies, Inc.) proposes to develop a new 25-megawatt (MW; net generation) geothermal energy facility supported by a 7MW parasitic solar field and 0.3-mile underground medium voltage distribution cable (Project). The Project is proposed on APN 054-250-31 and APN 059-020-001, on/near the existing Heber geothermal energy complex (HGEC) located at 855 Dogwood Road, Heber, CA. The Project site is within the Imperial County Geothermal Overlay Zone that allows for Major Geothermal Projects to be permitted via a Conditional use Permit (CUP) process (Imperial County General Plan; Renewable Energy and Transmission Element of County of Imperial General Plan, 2015).

This Revegetation Plan has been prepared in support of the Reclamation Plan Application as part of the CUP application for the Dogwood Geothermal Energy Project.

Project Location

The proposed facilities would be located on APN 054-250-31 and APN 059-020-001, near the existing Heber Geothermal Energy Complex (HGEC) located at 855 Dogwood Road, Heber, CA. All proposed facilities are located within the Imperial County Geothermal Overlay Zone that allows for Major Geothermal Projects (Imperial County General Plan; Renewable Energy and Transmission Element of County of Imperial General Plan, 2015) (Site Location figure below). The HGEC is comprised of three stand-alone geothermal power plants: Heber 2, Heber South, and Goulds 2, and is completely devoted to geothermal energy generation.

The Dogwood geothermal plant would be located within the HGEC (APN 054-250-31) in an area currently used for materials storage and supporting operations. The development area for the Dogwood Project is completely disturbed from energy generation operations and devoid of any vegetation, surface waters, or existing facilities that would require relocation or demolition (**Attachment B** in CUP Application – Site Pictures).

The Dogwood solar photovoltaic facility would be located immediately southeast of the HGEC (APN 059-020-001). The proposed solar facility would provide auxiliary power directly to the proposed Dogwood OEC. Because the power generated by the solar facility would not enter the grid, but serve as a parasitic load facility, the Dogwood solar facility is considered behind-the-meter. The energy generated by the

solar facilities will be collected by an on-site switch and short interconnection line segment (approximately 2,500 feet along Dogwood Road) to the Dogwood geothermal plant (Figure 2 - Site Plan below).

Surrounding land uses in the Project vicinity are primarily for industrial facilities, energy facilities, and agricultural cultivation. Solar energy facilities and agricultural cultivation are directly west; a construction/aggregates company is adjacent to the south; agricultural operations are present to the north and east; and, geothermal well pads and pipelines are present throughout the local vicinity. Imperial Irrigation District (IID) irrigation canals are also present throughout the Project vicinity.

Reclamation, Abandonment, and Revegetation Schedule

Reclamation, abandonment, and revegetation activities would commence at the closure of the Dogwood power plant (OEC) in 15-30 years, if CUP approved by Imperial County. Activities would commence after all energy facilities have been dismantled and removed from the site. The site would be returned to a natural or arable state, using weed free soil. The site would be reseeded with a County approved seed mix. If necessary, reseeding would be held off until the appropriate season (e.g. fall, spring). Activities would take approximately four to six months to complete.

Site Preparation

After all wells have been plugged and energy facilities are removed from the site, any soil piles or grades will be evened out by an excavator. The site is near zero elevation and is very flat and absent of topography. Reclamation activities will mimic the existing grade of the site and not introduce a new gradient/slope to the area. The site will then be rolled with a soil aerator/loosener. After site reclamation, topsoil will be transported to the site and deposited evenly across the site.

Selection of Plant Materials

The Dogwood site and HGEC are completely devoid of vegetation, as the site is used for geothermal energy generation and contains industrial equipment that should not have vegetation under/around the facilities. The solar site is presently used for alfalfa cultivation. The surrounding area is dominated by agricultural production and no natural areas are in the immediate vicinity of the Project Site. The applicant will reseed the entire 40-acre site with a seed mix approved by Imperial County.

Irrigation and Maintenance

Revegetation of the site will be maintained by a contractor every two weeks to conduct weeding, watering, and removing trash/debris. The site will be irrigated by water truck as necessary to establish the new vegetation.

CONDITIONAL USE PERMIT

I.C. PLANNING & DEVELOPMENT SERVICES DEPT.
801 Main Street, El Centro, CA 92243 (442) 265-1736

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

1. PROPERTY OWNER'S NAME Heber Field Company LLC	EMAIL ADDRESS ehelms@ormat.com	
2. MAILING ADDRESS (Street / P O Box, City, State) 947 Dogwood Road, Heber, CA 92249	ZIP CODE 89519-6075	PHONE NUMBER 775-356-9029, ext. 32368
3. APPLICANT'S NAME Second Imperial Geothermal Company LLC	EMAIL ADDRESS ehelms@ormat.com	
4. MAILING ADDRESS (Street / P O Box, City, State) 6140 Plumas Street, Reno, NV	ZIP CODE 89519-6075	PHONE NUMBER 775-356-9029, ext. 32368
4. ENGINEER'S NAME CA. LICENSE NO.	EMAIL ADDRESS	
5. MAILING ADDRESS (Street / P O Box, City, State) 6140 Plumas Street, Reno, NV	ZIP CODE 89519-6075	PHONE NUMBER 775-356-9029

6. ASSESSOR'S PARCEL NO. 059-020-001	SIZE OF PROPERTY (In acres or square foot)	ZONING (existing) A-2-G-SPA
7. PROPERTY (site) ADDRESS 690 Dogwood Road, Heber, CA 92249		
8. GENERAL LOCATION (i.e. city, town, cross street) Near intersection of Dogwood Road and Willoughby Road		
9. LEGAL DESCRIPTION Track 44, Township 16 South; Range 14 East; SBB&M		

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

10. DESCRIBE PROPOSED USE OF PROPERTY (list and describe in detail)	Parasitic solar facility for existing Heber 2 geothermal power plant
11. DESCRIBE CURRENT USE OF PROPERTY	Alfalfa cultivation and geothermal wells and pipeline
12. DESCRIBE PROPOSED SEWER SYSTEM	No changes to existing sewer service
13. DESCRIBE PROPOSED WATER SYSTEM	No changes to existing water service
14. DESCRIBE PROPOSED FIRE PROTECTION SYSTEM	Fire response system for solar facilities

15. IS PROPOSED USE A BUSINESS? ☒ Yes ☐ No	IF YES, HOW MANY EMPLOYEES WILL BE AT THIS SITE? Approximately 10-15, temporarily for construction

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

Elizabeth Helms — Print Name
Elizabeth Helms — Signature
June 28, 2023 — Date

Print Name
Signature
Date

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 # _____

ORMAT

June 27, 2023

Mr. Jim Minnick
County of Imperial
Planning & Development Services Department
801 Main Street
El Centro, CA 92243

Subject: Conditional Use Permit Application for the Heber 2 Parasitic Solar Energy Project
602 Dogwood Road, Heber, CA (APN 059-020-001)

Dear Mr. Minnick:

The Second Imperial Geothermal Company LLC (Applicant; wholly owned subsidiary of Ormat Technologies, Inc. [Ormat]) proposes to develop a 15-megawatt (MW) solar energy facility that will provide a parasitic load to the existing Heber 2 geothermal power plant (Project). The solar energy would be transmitted to the existing Heber 2 power plant (ORMAT Energy Converter – OEC) via an underground medium voltage distribution cable that is being proposed under a separate CUP application (Dogwood Geothermal Energy Project).

The Project site is within the Imperial County Geothermal Overlay Zone that allows for *Major Geothermal Projects* to be permitted via a Conditional use Permit (CUP) process (Imperial County General Plan; Renewable Energy and Transmission Element of County of Imperial General Plan, 2015). Although the proposed developments are solar energy facilities, the energy they generate will be transmitted directly and exclusively to the existing Heber 2 Geothermal Power Plant, located on APN 054-250-31 and 855 Dogwood Road, Heber, CA. Therefore, the proposed parasitic solar facilities are considered *behind-the-meter* and serve as an extension of the existing Heber 2 geothermal power plant.

Enclosed is one original CUP Application with ink signatures, two hard copies of the CUP Application, and one digital copy (CD) of the CUP Application. The enclosed application includes the following items:

- CUP Application Form and Fee
- Site Plan, Facility Integration Diagram, and Process Diagram (20 copies)
- Imperial County Planning & Development Services (ICPDS) General Indemnification Agreement
- Attachment A - Project Description, Map Set, and General Plan (Zoning) Conformance
- Attachment B - Site Photographs
- Attachment C – Water Quality Management Plan
- Attachment D – Imperial County Reclamation Plan

We are presently working on the necessary technical reports and CEQA Checklist (Initial Study for the *Whole of the Action*, including the proposed Dogwood Geothermal Energy Project, Heber 2 Solar Energy Project, and Heber Field Company Geothermal Wells and Pipeline Project) and intend to submit to the County in July. Thank you and please contact me if you have any questions regarding the Project or this CUP Application.

Sincerely,

Alissa Sanchez
Senior Manager, Environmental Permitting
ORMAT Nevada, Inc.
PHONE: (775) 356-9029 (ext. 32234)
EMAIL: asanchez@ormat.com

Enclosures

IMPERIAL COUNTY PLANNING & DEVELOPMENT SERVICES
GENERAL INDEMNIFICATION AGREEMENT

As part of this application, applicant and real party in interest, if different, agree to defend, indemnify, hold harmless, and release the County of Imperial ("County"), its agents, officers, attorneys, and employees (including consultants) from any claim, action, or proceeding brought against any of them, the purpose of which is to attack, set aside, void, or annul the approval of this application or adoption of the environmental document which accompanies it. This indemnification obligation shall include, but not be limited to, damages, costs, expenses, attorney fees, or expert witness fees that may be asserted by any person or entity, including the applicant, arising out of or in connection with the approval of this application, whether or not there is concurrent negligence on the part of the County, its agents, officers, attorneys, or employees (including consultants).

If any claim, action, or proceeding is brought against the County, its agents, officers, attorneys, or employees (including consultants), to attack, set aside, void, or annul the approval of the application or adoption of the environmental document which accompanies it, then the following procedures shall apply:

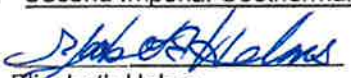
1. The Planning Director shall promptly notify the County Board of Supervisors of any claim, action or proceeding brought by an applicant challenging the County's action. The County, its agents, attorneys and employees (including consultants) shall fully cooperate in the defense of that action.

2. The County shall have the final determination on how to best defend the case and will consult with applicant regularly regarding status and the plan for defense. The County will also consult and discuss with applicant the counsel to be used by County to defend it, either with in-house counsel, or by retaining outside counsel provided that the County shall have the final decision on the counsel retained to defend it. Applicant shall be fully responsible for all costs incurred. Applicant shell be entitled to provide his or her own counsel to defend the case, and said independent counsel shall work with County Counsel to provide a joint defense.

Executed at Reno, Nevada on June 28, 2023

APPLICANT

Name: Second Imperial Geothermal Company LLC

By 
Elizabeth Helms

Title Corporate Secretary

Mailing Address: 6140 Plumas St

Reno, NV 89519

REAL PARTY IN INTEREST
(If different from Applicant)

Name _____

By _____

Title _____

Mailing Address:

_____

_____

_____

ACCEPTED/RECEIVED BY _____ Date _____

PROJECT ID NO _____ AP N ___-___-___

MAIN OFFICE: 801 Main Street El Centro, CA 92243 (442) 265-1736 FAX: (442) 265-1735 E-MAIL: planning@co.imperial.ca.us

Attachment A

Project Description, Map Set, and General Plan (Zoning) Conformance

Catalyst
ENVIRONMENTAL SOLUTIONS

INTRODUCTION

The Second Imperial Geothermal Company (Applicant; wholly owned subsidiary of Ormat Technologies, Inc. [Ormat]) proposes to develop a 15-megawatt (MW) solar energy facility that will provide a parasitic load to the existing Heber 2 geothermal power plant (Project). The solar energy would be transmitted to the existing Heber 2 power plant (ORMAT Energy Converter – OEC) via a buried underground distribution cable that is being proposed under a separate CUP application (Dogwood Geothermal Energy Project).

PROJECT LOCATION & ACCESS

The proposed solar facilities would be located on APN 059-020-001, approximately 0.3 miles due south of the existing Heber 2 geothermal power plant located at 855 Dogwood Road, Heber, CA. All proposed facilities are located within the Imperial County Geothermal Overlay Zone that allows for *Major Geothermal Projects* (Imperial County General Plan; Renewable Energy and Transmission Element of County of Imperial General Plan, 2015) (**Site Location** figure below).

Interstate 8 (I-8; Kumeyaay Highway), located approximately 4.5 miles directly north, provides primary highway access to the HGEC. Dogwood Road stems off of I-8 and provides immediate site access. From the south, Willoughby Road runs west-east approximately 1,700 feet from the site and connects to Dogwood Road, providing immediate site access. Traffic flow is often irregular in this area.

PROJECT OBJECTIVES

The objectives of the Heber 2 Solar Project are to:

- Increase the amount of geothermal energy generated at the existing Heber 2 power plant by providing a parasitic load that reduces the amount of energy lost to generation operations.
- Provide upwards of 15MW of clean renewable energy to the local grid and region's energy generation profile. More renewable baseload energy and capacity will assist the State of California with meeting the objectives of Senate Bill 100 (100% Clean Energy Act of 2018) and the State's Renewables Portfolio Standard program.
- Develop clean, renewable geothermal energy in the Heber Geothermal Zone pursuant to the Imperial County General Plan.

PROJECT BENEFITS

As provided in the list below, the Project would provide significant state and local benefits, including, but not limited to:

- Increasing the employment base of Imperial County by creating both construction and operations positions, pursuant to Goal 2 of the Imperial County Strategic Plan (2020).
- Increasing the Imperial County tax base.
- Displacing fossil fuel consumption within the State.
- Meeting the State's climate change goals by reducing emissions of greenhouse gases associated with electrical generation.
- Promoting stable retail rates for electric service.
- Meeting the State's need for a diversified and balanced energy generation portfolio.
- Meeting the State's resource adequacy requirements.
- Contributing to the safe and reliable operation of the electrical grid, including providing predictable electrical supply, voltage support, lower line losses, and congestion relief.

SITE DESCRIPTION & SURROUNDING USES

The Heber 2 Solar site is presently used for alfalfa cultivation with irrigation ditches and dirt access roads present (**Attachment B – Site Pictures**). Surrounding land uses in the Project vicinity are primarily geothermal energy facilities and agricultural cultivation. Agricultural cultivation is adjacent to the Project site on all sides, with Imperial Irrigation District (IID) irrigation canals are also present throughout the Project vicinity. Geothermal wells and pipelines are also present throughout the immediate Project area.

ZONING & PROJECT CONFORMANCE

The Project site(s) is within the Imperial County Geothermal Overlay Zone that allows for *Major Geothermal Projects* to be permitted via a Conditional use Permit (CUP) process (Imperial County General Plan; Renewable Energy and Transmission Element of County of Imperial General Plan, 2015). Although the proposed developments are solar energy facilities, the energy they generate will be transmitted directly and exclusively to the existing Heber 2 Geothermal Power Plant, located on APN 054-250-31 and 855 Dogwood Road, Heber, CA. Therefore, the proposed parasitic solar facilities are considered *behind-the-meter* and serve as an extension of the existing Heber 2 geothermal power plant.

The Project site is zoned as A-2-G-SPA, which includes the Geothermal Overlay Zone (G) and allows for "Major Geothermal Projects" to be permitted through a CUP process. The Heber SPA is intended "to allow for commercial, residential, industrial, renewable energy and other employment-oriented development in a mixed used orientation" (Land Use Element of the Imperial County General Plan, 2015; emphasis added). Therefore, the proposed Project conforms to the standards and goals set forth in the Imperial County General Plan and the Renewable Energy and Transmission Element of County of Imperial General Plan (2015).

PROJECT DESCRIPTION

Site Preparation

The Heber 2 Solar site is currently used for alfalfa cultivation. After the crops are collected, the site would be cleared and a chain-link security fence would be installed around the solar construction site. To ensure the proposed facilities are situated on safe and stable surfaces, minor excavation and compaction activities would be performed. Material and equipment staging areas would be established on-site or at the existing Heber 2 Power Plant. The staging area would include an airconditioned temporary construction office, a first-aid station and other temporary facilities including, but not limited to, sanitary facilities, worker parking, truck loading and unloading, and a designated area for assembling the support structures for the placement of PV modules. On-site soil that has been piled during excavation will be used as backfill material, as necessary. Only soil free of debris and deleterious matter would be used as backfill material. The proposed facilities would be placed on shallow-spread footers and wall footers to support the structures. All site preparation and fill placement activities will be monitored by a qualified geotechnical engineer to detect undesirable materials and/or site conditions that may arise during site preparation.

The total project disturbance from the proposed development is approximately 85 acres.

Parasitic Solar Energy Facilities

A 15MW solar field would provide supplemental/auxiliary energy to the existing Heber 2 geothermal plant. These solar facilities are classified as *behind-the-meter* and would provide supplemental energy directly to the Heber 2 geothermal unit (OEC), this energy would not enter the transmission grid. The solar facilities will effectively reduce the margin between gross and net geothermal energy generation, allowing for the more efficient generation of geothermal energy and to allow more geothermal energy to enter the grid. The energy generated

by the solar fields would be collected by an on-site by a XMD and switch and transmitted along a short interconnecting cable line (approximately 0.3 mile) on Dogwood Road.

Buried Distribution Line

The energy generated by the Heber 2 solar facility would utilize a buried distribution cable that is proposed as part of the CUP application for the Dogwood Geothermal Energy Project. Once entering the HGEC, the medium voltage distribution cable would connect directly into the Heber 2 OEC.

Water Use and Source

Water required for facility construction activities, including grading and dust control, will be obtained from the Applicant's existing contract with IID. Up to 5,000 gallons per day (gpd) of water will be required for the first 2-4 months of development of the facility. Approximately 2,000 gpd will be consumed during the remaining development schedule of approximately 12-18 months. Thus, approximately 1.1 million gallons of water (10.1 acre-feet) will be used on-site during construction. Once operating, up to approximately 325 gpd (0.36 acre-feet per year) of non-potable water will be required and provided by the applicant's existing IID contract/allocation. The Project will not require additional water from the Imperial Irrigation District (IID) for operations and will be covered under the existing contract.

Construction Schedule

As provided in the table below, the Project is anticipated to take 12 months to install, test, and become fully operational. Construction will commence immediately after all permits are secured.

Project Phasing Table

Project Activity/Phase	Duration	Total Duration
Site Preparation	2 months	12 months
Project Construction	6 months	
Interconnection	2 months	
Testing	2 months	

Construction Equipment and Noise

Heavy construction equipment, including drill rigs, drilling equipment, semi-truck trailers, flatbed trucks, forklifts, excavators/bulldozers, roller, and cranes will be used to deliver and place the proposed facility equipment on the Project Site. Smaller powered hand tools, such as drills, compressors, and welding equipment will also be used. Employee vehicles will be used to transport workers to the Site and parked at the designated parking locations.

During construction, noise emissions will be periodic and temporary, depending on the use of heavy equipment. Smaller hand tools will be used consistently during the construction phase.

Construction activities will be limited to 7:00am through 7:00pm. Construction noise from Project development will not exceed the County threshold of 75 decibels at any time of (County of Imperial Codified Ordinances § 90702.00 – Sound Level Limits). There are no sensitive receptors (i.e., schools, churches, hospitals, parks, etc.) in close proximity (i.e., within 1 mile radius) to the Site. The closest residence is approximately 500 feet to the north, directly across E. Willoughby Road and IID Beech Canal.

Environmental Protection Measures

All ORMAT and contractor personnel will be informed of ORMAT's policy regarding environmental protection, safety plans, and emergency response protocols. Collectively, these measures minimize unintended impacts and events as result of facility construction and operation.

Surface and Ground Water Quality

- A Water Quality Management Plan (WQMP) will be prepared for both the construction and operations phases of the Project. The WQMP includes numerous "good housekeeping" and preventative maintenance, employee training, safe handling/storage, and spill response measures to prevent and minimize any unintended releases.
- The site will be designed and prepared to provide adequate stormwater conveyance and/or infiltration.
- Any spills or unintended releases of chemicals used during Project construction and/or operation will be cleaned up with the appropriate materials (i.e., absorbent pads, foams/gels) and the affected area remediated to prevent contact with groundwater resources.
- No vehicle fueling or maintenance will take place on exposed soil.

Wildlife

- Speed limits of 5 mph will be observed on the site in order to minimize dust and avoid collision and incidental mortality of local wildlife.

Vegetation

- Vegetation control, including invasive species eradication, will be implemented to prevent growth under or near the proposed facilities.

Air Quality

- The Project will adhere to the Imperial County Air Pollution Control District's (ICAPCD) Regulation VIII, Fugitive Dust Rules, which are designed to mitigate PM10 emissions during construction.
- ORMAT shall submit a Construction Dust Control Plan and notify the ICAPCD 10 days prior to the start of any construction activities.
- Any equipment breakdown resulting in air emissions shall be reported to ICAPCD and promptly corrected (within 24 hours when possible).
- To minimize unnecessary emissions, Project equipment and worker vehicles shall be turned off when not in use and not left idling.
- Water shall be applied to the development site and during preparation and construction to control fugitive dust.
- Earth moving work shall be completed in phases (as necessary) to minimize the amount of disturbed area at one time.
- Construction vehicles and heavy equipment that use non-surfaced facility roads and areas will be restricted to 5 mph to control fugitive dust.
- During windy conditions, barriers shall be constructed and/or additional watering will occur to minimize fugitive dust.

- Vehicle access shall be restricted to the disturbance area via signage and/or fencing.
- Equipment shall be operated according to best practices and maintained according to design specifications.
- Construction equipment shall be equipped with an engine designation of EPA Tier 3 (Tier 3) if commercially available and feasible. If a Tier 3 engine is not certified for a particular piece of equipment or not commercially available, then the equipment shall be either equipped with a Tier 2 engine or equipped with retrofit controls to reduce exhaust emissions of nitrogen oxides (NOx) and diesel particulate matter (DPM) to no more than Tier 2 levels. Prior to the issuance of a grading permit, ORMAT will submit a list of all construction equipment, including off road equipment, by make, model, year, horsepower, expected/actual hours of use, and EPA to the County Planning and Development Services Department and ICAPCD.
- The Project shall implement the following measures as part of its construction Best Management Practices (BMPs): providing Valley Fever awareness training for workers; providing respirators to workers when requested, including the provision of necessary training; use of closed-cab earth-moving vehicles equipped with HEPA-filtered air systems; employee testing for Valley Fever as needed; and conducting earth-moving activities downwind of workers when possible.

Cultural Resources

- The Project site is entirely disturbed so the probability of encountering an unanticipated cultural resource is low. As a safeguard, project construction personnel will monitor areas during surface disturbing activities. In the event any potential cultural or archaeological resources (e.g., bones, ceramics) are discovered, all construction affecting the discovery site will be suspended immediately until a qualified archaeologist has reviewed the findings. An Unanticipated Discoveries Plan will be prepared prior to resuming construction.

Waste Management

- Workers will be required to properly dispose of all refuse and trash to prevent any litter on the Project site.
- During construction, portable chemical sanitary facilities will be used by all construction personnel. These facilities will be serviced by a local contractor.
- All construction wastes, liquid and solid, will be disposed of in compliance with all appropriate local, state, and federal disposal regulations.
- Solid wastes will be disposed of in an approved solid waste disposal site in accordance with Imperial County Environmental Health Department requirements. Waste will be routinely collected and disposed of at an authorized landfill by a licensed disposal contractor.

Fire Prevention

- Safety Data Sheets for all known chemicals of concern will be maintained and available to workers and first responders.
- Personnel will not be allowed to smoke outside of designated areas.
- A list of emergency phone numbers will be available onsite.

- Adequate firefighting equipment (i.e., a shovel, a pulaski, standard fire extinguisher[s], and an ample water supply) will be kept readily available at the construction site.
- Vehicle catalytic converters (on vehicles that enter and leave the construction site on a regular basis) will be inspected often and cleaned of all flammable debris.
- All cutting/welding torch use, electric-arc welding, and grinding operations will be conducted in an area free from vegetation. An ample water supply and shovel will be on hand to extinguish any fires created from sparks. At least one person in addition to the cutter/welder/grinder will be at the work site to promptly detect fires created by sparks.
- An approved automatic fire detection system shall be installed as per the California Fire Code as adopted by the Imperial County Code. All fire detection systems shall be installed and maintained to the current fire code and regulations adopted by Imperial County.
- Fire Department access roads and gates will be in accordance with the current fire code adopted by Imperial County and the facility will maintain a Knox Box or a similar, Department-approved device for Site access.

Noise

- Diesel equipment used for drilling within 1,000 feet of any residence shall have hospital-type mufflers. Well venting and testing at these wells shall be accompanied by the use of an effective muffling device or "silencer".

Geotechnical and Geologic Hazards

- A formal geotechnical investigation of the Site's soil characteristics, seismic conditions, stormwater infiltration, site stability, and potential for liquefaction will be developed.

Public Health and Safety

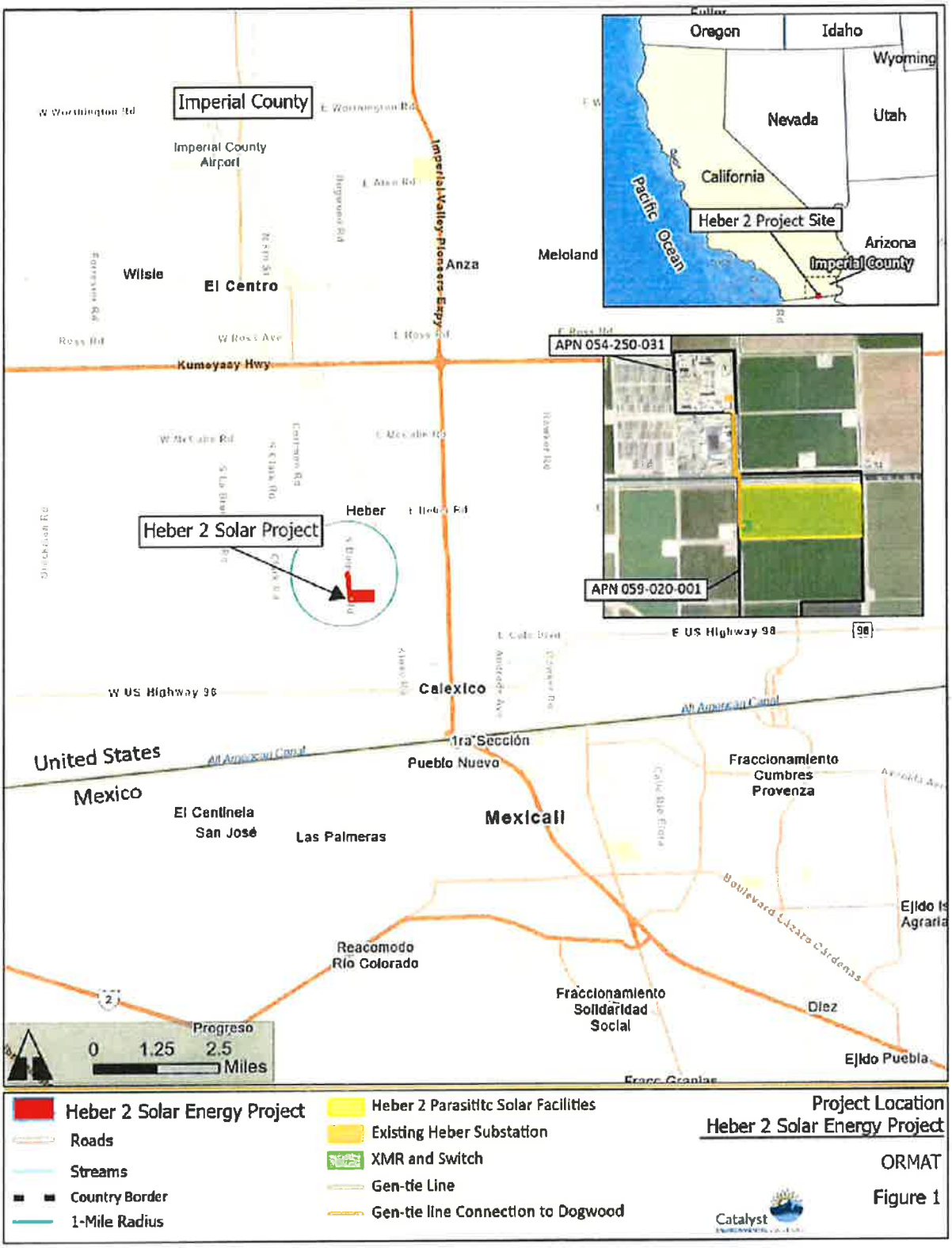
- The Site is fenced to prevent unauthorized people from accessing and tampering with the geothermal facilities, and to prevent wildlife from entering the facility.
- Signage, such as "No Trespassing" and "Danger – High Voltage" warnings, will continue to be posted at the Site to provide notice to unauthorized people to keep out.
- ORMAT will designate an employee to serve as the on-call Emergency Coordinator who fully comprehends the ERP and would be prepared to enact the ERP in the event of an emergency.
- Minor leaks or spills of fluids from construction equipment will be quickly contained and cleaned up.
- All hazardous materials will be used, transported, and disposed of in accordance with applicable safe handling and disposal regulations.

