# DRAFT
# ENVIRONMENTAL IMPACT REPORT
# FOR THE
# ENERGY SOURCE MINERAL ATLIS PROJECT
# IMPERIAL COUNTY, CALIFORNIA

*Prepared for:*

**COUNTY OF IMPERIAL**
Planning and Development Services Department
801 Main Street
El Centro, California 92243
(442) 265-1736

*Prepared by:*

**CHAMBERS GROUP, INC.**
9620 Chesapeake Drive, Suite 202
San Diego, California 92123
(949) 261-5414

**June 2021**

**TABLE OF CONTENTS**

**Section** **Page**

**ES EXECUTIVE SUMMARY ..... ES-1**

**1.0 INTRODUCTION ..... 1.0-1**

**2.0 PROJECT DESCRIPTION ..... 2.0-1**

**3.0 ENVIRONMENTAL SETTING ..... 3.0-1**

**4.0 ENVIRONMENTAL IMPACT ANALYSIS ..... 4.0-1**
4.1 AIR QUALITY ..... 4.1-1
4.2 BIOLOGICAL RESOURCES ..... 4.2-1
4.3 CULTURAL RESOURCES ..... 4.3-1
4.4 ENERGY ..... 4.4-1
4.5 GEOLOGY AND SOILS ..... 4.5-1
4.6 GREENHOUSE GASES ..... 4.6-1
4.7 HAZARDS AND HAZARDOUS MATERIALS ..... 4.7-1
4.8 HYDROLOGY AND WATER QUALITY ..... 4.8-1
4.9 NOISE ..... 4.9-1
4.10 TRANSPORTATION ..... 4.10-1
4.11 TRIBAL CULTURAL RESOURCES ..... 4.11-1
4.12 UTILITIES AND SERVICES SYSTEMS ..... 4.12-1

**5.0 ALTERNATIVES ANALYSIS ..... 5.0-1**

**6.0 OTHER CEQA CONSIDERATIONS ..... 6.0-1**
6.1 EFFECTS NOT FOUND TO BE SIGNIFICANT ..... 6.0-1
6.2 IRREVERSIBLE ENVIRONMENTAL CHANGES ..... 6.0-14
6.3 GROWTH INDUCING IMPACTS ..... 6.0-15
6.4 SIGNIFICANT UNAVOIDABLE IMPACTS ..... 6.0-16

**7.0 REFERENCES ..... 7.0-1**

**8.0 REPORT PREPARATION ..... 8.0-1**

**9.0 ACRONYMS AND ABBREVIATIONS ..... 9.0-1**

**LIST OF APPENDICES**

**APPENDIX A** **Initial Study and Environmental Analysis for the Energy Source Mineral ATLiS Project, December 2020, Chambers Group, Inc., NOP, and NOP Comment Letters.**

**APPENDIX B** **Air Quality Assessment Hudson Ranch Mineral Recovery, County of Imperial, June 17, 2021, Ldn Consulting, Inc.**

**APPENDIX C** **Biological Technical Report (BTR) for the Energy Source Mineral Project Imperial County, California, December 2020, Chambers Group, Inc.**

**APPENDIX D** **Archaeological and Paleontological Assessment Report for the Energy Source Mineral, LLC Project, Calipatria, Imperial County, California, January 2021, Chambers Group, Inc.**

**APPENDIX E** **Geotechnical Report, Proposed Mineral Extraction Facility, 409 West McDonald Road, Calipatria, California, October 2019, LandMark Consultants, Inc.**

**APPENDIX F** **Phase I Environmental Site Assessment, Hudson Ranch Geothermal Plant, 409 West McDonald Road, Calipatria, California, August 2020, LandMark Consultants, Inc.**

**APPENDIX G** **Hudson Ranch Greenhouse Gas Screening Letter – County of Imperial, June 6, 2021, Ldn Consulting, Inc.**

**APPENDIX H** **Energy Calculations, April 2021, Vista Environmental.**

**APPENDIX I** **Noise Worksheets, April 27, 2021, Vista Environmental.**

**APPENDIX J** **Water Supply Assessment – Energy Source Minerals, LLC, April 21, 2021, Dubose Design Group.**

**APPENDIX K** **Traffic Impact Analysis, Hudson Ranch Mineral Recovery, County of Imperial, California, June 22, 2021, Linscott Law & Greenspan Engineers.**