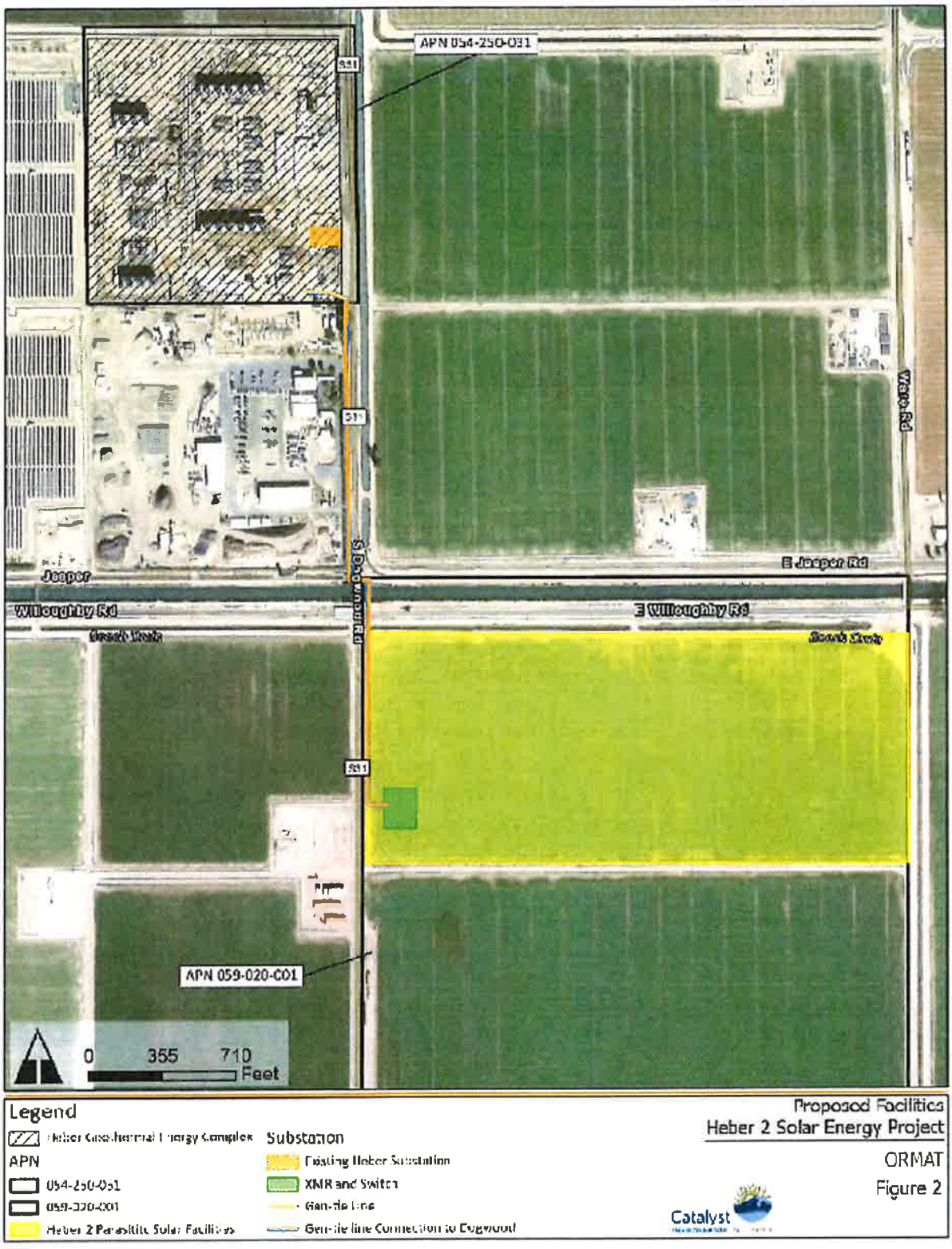
Traffic and Transportation

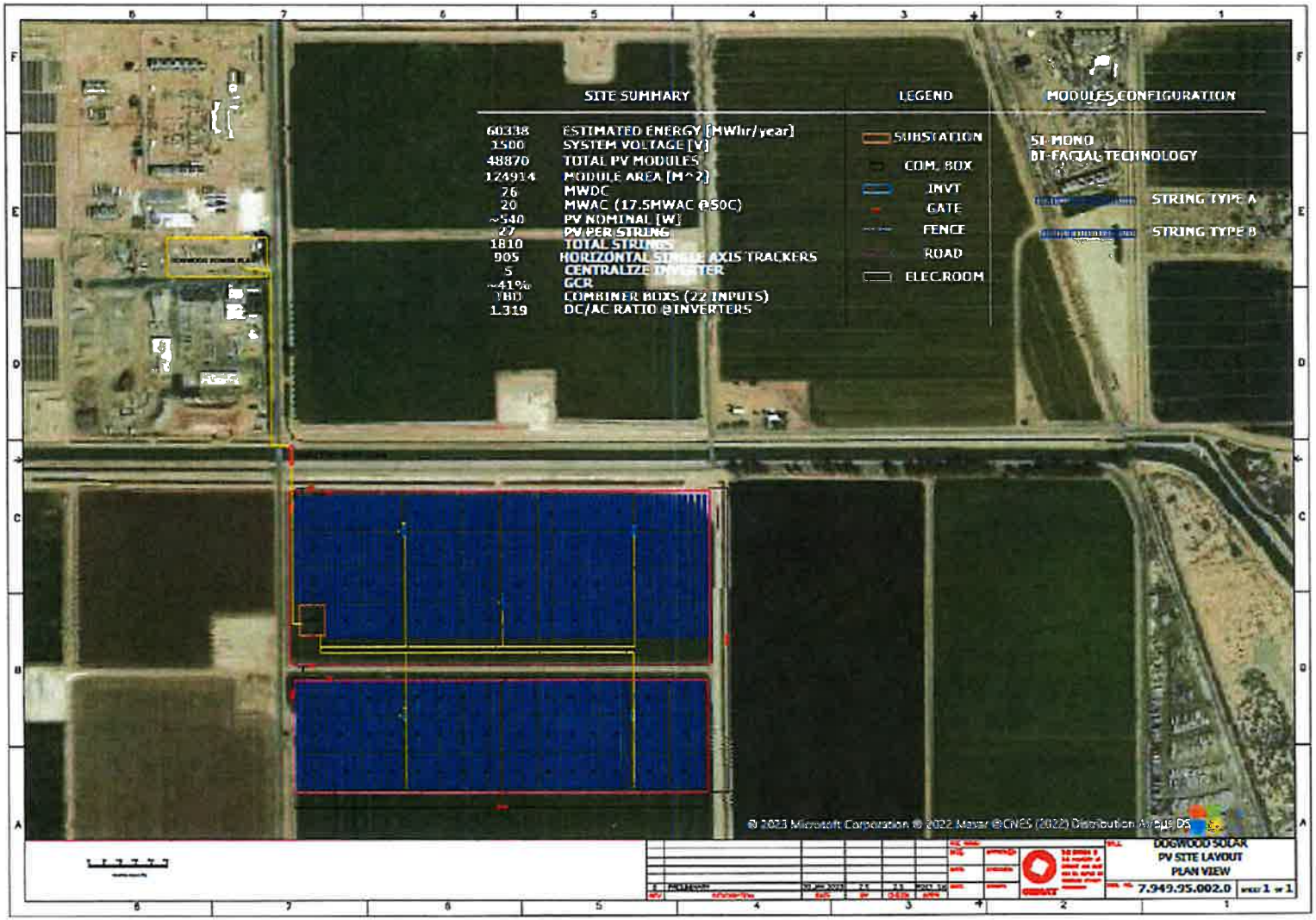
- Project personnel will coordinate that movement of any required oversized load on Imperial County roads with the Imperial County Department of Public Works (ICDPW) and/or on State highways with the California Department of Transportation (CalTrans) and the El Centro California Highway Patrol office. Transportation of oversized equipment will be minimized to the greatest extent feasible. Oversized

equipment and/or large vehicles which impose greater than legal roads on riding surfaces, including bridges, shall require a transportation permit.

- The Project shall consider traffic safety in transporting equipment and materials to the permitted facilities to include temporary signs warning motorists on adjacent roadways and flagmen shall be used when equipment is being brought to and from the plant and wellfield sites.
- The Project shall coordinate with DPW for any requested dedication of rights-of-way needed for Dogwood Road for the consideration of existing and any future road needs.
- The Project shall file for an encroachment permit for any work or proposed work in the affected County or CalTrans road rights-of-way and for any and all new, altered or unauthorized existing driveway(s) to access the lot or lots and for any proposed road crossings.


Imperial County
Imperial County Airport
Imperial Valley Pioneers Expy
Wilsie
El Centro
Anza
Meloland
Heber
Heber 2 Solar Project
Kumeyaay Hwy
W Ross Ave
E Ross Rd
W Worthington Rd
E Worthington Rd
E Aten Rd
W McCabe Rd
E McCabe Rd
E Cole Blvd
E US Highway 98
W US Highway 98
Calexico
All American Canal
United States
Mexico
El Centinela
San José
Las Palmeras
1ra Sección
Pueblo Nuevo
Mexicali
Fraccionamiento Cumbres Provenza
Boulevard Lázaro Cárdenas
Ejido Is Agraria
Reacomodo Río Colorado
Fraccionamiento Solidaridad Social
Diez
Ejido Puebla
Progreso
0 1.25 2.5 Miles
Oregon
Idaho
Wyoming
Nevada
Utah
California
Pacific Ocean
Heber 2 Project Site
Arizona
Imperial County
APN 054-250-031
APN 059-020-001
Heber 2 Solar Energy Project
Roads
Streams
Country Border
1-Mile Radius
Heber 2 Parasitic Solar Facilities
Existing Heber Substation
XMR and Switch
Gen-tie Line
Gen-tie line Connection to Dogwood
Project Location
Heber 2 Solar Energy Project
ORMAT
Figure 1
Catalyst

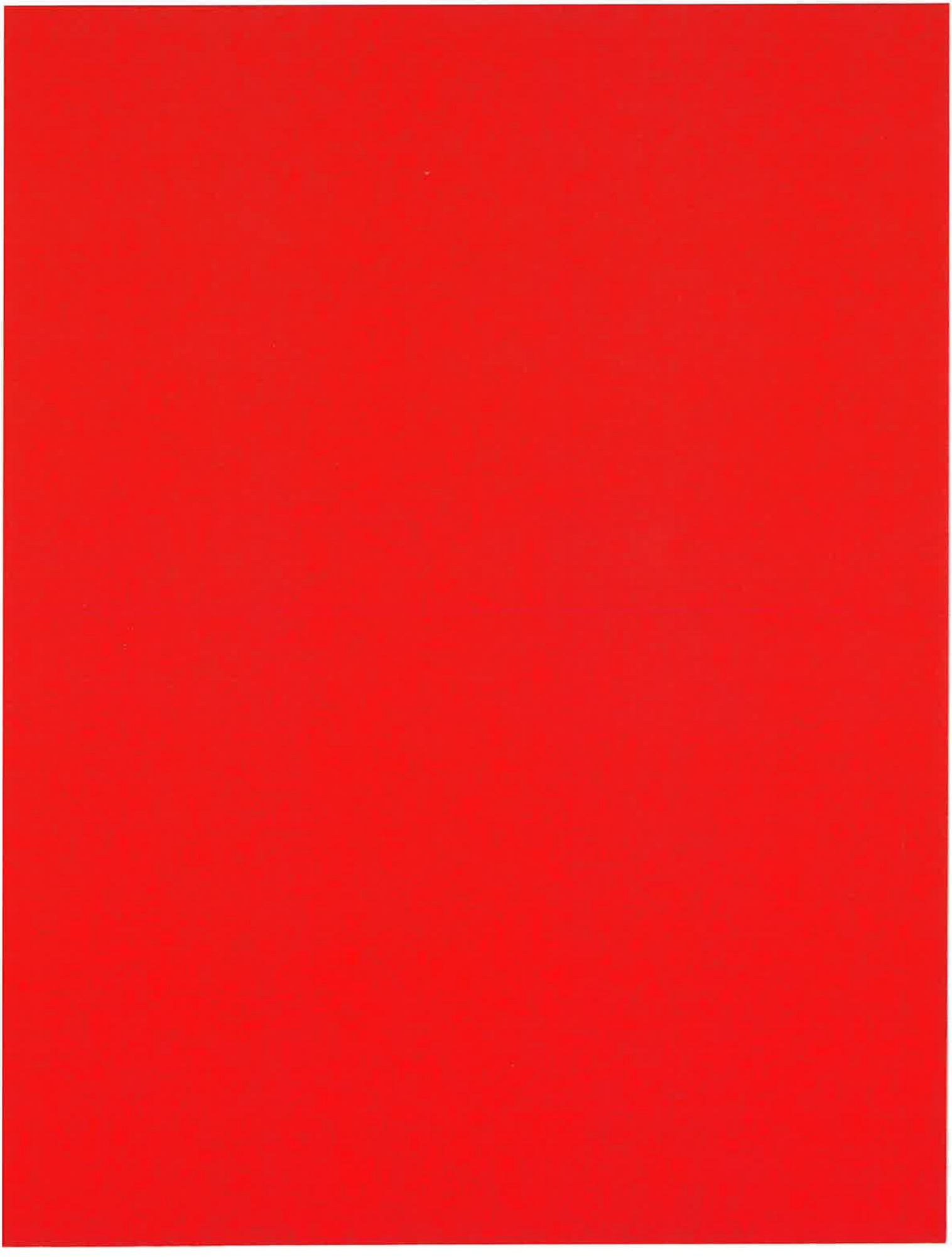

APN 054-250-031
APN 059-020-001
Ware Rd
E Jasper Rd
Jasper
Willoughby Rd
E Willoughby Rd
Dogwood Rd
931
0
355
710
Feet
Legend
Heber Geothermal Energy Complex
APN
054-250-031
059-020-001
Heber 2 Parasitic Solar Facilities
Substation
Existing Heber Substation
XMR and Switch
Gen-tie Line
Gen-tie line Connection to Dogwood
Proposed Facilities
Heber 2 Solar Energy Project
ORMAT
Figure 2
Catalyst


SITE SUMMARY
60338 ESTIMATED ENERGY [MWhr/year]
1500 SYSTEM VOLTAGE [V]
48870 TOTAL PV MODULES
124914 MODULE AREA [M^2]
76 MWDC
20 MWAC (17.5MWAC @50C)
~540 PV NOMINAL [W]
27 PV PER STRING
1810 TOTAL STRINGS
905 HORIZONTAL SINGLE AXIS TRACKERS
5 CENTRALIZE INVERTER
~41% GCR
TBD COMBINER BOXS (22 INPUTS)
1.319 DC/AC RATIO @INVERTERS
LEGEND
SUBSTATION
COM. BOX
INVT
GATE
FENCE
ROAD
ELECROOM
MODULES CONFIGURATION
SI-MONO
BI-FACIAL TECHNOLOGY
STRING TYPE A
STRING TYPE B
© 2023 Microsoft Corporation © 2022 Maxar ©CNES (2022) Distribution Airbus DS
DOGWOOD SOLAR
PV SITE LAYOUT
PLAN VIEW
7.949.95.002.0

Attachment B

Site Photographs

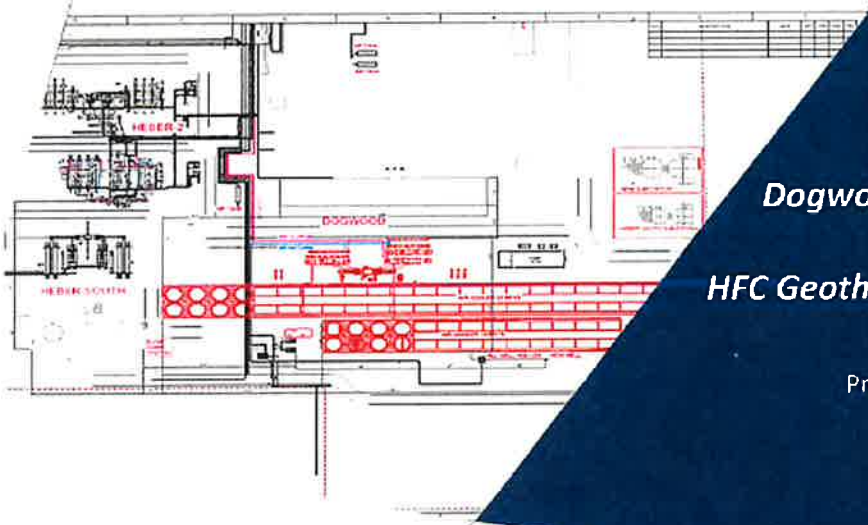
Catalyst
ENVIRONMENTAL SOLUTIONS



Attachment C

Water Quality Management Plan

Catalyst
ENVIRONMENTAL SOLUTIONS



Water Quality Management Plan

Dogwood Geothermal Energy Project
Heber 2 Solar Energy Project
HFC Geothermal Wells & Pipeline Project

Prepared for: Imperial County Planning and Development Services

Submitted by: ORMAT

June 20, 2023

Innovative solutions for a complex world

Catalyst
ENVIRONMENTAL SOLUTIONS

Document Information

Prepared for	OrHeber 3 LLC, Heber Field Company, and the Second Imperial Geothermal Company (collectively, the Applicants, all wholly owned subsidiaries of Ormat Technologies, Inc.)
Project Name	Dogwood Geothermal Energy Project, Dogwood Solar, and Heber 2 Solar Facilities APN 054-250-031; APN 059-020-001; APN 054-250-017
Address	ORMAT 6140 Plumas Street Reno, NV 89519-6075
Project Manager	Ben Pogue bpogue@ce.solutions
Project Engineer	Paden Voget, P.E. pvoget@ce.solutions State of California Professional Engineer #69238
Date	June 10, 2023

Professional Certification

Water Quality Management Plan

Dogwood Geothermal Energy Project, Dogwood Solar, and Heber 2 Solar Facilities

This report has been prepared by Catalyst Environmental Solutions Corporation under the professional supervision of the Principal(s) and/or staff whose signature(s) appear hereon.

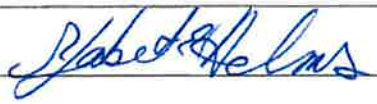
The scope of work and specifications are presented in accordance with generally accepted professional engineering practice and those of the California State Water Resources Control Board Order No. 2013-001-DWQ. There is no other warranty either expressed or implied.

Paden Voget, PE
State of California Professional Engineer #69238

Project Owner's Certification

This Water Quality Management Plan (WQMP) has been prepared for OrHeber 3 (OH), LLC, Heber Field Company, LLC (HFC), and the Second Imperial Geothermal Company (collectively, the Applicants, all subsidiaries of Ormat Technologies, Inc. [ORMAT]) by Catalyst Environmental solutions. The WQMP is intended to comply with the requirements of the County of Imperial and the Phase II Small MS4 General Permit Imperial Valley Watershed. The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of the site consistent with the Phase II Small MS4 Permit and the intent of the County of Imperial and the unincorporated community of Heber. Once the undersigned transfers its interest in the property, its successors in interest and the city/county/town shall be notified of the transfer. The new owner will be informed of its responsibility under this WQMP. A copy of the approved WQMP shall be available on the subject site in perpetuity.

"I certify under a penalty of law that the provisions (implementation, operation, maintenance, and funding) of the WQMP have been accepted and that the plan will be transferred to future successors."

Project Data			
Permit/Application Number(s):	New CUP for Dogwood Geothermal Energy Project New CUP for Heber 2 Solar Energy Project Amendment to CUP No. 06-0028 for the HFC Geothermal Wells & Pipeline Project	Grading Permit Number(s)	N/A
Tract/Parcel Map Number(s):	APN 054-250-031 APN 059-020-001 APN 054-250-017	Building Permit Number(s)	N/A
CUP, SUP, and/or APN:			06-0028 (for HFC)
Owner's Signature			
Owner Name:	Elizabeth Helms		
Title:	Corporate Secretary		
Company:	ORMAT		
Address:	6140 Plumas Road, Reno, NV		
Email:	ehelms@ormat.com		
Telephone:	775-356-9029 ext. 32368		
Signature:	 Date:		June 28, 2023

ACKNOWLEDGMENT

STATE OF NEVADA)
)
COUNTY OF WASHOE)

On June 20, 2023, before me, a Notary Public, personally appeared Elizabeth Helms, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the attached **PROJECT OWNER'S CERTIFICATION** and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person or entity on behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Notary Public

ANGELA MICKIEL ARGUELLO
NOTARY PUBLIC
STATE OF NEVADA
COUNTY OF WASHOE
No. 97-2924-2 MY APPT. EXPIRES AUGUST 11, 2025

Table of Contents

Tables

Figures

SECTION 1 Project Description

OrHeber 3, LLC, Heber Field Company, LLC, and the Second Imperial Geothermal Company (collectively, the Applicants, and all subsidiaries of Ormat Technologies, Inc. [ORMAT]) proposes to develop a new 25-megawatt (MW; net generation) geothermal energy facility (Dogwood Project), Dogwood Solar, and Heber 2 Solar Parasitic Facilities. Proposed developments would occur on Assessor Parcel Numbers (APNs) 054-250-31; APN 059-020-001; and APN 054-250-017, near the existing geothermal energy complex located at 855 Dogwood Road, Heber, California. The Project site(s) is within the Imperial County Geothermal Overlay Zone that allows for Major Geothermal Projects to be permitted via a Conditional use Permit (CUP) process (Imperial County General Plan; Renewable Energy and Transmission Element of County of Imperial General Plan, 2015). The following facilities are proposed for development, provided by the Applicant:

Dogwood Project (OrHeber 3, LLC) – New CUP

- One (1) Integrated Two Level Unit (ITLU) Air Cooled ORMAT Energy Converter (OEC) generating unit
- Two (2) 20,000-Gallon Isopentane Tanks for Motive Fluid Storage
- One (1) Project substation for transmission to the grid
- Ancillary and auxiliary facilities (including, compressed air system and fire prevention system)
- A seven (7) megawatt (MW) solar photovoltaic field dedicated to the Dogwood geothermal plant
- Underground medium voltage distribution cable from Dogwood solar facilities to Dogwood geothermal plant (and Heber 2 solar facilities to the Heber 2 OEC)

Heber 2 Parasitic Solar Energy Facilities (Second Imperial Geothermal Company) – Amendment to CUP No. 19-0017

- A fifteen (15) MW solar photovoltaic field dedicated to the Heber 2 geothermal plant
- Interconnecting cable line from Heber 2 solar facilities to Heber 2 geothermal plant

Wells and Pipeline (Heber Field Company, LLC) – Amendment to CUP No. 06-0028

- Up to six (6) new production wells (3 sited, 3 unsited)
- One (1) new injection well
- Brine pipelines

As provided in **Table 1** below, the total project disturbance from the proposed development is approximately 124 acres. **Figure 1** and **Figure 2** provide a site plan of the proposed facilities and brief descriptions of each facility are provided below.

Table 1. Dogwood Project Area of Disturbance Estimate

Facility	Disturbance (Acres)
Geothermal Energy Facilities and Project Substation	5 acres (site currently completely disturbed)
Solar Field and Connection Line	~ 95 acres
Production and Injection Wells and Connecting Pipeline	~ 24 acres
TOTAL	**124 acres**

The Project will result in approximately 1,400 square feet of area converted to impervious surface area resulting from installation of equipment footings/foundations. Although some minor grading will be performed for the installation of the parasitic solar fields, the existing drainage pattern of the sites will not be altered from existing conditions. Accordingly, the Project will not result in a change to the existing grade and stormwater flows and drainage will not be altered from existing conditions. **Figure 3** illustrates the existing drainage facilities in the vicinity of the Project. **Figure 4** provides a site plan of the proposed facilities.

1.1.1 Geothermal Production and Injection Wells

Heber Field Company (HFC) owns and operates the geothermal wells and pipeline network that provides geothermal fluid/brine to the entire Heber Geothermal Energy Complex (HGEC), which includes the existing Heber 2, Heber South, and Goulds II geothermal power plants. HFC holds a CUP (No. 06-0028) for this wellfield and through a CUP amendment process, the new production and injection wells and pipelines are proposed to be added to this existing CUP. HFC proposes to develop up to six production wells. Three of these wells are sited to support the new Dogwood geothermal facility. **Figure 1** provides the locations of the three Dogwood wells. HFC is also seeking to permit three unsited wells that would be developed in the future. The unsited wells would be developed within one-mile of the HGEC and not near any sensitive receptors. HFC would anticipate construction in close proximity to an existing well pad and pipeline connections. The surrounding area is predominantly agricultural and the unsited wells would likely convert a small amount for geothermal production or injection use (approximately 1.5 acres of disturbance per well pad).

The production wells would be completed to depths between 1,000 and 4,000 feet, averaging approximately 3,500 feet. Casing depth will comply with California Department of Conservation – Geologic Energy Management Division (CalGEM) Regulations (Chapter 4, Article 3, §§ 1723, 2018) and vary depending on the total depth of the well. After the production well is completed, a well head will be installed and connected to a transmission pipeline that will convey geothermal fluid to the Dogwood Project (as discussed below). An industrial grate will be placed over the well to prevent falls. An insulated electric conductor running from the OEC to the wellheads along the connecting pipelines will supply electricity to the wellhead pump motors. During normal well operations, total geothermal fluid production rates are expected to be approximately 8,000 gallons per minute (gpm) at 280°F. One new injection well would be installed directly adjacent to the Dogwood plant. This well would also be owned and operated by HFC. This well is designed to provide direct service to the Dogwood Project, in addition to the available capacity in the existing HFC injection well/system. Injection will occur at the same approximate levels (i.e., 8,000 gpm) but at lower temperatures of approximately 170°F.

1.1.2 Geothermal Fluid Pipeline

A short segment of new pipeline is proposed within the solar energy fields to collect and deliver the new geothermal fluid/brine from two of the new production wells. This new pipeline would connect to the existing pipeline network to deliver fluid/brine to the Dogwood plant. Construction of the pipeline segment would include auguring 24-inch diameter holes into the ground about three to five feet deep at approximately 30-foot intervals along the pipeline route. When complete, the top of the new geothermal pipelines will average three feet above the ground surface. Electrical power and instrumentation cables for the wells may also be installed in steel conduit constructed along the pipe.

1.1.3 ORMAT Energy Converter (Geothermal Energy Production Unit)

The proposed ORMAT Energy Converter (OEC) unit is a two-turbine combined cycle binary unit, operating on a subcritical Rankine cycle, with isopentane as the motive fluid. The OEC system consists of a generator, turbines, a vaporizer, Air Cooled condensers, preheaters and recuperators, and an evacuation skid/vapor recovery maintenance unit (VRMU) for purging and maintenance events. The design capacity for the unit is 25 MW (net).

1.1.4 Isopentane Storage Tanks

Two double-walled 20,000-gallon above-ground storage tanks would be installed for motive fluid (isopentane) storage. Numerous safety and fire prevention measures will be installed on/near the ABST, including:

- Concrete foundations with blast walls separating the tank from the OEC
- An automated water suppression system.
- Concrete containment areas.
- Two flame detectors, which will immediately detect any fire and immediately trigger the automatic fire suppression system.
- A gas detector, which will immediately detect any isopentane leak and notify the control room (manned by 24/7).

1.1.5 Cooling Tower

A cooling tower array will perform air-cooling operations of the geothermal fluid. The cooling tower will include a series of heat-absorbing evaporators and condensers to capture and transfer heat stored in the geothermal fluid.

1.1.6 Parasitic Solar Energy Facilities

Two separate solar photovoltaic energy fields are proposed – a seven (7) megawatt solar field to provide supplemental/auxiliary energy to the Dogwood geothermal plant and a fifteen (15) MW solar field to provide supplemental/auxiliary energy for the Heber 2 geothermal plant. These solar facilities are classified as behind-the-meter and would provide supplemental energy directly to the Dogwood and Heber 2 geothermal units (OECs), this energy would not enter the transmission grid. The solar facilities

will effectively reduce the margin between gross and net geothermal energy generation, allowing for the more efficient generation of geothermal energy and to allow more geothermal energy to enter the grid. The energy generated by the solar fields would be collected on-site by a XMR and switch and transmitted along a short interconnecting cable line (approximately 1,000 feet) on Dogwood Road to the Dogwood and Heber 2 OECs.

1.1.7 Project Substation

The Project will require a new substation to step up the low voltage electrical energy generated at the Dogwood geothermal unit to the higher voltage required for commercial transmission. No upgrades to off-site transmission facilities is necessary and the new Dogwood substation will connect directly to the existing point of interconnection with the Imperial Irrigation District (IID) controlled grid. The substation will include a 13.8 kV circuit breaker to protect the electric generator, a minimum of 80 megavolt ampere 13.8 kV/115 kV transformer, and 115 kV potential and current transformers for metering and system protection.

1.1.8 Water Use and Source

Water required for facility construction activities, including grading and dust control, will be obtained from the applicant's existing contract with IID. Up to 5,000 gallons per day (gpd) of water will be required for the first 2-4 months of development of the facility. Approximately 2,000 gpd will be consumed during the remaining development schedule of approximately 12-18 months. Thus, approximately 1.1 million gallons of water (10.1 acre-feet) will be used on-site during construction. Once operating, up to approximately 325 gpd (0.36 acre-feet per year) of non-potable water will be required and provided by the applicant's existing IID contract/allocation. Water required for well drilling would typically average 50,000 gpd. Water necessary for these activities would be obtained from local irrigation canals in conformance with IID requirements. Alternatively, a temporary pipeline from the respective irrigation canal could be used for water delivery to the well site. Any temporary pipeline would be laid on the surface immediately adjacent to the access road. The Project will not require additional water from the Imperial Irrigation District (IID) for operations and will be covered under the existing contract.

1.2 SITE LOCATION

The Site includes approximately 4 acres within the Heber quadrangle of the U.S. Geological Survey (USGS) 7.5" topographic map, and sits within Township 16 South, Range 14 East of the San Bernardino Base and Meridian in Imperial County, California.

1.3 LAND USE AND TOPOGRAPHY

The Project is located on private lands owned by ORMAT in southern Imperial County as shown in **Figure 1.** The Proposed development includes approximately 124 acres within APN 054-250-31; APN 059-020-001; and APN 054-250-017, near the existing geothermal energy complex located at 855 Dogwood Road, Heber, California. The Project site is zoned as A-2-G SPA, for General Agriculture (A-2), Geothermal Overlay Zone (G), and in the Heber Specific Plan Area (SPA). The Project site lies at an elevation of approximately 5 feet below mean sea level (msl) in the Imperial Valley region of the California low

desert. The surrounding properties lie on terrain, which is flat, part of a large agricultural valley. The existing geothermal energy complex is devoid of vegetation and is actively disturbed as part of the ongoing energy generation operations at Heber 2. The sites identified for the Dogwood Parasitic Solar Facility, Heber 2 Parasitic Solar Facility, and production wells are currently actively cultivated agricultural fields. Adjacent properties consist of agricultural land to the north and a solar farm to the west.

1.4 SITE GEOLOGY, HYDROGEOLOGY, AND SOILS

The part of Imperial County containing Heber lies within the Pliocene to Holocene, Q Geologic Unit (McCrink et al. 2011). Three natural geomorphic provinces underlay Imperial County, including the Peninsular Ranges, the Colorado Desert, and the Mojave Desert. The Colorado Desert geomorphic province spans central Imperial County and contains the Salton Sea and the Imperial valley. This Basin and Range province, sometimes referred to as the Salton Trough, is composed of a low-lying barren desert basin located between alluvium-covered, active branches of the San Andreas Fault containing Cenozoic sedimentary rocks and alluvial, lacustrine, and eolian deposits. The surface of sediments in the middle of the trough are about 275 feet below sea-level (bsl) (Digital Desert 2019).

Surface water in the area of the Site consists of canals and agricultural drains operated and maintained by the Imperial Irrigation District. Canals adjacent to the Project Site include Date Drain No. 3 and Beech Drain as illustrated in **Figure 3**. These canals ultimately drain to the Alamo River, a tributary to the Salton Sea. Surface runoff within the Project Site occurs primarily as sheetflow across the lot generally to the north, eventually flowing into the adjoining ditches.

The regional groundwater flow direction within the Imperial Valley is toward the Salton Sea, a closed basin with a surface elevation of approximately 225 feet below sea level. Groundwater flow in the Project area flows in a general northwest direction.

Dry lean silty clays dominate the project site surface extending to approximately 4 to 5 feet below ground surface (bgs). These silty clays are underlain by moist stiff clays from approximately 6 feet to 38-40 feet bgs. Silty clay to clayey silt dominate 40-50 feet bgs to the extent of geotechnical exploration (Landmark 2019).

1.5 HYDROMODIFICAITON APPLICABILITY

As discussed above, the Project would result in less than 1,400 square feet of impervious area from pre-Project conditions. For construction of the parasitic solar fields, limited grading is proposed for the Project that would not result in changes to the permeability of the site nor alter the existing drainage patterns. As such, the post-development runoff volume, time of concentration, and peak flow velocity would not be altered from that of the pre-development condition.

1.6 POTENTIAL STORMWATER POLLUTANTS

Table 2 summarizes expected stormwater pollutants of concern based on land use and site activities.

Table 2. Pollutants of Concern

Pollutant	Potential to Impact Stormwater (Y/N)	Additional Information and Comments
Pathogens (Bacterial/Virus)	N	--
Nutrients – Phosphorous	N	--
Nutrients - Nitrogen	N	--
Noxious Aquatic Plants	N	--
Sediment	Y	Overland flows over unpaved surface may result in sediment in stormwater runoff
Metals	Y	Leaks/spills in Project area may result in metals in stormwater runoff
Oil and Grease	Y	Leaks/spills in Project area may result in oil and grease in stormwater runoff
Trash/Debris	Y	Improperly disposed of trash/debris may result in trash in stormwater runoff
Pesticides/Herbicides	N	--
Other	N	--

SECTION 2 Best Management Practices

This section describes the Best Management Practices (BMPs) that will be implemented and maintained throughout the life of the project. The BMPs will be used to prevent and minimize water pollution that can be caused by stormwater runoff. **Table 3** details the BMPs selected to be implemented at the Project site based on the potential pollutants. Note that the OEC, isopentane tanks, cooling tower, and substation are located within the existing operational footprint and is subject to the existing policies and programs implemented by ORMAT for the facility as would the proposed development outside of the existing HGEC. Because the Project does not propose any changes to the existing stormwater volume, peak flow velocity, time of concentration or drainage patterns, no structural BMPs are proposed.

Table 3. Non-Structural Source Control BMPs

Pollutant Source	Pollutant	BMP	Existing?	New/Revised?
Stormwater run-on and runoff	Erosion, sediment, contaminated stormwater	• Stabilize drainage with rocks, gravel, vegetation, or riprap • Provide perimeter control to isolate sediment (loose dirt). Includes earthen berms, fiber rolls, silt fence, etc.	X	
Vehicle Track Out	Sediment, Dust	• Provide tracking control devise • Conduct street sweeping	X	
Work Areas	Trash	• Regularly monitor and clean trash • Provide employee training for good housekeeping	X	
Equipment Areas (OECs, ITLUs, pipes)	Isopentane, sediment	• Control drainage patterns with berms • Use water truck for dust control • Conduct routine inspections	X	X
Stored materials and equipment maintenance	Oil, grease, hydraulic fluid, anti-freeze, metals	• Provide good housekeeping training • Store materials in secondary containment • Spill kit and response training	X	

In addition to the activities listed above, ORMAT follows all approved operational guidelines that are currently in place. Temporary and permanent soil erosion control BMPs will be implemented in conformance with the BMP Fact Sheets provided in the California Stormwater Quality Association (CASQA) Stormwater Best Management Practice Handbook – Industrial and Commercial (2019).

2.1 NON-STRUCTURAL BMPS

The following are prevention practices utilized to minimize the probability of pollution of stormwater discharge.

2.1.1 Good Housekeeping

As a component of this program, good housekeeping practices are performed so that facility is kept in a clean and orderly condition. Proper housekeeping practices include:

- Periodic cleanup of equipment, as needed, based upon facility inspections,
- Sweeping impervious surfaces, as needed, based upon facility inspections,
- Proper waste disposal practices and covering of waste storage areas at all times,
- Proper storage and covering of materials at all times,
- Removal of any oil-stained soil/gravel, especially around equipment locations and loading areas,
- Cleaning of significant oil and grease stains on surfaces that drain to the stormwater drainage areas, and
- Cleaning the exterior of oil containers on hydraulic machinery upon discovery of an accumulation of hydraulic fluid.

2.1.2 Preventative Maintenance

As a component of this program, operations and maintenance staff perform preventative maintenance of stormwater management devices to assure their proper operation. Preventative maintenance of stormwater management devices includes the following:

- Cleaning of accumulated sediment, potential contaminants, and debris from the Site;
- Inspection of secondary containment structures as part of the regular daily visual inspections;
- Maintenance and inspection of secondary containment structures, as needed, based upon inspections;
- Daily inspection and maintenance of equipment and associated piping and valves as required by preventive maintenance procedures;
- Inspection and maintenance of rainfall protection coverings for waste storage bins and receptacles on a periodic basis; and
- A comprehensive preventive maintenance schedule is performed on all facility operations equipment as part of routine procedures.

2.1.3 Spill Response

Spill prevention and response is performed according to the facility's SPCC Plan . Copies of this plan are located in the on-site ORMAT office.

A limited amount of spill cleanup equipment is stored onsite. This equipment is found within hazardous material storage areas. Detailed information concerning spill cleanup equipment and resources is included in the SPCC Plan.

The volume of containment areas surrounding each potential source is designed to hold the contents of a spill from the largest vessel / container. The SPCC Plan summarizes the capacity of potential sources and volume of the respective secondary containment areas.

2.1.4 Material Handling and Storage

The primary hazardous material to be stored on-site is isopentane. The additional isopentane will be stored in the appropriately designed (2x) 20,000 gallon above ground storage tanks, as well as the existing (2x) 10,000 gallon tanks for Heber 2 OEC. The isopentane is used as a motive fluid for geothermal energy generation and is not directly discharged, rather is released as an air emission. Therefore, the isopentane would not be directly exposed to stormwater. All other hazardous waste would be stored in 55-gallon drums and other Department of Transportation (DOT) approved packaging within a contained area located on the Site. Stormwater that accumulates within the hazardous material and hazardous waste containment area is collected via vacuum truck and disposed of off-site or recycled back into the production system. A bill of lading, non-hazardous waste manifest or uniform hazardous waste manifest is used to document all such shipments.

2.1.5 Employee Training

A combined annual Storm Water Compliance / SPCC Plan training program is conducted for the Pollution Prevention Team members and operations personnel. Participants undergo stormwater management training for all areas and operations at this facility, as well as reviewing the spill response, control and countermeasure procedures. Other stormwater training is done on an as-needed basis.

2.1.6 Waste Handling/Recycling

At times, product or oily waste streams are transferred from the facility in 55-gallon drums. A bill of lading, non-hazardous waste manifest or uniform hazardous waste manifest is used to document all such shipments. Operations or contractor personnel closely monitor loading of transport vehicles. Collection and satellite accumulation containers for hazardous and non-hazardous waste are kept covered to prevent contact with stormwater. Appropriate spill control equipment and supplies are kept readily available in case of a spill.

2.1.7 Record Keeping and Internal Reporting

All inspection, sampling, maintenance, corrective action records, and any other information that is a part of this plan are maintained at the facility office. All records are maintained for a period of at least three (3) years.

2.1.8 Erosion Control and Site Stabilization

Permanent BMPs used at the existing HGEC facility to prevent soil erosion include routing runoff along earthen swales or drainage areas, and preventing run-off with berms along certain sections of the property line. Temporary BMPs used at the Site to prevent soil erosion include the use of sandbags, crushed rock, and silt fence. These BMPs are used as and where needed, especially in areas that are undeveloped or in the process of being developed.

SECTION 3 Operation and Maintenance Plan

The Dogwood Project is located within APN 054-250-31; APN 059-020-001; and APN 054-250-017, near the existing geothermal energy complex located at 855 Dogwood Road, Heber, California. The following non-structural water quality best management practices (BMPs) are proposed for the Project:

- Good Housekeeping
- Preventative Maintenance
- Spill Response
- Material Handling and Storage
- Employee Training
- Waste Handling/Recycling
- Record Keeping and Internal Reporting
- Erosion Control and Site Stabilization

3.1 MAINTENANCE RESPONSIBILITY

The Heber Field Company (subsidiary of ORMAT) is the property owner and is responsible for BMP maintenance. Since HFC/ORMAT is the owner, no access agreement or easement is necessary to maintain the BMPs. HFC/ORMAT funds will be used to support Operation and Maintenance (O&M) activities to maintain BMP functionality. HFC/ORMAT maintenance staff are expected to perform the maintenance.

3.2 MAINTENANCE ACTIONS AND FREQUENCY

Maintenance actions are generally grouped into two categories: routine and intermittent.

Routine Maintenance

Routine inspections of the Project facilities and grounds will be performed annually. During these inspections staff evaluate if there is significant accumulation of trash, debris, or sediment that would need to be removed. Cleaning is done as needed based on the results of the inspections. The inspection frequency may be adjusted based on experience at the site (e.g., if inspections rarely find any material that needs to be cleaned out, then the inspection frequency can be reduced).

Intermittent Maintenance

Intermittent maintenance activities include more substantial maintenance that is not required as frequently as routine maintenance. The most likely form of intermediate maintenance is removal of sediment from existing drainage infrastructure and detention basins where necessary to maintain the capacity of the basins. Given that the Project Site is pervious and will not be graded or significantly altered and that rain is infrequent in Heber, this type of maintenance is expected to be required approximately once every year.

3.3 MAINTENANCE PROCEDURES

During each maintenance visit, the maintenance crew will evaluate existing drainage paths and infrastructure by inspecting for the maintenance indicators in **Table 4.** When a maintenance indicator is observed, the action described in the "Maintenance Actions" column will be taken.

Note that regardless of the projected maintenance type (routine or intermittent) described in the previous section, when a maintenance indicator is observed, the required maintenance action will be taken. For example, if significant sediment accumulation is observed in year three instead, then the accumulated sediment will still be cleaned out, even though the estimated frequency was once every year.

Table 4. Maintenance Indicators and Actions for BMPs

Typical Maintenance Indicator	Maintenance Action
Erosion due to concentrated stormwater runoff flow	Repair eroded areas and make appropriate corrective measures such as adding berm or stone at flow entry points, or re-grading as necessary.
Accumulated sediment, litter, or debris	Remove and properly dispose of accumulated materials, without damage to stormwater drainage structures.
Standing water	Remove any obstructions or debris or invasive vegetation, loosing or replace top-soil to allow for better infiltration, or minor re-grading for proper drainage.
Obstructed inlet or outlet structures	Clear obstructions.
Damage to structural components such as inlet or outlet structures	Repair or replace as applicable.

SECTION 4 References

California Stormwater Quality Association (CASQA). 2019. Industrial and Commercial Best Management Handbook. 2019.

Digital Desert. 2019. Ecological Sections: Mojave Desert. Available online at: http://digital-desert.com/ecosections/322c.htm).

Landmark Consultants, Inc. (Landmark). 2019. Geotechnical Report Update, Heber 2 Repower Project, Heber, California. Prepared for Ormat Nevada. April 2019.

McCrink, T.P., Pridmore, C.L., Tinsley, J.C., Sickler, R.R., Brandenberg, S.J., and J.P. Stewart. 2011. Liquefaction and other ground failures in Imperial County, California, from the April 4, 2010, El Mayor–Cucapah earthquake: U.S. Geological Survey Open-File Report 2011–1071 and California Geological Survey Special Report 220, 94 p. pamphlet, 1 pl., scale 1:51,440. Available at http://pubs.usgs.gov/of/2011/1071.

Figures

Figure 1. Dogwood Geothermal Energy Project Proposed Facilities

Figure 2. Dogwood and Heber 2 Solar Site Plan

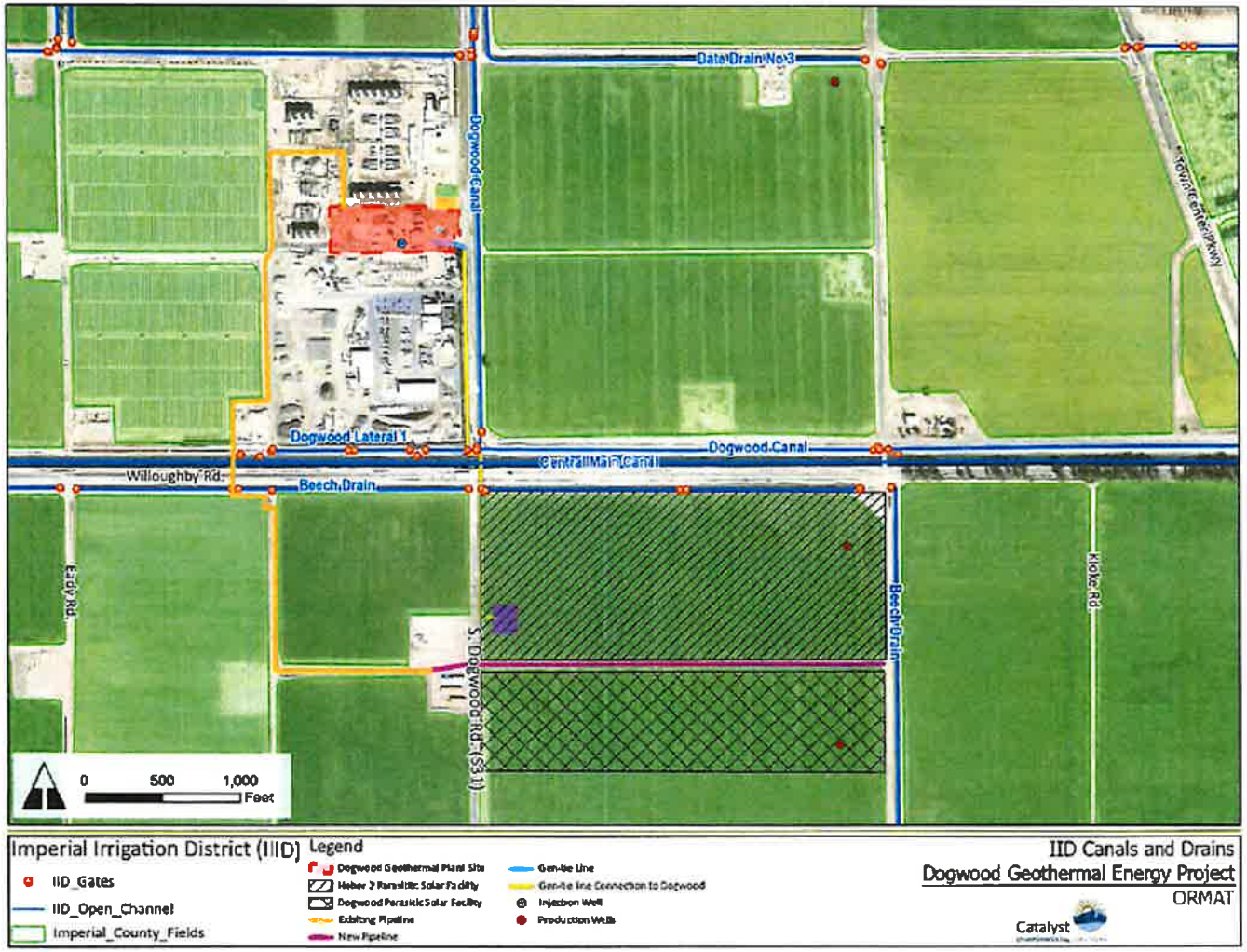


Figure 3. IID Canals and Drains.

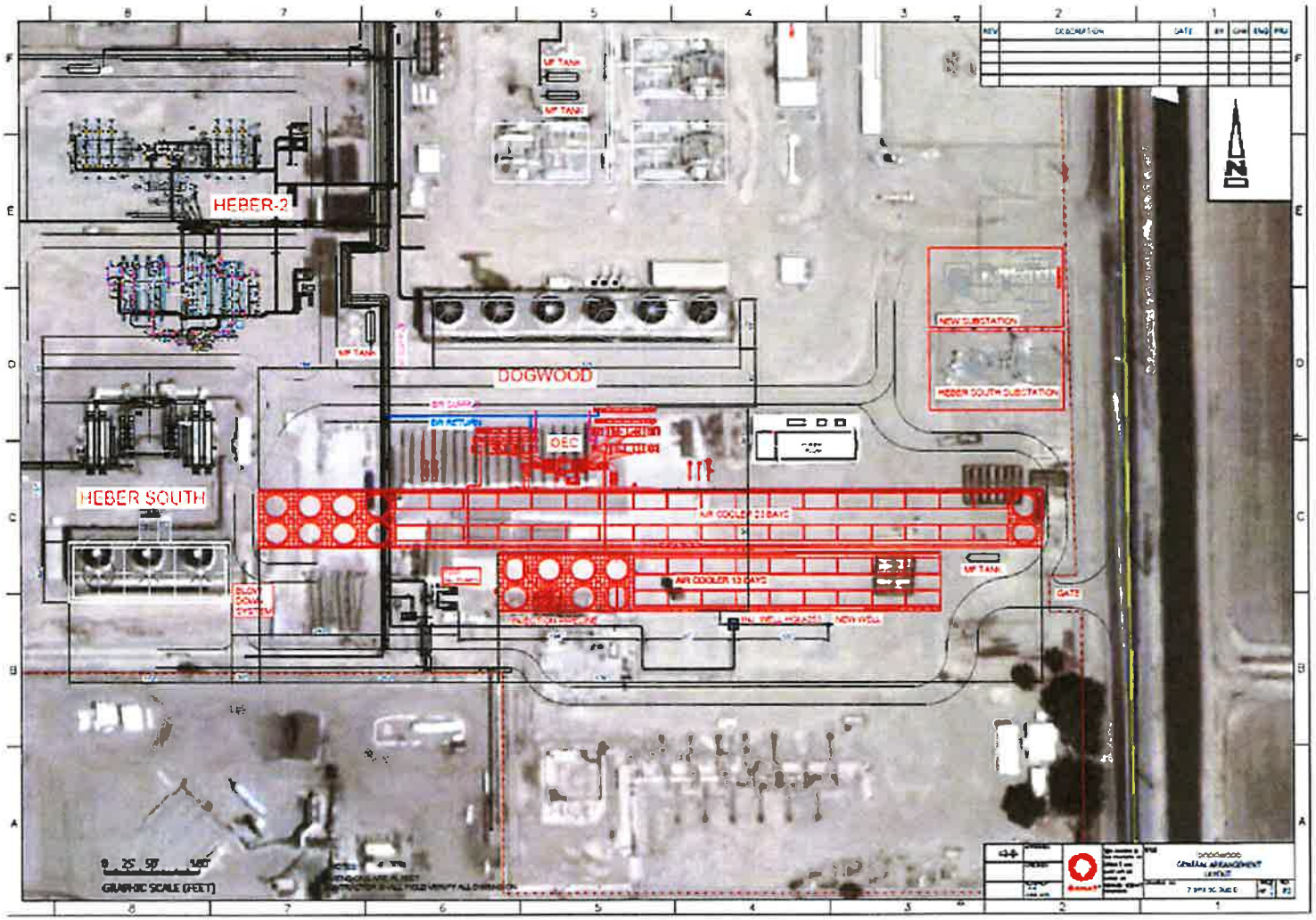


Figure 4. Dogwood Geothermal Site Plan

Attachment D

Imperial County Reclamation Plan

Catalyst
ENVIRONMENTAL SOLUTIONS

IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES DEPARTMENT

Reclamation Plan Application

OWNER, OPERATOR AND AGENT:

1. Applicant (Name, Mailing Address and Telephone Number):
   Second Imperial Geothermal Company LLC
   C/O Ormat Nevada, Inc
   Attn: Elizabeth Helms
   6140 Plumas St. Reno, NV 89519
   775-356-9029

2. Property Owner (s), or owner of Surface Rights (Name, Mailing Address and Telephone Number): [if different from applicant]
   Heber Field Company LLC
   C/O Ormat Nevada, Inc.
   Attn: Elizabeth Helms
   6140 Plumas St. Reno, NV 89519
   775-356-9029

3. Owner of Mineral Rights (Name, Mailing Address and Telephone Number): [if different than applicant]
   See 2

5. Lessee (Name, Mailing Address and Telephone Number):
   None

6. Operator (Name, Mailing Address and Telephone Number): [if different than applicant]
   Ormat Nevada, Inc.
   Attn: Elizabeth Helms
   6140 Plumas St. Reno, NV 89519
   775-356-9029

7. Agent of Process (Name, Mailing Address and Telephone Number):
Elizabeth Helms

6140 Plumas Street, Reno, NV 89519

775-356-9029

LOCATION:

8. Legal Description: (must be full legal)
Track 44, Township 16 South, Range 14 East, SBB&M

Assessor Parcel No.:	059-020-001
Longitude:	-115.529951
Latitude:	32.706665
Elevation:	near zero

9. Size of the land(s) that will be affected by mining operation. Total acreage:
85 acres

10. Describe existing and proposed access to the mine site: (please be specific)
alfalfa cultivation, access roads present throughout area

GEOLOGICAL BACKGROUND:

11. Mineral commodity to be minded:
N/A - solar energy

12. General Geological description of the area:
The site is located within the Piliocene to Holocene, Q Geologic Unit. The Colorado Desert geomorphic province spans central Imperial County, where the site is located, often referred to as the Salton Trough. Low-lying barren desert located between alluvium-covered, active branches of the San Andreas Fault.

13. Detailed description of the geology of the actual site in which surface mining is to be conducted:
Site is underlain by Cenozoic sedimentary rocks and alluvial, lacustrine, and eolian deposits. Surface sediments are about 275 feet below sea level.

14. Brief description of the environmental setting of the site and the surrounding areas. Existing land uses, soil, vegetation, ground water elevation and surface water characteristics.
site is entirely used for alfalfa cultivation with IID canals and geothermal wells and pipelines present throughout project area/vicinity.

MINING OPERATION AND PRODUCTION:

15. Proposed starting date of operation: October 2024

Estimated life of operation: 15-30 years

Termination Date: 2054

Duration of first phase: _____

Second phase: _____

Third phase: _____

Fourth phase: _____

16. Operation will be (include days and hours of operation):

Continuous: continous solar energy generation 24 hours/day, 7 days per week

Intermittent: _____

Seasonal: _____

17. Maximum anticipated annual production (Tons or Cubic Yards):
N/A

18. Total anticipated production:

Minerals:	N/A	cubic yards/tons	0
Tailings retained on site:		cubic yards/tons	0
Tailings disposed off site:		cubic yards/tons	0

Maximum anticipated depth (indicate on map location of benchmarks to verify mine depth):
N/A

19. Describe mining method:
N/A

20. Describe nature of processing and explain disposal of tailings or waste.
N/A

21. Do you plan to use cyanide or other toxic materials in your operations?
No

Do you plan to use or store petroleum products or other hazardous materials on the site?
No

Describe refueling and maintenance of vehicles.
Construction equipment will be fueled on-site, as necessary. Fuel will be limited to diesel and gasoline, to fuel heavy and light equipment. Repairs to construction equipment will be performed on-site by certified mechanics. Spill prevention BMPs and safe handling techniques will be employed throughout the construction phase

22. Indicate the quantity of water to be used, source of water, method of conveyance to the mine site, the quantity, quality and method of disposal of used and/or surplus water. Indicate if water well to be used for mine operation (drilling, reactivation, changing use or increasing volume of water well may require Conditional Use Permit approval).

Water will be used for construction and maintenance activities, not to exceed 2,000 gallons per day for dust control activities during construction. All water will be provided by the Applicant under its existing IID contract.

23. Describe phases of mining if applicable and concurrent reclamation including time schedule for concurrent activities.

N/A - interim reclamation activities will occur after the solar facilities are developed. Stored/piled topsoil would be used as backfill and spreading material.

24. Describe the types of equipment that will be used in the operation, including the estimated average daily trips (ADT) that will be generated by the operation.

Backhoes, excavators, trucks, light vehicles, compactors, hand tools, welding equipment, water truck, and light duty crane.

25. Include the following maps: (NOTE: Without these the application is automatically incomplete.)

(1) Topographic Map with overlay showing proposed area to be mined.

(2) Site Plan showing mine layout and dimensions.

(3) General Vicinity Map showing the location of the mine site in Imperial County.

(4) Cross Section Map.

RECLAMATION:

26. Indicate by overlay of map of Item No. 24, or by color or symbol on map those areas to be covered by the reclamation plan:

Total acreage: 85 acres

27. Describe the ultimate physical condition of the site and specify the proposed use (s) or potential uses of the land after reclamation. Explain if utilities, haul or access roads will be removed or reclaimed.

Currently used for agricultural production. Project proposes to develop a 15MW solar energy facility on the site. The site would be returned to a natural or arable state at the conclusion of the facility's life cycle.

28. Describe relationship of the interim uses than mining and the ultimate physical condition to:

(a) Imperial County Zoning Ordinance

(b) Imperial County General Plan

The site is zoned as A-2-G-SPA and is within the County Geothermal Energy Overlay Zone. The proposed parasitic solar facilities are consistent with the County General Plan and Zoning/Land Use Element.

29. Notarized statement that all owners of the possessory interest in the land have been notified of the proposed uses or potential uses identified in Item No. 25 (see Attachment "A").

Heber Field Company is a wholly owned subsidiary of ORMAT and no other parties have an interest in the property.

30. Describe soil conditions and proposed topsoil salvage plan.

Silty clays and loams. Used for alfalfa cultivation. All topsoils would be piled during construction and used for interim reclamation after the solar facilities are developed.