**APPENDIX L** **AB 52 Tribal Consultation**

## LIST OF TABLES


| Table | | Page |
|---|---|---|
| ES-1 | SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES | ES-4 |
| 1.0-1 | REQUIRED EIR CONTENTS | 1.0-3 |
| 3.0-1 | RELATED PROJECTS | 3.0-4 |
| 4.0-1 | ENVIRONMENTAL IMPACT ANALYSIS | 4.0-1 |
| 4.1-1 | DESIGNATIONS/CLASSIFICATIONS FOR THE PROJECT AREA | 4.1-3 |
| 4.1-2 | AMBIENT AIR QUALITY MONITORING SUMMARY | 4.1-5 |
| 4.1-3 | ICAPCD THRESHOLDS OF SIGNIFICANCE | 4.1-6 |
| 4.1-4 | CONSTRUCTION-RELATED CRITERIA POLLUTANT EMISSIONS | 4.1-7 |
| 4.1-5 | OPERATIONAL-RELATED SUMMER CRITERIA POLLUTANT EMISSIONS | 4.1-7 |
| 4.1-6 | OPERATIONAL-RELATED WINTER CRITERIA POLLUTANT EMISSIONS | 4.1-7 |
| 4.2-1 | GENERAL PLAN CONSISTENCY | 4.2-5 |
| 4.2-2 | CRITERIA FOR EVALUATING SENSITIVE SPECIES POTENTIAL FOR OCCURRENCE (PFO) | 4.2-6 |
| 4.3-1 | GENERAL PLAN CONSISTENCY | 4.3-8 |
| 4.3-2 | PREVIOUSLY RECORDED CULTURAL RESOURCES WITHIN THE STUDY AREA | 4.3-10 |
| 4.4-1 | GENERAL PLAN CONSISTENCY | 4.4-5 |
| 4.5-1 | KNOWN FAULTS OR SEISMIC ZONES WITHIN A 45-MILE RADIUS OF THE PROJECT | 4.5-2 |
| 4.5-2 | GENERAL PLAN CONSISTENCY | 4.5-6 |
| 4.6-1 | GLOBAL WARMING POTENTIALS, ATMOSPHERIC LIFETIMES, AND ABUNDANCES OF GHGS | 4.6-2 |
| 4.6-2 | PROPOSED PROJECT CONSTRUCTION-RELATED GHG EMISSIONS | 4.6-11 |
| 4.6-3 | PROPOSED PROJECT OPERATIONS-RELATED GHG EMISSIONS | 4.6-12 |
| 4.6-4 | BUSINESS-AS-USUAL OPERATIONS-RELATED GHG EMISSIONS | 4.6-12 |
| 4.6-5 | CONSISTENCY WITH CARB'S 2017 SCOPING PLAN MEASURES FOR INDIVIDUAL PROJECTS | 4.6-13 |
| 4.7-1 | CONTAMINATED SITES WITHIN 10 MILES OF THE PROJECT SITE | 4.7-2 |
| 4.7-2 | GENERAL PLAN CONSISTENCY | 4.7-10 |
| 4.8-1 | GENERAL PLAN CONSISTENCY | 4.8-6 |
| 4.9-1 | FTA PROJECT EFFECTS ON CUMULATIVE NOISE EXPOSURE | 4.9-3 |
| 4.9-2 | CONSISTENCY WITH COUNTY GENERAL PLAN | 4.9-5 |
| 4.9-3 | ROADWAY NOISE IMPACT ZONES | 4.9-7 |
| 4.9-4 | PROPERTY LINE NOISE LIMITS | 4.9-7 |
| 4.9-5 | CONSTRUCTION EQUIPMENT NOISE CHARACTERISTICS AND NOISE LEVELS AT NEAREST HOME | 4.9-11 |
| 4.9-6 | EXISTING YEAR WITH PROJECT CONSTRUCTION TRAFFIC NOISE CONTRIBUTIONS | 4.9-13 |
| 4.9-7 | EXISTING YEAR WITH PROJECT OPERATIONAL TRAFFIC NOISE CONTRIBUTIONS | 4.9-13 |
| 4.9-8 | CUMULATIVE PROJECTS WITH PROJECT OPERATIONAL TRAFFIC NOISE CONTRIBUTIONS | 4.9-14 |
| 4.10-1 | EXISTING TRAFFIC VOLUMES | 4.10-4 |
| 4.10-2 | EXISTING INTERSECTION OPERATIONS | 4.10-4 |
| 4.10-3 | INTERSECTION LOS & DELAY RANGES | 4.10-5 |
| 4.10-4 | GENERAL PLAN CONSISTENCY | 4.10-7 |

4.10-5 CONSTRUCTION TRIP GENERATION ..... 4.10-10
4.10-6 DAY-TO-DAY OPERATIONS TRIP GENERATION ..... 4.10-10
4.10-7 EXISTING PLUS CONSTRUCTION INTERSECTION OPERATIONS ..... 4.10-12
4.10-8 EXISTING PLUS CONSTRUCTION STREET SEGMENT OPERATIONS ..... 4.10-13
4.10-9 EXISTING PLUS PROJECT INTERSECTION OPERATIONS ..... 4.10-13
4.10-10 EXISTING PLUS CONSTRUCTION STREET SEGMENT OPERATIONS ..... 4.10-14
4.10-11 VMT PER EMPLOYEE COMPARISON AND THRESHOLD ..... 4.10-15
4.10-12 CUMULATIVE PLUS PROJECT INTERSECTION OPERATIONS ..... 4.10-16
4.10-13 CUMULATIVE PLUS CONSTRUCTION STREET SEGMENT OPERATIONS ..... 4.10-17
4.10-14 ALTERNATIVE INTERSECTION ANALYSIS ..... 4.10-17
4.11-1 GENERAL PLAN CONSISTENCY ..... 4.11-3
4.12-1 IMPERIAL COUNTY WASTE DISPOSAL SITES ..... 4.12-3
4.12-2 GENERAL PLAN CONSISTENCY ..... 4.12-11
4.12-3 NONAGRICULTURAL WATER DEMAND IN IID WATER SERVICE AREA, 2015-2055 (KAF PER YEAR) ..... 4.12-13
4.12-4 IID SYSTEM OPERATIONS CONSUMPTIVE USE WITHIN IID WATER SERVICE AREA AND FROM AAC AT MESA LATERAL 5 TO IMPERIAL DAM, 2019 ..... 4.12-13
4.12-5 IID HISTORIC AND FORECASTED CONSUMPTIVE USE FOR NON-AGRICULTURAL LAND USES ..... 4.12-14
4.12-6 PROJECT WATER USES (AFY) ..... 4.12-17
4.12-7 PROJECT WATER SUMMARY ..... 4.12-17
4.12-8 AMORTIZED PROJECT WATER SUMMARY ..... 4.12-17
4.12-9 COUNTY OF IMPERIAL LANDFILLS IN VICINITY OF PROJECT SITE ..... 4.12-20
5.0-1 COMPARISON OF ALTERNATIVES – PROJECT OBJECTIVES ..... 5.0-6
5.0-2 COMPARISON OF ENVIRONMENTAL ISSUES ..... 5.0-7

## LIST OF FIGURES

**Figure** **Page**

1.0-1 THE ENVIRONMENTAL REVIEW PROCESS ..... 1.0-2
2.0-1 PROJECT LOCATION AND VICINITY ..... 2.0-5
2.0-2 SITE PLAN ..... 2.0-6
3.0-1 LOCATIONS OF RELATED PROJECTS IN IMPERIAL COUNTY ..... 3.0-5

# EXECUTIVE SUMMARY

## ES.1 INTRODUCTION

This Draft Environmental Impact Report (Draft EIR or DEIR), prepared in accordance with the California Environmental Quality Act (CEQA), addresses potential environmental effects associated with the development of a commercial lithium hydroxide production plant within the Salton Sea geothermal field in Imperial County, California. The DEIR provides an overview of the Project and considered alternatives, identifies the anticipated environmental impacts from the Project and the alternatives, and identifies mitigation measures designed to reduce the level of significance of any impact.