31. Describe the methods, their sequence and timing, to be used in bringing the reclamation of the land to its end state. Indicate on map (Items Nos. 24 and 25) or on diagrams as necessary. Include discussion of the pertinent items listed below.

(a) Backfilling and grading

(b) Stabilization of slopes

(c) Stabilization of permanent waste dumps, tailings, etc.

(d) Rehabilitation of pre-mining drainage

(e) Removal, disposal or utilization of residual equipment, structure, refuse, etc.

(f) Control and disposal of contaminants, especially with regard to surface runoff and ground water

(g) Treatment of streambeds and streambanks to control erosion and sedimentation

(h) Removal or minimization of residual hazards

(i) Resoiling, revegetation with evidence that selected plants can survive given the site's topography, soil and climate:

See Attachment D.

32. If applicant has selected a short term phasing of his reclamation, describe in detail the specific reclamation to be accomplished during the first phase:

Interim reclamation would include using stored topsoils as backfill and spreading material.

33. Describe how reclamation of this site in this manner may affect future mining at this site and in the surrounding area:

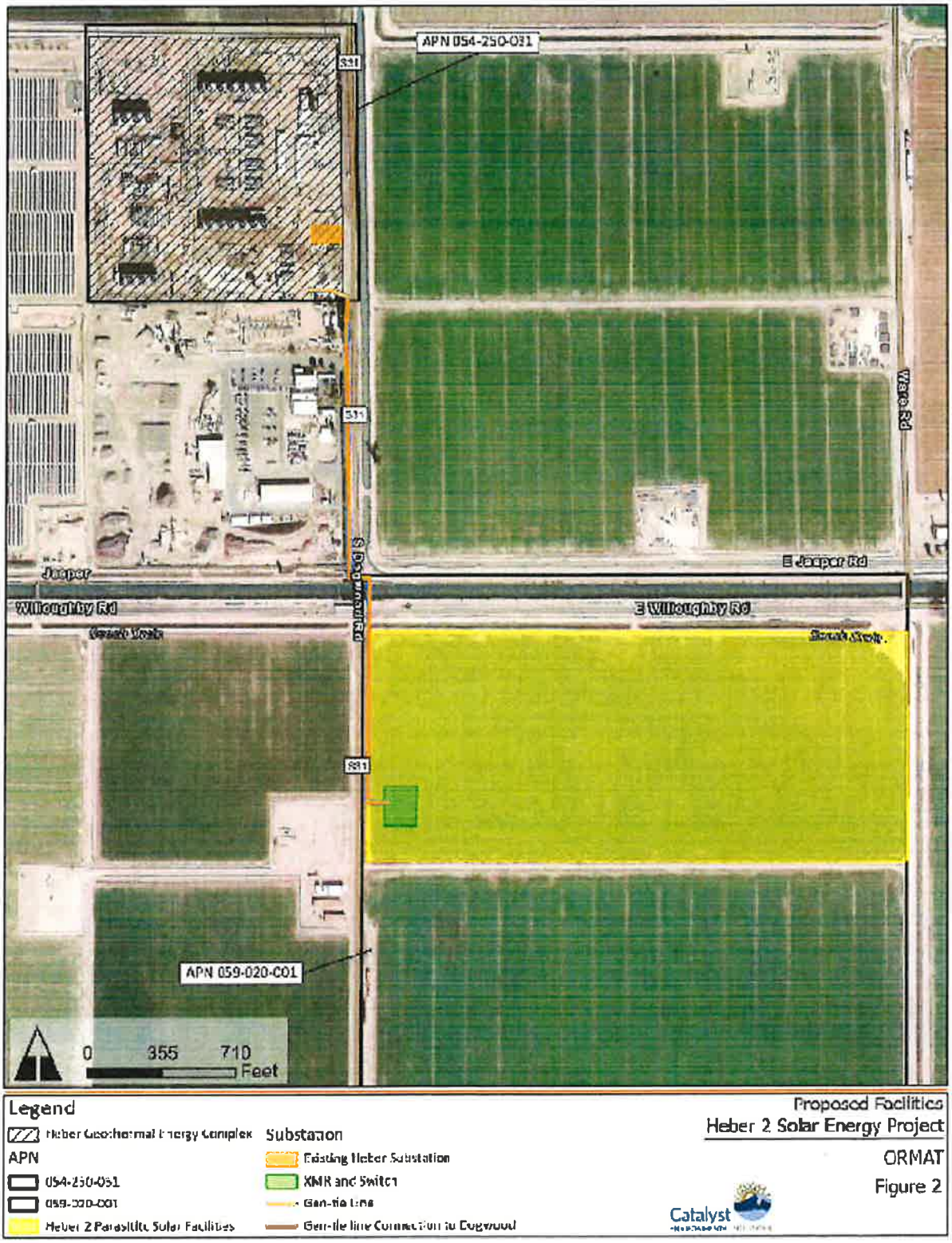
All solar facilities would be removed from the site and the site would be reclaimed back to a natural or arable state. Project would not impeded any future mining or geothermal operations on the site or in the vicinity.

34. Notarized statement that the person submitting the plan accepts responsibility for reclaiming the mined lands in accordance with the Reclamation Plan (Attachment "B"):
Attached.

35. Include Reclamation Cost Calculations as Attachment "C":
Attached.

36. Describe proposed Revegetation Plan (attach as "Attachment D" if necessary):
See Attachment D.


Imperial County
Heber 2 Solar Project
Heber 2 Project Site
Oregon
Idaho
Wyoming
Nevada
Utah
California
Arizona
Pacific Ocean
Imperial County
APN 054-250-031
APN 059-020-001
El Centro
Wilsie
Anza
Meloland
Heber
Calexico
Mexicali
United States
Mexico
Pueblo Nuevo
1ra Sección
Fraccionamiento Cumbres Provenza
El Centinela
San José
Las Palmeras
Reacomodo Río Colorado
Fraccionamiento Solidaridad Social
Diez
Ejido Puebla
Progreso
0 1.25 2.5 Miles
Heber 2 Solar Energy Project
Roads
Streams
Country Border
1-Mile Radius
Heber 2 Parasitic Solar Facilities
Existing Heber Substation
XMR and Switch
Gen-tie Line
Gen-tie line Connection to Dogwood
Project Location
Heber 2 Solar Energy Project
ORMAT
Figure 1
Catalyst


APN 054-250-031
S31
S31
S31
Ware Rd
E Jasper Rd
Jasper
Willoughby Rd
E Willoughby Rd
Dogwood Rd
APN 059-020-001
0
355
710
Feet
Legend
Heber Geothermal Energy Complex
APN
054-250-031
059-020-001
Heber 2 Parabolic Solar Facilities
Substation
Existing Heber Substation
XMR and Switch
Gen-tie Line
Gen-tie line Connection to Dogwood
Proposed Facilities
Heber 2 Solar Energy Project
ORMAT
Figure 2
Catalyst

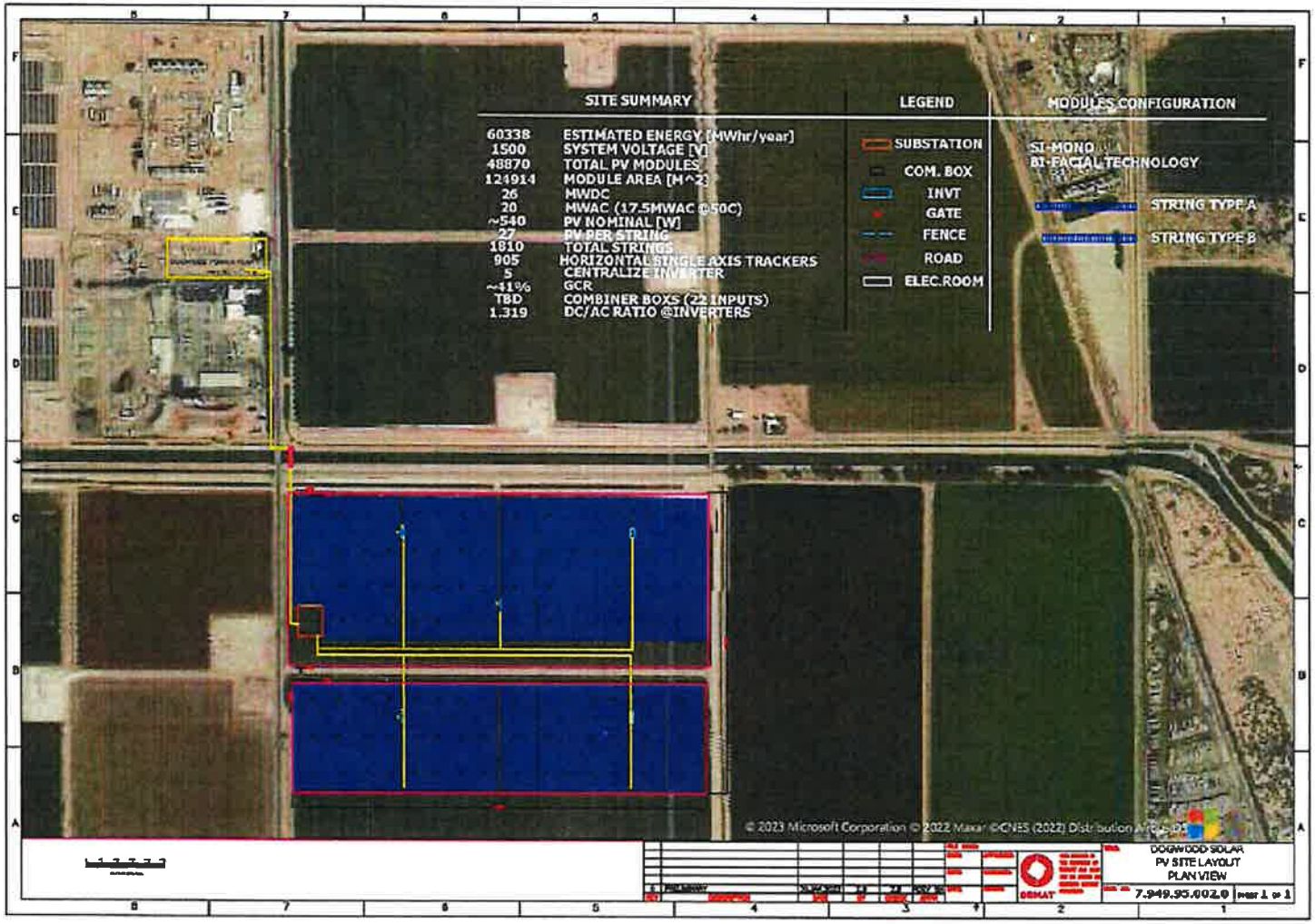


Figure 2. Dogwood and Heber 2 Solar Site Plan

Legend

- Heber Geothermal Energy Complex
- Heber 2 Parasitic Solar Facility
- Existing Heber Substation
- XMR and Switch
- Gen-tie Line
- Gen-tie line Connection to Dogwood
- Contour Lines (5ft)

Site Topography
Heber 2 Solar Energy Project

ORMAT

Catalyst

ATTACHMENT "A"

STATEMENT OF NOTIFICATION

I, the undersigned, have notified all owners of the possessory interest in the land of the proposed use (s) or potential uses identified in Item No. 26 of the Reclamation Plan.

Signed this 28th day

of June, 2023.

Operator or Operator's Agent

MAIN OFFICE: 801 Main Street El Centro, CA 92243 (760) 482-4236 FAX: (760) 353-8338 E-MAIL: planning@imperialcounty.net
ECON. DEV. OFFICE: 836 Main Street El Centro, CA 92243 (760) 482-4900 FAX: (760) 337-8907

ACKNOWLEDGMENT

STATE OF NEVADA)
)
COUNTY OF WASHOE)

On June 15, 2023, before me, a Notary Public, personally appeared Elizabeth Helms, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the attached **STATEMENT OF NOTIFICATION** and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person or entity on behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Notary Public

ANGELA MICKIEL ARGUELLO
NOTARY PUBLIC
STATE OF NEVADA
COUNTY OF WASHOE
No. 97-2924-2 MY APPT. EXPIRES AUGUST 11, 2025

ATTACHMENT "B"

STATEMENT OF RESPONSIBILITY

I, the undersigned, hereby agree to accept full responsibility for reclaiming all mined lands as described and submitted herein with any modifications requested by the County of Imperial as conditions of approval.

Signed this 28th day

of June, 2023.

Operator or Operator's Agent

MAIN OFFICE: 801 Main Street El Centro, CA 92243 (760) 482-4236 FAX: (760) 353-8338 E-MAIL: planning@imperialcounty.net
ECON. DEV. OFFICE: 836 Main Street El Centro, CA 92243 (760) 482-4900 FAX: (760) 337-8907

ACKNOWLEDGMENT

STATE OF NEVADA)
)
COUNTY OF WASHOE)

On June 28, 2023, before me, a Notary Public, personally appeared Elizabeth Helms, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the attached **STATEMENT OF RESPONSIBILITY** and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person or entity on behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

ANGELA MICKIEL ARGUELLO
NOTARY PUBLIC
STATE OF NEVADA
COUNTY OF WASHOE
No. 97-2824-2 MY APPT. EXPIRES AUGUST 11, 2025

Notary Public

ATTACHMENT "C"

RECLAMATION COST ANALYSIS

MAIN OFFICE: 801 Main Street El Centro, CA 92243 (760) 482-4236 FAX: (760) 353-8338 E-MAIL: planning@imperialcounty.net
ECON. DEV. OFFICE: 836 Main Street El Centro, CA 92243 (760) 482-4900 FAX: (760) 337-8907

Catalyst
ENVIRONMENTAL SOLUTIONS

Reclamation Cost Estimate for Heber 2 Solar Energy Project

Date: June 20, 2023

RE: **Reclamation Cost Estimate for the Heber 2 Solar Energy Project**

This cost estimate has been prepared for the Heber 2 Solar Energy Project and provides a general estimate to perform well abandonment and site reclamation/revegetation for the entire 85-acre solar site.

Site Reclamation and Revegetation

- Cost of Reclaiming 85 acres

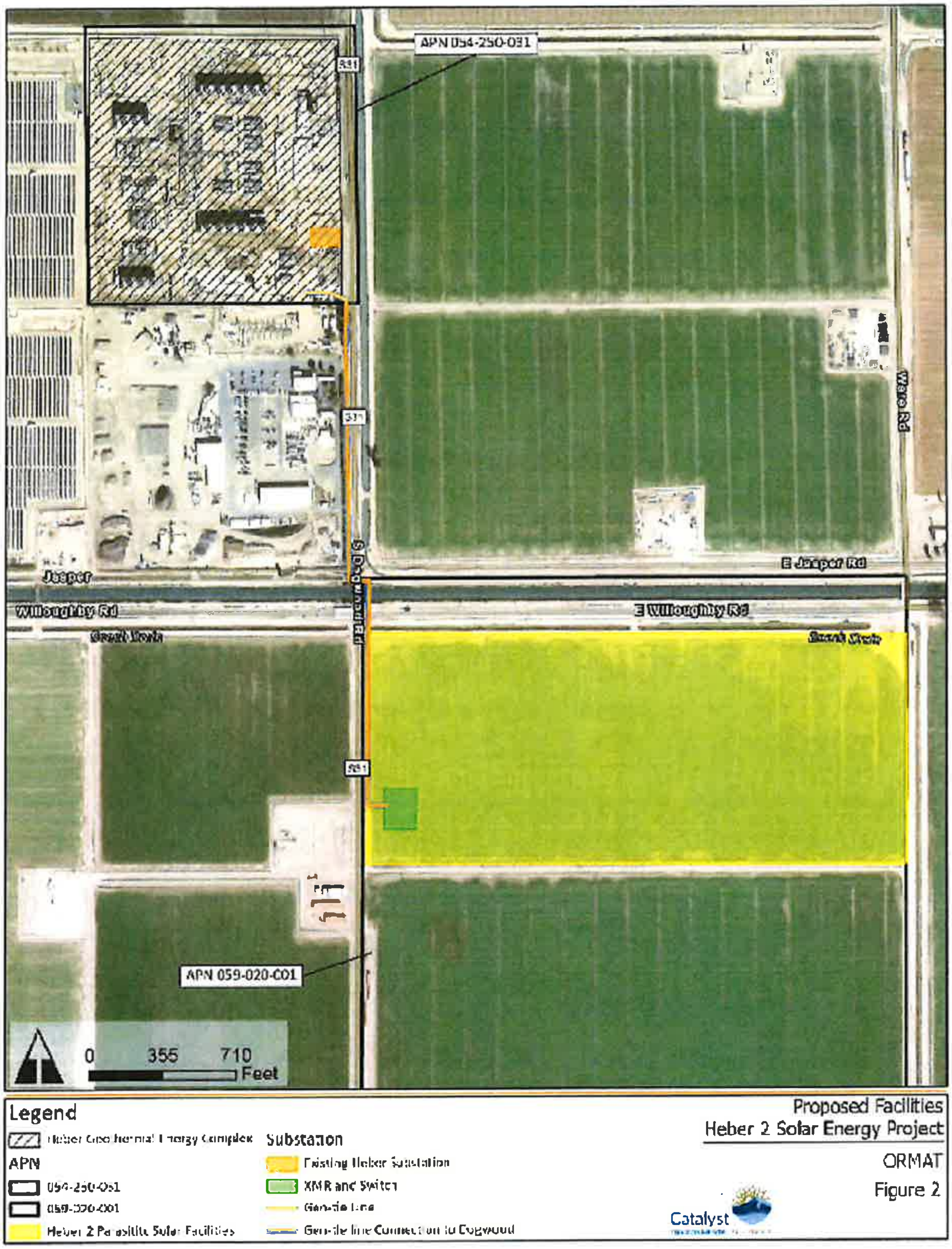
  $5,635/acre[2] for 85 acres = **$478,975**

References

[1] California Department of Conservation Oil, Gas, and Geothermal Resources. April 2019. California Code of Regulations, Section 1723. Available online at: https://www.conservation.ca.gov/index/Documents/DOGGR-SR-1%20Web%20Copy.pdf

[2] New Mexico Energy, Minerals, and Natural Resources Department. 2013. Guidance for Estimating Reclamation Costs. Available online at: http://www.emnrd.state.nm.us/MMD/MARP/documents/MMD_Part3FAGuidelines_Sept2013.pdf

Reclamation estimates provided in this document were increased by 15% to account for six years of inflation and potential contingency costs.



APN 054-250-031
581
Ware Rd
E Jasper Rd
Willoughby Rd
E Willoughby Rd
S Dogwood Rd
APN 059-020-C01
0
355
710
Feet
Legend
APN
Substation
XMR and Switch
Proposed Facilities
Heber 2 Solar Energy Project
ORMAT
Figure 2
Catalyst

ATTACHMENT "D"

REVEGATION PLAN

(REVISED MARCH 25, 2005)
JH/lh/S:/forms_lists/reclamation plan aplication

MAIN OFFICE: 801 Main Street El Centro, CA 92243 (760) 482-4236 FAX: (760) 353-8338 E-MAIL: planning@imperialcounty.net
ECON. DEV. OFFICE: 838 Main Street El Centro, CA 92243 (760) 482-4900 FAX: (760) 337-9507

Revegetation Plan for Heber 2 Solar Energy Project

Date: June 20, 2023

From: Catalyst Environmental Solutions (on behalf of ORMAT)

RE: **Revegetation Plan for the Heber 2 Solar Energy Project**

INTRODUCTION

The Second Imperial Geothermal Company (Applicant; wholly owned subsidiary of Ormat Technologies, Inc. [Ormat]) proposes to develop a 15-megawatt (MW) solar energy facility that will provide a parasitic load to the existing Heber 2 geothermal power plant (Project). The solar energy would be transmitted to the existing Heber 2 power plant (ORMAT Energy Converter – OEC) via an underground medium voltage distribution cable that is being proposed under a separate CUP application (Dogwood Geothermal Energy Project).

This Revegetation Plan Application has been prepared as part of the CUP Application for the Heber 2 Solar Energy Project and pursuant to Imperial County's municipal code.

Project Location and Site Description

The proposed solar facilities would be located on APN 059-020-001, approximately 0.3 miles due south of the existing Heber 2 plant located at 855 Dogwood Road, Heber, CA. All proposed facilities are located within the Imperial County Geothermal Overlay Zone that allows for *Major Geothermal Projects* (Imperial County General Plan; Renewable Energy and Transmission Element of County of Imperial General Plan, 2015) (**Site Location** figure below).

The 85-acre Heber 2 Solar site is presently used for alfalfa cultivation with irrigation ditches and dirt access roads present (**Attachment B** of CUP Application – Site Pictures). Surrounding land uses in the Project vicinity are primarily geothermal energy facilities and agricultural cultivation. Agricultural cultivation is adjacent to the Project site on all sides, with Imperial Irrigation District (IID) irrigation canals are also present throughout the Project vicinity. Geothermal wells and pipelines are also present throughout the immediate Project area.

Reclamation, Abandonment, and Revegetation Schedule

Reclamation, abandonment, and revegetation activities would commence at the closure of the Heber 2 Geothermal Energy Complex in 2049, approved by Imperial County. Activities would commence after all solar and energy facilities have been dismantled and removed from the site. If necessary, reseeding would be held off until the appropriate season (e.g. fall, spring). Activities would take approximately four to six months to complete.

Site Preparation

After all geothermal wells have been plugged and facilities are removed from the site, any soil piles or grades will be evened out by an excavator. The site is near zero elevation and is very flat and absent of topography. Reclamation activities will mimic the existing grade of the site and not introduce a new gradient/slope to the area. The site will then be rolled with a soil aerator/loosener. After site reclamation, topsoil will be transported to the site and deposited evenly across the site.

Selection of Plant Materials

The Heber 2 solar site is presently used for alfalfa cultivation. The surrounding area is dominated by agricultural production and no natural areas are in the immediate vicinity of the Project Site. SIGC/ORMAT will reseed the entire site with a seed mix approved by Imperial County or return the land to an arable state for cultivation once more.

Irrigation and Maintenance

Revegetation of the site will be maintained by a contractor every two weeks to conduct weeding, watering, and removing trash/debris. The site will be irrigated by water truck as necessary to establish the new vegetation.

Legend

Heber Geothermal Energy Complex

APN

054-250-031

059-020-001

Heber 2 Parasitic Solar Facilities

Substation

Existing Heber Substation

XMR and Switch

Gen-tie Line

Gen-tie line Connection to Dogwood

Proposed Facilities
Heber 2 Solar Energy Project

ORMAT

Figure 2

Catalyst

CONDITIONAL USE PERMIT

I.C. PLANNING & DEVELOPMENT SERVICES DEPT.
801 Main Street, El Centro, CA 92243 (442) 265-1736

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

1. PROPERTY OWNER'S NAME Heber Field Company LLC	EMAIL ADDRESS ehelms@ormat.com	
2. MAILING ADDRESS (Street / P O Box, City, State) 947 Dogwood Road, Heber, CA 92249	ZIP CODE 89519-6075	PHONE NUMBER 775- 356-9029, ext. 32368
3. APPLICANT'S NAME Heber Field Company LLC	EMAIL ADDRESS ehelms@ormat.com	
4. MAILING ADDRESS (Street / P O Box, City, State) 947 Dogwood Road, Heber, CA 92249	ZIP CODE 89519-6075	PHONE NUMBER 775-356-9029, ext. 32368
4. ENGINEER'S NAME CA. LICENSE NO.	EMAIL ADDRESS	
5. MAILING ADDRESS (Street / P O Box, City, State) 6140 Plumas Street, Reno, NV	ZIP CODE 89519-6075	PHONE NUMBER 775-356-9029, ext. 32368

6. ASSESSOR'S PARCEL NO. 054-250-017; 059-020-001	SIZE OF PROPERTY (In acres or square foot) ~235 acres (combined)	ZONING (existing) A-2-G-SPA
7. PROPERTY (site) ADDRESS 690 Dogwood Road, Heber, CA 92249		
8. GENERAL LOCATION (i.e. city, town, cross street) Near intersection of Dogwood Road and Willoughby Road; Ware Road		
9. LEGAL DESCRIPTION Track 44, Township 16 South; Range 14 East; SBB&M		

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

10. DESCRIBE PROPOSED USE OF PROPERTY (list and describe in detail) Up to six geothermal wells and pipeline	
11. DESCRIBE CURRENT USE OF PROPERTY	Geothermal wells and pipeline; alfalfa cultivation
12. DESCRIBE PROPOSED SEWER SYSTEM	No changes to existing sewer service
13. DESCRIBE PROPOSED WATER SYSTEM	No changes to existing water service
14. DESCRIBE PROPOSED FIRE PROTECTION SYSTEM	Fire response system will be built for well pad
15. IS PROPOSED USE A BUSINESS? ☒ Yes ☐ No	IF YES, HOW MANY EMPLOYEES WILL BE AT THIS SITE? Approximately 10-15, temporarily during construction

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

Elizabeth Helms — Print Name
June 28, 2023 — 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 # _____

ORMAT

June 26, 2023

Mr. Jim Minnick
County of Imperial
Planning & Development Services Department
801 Main Street
El Centro, CA 92243

Subject: Conditional Use Permit Amendment Application (CUP 06-0028) for the Heber Field Company LLC Geothermal Wells and Pipeline

Dear Mr. Minnick:

The Heber Field Company LLC (Applicant; wholly owned subsidiary of Ormat Technologies, Inc. [Ormat]) proposes to develop up to six geothermal production wells, one geothermal injection well, and approximately 4,500 linear feet of new pipeline (Project) that will support the proposed Dogwood Ormat Energy Converter (OEC), which also has a pending Conditional Use Permit (CUP) application with Imperial County. Proposed developments would occur on APN 059-020-001 and APN 054-250-017, immediately east and southeast of the existing Heber geothermal energy complex located at 855 Dogwood Road, Heber, CA. The Project site(s) is within the Imperial County Geothermal Overlay Zone that allows for *Major Geothermal Projects* to be permitted via a CUP process (Imperial County General Plan; Renewable Energy and Transmission Element of County of Imperial General Plan, 2015).

Enclosed is one original CUP Amendment Application with ink signatures, two hard copies of the CUP Amendment Application, and one digital copy (CD) of the CUP Amendment Application. The enclosed application includes the following items:

- CUP Application Form and Fee
- Site Plan, Facility Integration Diagram, and Process Diagram (20 copies)
- Imperial County Planning & Development Services (ICPDS) General Indemnification Agreement
- Attachment A - Project Description, Map Set, and General Plan (Zoning) Conformance
- Attachment B - Site Photographs
- Attachment C - Water Quality Management Plan
- Attachment D - Imperial County Reclamation Plan

We are presently working on the necessary technical reports and CEQA Checklist (Initial Study for the *Whole of the Action*, including the proposed Dogwood Geothermal Energy Project, Heber 2 Solar Energy Project, and Heber Field Company Geothermal Wells and Pipeline Project) and intend to submit to the County in July. Thank you and please contact me if you have any questions regarding this pre-application package.

Sincerely,

Alissa Sanchez
Senior Manager, Environmental Permitting
Ormat Nevada, Inc.
PHONE: (775) 356-9029 (ext. 32234)
EMAIL: asanchez@ormat.com

Enclosures

IMPERIAL COUNTY PLANNING & DEVELOPMENT SERVICES
GENERAL INDEMNIFICATION AGREEMENT

As part of this application, applicant and real party in interest, if different, agree to defend, indemnify, hold harmless, and release the County of Imperial ("County"), its agents, officers, attorneys, and employees (including consultants) from any claim, action, or proceeding brought against any of them, the purpose of which is to attack, set aside, void, or annul the approval of this application or adoption of the environmental document which accompanies it. This indemnification obligation shall include, but not be limited to, damages, costs, expenses, attorney fees, or expert witness fees that may be asserted by any person or entity, including the applicant, arising out of or in connection with the approval of this application, whether or not there is concurrent negligence on the part of the County, its agents, officers, attorneys, or employees (including consultants).

If any claim, action, or proceeding is brought against the County, its agents, officers, attorneys, or employees (including consultants), to attack, set aside, void, or annul the approval of the application or adoption of the environmental document which accompanies it, then the following procedures shall apply:

1. The Planning Director shall promptly notify the County Board of Supervisors of any claim, action or proceeding brought by an applicant challenging the County's action. The County, its agents, attorneys and employees (including consultants) shall fully cooperate in the defense of that action.

2. The County shall have the final determination on how to best defend the case and will consult with applicant regularly regarding status and the plan for defense. The County will also consult and discuss with applicant the counsel to be used by County to defend it, either with in-house counsel, or by retaining outside counsel provided that the County shall have the final decision on the counsel retained to defend it. Applicant shall be fully responsible for all costs incurred. Applicant shall be entitled to provide his or her own counsel to defend the case, and said independent counsel shall work with County Counsel to provide a joint defense.