## ES.2 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

The primary purpose of the CEQA process is to inform the public and decision makers as to the potential impacts of a project and to allow an opportunity for public input to ensure informed decision-making by the Lead Agency. CEQA requires all State and local government agencies to consider the environmental effects of projects over which they have discretionary authority. CEQA also requires each public agency to mitigate or avoid the significant environmental impacts resulting from proposed projects, when feasible, and to identify a range of feasible alternatives to the proposed project that could reduce those environmental effects.

Under CEQA, an EIR analyzes the impacts of an individual activity or specific project and focuses primarily on changes in the environment that would result from that activity or project. The Draft EIR must include the contents required by CEQA and the CEQA Guidelines and examine all phases of the project, including planning, construction, operation, and any reasonably foreseeable future phases.

## ES.3 PROJECT DESCRIPTION

Energy-Source Minerals, LLC (Applicant) is proposing to construct and operate a commercial lithium hydroxide production plant within the Salton Sea geothermal field in Imperial County (County), California (Project). The facility (ALTiS Plant) will process geothermal brine from the neighboring Hudson Ranch Power I Geothermal Plant (HR1) to produce lithium hydroxide as well as zinc and manganese products which would be sold commercially. Project facilities would be built on three parcels privately owned by Hudson Ranch Power I LLC in the County of Imperial: APNs 020-100-025, 020-100-044, 020-100-046. The Project site is zoned M-2-G-PE (Medium Industrial /Geothermal Overlay), and the County General Plan designates the Project site as Agriculture land use.

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

## ES.4 INTENDED USES OF THIS EIR

This Draft EIR examines the environmental impacts of the Proposed Project. It is the intent of this Draft EIR to enable the County, other responsible agencies, and interested parties to evaluate the environmental impacts of the Proposed Project and identify feasible measures to mitigate such impacts, thereby enabling them to make informed decisions with respect to the requested entitlements.

The CEQA Guidelines require an EIR to include a statement briefly describing the intended uses of the EIR, including a list of agencies expected to use the EIR in their decision-making and the list of the permits and other approvals required to implement the Project.

The County will use this Draft EIR to provide information on the potential environmental effects of the following proposed actions:

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

## ES.5 PROJECT OBJECTIVES

The Proposed Project has the following objectives:

- To produce quantities of lithium, manganese, zinc, and other strategic minerals from geothermal brine for commercial sale
- To collocate near a geothermal flash plant to minimize the distance required to pipe the brine between the geothermal plant and the mineral extraction plant
- To provide a supplemental domestic source of lithium, a designated critical material identified by the U.S. Department of Energy
- To minimize and mitigate any potential impact to sensitive environmental resources within the Project area

## ES.6 SUMMARY OF ALTERNATIVES AND ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an EIR describe a range of reasonable alternatives to the Proposed Project, or to the location of the Proposed Project, which could feasibly avoid or lessen any significant environmental impacts while substantially attaining the basic objectives of the project. An EIR should also evaluate the comparative merits of the alternatives.

Only one alternative was considered feasible and analyzed in this analysis. A comparison of the Project's impacts and the No Project Alternative impacts is shown in Table 5.0-2. The No Project Alternative would be considered the environmentally superior alternative, as it would avoid or reduce all of the potential impacts associated with construction and operation of the Project. Additionally, the No Project Alternative would not allow for full utilization of the existing HR1 site and would not allow for a secondary extraction process to extract additional minerals prior to injection back into the ground. The No Project Alternative

would not meet most of the Project objectives including that it would not (1) produce quantities of lithium, manganese, zinc, and other strategic minerals from geothermal brine for commercial sale; (2) collocate a mineral extraction plant near a geothermal flash plant to minimize the distance required to pipe the brine between the geothermal plant and the mineral extraction plant; or (3) provide a supplemental domestic source of lithium, a designated critical material identified by the U.S. Department of Energy. Furthermore, by not producing lithium under the No Project Alternative, the need for lithium production to meet certain technical processing needs would remain and may result in future mining projects other than and potentially with greater impacts than the Proposed Project.

CEQA Guidelines requires that, if the No Project Alternative is determined to be the environmentally superior alternative, an environmentally superior alternative must also be identified among the remaining alternatives. However, reducing the Project size and relocating the Project to another site in the area were deemed to be infeasible alternatives. Thus, the only environmentally superior alternative identified is the No Project Alternative.

## ES.7 TABLE OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

A summary of the potential environmental impacts of the Proposed Project is provided below for each topic addressed in this Draft EIR. Table ES-1 summarizes the significance of the impacts of the Project based on the information and analysis in Chapter 4.0 of this Draft EIR.