Executed at Reno Nevada on June 28, 2023

APPLICANT

Name: Heber Field Company LLC

By Elizabeth Helms

Title Corporate Secretary

Mailing Address:

6140 Plumas St
Reno, NV
89519

REAL PARTY IN INTEREST
(If different from Applicant)

Name _____

By _____

Title _____

Mailing Address:

_____
_____
_____

ACCEPTED/RECEIVED BY _____ Date _____

PROJECT ID NO _____ AP N ___-___-___

S:\FORMS _ LISTS\General Indemnification FORM 041516.doc

Attachment A

Project Description, Map Set, and General Plan (Zoning) Conformance

Catalyst
ENVIRONMENTAL SOLUTIONS

INTRODUCTION

Heber Field Company LLC (Applicant; wholly owned subsidiary of Ormat Technologies, Inc. [Ormat]) proposes to develop up to six geothermal production wells, one geothermal injection well, and approximately 4,500 linear feet of new pipeline (Project) that will support the proposed Dogwood Ormat Energy Converter (OEC), which also has a pending Conditional Use Permit (CUP) application with Imperial County. Proposed developments would occur on APN 059-020-001 and APN 054-250-017, immediately east and southeast of the existing Heber Geothermal Energy Complex (HGEC) located at 855 Dogwood Road, Heber, CA. The Project site(s) is within the Imperial County Geothermal Overlay Zone that allows for *Major Geothermal Projects* to be permitted via a CUP process (Imperial County General Plan; Renewable Energy and Transmission Element of County of Imperial General Plan, 2015).

PROJECT LOCATION & ACCESS

Three of the proposed production wells would be located on APN 059-020-001 and APN 054-250-017 – one well would be on APN 054-250-017 adjacent to an existing well pad and the other two wells would be sited on APN 059-020-001 (Figure 1 below). Three production wells are yet to be sited but will be located within the same APNs. The one injection well would be located adjacent to the Dogwood OEC, within the existing HGEC. All proposed facilities are located within the Imperial County Geothermal Overlay Zone that allows for *Major Geothermal Projects* (Imperial County General Plan; Renewable Energy and Transmission Element of County of Imperial General Plan, 2015) **(Figure 1 - Site Location** below).

Interstate 8 (I-8; Kumeyaay Highway), located approximately 4.5 miles directly north, provides primary highway access to the HGEC. Dogwood Road stems off of I-8 and provides immediate site access. From the south, Willoughby Road runs west-east approximately 1,700 feet from the site and connects to Dogwood Road, providing immediate site access to APN 059-020-001. Site access to APN 054-250-017 would be provided by Ware Road. Traffic flow is often irregular in this area.

PROJECT OBJECTIVES

The objectives of the Project are to:

- Develop geothermal wells and pipelines with a minimal disturbance footprint and environmental impacts by siting the wells near existing well pads and pipelines.
- Develop clean, renewable geothermal energy in the Heber Geothermal Zone pursuant to the Imperial County General Plan.
- Provide renewable baseload energy and capacity to assist the State of California with meeting the objectives of Senate Bill 100 (100% Clean Energy Act of 2018) and the State's Renewables Portfolio Standard program.

PROJECT BENEFITS

As provided in the list below, the Project would provide significant state and local benefits, including, but not limited to:

- Increasing the employment base of Imperial County by creating both construction and operations positions, pursuant to Goal 2 of the Imperial County Strategic Plan (2020).
- Increasing the Imperial County tax base.
- Displacing fossil fuel consumption within the State.
- Meeting the State's climate change goals by reducing emissions of greenhouse gases associated with electrical generation.

- Promoting stable retail rates for electric service.
- Meeting the State's need for a diversified and balanced energy generation portfolio.
- Meeting the State's resource adequacy requirements.
- Contributing to the safe and reliable operation of the electrical grid, including providing predictable electrical supply, voltage support, lower line losses, and congestion relief.

SITE DESCRIPTION & SURROUNDING USES

The production well sites are presently used for alfalfa cultivation and geothermal energy operations (injection well at HGEC). Surrounding land uses in the Project vicinity are primarily for industrial facilities, energy facilities, and agricultural cultivation. Agricultural operations are present throughout the immediate Project area. Geothermal well pads and pipelines and Imperial Irrigation District (IID) irrigation canals are also present throughout the Project vicinity.

ZONING & PROJECT CONFORMANCE

The Project site is zoned as A-2-G-SPA, which includes the Geothermal Overlay Zone (G) and allows for "Major Geothermal Projects" to be permitted through a CUP process. The Heber SPA is intended "to allow for commercial, residential, industrial, renewable energy and other employment-oriented development in a mixed used orientation" (Land Use Element of the Imperial County General Plan, 2015; emphasis added). Therefore, the proposed Project conforms to the standards and goals set forth in the Imperial County General Plan and the Renewable Energy and Transmission Element of County of Imperial General Plan (2015).

PROJECT DESCRIPTION

As provided in Table 1 below, the total project disturbance from the proposed development is approximately 13.5 acres. The figures below provide a site plan of the proposed facilities and brief descriptions of each facility are provided below.

Table 1 – HFC Geothermal Wells and Pipeline Project Disturbance Estimate

Facility	*Disturbance (Acres)*
Geothermal Production Wells	12 acres total (2 acres each)
Geothermal Injection Well	0 acres (within existing Heber Complex)
Geothermal Pipeline	1.5 acres (4,500 linear feet of pipeline, 15 feet wide)
TOTAL	**13.5 acres**

Site Preparation

The well pad sites are currently used for alfalfa cultivation. After the crops are collected, a 200'x200' (40,000 square feet) area would be cleared and a chain-link security fence would be installed around each well pad construction site. Site preparation activities for the well pads would include clearing, earthwork, drainage and grading necessary for safe operations and for fire prevention. Clearing would include removal of organic material, stumps, brush and slash, which would either be removed and taken to an appropriate dump site or left onsite. Topsoil would be stripped (typically to the rooting depth) and salvaged during the construction of all pads, as feasible. Salvaged topsoil (and cleared organic material, stumps, brush and slash, if saved) would be stockpiled on the pads for use during final reclamation of disturbed areas.

To ensure the proposed facilities are situated on safe and stable surfaces, minor excavation and compaction activities would be performed. The top 18 inches of the Project Site's exposed soil would be removed, extending approximately 5 feet beyond the proposed facilities. A minimum of 18 inches of CalTrans Class 2 aggregate based will be placed and compacted to the appropriate density (ASTM D1557). On-site soil that has been piled during excavation will be used as backfill material, as necessary. Only soil that is free of debris and deleterious matter would be used as backfill material. The proposed facilities would be placed on shallow-spread footers and wall footers to support the structures. All site preparation and fill placement activities will be monitored by a qualified geotechnical engineer to detect undesirable materials and/or site conditions that may arise during site preparation.

Geothermal Production and Injection Wells

Production wells flow geothermal fluid to the surface, and injection wells are used to inject geothermal fluid from the energy plant back into the geothermal reservoir. Injection ensures the longevity and renewability of the geothermal resource. The Applicant proposes to develop up to six geothermal production wells, all within the Imperial County Geothermal Overlay Zone. The location of three of the production wells are known at this time and the remaining wells will be sited within the same APNs 059-020-001 and 054-250-017. The injection well would be installed within the HGEC, immediately next to the proposed Dogwood OEC (separate CUP application).

During well installation, each well pad would accommodate a drilling rig, support equipment, portable bathroom, baker tanks, and project vehicles. Each well pad would be prepared to create a level pad for the drill rig and a graded surface for the support equipment. Stormwater runoff from undisturbed areas around the constructed drill pads would be directed into ditches surrounding the drill pad and back onto undisturbed ground, consistent with BMPs for storm water identified in "Drilling and Operating Geothermal Wells in California" (CalGem PR75). The site would be graded to prevent fugitive stormwater runoff off the well pad and has been designed to withstand a 100-year storm event.

Each well would be drilled with a rotary drill rig similar to those used to drill oil and gas wells. Exhibit 1 provides an image of the typical drill used to install geothermal production (and injection) wells. The production wells would each be drilled and cased to a design depth of approximately 5,000 feet (Exhibit 2). Exhibit 3 provides a standard well pad layout for installing a geothermal production well. Following the cementing of the surface casing, blowout prevention equipment (BOPE) would be installed. During drilling operations, a minimum of 10,000 gallons of cool water and 12,000 pounds of inert, non-toxic barite (barium sulfate) would be stored at each well pad (as appropriate for the type of material) for use in preventing uncontrolled well flow, as necessary.

Once the well is completed, a well head will be installed and connected to the pipeline network to convey geothermal fluids (Exhibit 4). A motor control building would be installed next to the well head to provide system controls, sensors, and treatment systems. During normal well field operations, total geothermal fluid production rates are expected to be approximately 15,150 gallons per minute (gpm) at 280°F. Injection would occur at the same approximate levels (i.e., 15,150 gpm) but at lower temperatures of near 170°F.

Exhibit 1 – Picture of Example Drill Rig

Exhibit 2 – Profile of a Geothermal Production Well

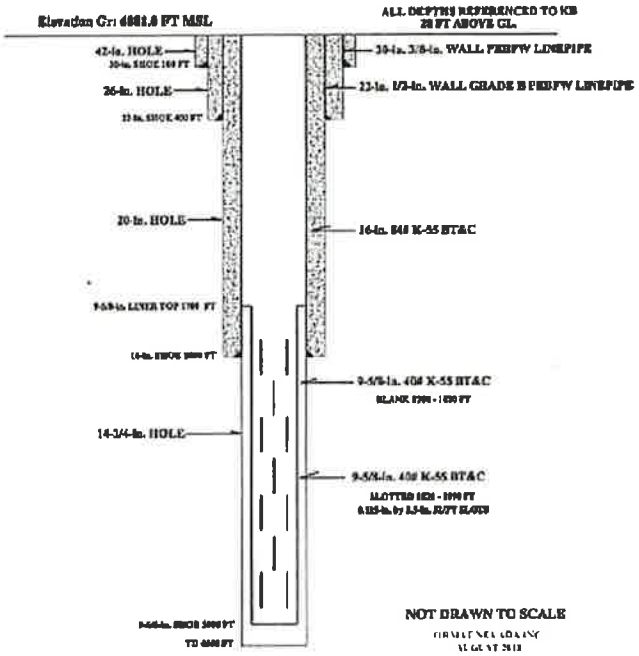


Exhibit 3 – Typical Well Pad Layout to Drill a Geothermal Production Well

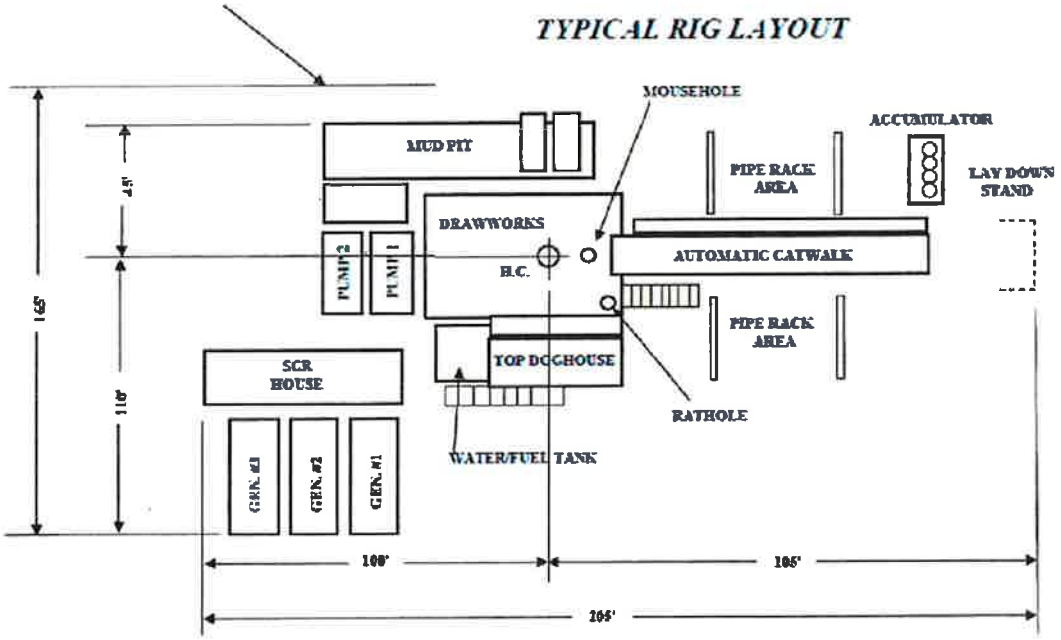
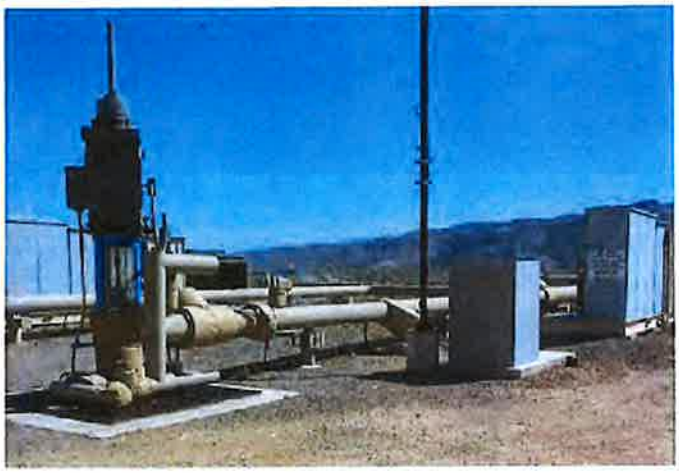


Exhibit 4 – Picture of Example Finished Geothermal Production Well



Geothermal Fluid Pipeline

Approximately 4,500 feet (0.85 miles) of geothermal fluid production pipeline are proposed for installation on APN 059-020-001. This new segment of pipeline will connect to an existing pipeline collection point that will deliver the geothermal brine to the proposed Dogwood OEC. The well on APN 054-250-017 would connect to the existing pipeline segment adjacent to the proposed well pad site. The pipeline would be used to transport geothermal fluid from the production wells to the power plants.

Construction of the pipeline network would begin by vertically auguring nominal 24-inch diameter holes into the ground about three to five feet deep at approximately 30-foot intervals along the pipeline route (Figure 2 below). Two holes for pipeline supports would be drilled at each anchor point. Dirt removed from the holes would be cast on the ground adjacent to each hole. The steel pipe "sleeper" would be placed in the hole and concrete poured to fill the hole slightly above the ground surface.

After the anchor points are installed, approximately 30-foot-long steel pipe sections would be delivered and placed along the pipeline construction corridor. A small crane would lift the pipe sections onto the pipe supports and temporary pipe jacks so that they could be welded together into a solid pipeline. Once welded and the welds tested, the pipe would be jacketed with insulation and an aluminum sheath (appropriately colored, likely covert green, to blend with the area).

When completed, the top of the new geothermal pipelines would average three to four feet above the ground surface to accommodate terrain undulations and to facilitate movement of wildlife. Electrical power and instrumentation cables for the wells would then either be installed in steel conduit constructed along the pipe or hung by cable from pipe along the pipeline route.

Water Use and Source

Water required for well drilling would typically average 50,000 gpd. Water necessary for these activities would be obtained from local irrigation canals in conformance with IID requirements. Alternatively, a temporary pipeline from the respective irrigation canal could be used for water delivery to well site. Any temporary pipeline would be lain on the surface immediately adjacent to the access road. The Project will not require additional water from the Imperial Irrigation District (IID) for operations and will be covered under the existing contract.

Construction Schedule

As provided in the table below, the Project is anticipated to take 11 months to install, test, and become fully operational. Construction will commence immediately after all permits are secured.

Project Phasing Table

Project Activity/Phase	Duration	Total Duration
Site Preparation	1 months	11 months
Well Drilling/Installation	6 months	
Well Testing	2 months	
Connect to Pipelines	2 months	

Construction Equipment and Noise

Heavy construction equipment, including drill rigs, drilling equipment, semi-truck trailers, flatbed trucks, forklifts, excavators/bulldozers, roller, and cranes will be used to deliver and place the proposed facility equipment on the Project Site. Smaller powered hand tools, such as drills, compressors, and welding equipment will also be used. Employee vehicles will be used to transport workers to the Site and parked at the designated parking locations.

During construction, noise emissions will be periodic and temporary, depending on the use of heavy equipment. Smaller hand tools will be used consistently during the construction phase.

Construction activities will be limited to 7:00am through 7:00pm. Construction noise from Project development will not exceed the County threshold of 75 decibels at any time of (County of Imperial Codified Ordinances § 90702.00 – Sound Level Limits). There are no sensitive receptors (i.e., schools, churches, hospitals, parks, etc.) in close proximity (i.e., within 1 mile radius) to the Site. The closest residence is approximately 3,600 feet (approximately 2/3 mile) to the east.

Abandonment

As included in the enclosed Reclamation Plan Application, at the end of the useful life, all equipment and facilities would be properly abandoned and dismantled. A Site Abandonment Plan (SAP), in conformance with Imperial County and CalGEM requirements, would be prepared and implemented. The SAP would describe the proposed approach to facility abandonment, equipment removal, disposal, and site restoration.

Environmental Protection Measures

All ORMAT and contractor personnel will be informed of ORMAT's policy regarding environmental protection, safety plans, and emergency response protocols. Collectively, these measures minimize unintended impacts and events as result of facility construction and operation.

Surface and Ground Water Quality

- A Water Quality Management Plan (WQMP) will be prepared for both the construction and operations phases of the Project. The WQMP includes numerous "good housekeeping" and preventative maintenance, employee training, safe handling/storage, and spill response measures to prevent and minimize any unintended releases.
- The site will be designed and prepared to provide adequate stormwater conveyance and/or infiltration.
- Any spills or unintended releases of chemicals used during Project construction and/or operation will be cleaned up with the appropriate materials (i.e., absorbent pads, foams/gels) and the affected area remediated to prevent contact with groundwater resources.
- No vehicle fueling or maintenance will take place on exposed soil.

Wildlife

- Speed limits of 5 mph will be observed on the site in order to minimize dust, avoid collision, and incidental mortality of local wildlife.

Vegetation

- Vegetation control, including invasive species eradication, will be implemented to prevent growth under or near the proposed facilities.

Air Quality

- The Project will adhere to the Imperial County Air Pollution Control District's (ICAPCD) Regulation VIII, Fugitive Dust Rules, which are designed to mitigate PM10 emissions during construction.
- ORMAT shall submit a Construction Dust Control Plan and notify the ICAPCD 10 days prior to the start of any construction activities.
- Any equipment breakdown resulting in air emissions shall be reported to ICAPCD and promptly corrected (within 24 hours when possible).
- To minimize unnecessary emissions, Project equipment and worker vehicles shall be turned off when not in use and not left idling.
- Water shall be applied to the development site and during preparation and construction to control fugitive dust.
- Earth moving work shall be completed in phases (as necessary) to minimize the amount of disturbed area at one time.
- Construction vehicles and heavy equipment that use non-surfaced facility roads and areas will be restricted to 5 mph to control fugitive dust.
- During windy conditions, barriers shall be constructed and/or additional watering will occur to minimize fugitive dust.
- Vehicle access shall be restricted to the disturbance area via signage and/or fencing.
- Equipment shall be operated according to best practices and maintained according to design specifications.
- Construction equipment shall be equipped with an engine designation of EPA Tier 3 (Tier 3) if commercially available and feasible. If a Tier 3 engine is not certified for a particular piece of equipment or not commercially available, then the equipment shall be either equipped with a Tier 2 engine or equipped with retrofit controls to reduce exhaust emissions of nitrogen oxides (NOx) and diesel particulate matter (DPM) to no more than Tier 2 levels. Prior to the issuance of a grading permit, ORMAT will submit a list of all construction equipment, including off road equipment, by make, model, year, horsepower, expected/actual hours of use, and EPA to the County Planning and Development Services Department and ICAPCD.
- The Project shall implement the following measures as part of its construction Best Management Practices (BMPs): providing Valley Fever awareness training for workers; providing respirators to workers when requested, including the provision of necessary training; use of closed-cab earth-moving vehicles equipped with HEPA-filtered air systems; employee testing for Valley Fever as needed; and conducting earth-moving activities downwind of workers when possible.

Cultural Resources

- The Project site is entirely disturbed from cultivation and the probability of encountering an unanticipated cultural resource is low. As a safeguard, project construction personnel will monitor areas during surface disturbing activities. In the event any potential cultural or archaeological resources (e.g., bones, ceramics) are discovered, all construction affecting the discovery site will be suspended immediately until a qualified archaeologist has reviewed the findings. An Unanticipated Discoveries Plan will be prepared prior to resuming construction.

Waste Management

- Workers will be required to properly dispose of all refuse and trash to prevent any litter on the Project site.
- During construction, portable chemical sanitary facilities will be used by all construction personnel. These facilities will be serviced by a local contractor.
- All construction wastes, liquid and solid, will be disposed of in compliance with all appropriate local, state, and federal disposal regulations.
- Solid wastes will be disposed of in an approved solid waste disposal site in accordance with Imperial County Environmental Health Department requirements. Waste will be routinely collected and disposed of at an authorized landfill by a licensed disposal contractor.

Fire Prevention

- An Emergency Response Plan covering possible emergencies (e.g. blow-outs, major fluid spills, impacts due to earthquakes, and other emergencies) shall be maintained. At least one Emergency Coordinator, responsible for coordinating all emergency response measures, will be on call and able to quickly reach the Project at all times. The Emergency Coordinator shall be thoroughly familiar with all aspects of the Emergency Response Plan and have the authority to commit the resources needed to carry out the contingency plan. Adequate personnel and equipment shall be available to respond to emergencies and to ensure compliance with CUP conditions, including appropriate first aid employee training and other provisions during Project construction and operation. All construction equipment will be equipped with exhaust spark arresters.
- Safety Data Sheets for all known chemicals of concern will be maintained and available to workers and first responders.
- Personnel will not be allowed to smoke outside of designated areas.
- A list of emergency phone numbers will be available onsite.
- Adequate firefighting equipment (i.e., a shovel, a pulaski, standard fire extinguisher[s], and an ample water supply) will be kept readily available at each active construction site.
- Vehicle catalytic converters (on vehicles that enter and leave the construction site on a regular basis) will be inspected often and cleaned of all flammable debris.
- All cutting/welding torch use, electric-arc welding, and grinding operations will be conducted in an area free from vegetation. An ample water supply and shovel will be on hand to extinguish any fires created from sparks. At least one person in addition to the cutter/welder/grinder will be at the work site to promptly detect fires created by sparks.

- A survey and analysis of the proposed fire suppression and detection equipment will be performed by a certified fire protection engineer to evaluate the proposed fire response system's performance. An evaluation of the proposed fire suppression and detection equipment in conjunction with existing equipment will also occur. A full report of findings will be provided to Imperial County Fire Department for review.
- An approved automatic fire detection system shall be installed as per the California Fire Code as adopted by the Imperial County Code. All fire detection systems shall be installed and maintained to the current fire code and regulations adopted by Imperial County.
- Fire Department access roads and gates will be in accordance with the current fire code adopted by Imperial County and the facility will maintain a Knox Box or a similar, Department-approved device for Site access.

Noise

- Diesel equipment used for drilling within 1,000 feet of any residence shall have hospital-type mufflers. Well venting and testing at these wells shall be accompanied by the use of an effective muffling device or "silencer".

Geotechnical and Geologic Hazards

- A formal geotechnical investigation of the Site's soil characteristics, seismic conditions, stormwater infiltration, site stability, and potential for liquefaction will be developed.

Public Health and Safety

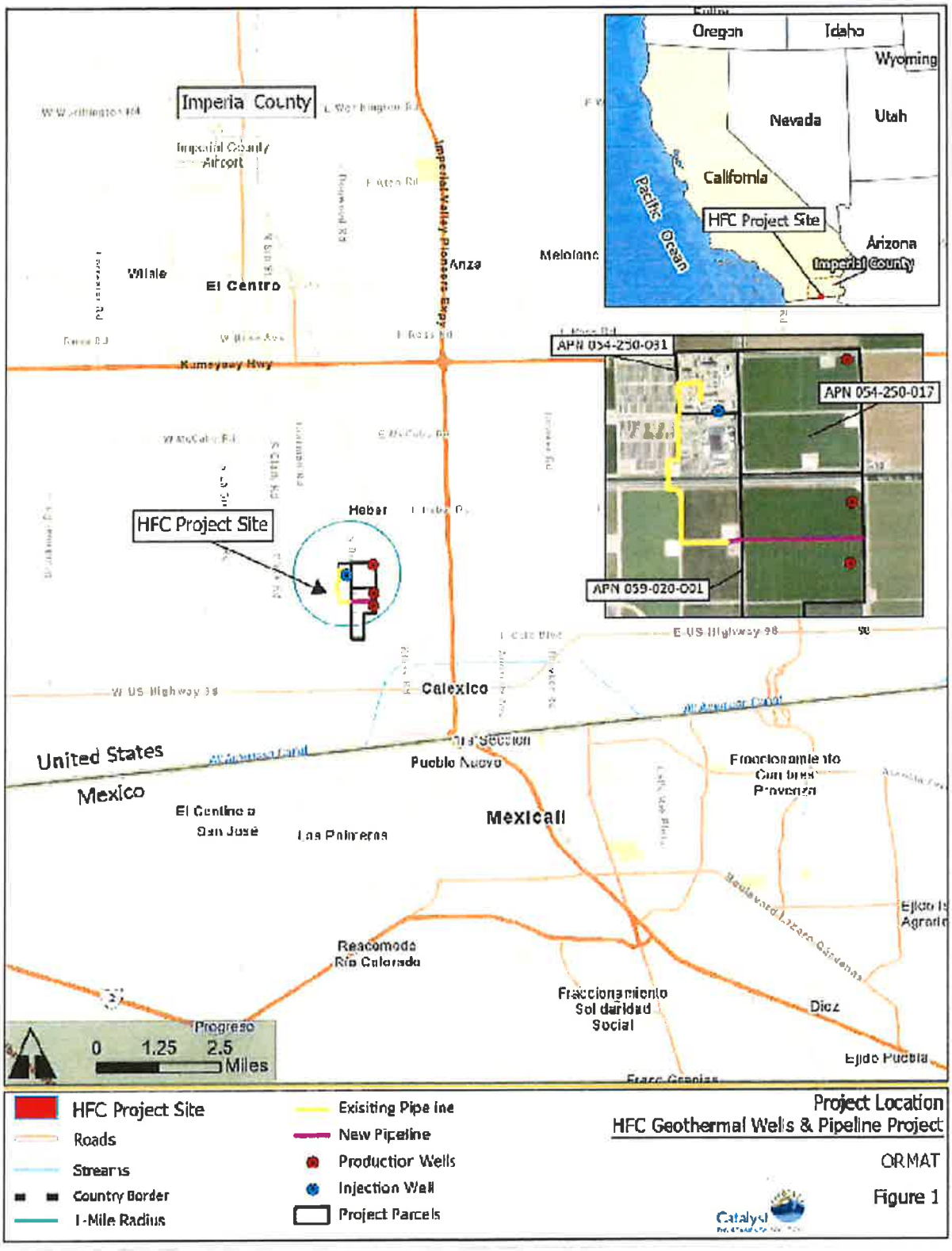
- The Site is fenced to prevent unauthorized people from accessing and tampering with the geothermal facilities, and to prevent wildlife from entering the facility.
- Signage, such as "No Trespassing" warnings, will continue to be posted at the Site to provide notice to unauthorized people to keep out.
- A Hazardous Materials Business Plan (HMBP) will be prepared and submitted to the California Department of Toxic Substances Control (CDTSC), as the Certified Unified Program Agency (CUPA) for Imperial County.
- ORMAT will designate an employee to serve as the on-call Emergency Coordinator who fully comprehends the ERP and would be prepared to enact the ERP in the event of an emergency.
- Minor leaks or spills of fluids from construction equipment will be quickly contained and cleaned up.
- All hazardous materials will be used, transported, and disposed of in accordance with applicable safe handling and disposal regulations.

Traffic and Transportation

- Project personnel will coordinate that movement of any required oversized load on Imperial County roads with the Imperial County Department of Public Works (ICDPW) and/or on State highways with the California Department of Transportation (CalTrans) and the El Centro California Highway Patrol office. Transportation of oversized equipment will be minimized to the greatest extent feasible. Oversized

equipment and/or large vehicles which impose greater than legal roads on riding surfaces, including bridges, shall require a transportation permit.

- The Project shall consider traffic safety in transporting equipment and materials to the permitted facilities to include temporary signs warning motorists on adjacent roadways and flagmen shall be used when equipment is being brought to and from the plant and wellfield sites.
- The Project shall coordinate with DPW for any requested dedication of rights-of-way needed for Dogwood Road for the consideration of existing and any future road needs.
- The Project shall file for an encroachment permit for any work or proposed work in the affected County or CalTrans road rights-of-way and for any and all new, altered or unauthorized existing driveway(s) to access the lot or lots and for any proposed road crossings.