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| ***Air Quality*** | | | |
| **Threshold a) Conflict with or obstruct implementation of the applicable air quality plan?** | | | |
| Both construction and operational emissions created from the Proposed Project would be within their respective ICAPCD thresholds. According to the ICAPCD Handbook, projects that are within the ICAPCD thresholds are consistent with the regional air quality plans. Furthermore, the standard mitigation measures provided in the ICAPCD Handbook have been incorporated into the Project Description for the Proposed Project as Project Design Features (see Section 2.5), and the Proposed Project will be required to implement all of the ICAPCD Regulation VIII, fugitive dust control measures during construction and operation of the Proposed Project. Furthermore, any stationary sources of emissions operated on site will be required to adhere to ICAPCD Rule 207, New and Modified Stationary Source Review and Rule 201 that require permits to construct and operate stationary sources. Therefore, the Proposed Project would not conflict with or obstruct implementation of the applicable air quality plans. | Less than Significant | No Mitigation Required. | Less than Significant |
| **Threshold b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard?** | | | |
| The standard mitigation measures from the ICAPCD Handbook for both construction and operations have been incorporated into the Project Description as Project Design Features (see Section 2.5 of the Project Description). Furthermore, the Proposed Project would be required to implement all of the ICAPCD Regulation VIII, fugitive dust control measures during construction and | Less than Significant | No Mitigation Required. | Less than Significant |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| operation of the Proposed Project. Furthermore, any stationary sources of emissions operated on site will be required to adhere to ICAPCD Rule 207, New and Modified Stationary Source Review and Rule 201 that require permits to construct and operate stationary sources. Therefore, the Proposed Project would result in a less than significant cumulatively considerable net increase of any criteria pollutant. | | | |
| ***Biological Resources*** | | | |
| **Threshold 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?** | | | |
| No special status plant species have potential to occur within the Project site. However, one special status wildlife species, the burrowing owl, does have the potential to occur. The burrowing owl is a California SSC. Approximately 10 artificial burrowing owl burrows are located within 130 feet west of the Project boundary and were installed as mitigation for other projects in the surrounding area. One burrowing owl was observed foraging within the southwest portion of the Project site during the biological reconnaissance-level survey. The artificial burrows are outside the Project boundary and will be avoided during construction activities; nonetheless, the potential for impacts to the burrowing owl during construction and operation of the Project may exist. With implementation of Mitigation Measures BIO-1 through BIO-5, impacts to burrowing owls would be less than significant.<br>No impacts to jurisdictional waters/wetlands are anticipated; therefore, a USACE 404 permit, State 401 | Potentially Significant | BIO-1: The Applicant shall ensure that prior to and during construction, onsite occupied burrows shall be avoided during nesting season (February 1 – August 31).<br>BIO-2: The Applicant shall conduct a preconstruction survey within 30 days of ground-breaking activities to identify any burrowing owls on site.<br>BIO-3: If burrowing owls are found within the Project site, a Burrowing Owl Mitigation Plan must be prepared by a qualified biologist and approved by CDFW prior to any ground disturbing activities.<br>BIO-4: The construction or site manager shall ensure that no construction occurs within 250 feet of the artificial burrows or other active or occupied burrows unless active or occupied burrows are sheltered with hay bales and monitored by a qualified biologist; if this is done, work may occur within 20 feet of active or occupied burrows. If qualified biologists observe burrowing owls agitation, work in the vicinity will stop. Additional | Less Than Significant |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| certification, or State Streambed Alteration Agreement will not be required for Project authorization. | | shelter materials can be added until burrowing owls remain calm during construction activities.<br>BIO-5: If passive relocation is required, it shall be done by a qualified biologist from September 1 to January 31 and will follow the CDFW Staff Report on Burrowing Owl Mitigation Guidelines (CDFW 2012). | |
| **Threshold 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 native wildlife nursery sites?** | | | |
| The Project site is not situated within a known migratory wildlife corridor or nursery site. Following construction of the Project, ground-dwelling wildlife will continue to be able to move locally through the area using the surrounding agricultural lands, undeveloped lands, and margins of the nearby irrigation canals. Additionally, no construction activities would occur within IID canals, drains, or ditches. | Less than Significant | No Mitigation Required. | Less than Significant |
| ***Cultural Resources*** | | | |
| **Threshold a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?**<br>**Threshold b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?** | | | |
| Based on the background research and results of the cultural pedestrian survey, Chambers Group does not recommend that any further archaeological testing or evaluation occur for any of the found archaeological sites prior to construction. Due to the highly disturbed nature of the Project site, archaeological monitoring is not required. Impacts to historical and archaeological resources would be less than significant. | Less than Significant | No Mitigation Required. | Less than Significant |
| **Threshold c) Would the project disturb any human remains, including those interred outside of formal cemeteries?** | | | |
| In the event of an unanticipated discovery of human remains, the Imperial County Medical Examiner-Coroner | Less than Significant | No Mitigation Required. | Less than Significant |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| would be notified immediately. If the human remains are determined to be prehistoric, the Medical Examiner-Coroner would notify the NAHC, which would notify a most likely descendant (MLD). The MLD would complete an inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials (NPS 1983). Compliance with these regulations would ensure impacts to human remains resulting from the Project would be less than significant. | | | |
| ***Energy*** | | | |
| **Threshold a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?** | | | |
| Construction activities associated with the Proposed Project would require limited electricity consumption that would not be expected to have an adverse impact on available electricity supplies and infrastructure. Therefore, the use of electricity during Project construction would not be wasteful, inefficient, or unnecessary. Since power lines currently exist in the vicinity of the Project site, it is anticipated that only nominal improvements would be required to IID distribution lines and equipment with development of the Proposed Project. Construction activities associated with the Project would be required to adhere to all State and ICAPCD regulations for off-road equipment and on-road trucks, which provide minimum fuel efficiency standards. As such, construction activities for the Proposed Project | Less than Significant | No Mitigation Required. | Less than Significant |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| would not result in the wasteful, inefficient, and unnecessary consumption of energy resources.<br>The Proposed Project would consume 51,840,000 kilowatt-hours per year of electricity. This equates to 1.56 percent of the electricity consumed annually in the County of Imperial. As such, the operations-related electricity use would be nominal when compared to current electricity usage rates in the County. The Project would consume 22,985 gallons of transportation fuel per year. This equates to 0.024 percent of the gasoline and diesel consumed in the County annually. As such, the operations-related petroleum use would be nominal when compared to current petroleum usage rates in the County. Additionally, the Project would comply with all federal, State, and County requirements related to the consumption of transportation energy, including CCR Title 24, Part 11, the CALGreen Code, which requires all new parking lots to provide preferred parking for clean air vehicles. | | | |
| **Threshold b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?** | | | |
| The Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. The applicable Renewable Energy and Transmission Element for the Project is included in the County's General Plan. | Less than Significant | No Mitigation Required. | Less than Significant |
| ***Geology and Soils*** | | | |
| **Threshold a) ii) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?** | | | |
| The Project site is considered likely to be subjected to moderate to strong ground motion from earthquakes in | Less than Significant | GEO-1: All grading operations and construction shall be conducted in conformance with the recommendations | Less than Significant |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| the region. In accordance with mitigation measure GEO-1, outlined below, the Project structural engineer shall confirm whether an exception applies to the Project. If none of the above exceptions apply, a qualified geo-engineer shall be consulted to perform a site-specific ground motion hazard analysis. Additionally, the Project shall adhere to all of the recommendations for construction and building as noted in the Preliminary Geotechnical Investigation and as summarized in GEO-1. With implementation of GEO-1, impacts resulting from seismic ground shaking would be less than significant. | | included in the Preliminary Geotechnical Report on the Project site that has been prepared by LandMark Geo-Engineers and Geologists (LandMark) in August 2020. Design, grading, and construction shall be performed in accordance with the recommendations of the project geotechnical consultant as summarized in a final written report, subject to review by the County, prior to commencement of grading activities.<br>A full description of recommendations in the Preliminary Geotechnical Investigation is provided in Section 4: Design Criteria of Appendix E. Recommendations are summarized below:<br><br>**Site Preparation:** The site shall be properly cleared and grubbed. Any excavations resulting from site clearing shall be sloped to a bowl shape to the lowest depth of disturbance and backfilled under the observation of the geotechnical engineer's representative. Prior to placing any fills, the surface 12 inches of soil should be uniformly moisture conditioned by disking and wetting to a minimum of optimum plus 2 to 8 percent and compacted to a minimum of 90 percent of ASTM D1557 maximum density. Onsite native clays placed as engineered fill should be uniformly moisture conditioned by disking and wetting or drying to optimum plus 2 to 8 percent and compacted in 6 inch maximum lifts to a minimum of 90 percent relative compaction. Clods shall be reduced by disking to a maximum dimension of 1.0 inch prior to being placed as fill. The existing surface soil within the Project shall be removed to the appropriate recommended depths. An engineered building support pad shall be placed below mat foundations. Aggregate shall be compacted to a minimum of 95 percent of ASTM D1557 maximum density at 2 percent below to 4 percent above | |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| | | optimum moisture. Imported fill soil shall be nonexpansive and should meet the Unified Soil Classification System (USCS) classifications of ML (nonplastic), SM, SP-SM, or SW-SM with a maximum rock size of 3 inches and no less than 5 percent passing the No. 200 sieve. The geotechnical engineer should approve imported fill soil sources before hauling material to the site. Imported fill should be placed in lifts no greater than 8 inches in loose thickness and compacted to a minimum of 95 percent of ASTM D1557 maximum dry density at optimum moisture ±2 percent. An engineered support pad consisting of 12 inches of Class 2 aggregate base shall be placed below mat foundations. The aggregate base shall be compacted to a minimum of 95 percent of ASTM D1557 maximum density at 2 percent below to 4 percent above optimum moisture. Structures that are not sensitive to settlements, not heavy loaded, or that can be economically replaced or repaired such as small tanks, pumps, and vessels, can be supported on shallow foundations on reinforced structural fill. The performance of structural fill with respect to resisting liquefaction failure mechanisms, and reducing some of the static differential settlements can be enhanced by reinforced the structural fill with geogrid fabrics. The native soils should be excavated from the designated foundation areas extending 5.0 feet beyond all exterior foundation lines to 3.0 feet below the planned bottom of foundation level. Exposed subgrade should be inspected by the geotechnical engineer and if found to be loose, shall be scarified to a depth of 8 inches, uniformly moisture conditioned to 2 to 8 percent above optimum and recompacted to a minimum of 90 percent of the maximum density determined in accordance with ASTM D1557 methods. A 6-ounce non-woven separation fabric equivalent to Mirafi 160N or equivalent should be placed over the subgrade prior to placing the | |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| | | reinforced structural fill. In areas other than the basin backfill which are to receive housekeeping slabs or area concrete slabs, the ground surface should be presaturated (20 percent minimum moisture content) to a minimum depth of 24 inches and then scarified to 8 inches, moisture conditioned to a minimum of 5 percent over optimum, and recompacted to a minimum of 90 percent of ASTM D1557 maximum density just prior to concrete placement. All site preparation and fill placement should be continuously observed and tested by a representative of a qualified geotechnical engineering firm. Full-time observation services during the excavation and scarification process is necessary to detect undesirable materials or conditions and soft areas that may be encountered in the construction area. Auxiliary structures such as free-standing or retaining walls should have footings extended to a minimum of 30 inches below grade. The existing soil beneath the structure foundation should be prepared in the manner described for the building pad except the preparation need only to extend 24 inches below and beyond the footing.