Imperia County
Imperial County Airport
Imperial Valley Pioneers Expy
Oregon
Idaho
Wyoming
Nevada
Utah
California
Pacific Ocean
HFC Project Site
Arizona
Imperial County
Meloland
Anza
Wiale
El Centro
Kumeyaay Hwy
APN 054-250-031
APN 054-250-017
APN 059-020-001
HFC Project Site
Heber
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Calexico
United States
Mexico
Pueblo Nuevo
Mexicali
El Centinela
San José
Las Palmeras
Fraccionamiento Cumbres Provenza
Reacomodo Río Colorado
Fraccionamiento Solidaridad Social
Diez
Ejido Puebla
Progreso
0 1.25 2.5 Miles
HFC Project Site
Roads
Streams
Country Border
1-Mile Radius
Exisiting Pipe line
New Pipeline
Production Wells
Injection Well
Project Parcels
Project Location
HFC Geothermal Wells & Pipeline Project
ORMAT
Figure 1
Catalyst

Legend

- Heber Geothermal Energy Complex
- Existing Pipeline
- New Pipeline
- Injection Well
- Production Wells

Proposed Facilities
HFC Geothermal Wells and Pipeline Project
ORMAT
Figure 2

Catalyst

Attachment B

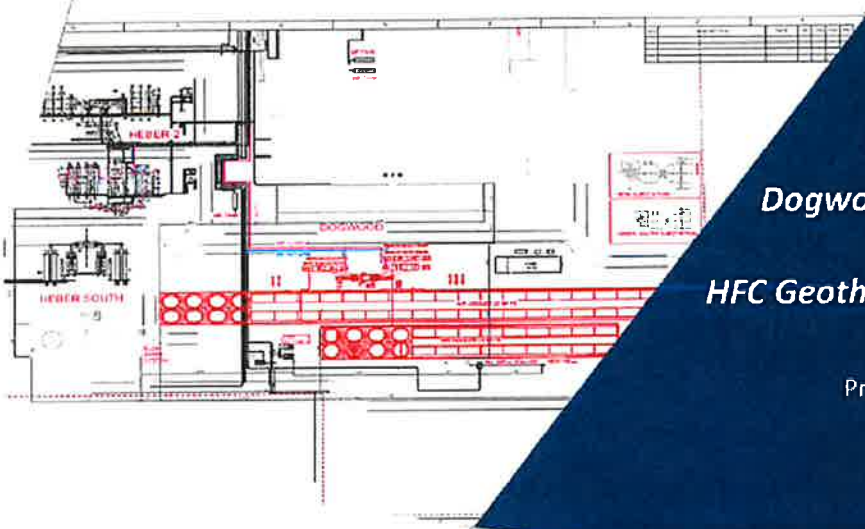
Site Photographs

Catalyst
ENVIRONMENTAL SOLUTIONS

Attachment C

Water Quality Management Plan

Catalyst
ENVIRONMENTAL SOLUTIONS



Water Quality Management Plan

Dogwood Geothermal Energy Project
Heber 2 Solar Energy Project
HFC Geothermal Wells & Pipeline Project

Prepared for: Imperial County Planning and Development Services

Submitted by: ORMAT

June 20, 2023

Innovative solutions for a complex world

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Document Information

Prepared for	OrHeber 3 LLC, Heber Field Company, and the Second Imperial Geothermal Company (collectively, the Applicants, all wholly owned subsidiaries of Ormat Technologies, Inc.)
Project Name	Dogwood Geothermal Energy Project, Dogwood Solar, and Heber 2 Solar Facilities APN 054-250-031; APN 059-020-001; APN 054-250-017
Address	ORMAT 6140 Plumas Street Reno, NV 89519-6075
Project Manager	Ben Pogue bpogue@ce.solutions
Project Engineer	Paden Voget, P.E. pvoget@ce.solutions State of California Professional Engineer #69238
Date	June 10, 2023

Professional Certification

Water Quality Management Plan

Dogwood Geothermal Energy Project, Dogwood Solar, and Heber 2 Solar Facilities

This report has been prepared by Catalyst Environmental Solutions Corporation under the professional supervision of the Principal(s) and/or staff whose signature(s) appear hereon.

The scope of work and specifications are presented in accordance with generally accepted professional engineering practice and those of the California State Water Resources Control Board Order No. 2013-001-DWQ. There is no other warranty either expressed or implied.

Paden Voget, PE
State of California Professional Engineer #69238

June 2023

Project Owner's Certification

This Water Quality Management Plan (WQMP) has been prepared for OrHeber 3 (OH), LLC, Heber Field Company, LLC (HFC), and the Second Imperial Geothermal Company (collectively, the Applicants, all subsidiaries of Ormat Technologies, Inc. [ORMAT]) by Catalyst Environmental solutions. The WQMP is intended to comply with the requirements of the County of Imperial and the Phase II Small MS4 General Permit Imperial Valley Watershed. The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of the site consistent with the Phase II Small MS4 Permit and the intent of the County of Imperial and the unincorporated community of Heber. Once the undersigned transfers its interest in the property, its successors in interest and the city/county/town shall be notified of the transfer. The new owner will be informed of its responsibility under this WQMP. A copy of the approved WQMP shall be available on the subject site in perpetuity.

"I certify under a penalty of law that the provisions (implementation, operation, maintenance, and funding) of the WQMP have been accepted and that the plan will be transferred to future successors."

Project Data			
Permit/Application Number(s):	New CUP for Dogwood Geothermal Energy Project New CUP for Heber 2 Solar Energy Project Amendment to CUP No. 06-0028 for the HFC Geothermal Wells & Pipeline Project	Grading Permit Number(s)	N/A
Tract/Parcel Map Number(s):	APN 054-250-031 APN 059-020-001 APN 054-250-017	Building Permit Number(s)	N/A
CUP, SUP, and/or APN:			06-0028 (for HFC)
Owner's Signature			
Owner Name:	Elizabeth Helms		
Title:	Corporate Secretary		
Company:	Ormat Nevada Inc.		
Address:	6140 Plumas Road, Reno, NV		
Email:	ehelms@ormat.com		
Telephone:	775-356-9029 ext. 32368		
Signature:	 Date:		June 28, 2023

ACKNOWLEDGMENT

STATE OF NEVADA)
)
COUNTY OF WASHOE)

On June 28, 2023, before me, a Notary Public, personally appeared Elizabeth Helms, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the attached **PROJECT OWNER'S CERTIFICATION** and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person or entity on behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Notary Public

ANGELA MICKIEL ARGUELLO
NOTARY PUBLIC
STATE OF NEVADA
COUNTY OF WASHOE
No. 97-2924-2 MY APPT. EXPIRES AUGUST 11, 2025

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SECTION 1 Project Description

OrHeber 3, LLC, Heber Field Company, LLC, and the Second Imperial Geothermal Company (collectively, the Applicants, and all subsidiaries of Ormat Technologies, Inc. [ORMAT]) proposes to develop a new 25-megawatt (MW; net generation) geothermal energy facility (Dogwood Project), Dogwood Solar, and Heber 2 Solar Parasitic Facilities. Proposed developments would occur on Assessor Parcel Numbers (APNs) 054-250-31; APN 059-020-001; and APN 054-250-017, near the existing geothermal energy complex located at 855 Dogwood Road, Heber, California. The Project site(s) is within the Imperial County Geothermal Overlay Zone that allows for Major Geothermal Projects to be permitted via a Conditional use Permit (CUP) process (Imperial County General Plan; Renewable Energy and Transmission Element of County of Imperial General Plan, 2015). The following facilities are proposed for development, provided by the Applicant:

Dogwood Project (OrHeber 3, LLC) – New CUP

- One (1) Integrated Two Level Unit (ITLU) Air Cooled ORMAT Energy Converter (OEC) generating unit
- Two (2) 20,000-Gallon Isopentane Tanks for Motive Fluid Storage
- One (1) Project substation for transmission to the grid
- Ancillary and auxiliary facilities (including, compressed air system and fire prevention system)
- A seven (7) megawatt (MW) solar photovoltaic field dedicated to the Dogwood geothermal plant
- Underground medium voltage distribution cable from Dogwood solar facilities to Dogwood geothermal plant (and Heber 2 solar facilities to the Heber 2 OEC)

Heber 2 Parasitic Solar Energy Facilities (Second Imperial Geothermal Company) – Amendment to CUP No. 19-0017

- A fifteen (15) MW solar photovoltaic field dedicated to the Heber 2 geothermal plant
- Interconnecting cable line from Heber 2 solar facilities to Heber 2 geothermal plant

Wells and Pipeline (Heber Field Company, LLC) – Amendment to CUP No. 06-0028

- Up to six (6) new production wells (3 sited, 3 unsited)
- One (1) new injection well
- Brine pipelines

As provided in **Table 1** below, the total project disturbance from the proposed development is approximately 124 acres. **Figure 1** and **Figure 2** provide a site plan of the proposed facilities and brief descriptions of each facility are provided below.

Table 1. Dogwood Project Area of Disturbance Estimate

Facility	Disturbance (Acres)
Geothermal Energy Facilities and Project Substation	5 acres (site currently completely disturbed)
Solar Field and Connection Line	~ 95 acres
Production and Injection Wells and Connecting Pipeline	~ 24 acres
TOTAL	**124 acres**

The Project will result in approximately 1,400 square feet of area converted to impervious surface area resulting from installation of equipment footings/foundations. Although some minor grading will be performed for the installation of the parasitic solar fields, the existing drainage pattern of the sites will not be altered from existing conditions. Accordingly, the Project will not result in a change to the existing grade and stormwater flows and drainage will not be altered from existing conditions. **Figure 3** illustrates the existing drainage facilities in the vicinity of the Project. **Figure 4** provides a site plan of the proposed facilities.

1.1.1 Geothermal Production and Injection Wells

Heber Field Company (HFC) owns and operates the geothermal wells and pipeline network that provides geothermal fluid/brine to the entire Heber Geothermal Energy Complex (HGEC), which includes the existing Heber 2, Heber South, and Goulds II geothermal power plants. HFC holds a CUP (No. 06-0028) for this wellfield and through a CUP amendment process, the new production and injection wells and pipelines are proposed to be added to this existing CUP. HFC proposes to develop up to six production wells. Three of these wells are sited to support the new Dogwood geothermal facility. **Figure 1** provides the locations of the three Dogwood wells. HFC is also seeking to permit three unsited wells that would be developed in the future. The unsited wells would be developed within one-mile of the HGEC and not near any sensitive receptors. HFC would anticipate construction in close proximity to an existing well pad and pipeline connections. The surrounding area is predominantly agricultural and the unsited wells would likely convert a small amount for geothermal production or injection use (approximately 1.5 acres of disturbance per well pad).

The production wells would be completed to depths between 1,000 and 4,000 feet, averaging approximately 3,500 feet. Casing depth will comply with California Department of Conservation – Geologic Energy Management Division (CalGEM) Regulations (Chapter 4, Article 3, §§ 1723, 2018) and vary depending on the total depth of the well. After the production well is completed, a well head will be installed and connected to a transmission pipeline that will convey geothermal fluid to the Dogwood Project (as discussed below). An industrial grate will be placed over the well to prevent falls. An insulated electric conductor running from the OEC to the wellheads along the connecting pipelines will supply electricity to the wellhead pump motors. During normal well operations, total geothermal fluid production rates are expected to be approximately 8,000 gallons per minute (gpm) at 280°F. One new injection well would be installed directly adjacent to the Dogwood plant. This well would also be owned and operated by HFC. This well is designed to provide direct service to the Dogwood Project, in addition to the available capacity in the existing HFC injection well/system. Injection will occur at the same approximate levels (i.e., 8,000 gpm) but at lower temperatures of approximately 170°F.

1.1.2 Geothermal Fluid Pipeline

A short segment of new pipeline is proposed within the solar energy fields to collect and deliver the new geothermal fluid/brine from two of the new production wells. This new pipeline would connect to the existing pipeline network to deliver fluid/brine to the Dogwood plant. Construction of the pipeline segment would include auguring 24-inch diameter holes into the ground about three to five feet deep at approximately 30-foot intervals along the pipeline route. When complete, the top of the new geothermal pipelines will average three feet above the ground surface. Electrical power and instrumentation cables for the wells may also be installed in steel conduit constructed along the pipe.

1.1.3 ORMAT Energy Converter (Geothermal Energy Production Unit)

The proposed ORMAT Energy Converter (OEC) unit is a two-turbine combined cycle binary unit, operating on a subcritical Rankine cycle, with isopentane as the motive fluid. The OEC system consists of a generator, turbines, a vaporizer, Air Cooled condensers, preheaters and recuperators, and an evacuation skid/vapor recovery maintenance unit (VRMU) for purging and maintenance events. The design capacity for the unit is 25 MW (net).

1.1.4 Isopentane Storage Tanks

Two double-walled 20,000-gallon above-ground storage tanks would be installed for motive fluid (isopentane) storage. Numerous safety and fire prevention measures will be installed on/near the ABST, including:

- Concrete foundations with blast walls separating the tank from the OEC
- An automated water suppression system.
- Concrete containment areas.
- Two flame detectors, which will immediately detect any fire and immediately trigger the automatic fire suppression system.
- A gas detector, which will immediately detect any isopentane leak and notify the control room (manned by 24/7).

1.1.5 Cooling Tower

A cooling tower array will perform air-cooling operations of the geothermal fluid. The cooling tower will include a series of heat-absorbing evaporators and condensers to capture and transfer heat stored in the geothermal fluid.

1.1.6 Parasitic Solar Energy Facilities

Two separate solar photovoltaic energy fields are proposed – a seven (7) megawatt solar field to provide supplemental/auxiliary energy to the Dogwood geothermal plant and a fifteen (15) MW solar field to provide supplemental/auxiliary energy for the Heber 2 geothermal plant. These solar facilities are classified as behind-the-meter and would provide supplemental energy directly to the Dogwood and Heber 2 geothermal units (OECs), this energy would not enter the transmission grid. The solar facilities

will effectively reduce the margin between gross and net geothermal energy generation, allowing for the more efficient generation of geothermal energy and to allow more geothermal energy to enter the grid. The energy generated by the solar fields would be collected on-site by a XMR and switch and transmitted along a short interconnecting cable line (approximately 1,000 feet) on Dogwood Road to the Dogwood and Heber 2 OECs.

1.1.7 Project Substation

The Project will require a new substation to step up the low voltage electrical energy generated at the Dogwood geothermal unit to the higher voltage required for commercial transmission. No upgrades to off-site transmission facilities is necessary and the new Dogwood substation will connect directly to the existing point of interconnection with the Imperial Irrigation District (IID) controlled grid. The substation will include a 13.8 kV circuit breaker to protect the electric generator, a minimum of 80 megavolt ampere 13.8 kV/115 kV transformer, and 115 kV potential and current transformers for metering and system protection.

1.1.8 Water Use and Source

Water required for facility construction activities, including grading and dust control, will be obtained from the applicant's existing contract with IID. Up to 5,000 gallons per day (gpd) of water will be required for the first 2-4 months of development of the facility. Approximately 2,000 gpd will be consumed during the remaining development schedule of approximately 12-18 months. Thus, approximately 1.1 million gallons of water (10.1 acre-feet) will be used on-site during construction. Once operating, up to approximately 325 gpd (0.36 acre-feet per year) of non-potable water will be required and provided by the applicant's existing IID contract/allocation. Water required for well drilling would typically average 50,000 gpd. Water necessary for these activities would be obtained from local irrigation canals in conformance with IID requirements. Alternatively, a temporary pipeline from the respective irrigation canal could be used for water delivery to the well site. Any temporary pipeline would be laid on the surface immediately adjacent to the access road. The Project will not require additional water from the Imperial Irrigation District (IID) for operations and will be covered under the existing contract.

1.2 SITE LOCATION

The Site includes approximately 4 acres within the Heber quadrangle of the U.S. Geological Survey (USGS) 7.5" topographic map, and sits within Township 16 South, Range 14 East of the San Bernardino Base and Meridian in Imperial County, California.

1.3 LAND USE AND TOPOGRAPHY

The Project is located on private lands owned by ORMAT in southern Imperial County as shown in **Figure 1**. The Proposed development includes approximately 124 acres within APN 054-250-31; APN 059-020-001; and APN 054-250-017, near the existing geothermal energy complex located at 855 Dogwood Road, Heber, California. The Project site is zoned as A-2-G SPA, for General Agriculture (A-2), Geothermal Overlay Zone (G), and in the Heber Specific Plan Area (SPA). The Project site lies at an elevation of approximately 5 feet below mean sea level (msl) in the Imperial Valley region of the California low

desert. The surrounding properties lie on terrain, which is flat, part of a large agricultural valley. The existing geothermal energy complex is devoid of vegetation and is actively disturbed as part of the ongoing energy generation operations at Heber 2. The sites identified for the Dogwood Parasitic Solar Facility, Heber 2 Parasitic Solar Facility, and production wells are currently actively cultivated agricultural fields. Adjacent properties consist of agricultural land to the north and a solar farm to the west.

1.4 SITE GEOLOGY, HYDROGEOLOGY, AND SOILS

The part of Imperial County containing Heber lies within the Pliocene to Holocene, Q Geologic Unit (McCrink et al. 2011). Three natural geomorphic provinces underlay Imperial County, including the Peninsular Ranges, the Colorado Desert, and the Mojave Desert. The Colorado Desert geomorphic province spans central Imperial County and contains the Salton Sea and the Imperial valley. This Basin and Range province, sometimes referred to as the Salton Trough, is composed of a low-lying barren desert basin located between alluvium-covered, active branches of the San Andreas Fault containing Cenozoic sedimentary rocks and alluvial, lacustrine, and eolian deposits. The surface of sediments in the middle of the trough are about 275 feet below sea-level (bsl) (Digital Desert 2019).

Surface water in the area of the Site consists of canals and agricultural drains operated and maintained by the Imperial Irrigation District. Canals adjacent to the Project Site include Date Drain No. 3 and Beech Drain as illustrated in **Figure 3**. These canals ultimately drain to the Alamo River, a tributary to the Salton Sea. Surface runoff within the Project Site occurs primarily as sheetflow across the lot generally to the north, eventually flowing into the adjoining ditches.

The regional groundwater flow direction within the Imperial Valley is toward the Salton Sea, a closed basin with a surface elevation of approximately 225 feet below sea level. Groundwater flow in the Project area flows in a general northwest direction.

Dry lean silty clays dominate the project site surface extending to approximately 4 to 5 feet below ground surface (bgs). These silty clays are underlain by moist stiff clays from approximately 6 feet to 38-40 feet bgs. Silty clay to clayey silt dominate 40-50 feet bgs to the extent of geotechnical exploration (Landmark 2019).

1.5 HYDROMODIFICAITON APPLICABILITY

As discussed above, the Project would result in less than 1,400 square feet of impervious area from pre-Project conditions. For construction of the parasitic solar fields, limited grading is proposed for the Project that would not result in changes to the permeability of the site nor alter the existing drainage patterns. As such, the post-development runoff volume, time of concentration, and peak flow velocity would not be altered from that of the pre-development condition.

1.6 POTENTIAL STORMWATER POLLUTANTS

Table 2 summarizes expected stormwater pollutants of concern based on land use and site activities.

Table 2. Pollutants of Concern

Pollutant	Potential to Impact Stormwater (Y/N)	Additional Information and Comments
Pathogens (Bacterial/Virus)	N	--
Nutrients – Phosphorous	N	--
Nutrients - Nitrogen	N	--
Noxious Aquatic Plants	N	--
Sediment	Y	Overland flows over unpaved surface may result in sediment in stormwater runoff
Metals	Y	Leaks/spills in Project area may result in metals in stormwater runoff
Oil and Grease	Y	Leaks/spills in Project area may result in oil and grease in stormwater runoff
Trash/Debris	Y	Improperly disposed of trash/debris may result in trash in stormwater runoff
Pesticides/Herbicides	N	--
Other	N	--

SECTION 2 Best Management Practices

This section describes the Best Management Practices (BMPs) that will be implemented and maintained throughout the life of the project. The BMPs will be used to prevent and minimize water pollution that can be caused by stormwater runoff. **Table 3** details the BMPs selected to be implemented at the Project site based on the potential pollutants. Note that the OEC, isopentane tanks, cooling tower, and substation are located within the existing operational footprint and is subject to the existing policies and programs implemented by ORMAT for the facility as would the proposed development outside of the existing HGEC. Because the Project does not propose any changes to the existing stormwater volume, peak flow velocity, time of concentration or drainage patterns, no structural BMPs are proposed.

Table 3. Non-Structural Source Control BMPs

Pollutant Source	Pollutant	BMP	Existing?	New/Revised?
Stormwater run-on and runoff	Erosion, sediment, contaminated stormwater	• Stabilize drainage with rocks, gravel, vegetation, or riprap • Provide perimeter control to isolate sediment (loose dirt). Includes earthen berms, fiber rolls, silt fence, etc.	X	
Vehicle Track Out	Sediment, Dust	• Provide tracking control devise • Conduct street sweeping	X	
Work Areas	Trash	• Regularly monitor and clean trash • Provide employee training for good housekeeping	X	
Equipment Areas (OECs, ITLUs, pipes)	Isopentane, sediment	• Control drainage patterns with berms • Use water truck for dust control • Conduct routine inspections	X	X
Stored materials and equipment maintenance	Oil, grease, hydraulic fluid, anti-freeze, metals	• Provide good housekeeping training • Store materials in secondary containment • Spill kit and response training	X	

In addition to the activities listed above, ORMAT follows all approved operational guidelines that are currently in place. Temporary and permanent soil erosion control BMPs will be implemented in conformance with the BMP Fact Sheets provided in the California Stormwater Quality Association (CASQA) Stormwater Best Management Practice Handbook – Industrial and Commercial (2019).

2.1 NON-STRUCTURAL BMPS

The following are prevention practices utilized to minimize the probability of pollution of stormwater discharge.

2.1.1 Good Housekeeping

As a component of this program, good housekeeping practices are performed so that facility is kept in a clean and orderly condition. Proper housekeeping practices include:

- Periodic cleanup of equipment, as needed, based upon facility inspections,
- Sweeping impervious surfaces, as needed, based upon facility inspections,
- Proper waste disposal practices and covering of waste storage areas at all times,
- Proper storage and covering of materials at all times,
- Removal of any oil-stained soil/gravel, especially around equipment locations and loading areas,
- Cleaning of significant oil and grease stains on surfaces that drain to the stormwater drainage areas, and
- Cleaning the exterior of oil containers on hydraulic machinery upon discovery of an accumulation of hydraulic fluid.

2.1.2 Preventative Maintenance

As a component of this program, operations and maintenance staff perform preventative maintenance of stormwater management devices to assure their proper operation. Preventative maintenance of stormwater management devices includes the following:

- Cleaning of accumulated sediment, potential contaminants, and debris from the Site;
- Inspection of secondary containment structures as part of the regular daily visual inspections;
- Maintenance and inspection of secondary containment structures, as needed, based upon inspections;
- Daily inspection and maintenance of equipment and associated piping and valves as required by preventive maintenance procedures;
- Inspection and maintenance of rainfall protection coverings for waste storage bins and receptacles on a periodic basis; and
- A comprehensive preventive maintenance schedule is performed on all facility operations equipment as part of routine procedures.

2.1.3 Spill Response

Spill prevention and response is performed according to the facility's SPCC Plan . Copies of this plan are located in the on-site ORMAT office.

A limited amount of spill cleanup equipment is stored onsite. This equipment is found within hazardous material storage areas. Detailed information concerning spill cleanup equipment and resources is included in the SPCC Plan.

The volume of containment areas surrounding each potential source is designed to hold the contents of a spill from the largest vessel / container. The SPCC Plan summarizes the capacity of potential sources and volume of the respective secondary containment areas.

2.1.4 Material Handling and Storage

The primary hazardous material to be stored on-site is isopentane. The additional isopentane will be stored in the appropriately designed (2x) 20,000 gallon above ground storage tanks, as well as the existing (2x) 10,000 gallon tanks for Heber 2 OEC. The isopentane is used as a motive fluid for geothermal energy generation and is not directly discharged, rather is released as an air emission. Therefore, the isopentane would not be directly exposed to stormwater. All other hazardous waste would be stored in 55-gallon drums and other Department of Transportation (DOT) approved packaging within a contained area located on the Site. Stormwater that accumulates within the hazardous material and hazardous waste containment area is collected via vacuum truck and disposed of off-site or recycled back into the production system. A bill of lading, non-hazardous waste manifest or uniform hazardous waste manifest is used to document all such shipments.

2.1.5 Employee Training

A combined annual Storm Water Compliance / SPCC Plan training program is conducted for the Pollution Prevention Team members and operations personnel. Participants undergo stormwater management training for all areas and operations at this facility, as well as reviewing the spill response, control and countermeasure procedures. Other stormwater training is done on an as-needed basis.

2.1.6 Waste Handling/Recycling

At times, product or oily waste streams are transferred from the facility in 55-gallon drums. A bill of lading, non-hazardous waste manifest or uniform hazardous waste manifest is used to document all such shipments. Operations or contractor personnel closely monitor loading of transport vehicles. Collection and satellite accumulation containers for hazardous and non-hazardous waste are kept covered to prevent contact with stormwater. Appropriate spill control equipment and supplies are kept readily available in case of a spill.

2.1.7 Record Keeping and Internal Reporting

All inspection, sampling, maintenance, corrective action records, and any other information that is a part of this plan are maintained at the facility office. All records are maintained for a period of at least three (3) years.

2.1.8 Erosion Control and Site Stabilization

Permanent BMPs used at the existing HGEC facility to prevent soil erosion include routing runoff along earthen swales or drainage areas, and preventing run-off with berms along certain sections of the property line. Temporary BMPs used at the Site to prevent soil erosion include the use of sandbags, crushed rock, and silt fence. These BMPs are used as and where needed, especially in areas that are undeveloped or in the process of being developed.

SECTION 3 Operation and Maintenance Plan

The Dogwood Project is located within APN 054-250-31; APN 059-020-001; and APN 054-250-017, near the existing geothermal energy complex located at 855 Dogwood Road, Heber, California. The following non-structural water quality best management practices (BMPs) are proposed for the Project:

- Good Housekeeping
- Preventative Maintenance
- Spill Response
- Material Handling and Storage
- Employee Training
- Waste Handling/Recycling
- Record Keeping and Internal Reporting
- Erosion Control and Site Stabilization

3.1 MAINTENANCE RESPONSIBILITY

The Heber Field Company (subsidiary of ORMAT) is the property owner and is responsible for BMP maintenance. Since HFC/ORMAT is the owner, no access agreement or easement is necessary to maintain the BMPs. HFC/ORMAT funds will be used to support Operation and Maintenance (O&M) activities to maintain BMP functionality. HFC/ORMAT maintenance staff are expected to perform the maintenance.

3.2 MAINTENANCE ACTIONS AND FREQUENCY

Maintenance actions are generally grouped into two categories: routine and intermittent.

Routine Maintenance

Routine inspections of the Project facilities and grounds will be performed annually. During these inspections staff evaluate if there is significant accumulation of trash, debris, or sediment that would need to be removed. Cleaning is done as needed based on the results of the inspections. The inspection frequency may be adjusted based on experience at the site (e.g., if inspections rarely find any material that needs to be cleaned out, then the inspection frequency can be reduced).

Intermittent Maintenance

Intermittent maintenance activities include more substantial maintenance that is not required as frequently as routine maintenance. The most likely form of intermediate maintenance is removal of sediment from existing drainage infrastructure and detention basins where necessary to maintain the capacity of the basins. Given that the Project Site is pervious and will not be graded or significantly altered and that rain is infrequent in Heber, this type of maintenance is expected to be required approximately once every year.

3.3 MAINTENANCE PROCEDURES

During each maintenance visit, the maintenance crew will evaluate existing drainage paths and infrastructure by inspecting for the maintenance indicators in **Table 4**. When a maintenance indicator is observed, the action described in the "Maintenance Actions" column will be taken.

Note that regardless of the projected maintenance type (routine or intermittent) described in the previous section, when a maintenance indicator is observed, the required maintenance action will be taken. For example, if significant sediment accumulation is observed in year three instead, then the accumulated sediment will still be cleaned out, even though the estimated frequency was once every year.

Table 4. Maintenance Indicators and Actions for BMPs

Typical Maintenance Indicator	Maintenance Action
Erosion due to concentrated stormwater runoff flow	Repair eroded areas and make appropriate corrective measures such as adding berm or stone at flow entry points, or re-grading as necessary.
Accumulated sediment, litter, or debris	Remove and properly dispose of accumulated materials, without damage to stormwater drainage structures.
Standing water	Remove any obstructions or debris or invasive vegetation, loosing or replace top-soil to allow for better infiltration, or minor re-grading for proper drainage.
Obstructed inlet or outlet structures	Clear obstructions.
Damage to structural components such as inlet or outlet structures	Repair or replace as applicable.

SECTION 4 References

California Stormwater Quality Association (CASQA). 2019. Industrial and Commercial Best Management Handbook. 2019.

Digital Desert. 2019. Ecological Sections: Mojave Desert. Available online at: http://digital-desert.com/ecosections/322c.htm).

Landmark Consultants, Inc. (Landmark). 2019. Geotechnical Report Update, Heber 2 Repower Project, Heber, California. Prepared for Ormat Nevada. April 2019.