<br>**Shallow Foundations, Structural Mats and Settlements:** The Project shall implement shallow spread footings and continuous wall footings to support the structures planned for offices, control rooms, and warehouses. Footings shall be founded on 3 feet of engineered granular fill as described in Appendix E. The foundations shall be designed using an allowable soil-bearing pressure of 2,000 pounds per square foot (psf). The allowable soil pressure shall be increased by one-third for short term loads induced by winds or seismic events. Resistance to horizontal loads shall be developed by passive earth pressure on the sides of footings and frictional resistance developed along the bases of footings and concrete slabs. Passive resistance to lateral earth pressure shall be calculated using an | |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| | | equivalent fluid pressure of 300 equivalent fluid pressure (pcf) (for imported sands) to resist lateral loadings. The top 1 foot of embedment shall not be considered in computing passive resistance unless the adjacent area is confined by a slab or pavement. An allowable friction coefficient of 0.35 (for imported sands) shall also be used at the base of the footings to resist lateral loading. Foundation movement under the estimated static (non-seismic) loadings and static site conditions shall not exceed 0.75 inch with differential movement of about two-thirds of total movement for the loading assumptions stated above when the subgrade preparation guidelines given above are followed. Seismically induced liquefaction settlement shall be on the order of less than 0.75 inch. Mat foundations for lightly loaded structures like pumps, small tanks, generators, etc., shall be designed using an allowable soil bearing pressure of 1,500 psf when the foundation is supported on 12 inches of compacted Class 2 aggregate base (95 percent of ASTM D1557 maximum density to ±2 percent of optimum moisture). The native soils supporting the concrete structural mat and compacted aggregate base shall be moisture conditioned and recompacted as specified in Appendix E. The allowable soil pressure shall be increased by one-third for short-term loads induced by winds or seismic events. Design criteria for these mat foundations are provided in Appendix E.<br>**Flexible Tank Foundations and Settlements:** The existing soils underlying the proposed tank area shall be removed to a depth of 36 inches below ground surface or a minimum of 24 inches below the bottom of the ring wall foundation (whichever is lower), extending to a minimum of 5 feet beyond the perimeter of the tank. Exposed subgrade shall be scarified to a depth of 8 inches, uniformly moisture conditioned to 2 to 8 percent above | |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| | | optimum moisture content, and recompacted to a minimum of 90 percent of the maximum density determined in accordance with ASTM D1557 methods. If soft conditions are encountered at the bottom of the excavation and subgrade compaction is not achievable, the native soil at the sub-excavation and footing excavation level shall be overlain by a woven geotextile stabilizing fabric (Mirafi HP 370 or equivalent). The area shall then be brought to finish grade with engineered fill consisting of the following components:<br>36 inches of reinforced crushed aggregate base<br>8 inches of crushed rock (1" x No. 4)<br>4 inches of oiled sand<br>The fill shall be crowned about 40 percent of the total center settlement to allow for differential settlement between the tank perimeter and center. If compaction of sub-excavation level is achievable, the 36 inches of aggregate base shall be placed in 8-inch maximum loose lifts and compacted to a minimum 95 percent of ASTM D1557 maximum density within 2 percent of optimum moisture. If bottom of excavation subgrade compaction is not achievable and the geotextile stabilizing fabric is utilized, the first 12-inch layer of aggregate base placed over the geotextile fabric shall be compacted to a minimum of 90 percent. The remaining engineered aggregate base fill shall be placed in 8-inch maximum loose lifts and compacted to a minimum 95 percent of ASTM D1557 maximum density within 2 percent of optimum moisture. The crushed rock tank underlayment shall meet the gradation requirements of ASTM C33, Size 57 (1" x No. 4 rock). The tank shall have a perimeter ring wall foundation which supports the tank wall and roof. The interior footings and the ring wall may be proportioned for a net load (in addition to the uniform tank liquid load) for dead load of roof weight (plus sustained live | |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| | | load). The minimum depth of the ring wall footing shall be 24 inches below the finished ground surface. The minimum footing width shall be 12 inches. Flexible connections such "Flex-Tend" expansion joints shall be used to connect exterior piping with the tank. The tank shall be preloaded and monitored for settlement prior to making piping connections. It may be necessary to readjust piping connections after the loading sequence. The estimated settlement for the different proposed diameter tanks with an imposed pressure load of 1,500 and 2,000 psf are included in Appendix E. If estimated settlements are excessive even for the flexible steel tanks and connections supported by the engineered fill, the existing soils underlying the clarifier tank shall be improved by soil mixing or soil replacement (sand/cement) with 48-inch diameter shafts. The minimum surface area replacement ratio shall be 20 percent. Following soil mixing, the area shall be brought to finish grade with engineered fill consisting of the following components:<br>36 inches of reinforced crushed aggregate base<br>8 inches of crushed rock (1" x No. 4)<br>4 inches of oiled sand<br>The fill may be crowned about 40 percent of the total center settlement to allow for differential settlement between the tank perimeter and center. Tank settlements with soil mixing improvement below the tank are shown in Appendix E.<br>**Soil Mixing (Rigid Mats):** The use of soil improvement like soil mixing with cement or soil replacement (sand/cement) shall be used to reduce settlement to tolerable limits. The highly plastic native clays were found not to mix well with conventional soil mixing augers (Hudson Ranch 1 Plant site), and imported sands may be required for soil-cement mixing. Structural mat foundations placed over the improved soil shall be used to support the various structural elements of the plant. Mats | |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| | | overlaying soil mixed columns shall be underlain by 3 feet of crushed aggregate base (Caltrans Class 2, 1-½-inch or ¾-inch grading). The existing soils shall be improved by soil mixing or soil replacement (sand/cement) with 48-inch diameter shafts. The minimum surface area replacement ratio shall be 20 percent. Soil-cement design shall be provided by a licensed specialty contractor.<br>**Auger Cast Piles**: Auger cast piles (cast-in-place grout with steel cage reinforcement) has been used successfully to provide deep foundations for heavily loaded and critical elements of industrial plants. Estimated capacities of 24- and 30-inch-diameter auger cast pile are provided in Appendix E. The structural capacity of the piles shall be verified by the structural engineer. The geotechnical engineer shall observe the auger cast pile drilling and electronic logs to evaluate each pile on a case-by-case basis.