McCrink, T.P., Pridmore, C.L., Tinsley, J.C., Sickler, R.R., Brandenberg, S.J., and J.P. Stewart. 2011. Liquefaction and other ground failures in Imperial County, California, from the April 4, 2010, El Mayor–Cucapah earthquake: U.S. Geological Survey Open-File Report 2011–1071 and California Geological Survey Special Report 220, 94 p. pamphlet, 1 pl., scale 1:51,440. Available at http://pubs.usgs.gov/of/2011/1071.

Figures

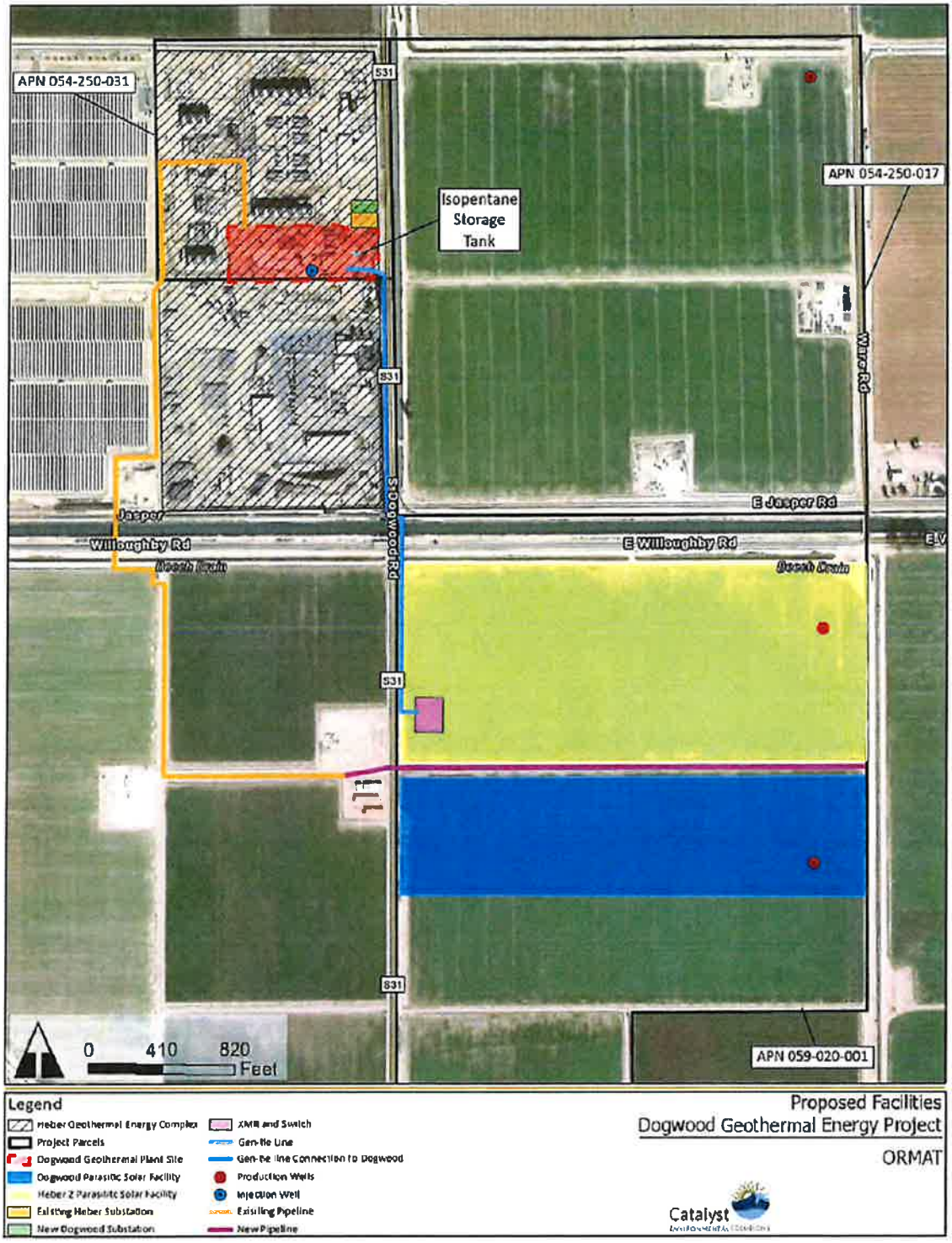


Figure 1. Dogwood Geothermal Energy Project Proposed Facilities

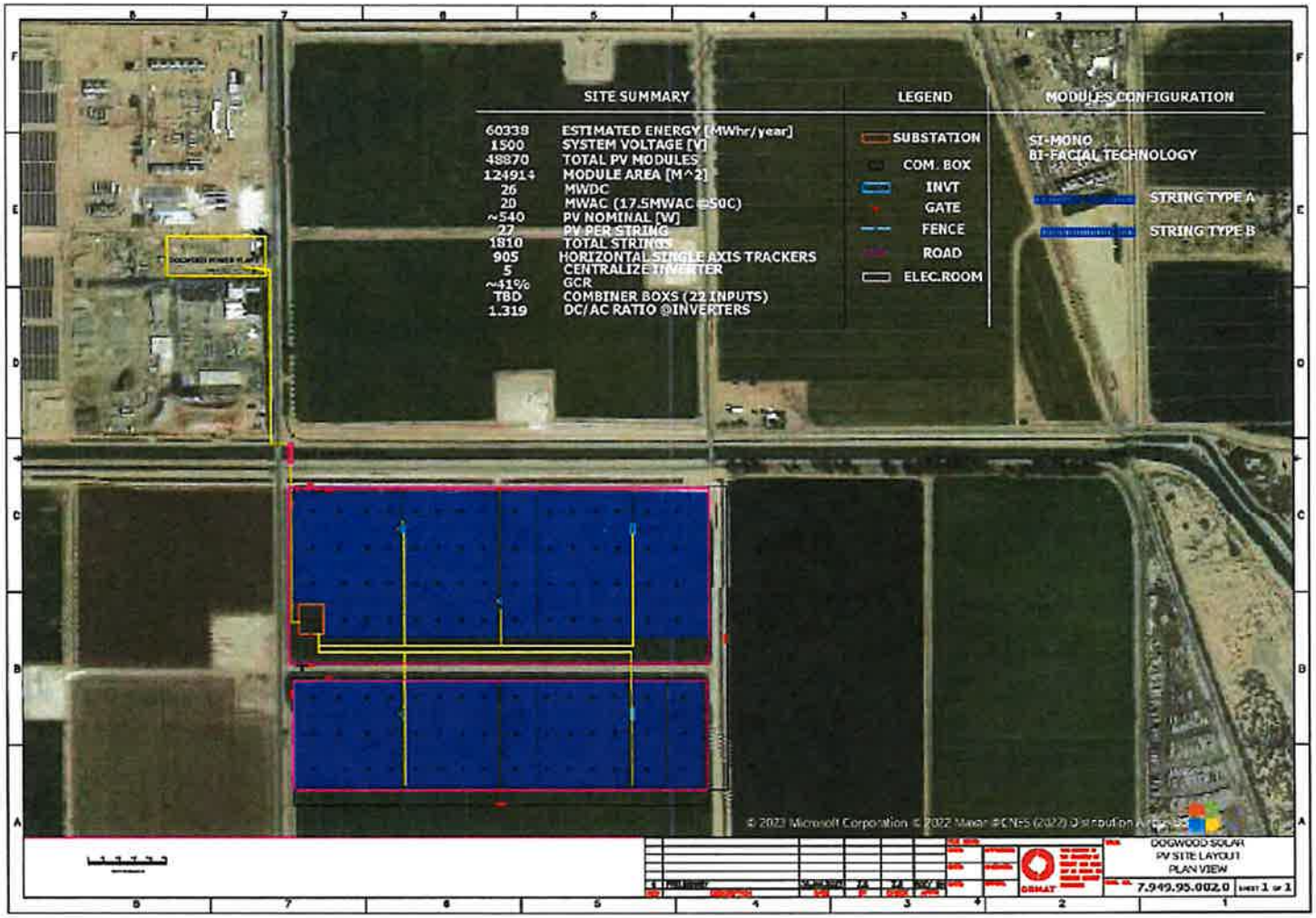


Figure 2. Dogwood and Heber 2 Solar Site Plan

Figure 3. IID Canals and Drains.

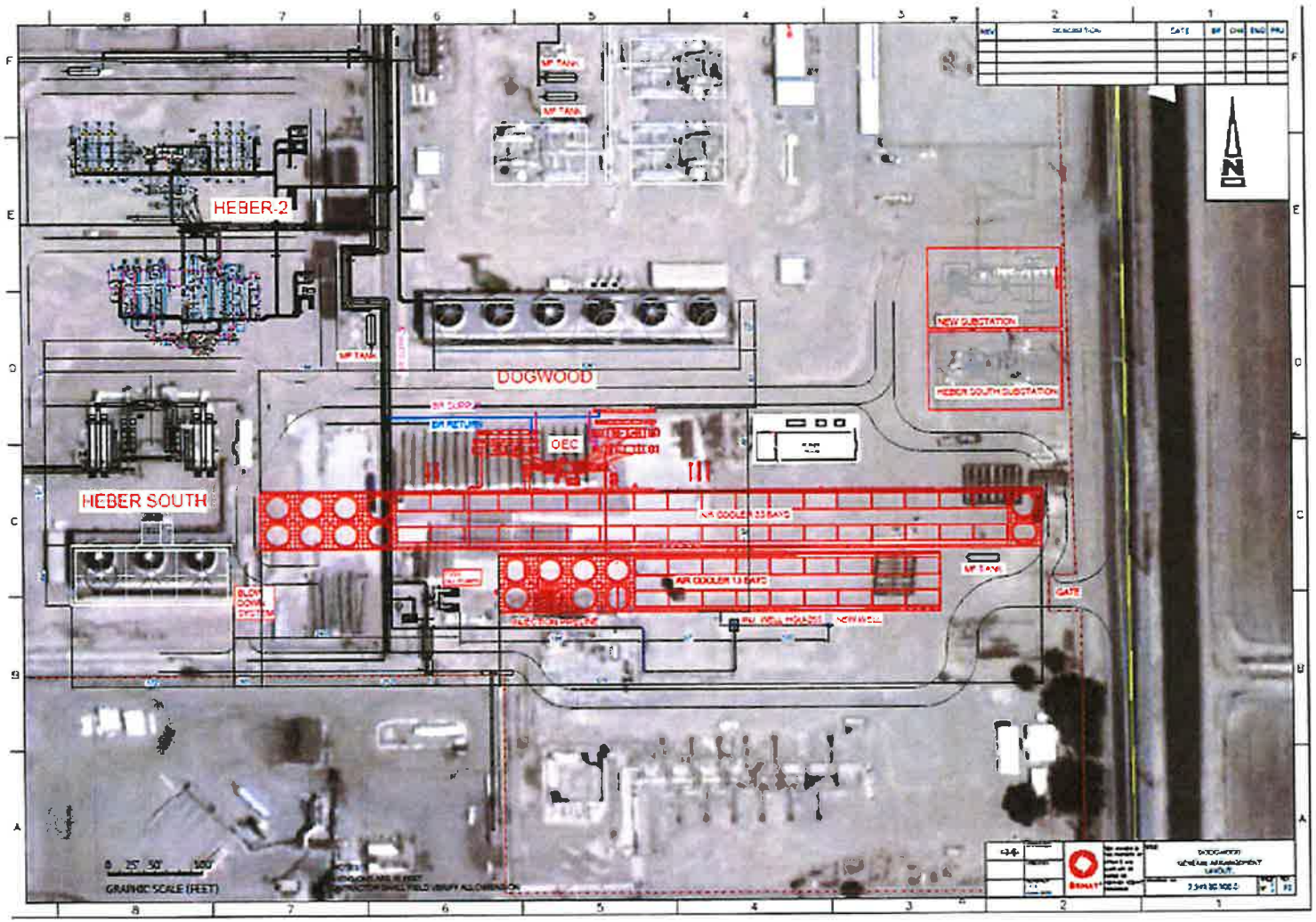


Figure 4. Dogwood Geothermal Site Plan

Attachment D

Imperial County Reclamation Plan

Catalyst
ENVIRONMENTAL SOLUTIONS

IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES DEPARTMENT

Reclamation Plan Application

OWNER, OPERATOR AND AGENT:

1. Applicant (Name, Mailing Address and Telephone Number):
   Heber Field Company LLC
   947 Dogwood Road, Heber, CA 92249
   Contact: Alissa Sanchez, asanchez@ormat.com; 775-356-9029, ext. 32234

2. Property Owner (s), or owner of Surface Rights (Name, Mailing Address and Telephone Number): [if different from applicant]
   Nowlin Family LLC
   5450 E McLellan Rd #142
   Mesa, AZ, 85205

3. Owner of Mineral Rights (Name, Mailing Address and Telephone Number): [if different than applicant]
   Nowlin Family LLC (see #2 for APN 054-250-017)
   Heber Field Company (see #1 APN 059-020-001)

5. Lessee (Name, Mailing Address and Telephone Number):

   APN 054-250-017, Heber Field Company, c/o Nowlin Family, LLC, Attn: Terri Pitman Watson, 13227 Tobiasson Road, Poway, CA 92064
   APN 059-020-001, Madjac Farms, Attn: Jimmy Abatti, PO Box 2135, El Centro, CA 92244

6. Operator (Name, Mailing Address and Telephone Number): [if different than applicant]
   Ormat Nevada Inc.
   6140 Plumas St
   Reno, NV 89519

7. Agent of Process (Name, Mailing Address and Telephone Number):
Ormat Nevada Inc., Attn: Elizabeth Helms
6140 Plumas Street, Reno, NV 89519
ehelms@ormat.com; 775-356-9029

LOCATION:

8. Legal Description: (must be full legal)

Track 44, Township 16 South, Range 14 East, SBB&M

Assessor Parcel No.:	054-250-31; 059-020-001	
Longitude:	-115.526745	-115.526746
Latitude:	132.0707398	32.715491
Elevation:	near zero	

9. Size of the land(s) that will be affected by mining operation. Total acreage:
Two parcels (APNs) totaling near 235 acres, but disturbance footprint for each well pad (up to six production, one injection) will be less than 1 acre.

10. Describe existing and proposed access to the mine site: (please be specific)
Alfalfa cultivation and geothermal energy wells/pipelines throughout area.

GEOLOGICAL BACKGROUND:

11. Mineral commodity to be minded:
Geothermal fluid/brine.

12. General Geological description of the area:
The site is located within the Piliocene to Holocene, Q Geologic Unit. The Colorado Desert geomorphic province spans central Imperial County, where the site is located, often referred to as the Salton Trough. Low-lying barren desert located between alluvium-covered, active branches of the San Andreas Fault.

13. Detailed description of the geology of the actual site in which surface mining is to be conducted:
Site is underlain by Cenozoic sedimentary rocks and alluvial, lacustrine, and eloian deposits. Surface sediments are about 275 feet below sea level. The site contains Holtville silty clays (wet) and Imperial-Glenbar silty clay loams (wet).

14. Brief description of the environmental setting of the site and the surrounding areas. Existing land uses, soil, vegetation, ground water elevation and surface water characteristics.
Existing site uses are limited to alfalfa cultivation. Geothermal wells and pipelines are present through out the project area/vicinity.

MINING OPERATION AND PRODUCTION:

15. Proposed starting date of operation: October 2024
Estimated life of operation: 15-30 years (with CUP amend to extend)
Termination Date: 2054
Duration of first phase:
Second phase:
Third phase:
Fourth phase:

16. Operation will be (include days and hours of operation):
Continuous: Wells and pipeline will generally operate 24 hours per day, 7 days per week
Intermittent:
Seasonal:

17. Maximum anticipated annual production (Tons or Cubic Yards):
N/A

18. Total anticipated production:

Minerals:	N/A	cubic yards/tons	0
Tailings retained on site:		cubic yards/tons	0
Tailings disposed off site:		cubic yards/tons	0

Maximum anticipated depth (indicate on map location of benchmarks to verify mine depth):
Up to 5,000 feet (production well)

19. Describe mining method:
Drilling for new production and injection well installation

20. Describe nature of processing and explain disposal of tailings or waste.
All drilling wastes/fluids will be captured in portable baker tanks for disposal at proper waste disposal facility. No wastes will be generated during operations, only during well installation and testing.

21. Do you plan to use cyanide or other toxic materials in your operations?
No

Do you plan to use or store petroleum products or other hazardous materials on the site?
No

Describe refueling and maintenance of vehicles.
Construction equipment/vehicles will be fueled on-site, as necessary. Fuel will be limited to diesel and gasoline for heavy and light equipment. Repairs to construction equipment will be performed on-site by certified mechanics. Spill prevention BMPs and safe handling techniques will be employed throughout the construction phase.

22. Indicate the quantity of water to be used, source of water, method of conveyance to the mine site, the quantity, quality and method of disposal of used and/or surplus water. Indicate if water well to be used for mine operation (drilling, reactivation, changing use or increasing volume of water well may require Conditional Use Permit approval).

Water required for well drilling would typically average 50,000 gpd. Water necessary for these activities would be obtained from local irrigation canals in conformance with IID requirements. Alternatively, a temporary pipeline from the respective irrigation canal could be used for water delivery to well site. Any temporary pipeline would be lain on the surface immediately adjacent to the access road. The Project will not require additional water from the Imperial Irrigation District (IID) for operations and will be covered under the existing contract.

23. Describe phases of mining if applicable and concurrent reclamation including time schedule for concurrent activities.

Well Drilling - installation of the new well, approximately six months
Well Testing - flow testing the well, approximately two months
Well Operation - connect wells to pipeline network for delivery to Heber Complex, approximately 2 months.

24. Describe the types of equipment that will be used in the operation, including the estimated average daily trips (ADT) that will be generated by the operation.

Heavy construction equipment, including drill rigs, drilling equipment, semi-truck trailers, flatbed trucks, forklifts, excavators/bulldozers, roller, and cranes will be used to deliver and place the proposed facility equipment on the Project Site. Smaller powered hand tools, such as drills, compressors, and welding equipment will also be used. Employee vehicles will be used to transport workers to the Site and parked at the designated parking locations.

25. Include the following maps: (NOTE: Without these the application is automatically incomplete.)

(1) Topographic Map with overlay showing proposed area to be mined.

(2) Site Plan showing mine layout and dimensions.

(3) General Vicinity Map showing the location of the mine site in Imperial County.

(4) Cross Section Map.

RECLAMATION:

26. Indicate by overlay of map of Item No. 24, or by color or symbol on map those areas to be covered by the reclamation plan:

Total acreage: Approximately 7 acres (approx. 1 acre disturbance per well pad, with up to 6 production wells and 1 injection well)

27. Describe the ultimate physical condition of the site and specify the proposed use (s) or potential uses of the land after reclamation. Explain if utilities, haul or access roads will be removed or reclaimed.

All proposed well pads are within the County overlay zone for major geothermal projects. All production well sites are currenlty used for alfalfa cultivation. The injection well site will be installed adjacent to the Dogwood OEC, within the Heber Complex. All sites and roads would be returned to a natural state or arable state.

28. Describe relationship of the interim uses than mining and the ultimate physical condition to:

(a) Imperial County Zoning Ordinance

(b) Imperial County General Plan

All sites are zoned as A-2-G-SPA and are within the County's geothermal overlay zone, which allows for major geothermal energy projects. The proposed facilities and uses are consistent with the Imperial County General Plan and Zoning/Land Use Elements.

29. Notarized statement that all owners of the possessory interest in the land have been notified of the proposed uses or potential uses identified in Item No. 25 (see Attachment "A").

The Applicant (Heber Field Company) is the sole owner of all property proposed for development

30. Describe soil conditions and proposed topsoil salvage plan.

Soils are presently cultivating alfalfa, and consists of silty clays and loams. Approximately 18 inches of topsoil will be excavated form th1 acre well pads and piled/stored for interim reclamation activities after well pad construction. After gravel is deposited and compacted, the piled topsoil would be used as backfill and spreading material.

31. Describe the methods, their sequence and timing, to be used in bringing the reclamation of the land to its end state. Indicate on map (Items Nos. 24 and 25) or on diagrams as necessary. Include discussion of the pertinent items listed below.

(a) Backfilling and grading

(b) Stabilization of slopes

(c) Stabilization of permanent waste dumps, tailings, etc.

(d) Rehabilitation of pre-mining drainage

(e) Removal, disposal or utilization of residual equipment, structure, refuse, etc.

(f) Control and disposal of contaminants, especially with regard to surface runoff and ground water

(g) Treatment of streambeds and streambanks to control erosion and sedimentation

(h) Removal or minimization of residual hazards

(i) Resoiling, revegetation with evidence that selected plants can survive given the site's topography, soil and climate:

See Attachment D.

32. If applicant has selected a short term phasing of his reclamation, describe in detail the specific reclamation to be accomplished during the first phase:

Interim reclamation would consist of replacing stored topsoil on areas that were disturbed for well pad construction but are not needed for operations. Reclamation activities at the conclusion of the facilities' life cycle would focus on returning the lands to a natural or arable state. These activities would not affect any future mining, agricultural, or geothermal operations on the site or in the vicinity.

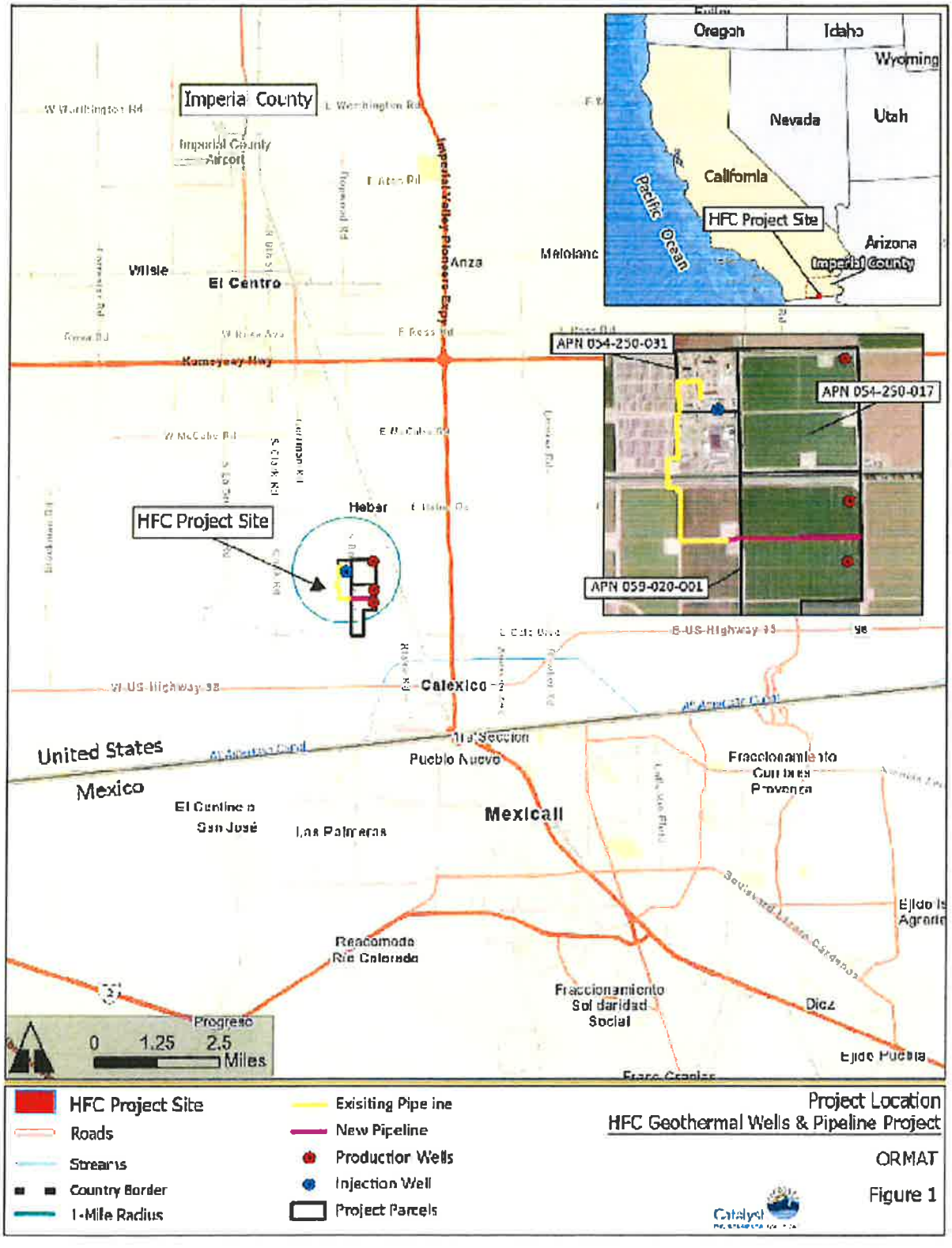
33. Describe how reclamation of this site in this manner may affect future mining at this site and in the surrounding area:

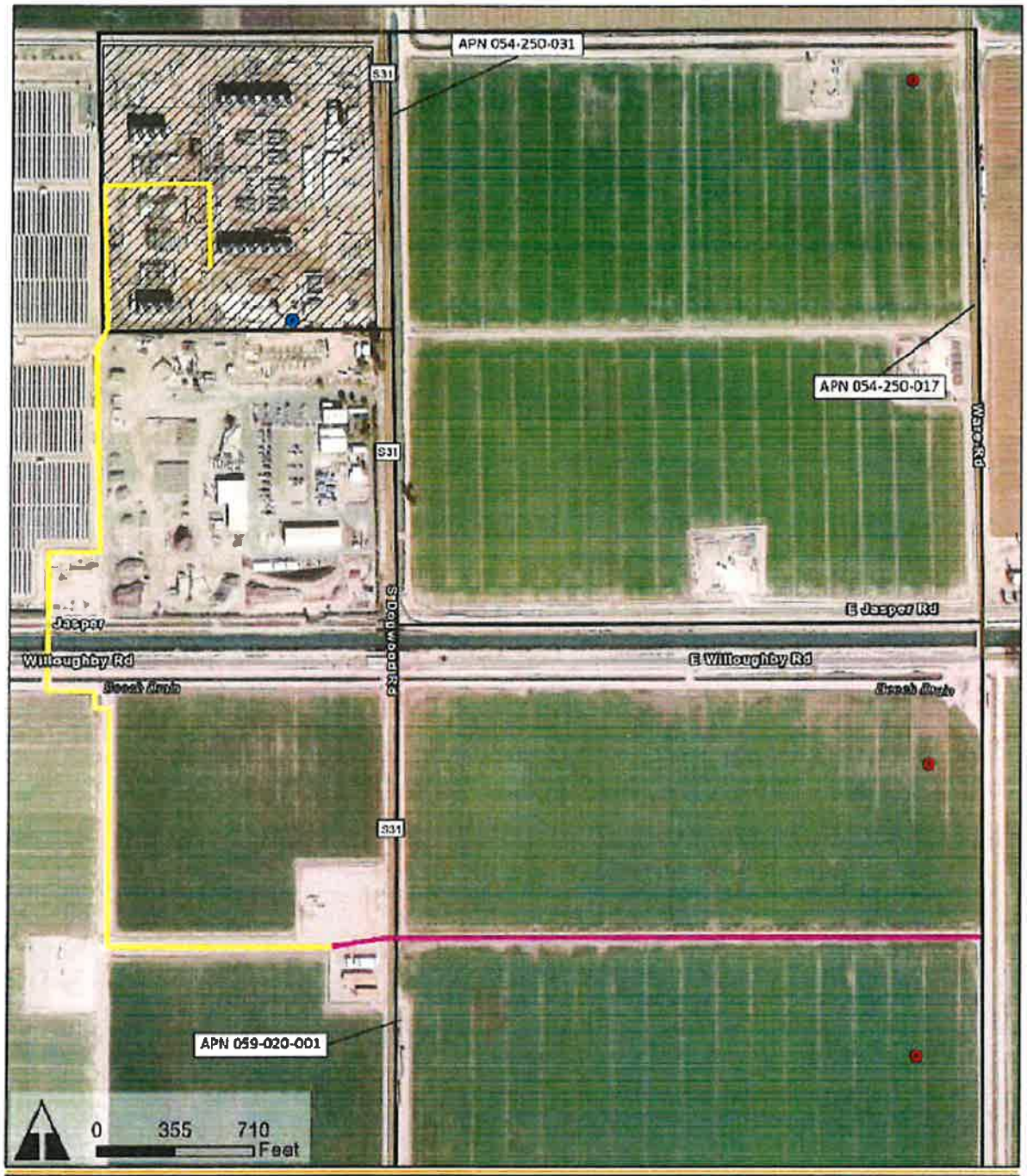
The wells would be plugged and abandoned in accordance with all CalGem regulations and protocols. The safe abandonment of the wells will ensure that future mining at these sites will not be significantly impacted.