<br>**Driven Piles:** The use of driven steel pipes had been used successfully for elevated pipe rack supports. Special provisions for corrosion protection due to the corrosive nature of the subsurface soils shall be implemented. Steel-driven pipe for the elevated pipe rack supports have been preliminarily sized as 10-inch-diameter with a 0.5-inch-thick wall. Axial and lateral loads were applied at 2 feet above ground surface. Estimated axial and lateral capacities of a 10-inch-diameter driven steel pipe are provided in Appendix E. Complete documentation of the proposed pile driving hammer shall be submitted to the geotechnical engineer for approval prior to mobilization. Driving records shall be maintained on each pile. The numbers of blows required to drive a pile each foot shall be recorded. Driving energy necessary to insure development of full design capacity shall be established after each selection of the pile driver. The geotechnical engineer shall observe pile driving and | |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| | | evaluate each pile on a case-by-case basis. Pre-drilling of pilot holes for piles to a depth of half the pile depth shall be allowed without reduction in pile capacity.<br>**Concrete Mixes and Corrosivity:** A minimum of 6.5 sacks per cubic yard of concrete (4,500 pounds per square inch [psi]) of Type V Portland Cement with a maximum water/cement ratio of 0.45 (by weight) shall be used for concrete placed in contact with native soil on this Project (sitework including sidewalks, housekeeping slabs, and foundations). Admixtures may be required to allow placement of this low water/cement ratio concrete. Thorough concrete consolidation and hard trowel finishes shall be used due to the aggressive soil exposure. No metallic water pipes or conduits shall be placed below foundations. Foundation designs shall provide a minimum concrete cover of 5 inches around steel reinforcing or embedded components (anchor bolts, etc.) exposed to native soil. If the 5-inch concrete edge distance cannot be achieved, all embedded steel components (anchor bolts, etc.) shall be epoxy coated for corrosion protection (in accordance with ASTM D3963/A934) or a corrosion inhibitor, and a permanent waterproofing membrane shall be placed along the exterior face of the exterior footings. Additionally, the concrete shall be thoroughly vibrated at footings during placement to decrease the permeability of the concrete. A qualified corrosion engineer shall evaluate the corrosion potential on metal construction materials and concrete at the site to obtain final design recommendations.<br>**Embankment Construction and General Site Fill:** All areas to receive new fill for the embankments shall be stripped of all vegetation. The surface 12 inches of native soil shall be uniformly moisture conditioned to 2 to 8 percent above optimum moisture by disking and compacted in 6 inch | |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| | | maximum lifts to a minimum of 90 percent of ASTM D1557 maximum density. The embankment slopes shall be constructed no steeper than 3:1 (unless lined with concrete or high-density polyethylene/polyvinyl chloride [HDPE/PVC] sheeting) with a minimum crown width of 15 feet. Embankments shall be overbuilt by 6 inches and subsequently cut to the plan line and grade to remove loose material along the slope faces. Native cohesive soil from the site or adjacent land areas shall be used as general and embankment fill and as pond liner material. The fill soils shall consist of cohesive silty clay (CL) or clay (CH). The general and embankment fill shall be pulverized/disked to less than 1 inch maximum clod size, uniformly moisture conditioned to 2 to 8 percent over optimum, placed in 6-inch maximum lifts, and compacted to a minimum of 90 percent of ASTM D1557 maximum density.<br>**Excavations:** All site excavations shall conform to California Division of Occupational Safety and Health (Cal/OSHA) requirements for Type B soil. The contractor is solely responsible for the safety of workers entering trenches. Temporary excavations with depths of 4 feet or less shall be cut nearly vertical for short duration. Excavations deeper than 4 feet shall require shoring or slope inclinations in conformance to Cal/OSHA regulations for Type B soil. Surcharge loads of stockpiled soil or construction materials shall be set back from the top of the slope a minimum distance equal to the height of the slope. All permanent slopes shall not be steeper than 3:1 to reduce wind and rain erosion. Slopes protected with ground cover may be as steep as 2:1; however, maintenance with motorized equipment shall not be implemented at this inclination.<br>**Utility Trench Backfill:** Prior to placement of utility bedding, the exposed subgrade at the bottom of trench excavations shall be | |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| | | examined for soft, loose, or unstable soil. Loose materials at trench bottoms resulting from excavation disturbance shall be removed to firm material. If extensive soft or unstable areas are encountered, these areas shall be over-excavated to a depth of at least 2 feet or to a firm base and replaced with additional bedding material. Pipe zone backfill (i.e., material beneath and in the immediate vicinity of the pipe) shall consist of a 4- to 8 inch bed of ⅜-inch crushed rock, sand/cement slurry, and/or crusher fines (sand) extending to a minimum of 12 inches above the top of the pipe. If crushed rock is used for pipe zone backfill for utilities, the crushed rock material shall be completed surrounded by a 6 ounce non-woven filter fabric such as Mirafi 160N or equivalent. The filter fabric shall cover the trench bottom, sidewalls, and over the top of the crushed rock to inhibit the migration of fine material into void spaces in the crushed rock, which may create the potential for sinkholes or depressions to develop at the ground surface. Pipe bedding shall be in accordance with the pipe manufacturer's recommendations and local codes and/or bedding requirements for specific types of pipes. Native backfill shall be placed and compacted only after buried pipes are encapsulated with suitable bedding and pipe envelope material. Mechanical compaction is recommended; ponding or jetting shall not be allowed, especially in areas supporting structural loads or beneath concrete slabs supported on grade, pavements, or other improvements. All trench backfill shall be placed and compacted in accordance with recommendations provided above for engineered fill. The pipe zone material (crusher fines, sand) shall be compacted to a minimum of 95 percent of ASTM D1557 maximum density. Pipe deflection shall be checked not to exceed 2 percent of pipe diameter. Soils used for trench backfill shall be placed in maximum 6-inch lifts (loose) and | |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| | | compacted to a minimum of 90 percent of ASTM D1557 maximum density at a minimum of 4 percent above optimum moisture. Granular trench backfill used in building pad areas shall be plugged with a solid (no clods or voids) 2-foot width of native clay soils at each end of the building foundation to prevent landscape water migration into the trench below the building. Backfill soil of utility trenches within paved areas shall be uniformly moisture conditioned to a minimum of 4 percent above optimum moisture, placed in layers not more than 6 inches in thickness, and mechanically compacted to a minimum of 90 percent of the ASTM D1557 maximum dry density, except that the top 12 inches shall be compacted to 95 percent (if granular trench backfill).<br>**Seismic Design:** Designs shall comply with the latest edition of the CBC for Site Class D using the seismic coefficients given in Appendix E.