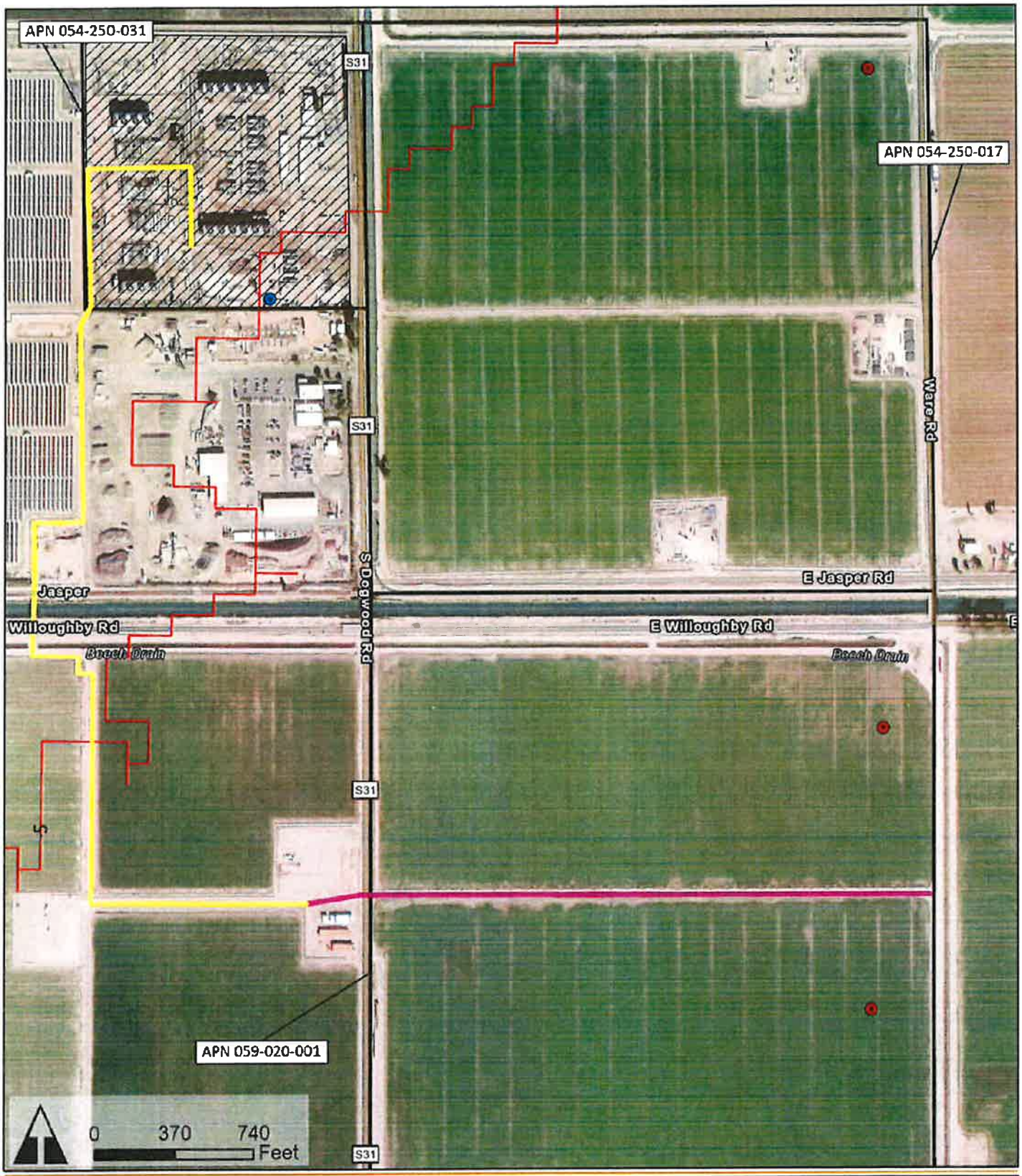
34. Notarized statement that the person submitting the plan accepts responsibility for reclaiming the mined lands in accordance with the Reclamation Plan (Attachment "B"):
Attached.

35. Include Reclamation Cost Calculations as Attachment "C":
Attached.

36. Describe proposed Revegetation Plan (attach as "Attachment D" if necessary):
The wells would be abandoned in accordance with CalGem regulations and protocols. All remaining surface facilities would be removed. The well pads would be reclaimed with weed-free soil. The sites would be reseeded with a seed mix authorized by Imperial County, or returned to an arable state for cultivation. See Attachment D.


Imperial County
Oregon
Idaho
Wyoming
Nevada
Utah
California
Pacific Ocean
HFC Project Site
Arizona
Imperial County
Wilsie
El Centro
Anza
Meloland
Heber
APN 054-250-031
APN 054-250-017
APN 059-020-001
HFC Project Site
Calexico
United States
Mexico
Mexicali
Pueblo Nuevo
Progreso
0 1.25 2.5 Miles
HFC Project Site
Roads
Streams
Country Border
1-Mile Radius
Exisiting Pipe ine
New Pipeline
Production Wells
Injection Well
Project Parcels
Project Location
HFC Geothermal Wells & Pipeline Project
ORMAT
Figure 1


APN 054-250-031
APN 054-250-017
APN 059-020-001
S31
S31
S31
Dogwood Rd
Ware Rd
E Jasper Rd
E Willoughby Rd
Willoughby Rd
0
355
710
Feet
Legend
Heber Geothermal Energy Complex
Exisiting Pipeline
New Pipeline
Injection Well
Production Wells
Proposed Facilities
HFC Geothermal Wells and Pipeline Project
ORMAT
Figure 2
Catalyst



Legend

- Heber Geothermal Energy Complex
- Project Parcels
- Exisiting Pipeline
- New Pipeline
- Production Wells
- Injection Well

Site Topography
HFC Geothermal Wells and Pipeline Project

ORMAT

Catalyst

ATTACHMENT "A"

STATEMENT OF NOTIFICATION

I, the undersigned, have notified all owners of the possessory interest in the land of the proposed use (s) or potential uses identified in Item No. 26 of the Reclamation Plan.

Signed this 28th day

of June, 2023.

Operator or Operator's Agent

MAIN OFFICE: 801 Main Street El Centro, CA 92243 (760) 482-4236 FAX: (760) 353-8338 E-MAIL: planning@imperialcounty.net
ECON. DEV. OFFICE: 836 Main Street El Centro, CA 92243 (760) 482-4900 FAX: (760) 337-8907

ACKNOWLEDGMENT

STATE OF NEVADA)
)
COUNTY OF WASHOE)

On June 26, 2023, before me, a Notary Public, personally appeared Elizabeth Helms, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the attached **STATEMENT OF NOTIFICATION** and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person or entity on behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Notary Public

ANGELA MICKIEL ARGUELLO
NOTARY PUBLIC
STATE OF NEVADA
COUNTY OF WASHOE
No. 97-2924-2 MY APPT. EXPIRES AUGUST 11, 2025

ATTACHMENT "B"

STATEMENT OF RESPONSIBILITY

I, the undersigned, hereby agree to accept full responsibility for reclaiming all mined lands as described and submitted herein with any modifications requested by the County of Imperial as conditions of approval.

Signed this 28th day

of June, 2023.

Operator or Operator's Agent

ACKNOWLEDGMENT

STATE OF NEVADA)
)
COUNTY OF WASHOE)

On June 20, 2023, before me, a Notary Public, personally appeared Elizabeth Helms, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the attached **STATEMENT OF RESPONSIBILITY** and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person or entity on behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

ANGELA MICKIEL ARGUELLO
NOTARY PUBLIC
STATE OF NEVADA
COUNTY OF WASHOE
No. 07-2024-2 MY APPT. EXPIRES AUGUST 11, 2025

Notary Public

ATTACHMENT "C"

RECLAMATION COST ANALYSIS

MAIN OFFICE: 801 Main Street El Centro, CA 92243 (760) 482-4236 FAX: (760) 353-8338 E-MAIL: planning@imperialcounty.net
ECON. DEV. OFFICE: 836 Main Street El Centro, CA 92243 (760) 482-4900 FAX: (760) 337-8907

Catalyst
ENVIRONMENTAL SOLUTIONS

Reclamation Cost Estimate for Heber Field Company Geothermal Wells and Pipeline Project

Date: June 20, 2023

RE: **Reclamation Cost Estimate for the Heber Field Company Geothermal Wells and Pipeline Project**

This cost estimate has been prepared for the Heber Field Company Geothermal Wells and Pipeline Project and provides a general estimate to perform well abandonment and site reclamation/revegetation for up to six geothermal production well pads and one geothermal injection well (sited within the existing Heber Geothermal Energy Complex site).

Geothermal Well Abandonment

- Cost of Abandoning Six Injection Wells

  6 wells x 200 feet[1] x $16.10/foot[2] = **$19,320**

- Cost of Abandoning One Injection Well

  1 well x 200 feet[1] x $16.10/foot[2] = **$3,220**

  TOTAL: $22,540

Site Reclamation and Revegetation

- Cost of Reclaiming 7 acres

  $10,235[2] (first acre) + $33,810 ($5,635/acre[2] for 6 acres) = **$44,045**

TOTAL RECLAMATION COST ESTIMATE: $66,585

References

[1] California Department of Conservation Oil, Gas, and Geothermal Resources. April 2019. California Code of Regulations, Section 1723. Available online at: https://www.conservation.ca.gov/index/Documents/DOGGR-SR-1%20Web%20Copy.pdf

[2] New Mexico Energy, Minerals, and Natural Resources Department. 2013. Guidance for Estimating Reclamation Costs. Available online at:
http://www.emnrd.state.nm.us/MMD/MARP/documents/MMD_Part3FAGuidelines_Sept2013.pdf

Reclamation estimates provided in this document were increased by 15% to account for six years of inflation and potential contingency costs.

ATTACHMENT "D"

REVEGATION PLAN

(REVISED MARCH 25, 2005)
JH/lh/S:/forms_lists/reclamation plan aplication

Revegetation Plan for Heber Field Company Geothermal Wells and Pipeline Project

Date: June 20, 2023

From: Catalyst Environmental Solutions (on behalf of ORMAT)

RE: **Revegetation Plan for the HFC Geothermal Wells and Pipeline Project**

INTRODUCTION

The Heber Field Company LLC (Applicant; wholly owned subsidiary of Ormat Technologies, Inc. [Ormat]) proposes to develop up to six geothermal production wells, one geothermal injection well, and approximately 4,500 linear feet of new pipeline (Project) that will support the proposed Dogwood Ormat Energy Converter (OEC), which also has a pending Conditional Use Permit (CUP) application with Imperial County. Proposed developments would occur on APN 059-020-001 and APN 054-250-017, immediately east and southeast of the existing Heber geothermal energy complex located at 855 Dogwood Road, Heber, CA. The Project site(s) is within the Imperial County Geothermal Overlay Zone that allows for Major Geothermal Projects to be permitted via a CUP process (Imperial County General Plan; Renewable Energy and Transmission Element of County of Imperial General Plan, 2015).

This Revegetation Plan Application has been prepared as part of the CUP Application and Reclamation Plan Application for the Heber Field Company Geothermal Wells and Pipeline Project and pursuant to Imperial County's municipal code.

Project Location and Site Description

Three of the proposed production wells would be located on APN 059-020-001 and APN 054-250-017 – one well would be on APN 054-250-017 adjacent to an existing well pad and the other two wells would be sited on APN 059-020-001 (Figure 1 below). Three production wells are yet to be sited but will be located within the same APNs. The one injection well would be located adjacent to the Dogwood OEC, within the existing HGEC. All proposed facilities are located within the Imperial County Geothermal Overlay Zone that allows for *Major Geothermal Projects* (Imperial County General Plan; Renewable Energy and Transmission Element of County of Imperial General Plan, 2015) (**Figure 1 - Site Location** below).

The production well sites are presently used for alfalfa cultivation and geothermal energy operations (injection well at HGEC). Surrounding land uses in the Project vicinity are primarily for industrial facilities, energy facilities, and agricultural cultivation. Agricultural operations are present throughout the immediate Project area. Geothermal well pads and pipelines and Imperial Irrigation District (IID) irrigation canals are also present throughout the Project vicinity.

Reclamation, Abandonment, and Revegetation Schedule

Reclamation, abandonment, and revegetation activities would commence at the closure of the Heber 2 Geothermal Energy Complex in 2049, approved by Imperial County. Activities would commence after all solar and energy facilities have been dismantled and removed from the site. The sites would be returned to a natural or arable state, using weed free soils. The sites would be reseeded with a County approved seed mix. If necessary, reseeding would be held off until the appropriate season (e.g. fall, spring). Activities would take approximately four to six months to complete.

Site Preparation

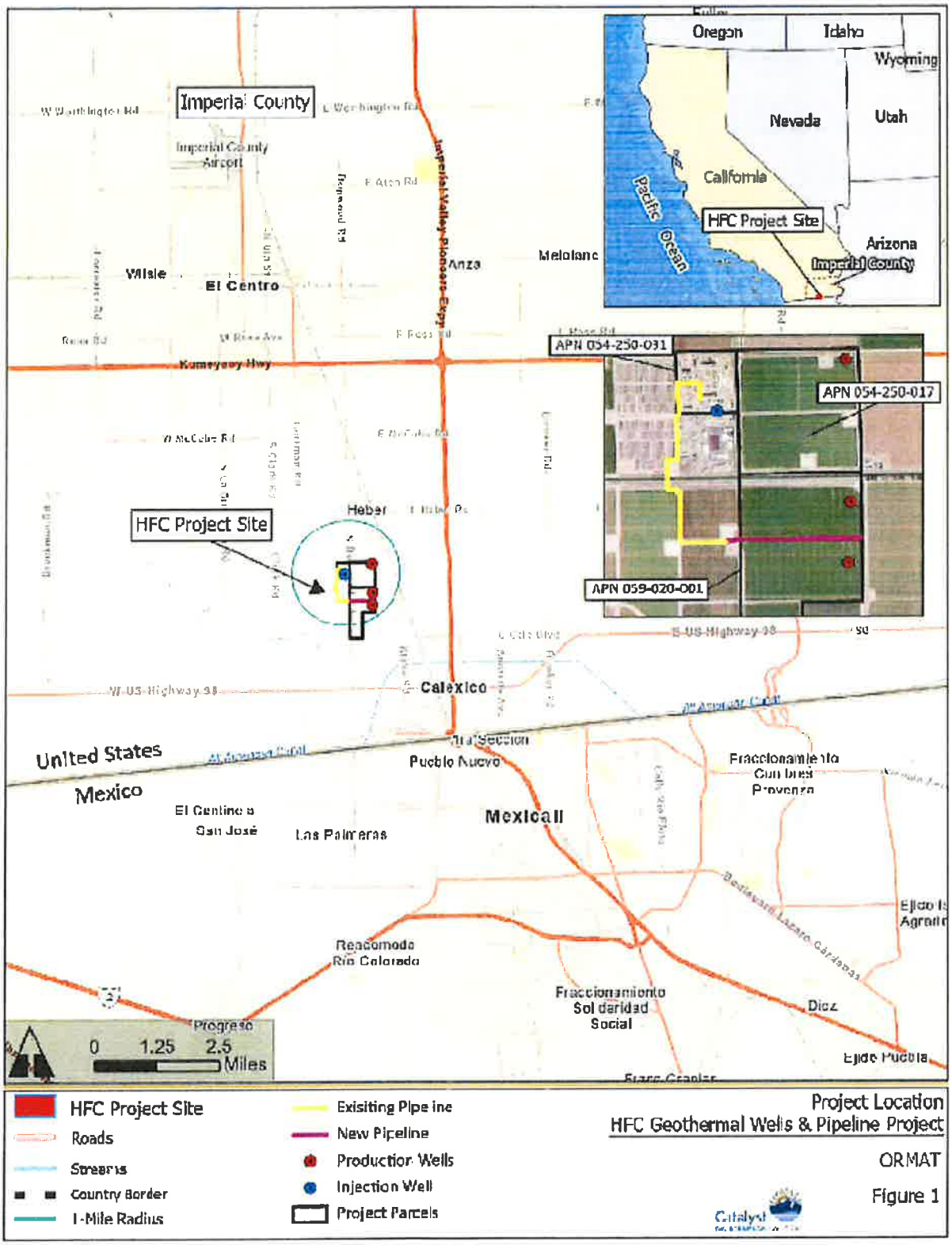
After all geothermal wells have been plugged and facilities are removed from the site, any soil piles or grades will be evened out by an excavator. The site is near zero elevation and is very flat and absent of topography. Reclamation activities will mimic the existing grade of the site and not introduce a new gradient/slope to the area. The site will then be rolled with a soil aerator/loosener. After site reclamation, topsoil will be transported to the site and deposited evenly across the site.

Selection of Plant Materials

The production well sites are presently used for alfalfa cultivation. The surrounding area is dominated by agricultural production and no natural areas are in the immediate vicinity of the Project Site. The applicant will reseed the entire site with a seed mix approved by Imperial County or return the land to an arable state for cultivation once more.

Irrigation and Maintenance

Revegetation of the site will be maintained by a contractor every two weeks to conduct weeding, watering, and removing trash/debris. The site will be irrigated by water truck as necessary to establish the new vegetation.


Imperial County
Imperial County Airport
Imperial Valley Pioneers Expy
Anza
Meloland
Wisle
El Centro
Kumeyaay Hwy
Heber
HFC Project Site
Calexico
W US Highway 98
E US Highway 98
United States
Mexico
Pueblo Nuevo
Mexicali
El Centinela
San José
Las Palmeras
Fraccionamiento Cumbres Provenza
Reacomodo Río Colorado
Fraccionamiento Solidaridad Social
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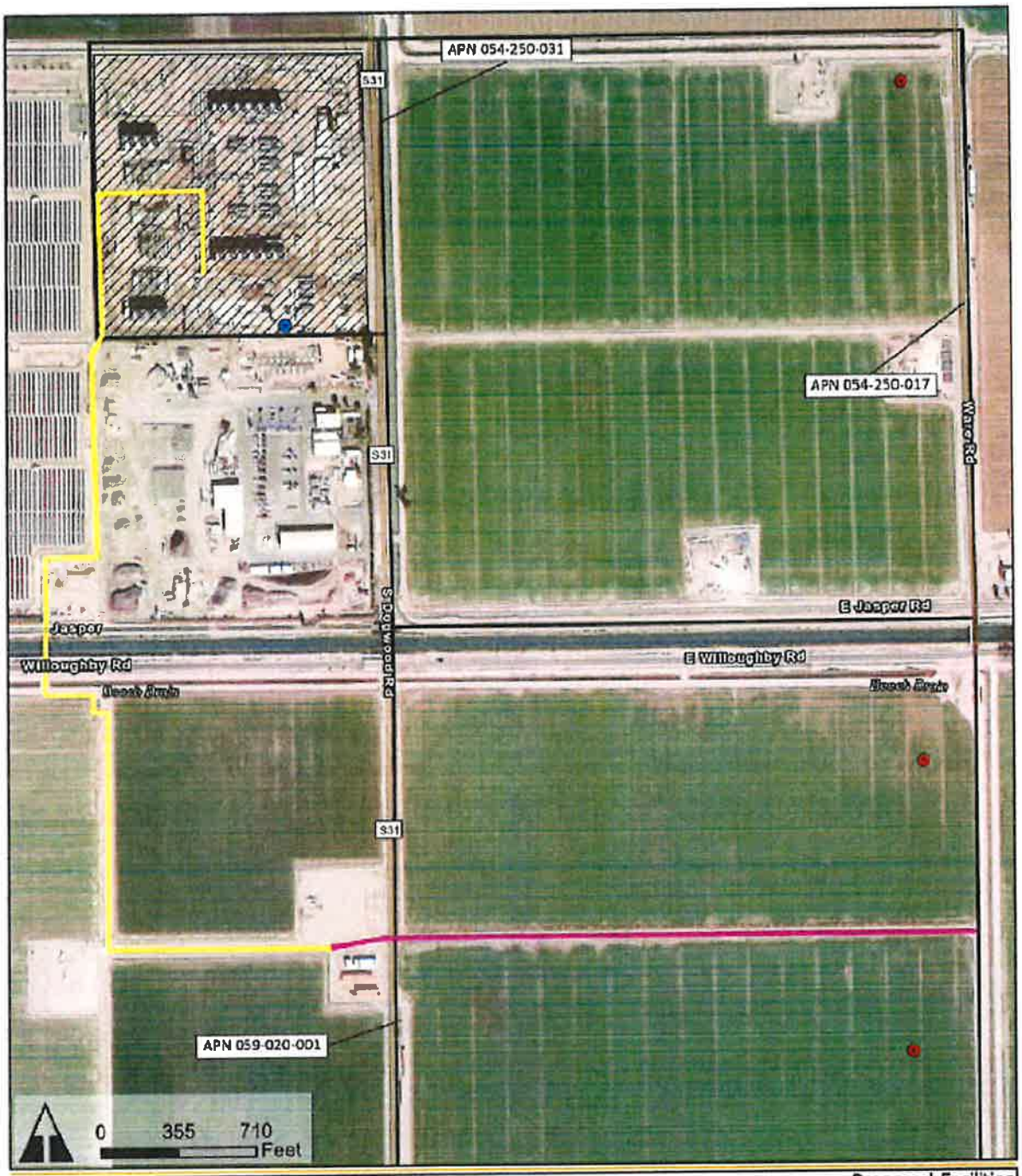
Díaz
Ejido Puebla
0 1.25 2.5 Miles
Oregon
Idaho
Wyoming
Nevada
Utah
California
Pacific Ocean
HFC Project Site
Arizona
Imperial County
APN 054-250-031
APN 054-250-017
APN 059-020-001
HFC Project Site
Roads
Streams
Country Border
1-Mile Radius
Exisiting Pipe ine
New Pipeline
Production Wells
Injection Well
Project Parcels
Project Location
HFC Geothermal Wells & Pipeline Project
ORMAT
Figure 1
Catalyst



Legend

- Heber Geothermal Energy Complex
- Exisiting Pipeline
- New Pipeline
- Injection Well
- Production Wells

Proposed Facilities
HFC Geothermal Wells and Pipeline Project
ORMAT
Figure 2

Catalyst

COMMENT LETTERS

COUNTY EXECUTIVE OFFICE

Miguel Figueroa
County Executive Officer
miguelfigueroa@co.imperial.ca.us
www.co.imperial.ca.us

County Administration Center
940 Main Street, Suite 208
El Centro, CA 92243
Tel: 442-265-1001
Fax: 442-265-1010

January 22, 2024

TO: Luis Valenzuela, Planning and Development Services Department

FROM: Rosa Lopez, Executive Office

SUBJECT: Request for Comments – OrHeber3, LLC Project / CUP#23-0020, #23-0021, 23-0022; APN 054-250-031 & 059-020-001

The County of Imperial Executive Office is responding to a request for comments: OrHeber3, LLC Project / CUP#23-0020, #23-0021, 23-0022; APN 054-250-031 & 059-020-001. The Executive Office would like to inform the developer of conditions and responsibilities of the applicant seeking Conditional Use Permits (CUPs). The conditions commence prior to the approval of an initial grading permit and subsequently continue throughout the permitting process. This includes, but not limited to:

- Sales Tax Guarantee. The permittee is required to have a Construction Site Permit reflecting the project site address for all proposed projects, allowing all eligible sales tax payments are allocated to the County of Imperial, Jurisdictional Code 13998. The permittee will provide the County of Imperial a copy of the CDTFA account number and sub-permit for its contractor and subcontractors (if any) related to the jobsite. Permittee shall provide in written verification to the County Executive Office that the necessary sales and use tax permits have been obtained, prior to the issuance of any grading permits.
- Construction/Material Budget: The permittee will provide the County Executive Office individual project construction materials budget: an official construction materials budget or detailed budget outlining the construction and materials cost for the processing facility on permittee letterhead.
- At developers cost, the County Executive Office shall hire a third-party consultant to produce a Fiscal and Economic Impact Analysis & Job and Employment Analysis (FEIA & JEIA) for the individual CUPs prior to project being placed on Planning Commission meeting.
- Public Service Agreement. The developer shall enter into a Public Service Agreement with the County of Imperial for the individual CUPs.

Should there be any concerns and/or questions, do not hesitate to contact me.

Office of the Agricultural Commissioner
Sealer of Weights and Measures
852 Broadway, El Centro CA 92243

Jolene Dessert
Commissioner / Sealer

Rachel Garewal
Asst. Commissioner / Sealer

January 23, 2024

Luis Valenzuela, Planner II
Planning & Development Services Department
County of Imperial
801 Main Street
El Centro, CA 92243

Re: orHeber 3 LLC, Second Imperial Geothermal Company LLC, Heber Field Company LLC CUP23-0020/021/022

Dear Mr. Valenzuela:

Our department received and reviewed the documents pertaining to CUP #23-0020/21/22 as submitted by orHeber 3 LLC, Second Imperial Geothermal Company LLC, Heber Field Company LLC. The applicant is proposing a geothermal plant and solar energy facility; 7MW parasitic solar facility, underground distribution line and project substation for CUP23-0020. The applicant also proposes to develop a 15-MW solar energy facility that will provide a parasitic load to the existing Heber 2 geothermal power plant (project) for CUP23-0021. Finally, for CUP 23-0022 the applicant proposes to develop up to six geothermal production wells, one geothermal injection well, and approximately 4,500 linear feet of new pipeline (project) that will support the proposed Dogwood OEC. The project is located at 855 Dogwood Rd. Heber, CA 92249.

Any plans to mitigate farmland taken out of production through the use of easements must ensure that the mitigating farm ground is in farmable condition. If the mitigation plan involves a Parceling Project, any parcels to remain in farming must align with existing infrastructure such as canals, delivery ditches, and surface & subsurface drainage systems. Mitigating farmland must be maintained in farmable condition, including repairs as needed to the infrastructure.

This project will require an ongoing Pest Management Plan to mitigate negative impacts to surrounding farmland from pests such as insects, vertebrates, weeds, and plant pathogens. The plan must be submitted to our office for approval prior to the issuance of a grading or building permit, whichever occurs first. Attached are the requirements that your company will need to meet.

APN 059-020-001 is currently designated as Farmland of Statewide Importance, as per the California Department of Conservation, Farmland Mapping and Monitoring Program (FMPP). Projects constructed on farm ground will also require a reclamation plan that would return the land to its pre-constructed agricultural condition at the conclusion or abandonment of the project. The reclamation plan needs to include a written description of the crop history of each field, water delivery system, drainage system, physical infrastructure, the parties responsible for conducting reclamation, and a detailed description of the recycling, and/or disposal of all solar arrays, inverters, transformers and other structures on each of the sites. The plan must be submitted to our office for approval prior to the issuance of a grading permit.

If you or the applicant has any questions, please contact me at 442-265-1500.

Respectfully,

Mayo Sandy for

Jolene Dessert
Agricultural Commissioner

Office of the
Agricultural Commissioner
Sealer of Weights and Measures

Carlos Ortiz
Agricultural Commissioner
Sealer of Weights and Measures

Jolene Dessert
Asst. Agricultural Commissioner
Asst. Sealer of Weights and Measures

Pest Management Plan Requirements for Solar Projects

The Project Shall:

- Maintain a Pest Management Plan until reclamation is complete.
- Develop and implement a Pest Management Plan that will reduce negative impacts to surrounding (not necessarily adjacent) farmland.
- Monitor for all pests including insects, vertebrates, weeds, and pathogens. Promptly control or eradicate pests when found, or when notified by the Agricultural Commissioner's office that a pest problem is present on the project site. The assistance of a licensed pest control advisor is recommended. All treatments must be performed by a qualified applicator or a licensed pest control business.
- "Control" means to reduce the population of common pests below economically damaging levels, and includes attempts to exclude pests before infestation, and effective control methods after infestation. Effective control methods may include physical/mechanical removal, biocontrol, cultural control, or chemical treatments.
- Use of "permanent" soil sterilants to control weeds or other pests is prohibited due to the fact that this would interfere with reclamation.
- Notify the Agricultural Commissioner's office immediately regarding any suspected exotic/invasive pest species as defined by the California Department of Food Agriculture (CDFA) and the United States Department of Agriculture (USDA). Request a sample be taken by the Agricultural Commissioner's Office of a suspected invasive species. Eradication of exotic pests will be done under the direction of the Agricultural Commissioner's Office and/or CDFA.
- Obey all pesticide use laws, regulations, and permit conditions.
- Allow access by Agricultural Commissioner staff for routine visual and trap pest surveys, compliance inspections, eradication of exotic pests, and other official duties.
- Ensure that all project employees that handle pest control issues are appropriately trained and certified, that all required records are maintained and available for inspection, and that all permits and other required legal documents are current.
- Maintain records of pests found and treatments or pest management methods used. Records should include the date, location/block, project name (current and previous if changed), and methods used. For pesticides include the chemical(s) used, EPA Registration numbers, application rates, etc. A pesticide use report may be used for this.
- Submit a report of monitoring, pest finds, and treatments, or other pest management methods to the Agricultural Commissioner quarterly within 15 days after the end of the previous quarter, and upon request. The report is required even if no pests were found or treatment occurred. It may consist of a copy of all records for the previous quarter, or may be a summary letter/report as long as the original detailed records are available upon request.

Reimbursement

- The project shall reimburse the Agricultural Commissioner's office for the actual cost of investigations, inspections, or other required non-routine responses to the site that are not funded by other sources.