<br>**Laydown Yard:** The new laydown yard shall consist of a minimum of 8.0 inches of Caltrans Class 2 aggregate base placed over 12 inches of moisture-conditioned native clay soil (minimum of 2 percent above optimum moisture) compacted to a minimum of 90 percent of the maximum dry density determined by ASTM D1557. Alternately, the access roads shall consist of 6 inches of aggregate base placed over 9 inches of lime-treated soil compacted to a minimum of 90 percent. Preliminary estimates of lime content required to stabilize the clay soils is 6 percent hydrated lime by weight of soil.<br>**Pavements:** Pavements shall be designed according to the 2020 Caltrans Highway Design Manual or other acceptable methods. The public agency or design engineer shall decide the appropriate traffic index for the site.<br>The Project structural engineer shall confirm whether an ASCE 7-16 Section 11.4.8 exception applies to the Project. If none of | |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| | | the exceptions apply, a qualified geo-engineer shall be consulted to perform a site-specific ground motion hazard analysis.<br>Development of building foundations and concrete flatwork shall include provisions for mitigating potential swelling forces and reduction in soil strength, which can occur from saturation of the soil. Typical measures considered to remediate expansive soil include:<br>Capping silt/clay soil with a non-expansive sand layer of sufficient thickness (3 feet minimum) to reduce the effects of soil shrink/swell<br>Moisture conditioning subgrade soils to a minimum of 5 percent above optimum moisture (ASTM D1557) within the drying zone of surface soils<br>Designing foundations to be resistant to shrink/swell forces of silt/clay soil<br>A combination of the methods described above. | |
| **iii) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?** | | | |
| According to the Preliminary Geotechnical Report, total induced settlements at the Project site are estimated to be less than ¼ inch should liquefaction occur. Additionally, ground failure in the form of small ground fissures, sand boil formation, and lateral spreading is unlikely because of the thickness of the overlying unliquefiable soil and the planar topography of the area. Based on the estimate of less than ¼ inch of liquefaction-induced settlements, no ground improvement or deep foundations are required to mitigate liquefaction settlement at the Project site. Impacts related to seismic-related ground failure would be less than significant. | Less than Significant | No Mitigation Required. | Less than Significant |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| **Threshold 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?** | | | |
| Collapsible soil generally consists of dry, loose, low-density material that has the potential to collapse and compact (decrease in volume) when subjected to the addition of water or excessive loading. Soils found to be most susceptible to collapse include loess (fine-grained wind-blown soils), young alluvium fan deposits in semi-arid to arid climates, debris flow deposits, and residual soil deposits. Due to the cohesive nature of the subsurface soils and shallow groundwater, the potential for hydro-collapse of the subsurface soils at the Project site is considered very low.<br>The Project is not located on a geologic unit or soil that is unstable or that would become unstable as a result of the Project. Impacts would be less than significant. | Less than Significant | No Mitigation Required. | Less than Significant |
| **Threshold d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?** | | | |
| The native surface clays likely exhibit moderate to high swell potential (Expansion Index, EI = 70 to 110) when correlated to Plasticity Index tests (ASTM D4318) performed on the native soils. The clay is expansive when wetted and can shrink with moisture loss (drying). Thus, mitigation measure GEO-1 would be implemented to reduce potential impacts related to expansive soils at the Project site to a less than significant level. | Potentially Significant | Implementation of Mitigation Measure GEO-1. | Less than Significant |
| **Threshold f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?** | | | |
| The Cultural Resources Assessment (Appendix D) determined that the Project has the potential to impact late Pleistocene to Holocene-age Lake Cahuilla Beds due | Potentially Significant | PALEO-1: Developer shall retain the services of a qualified paleontologist and require that all initial ground disturbing work be monitored by someone trained in | Less than Significant |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| to the high sensitivity of the Lake Cahuilla Beds and the potential for excavation activities extending down into undisturbed sediment. Although no recorded fossil localities have been identified within a 1-mile radius of the Project site, mitigation measures PALEO-1 through PALEO-5 would be implemented to ensure potential impacts to paleontological resources would be less than significant. | | fossil identification in monitoring contexts. The consultant shall provide a supervising paleontological specialist and a paleontological monitor present at the Project construction phase kickoff meeting.<br>PALEO-2: Just prior to commencing construction activities and thus prior to any ground disturbance in the Project Site, the supervising cultural resources specialist and cultural resources monitor shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the outset of the Project construction work phase, for which the lead contractor and all subcontractors shall make their personnel available. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to paleontological resources and maintain environmental compliance, and be performed periodically for new personnel coming on to the project as needed.<br>PALEO-3: The contractor shall provide the supervising paleontological resources specialist with a schedule of initial potential ground disturbing activities. A minimum of 48 hours shall be provided to the consultant of commencement of any initial ground disturbing activities such as vegetation grubbing or clearing, grading, trenching, or mass excavation.<br>A paleontological monitor shall be present onsite at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the supervising paleontologist, shall observe | |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| | | initial ground disturbing activities and, as they proceed, make adjustments to the number of monitors as needed to provide adequate observation and oversight. All monitors shall have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor shall maintain a daily record of observations as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.<br>The supervising paleontologist, paleontological monitor, and the lead contractor and subcontractors shall maintain a line of communication regarding schedule and activity such that the monitor is aware of all ground disturbing activities in advance in order to provide appropriate oversight.<br>PALEO-4: If paleontological resources are discovered, construction shall be halted within 50 feet of any paleontological finds and shall not resume until a qualified paleontologist can determine the significance of the find and/or the find has been fully investigated, documented, and cleared.<br>PALEO-5: At the completion of all ground disturbing activities, the consultant shall prepare a Paleontological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all prehistoric or historic archaeological finds, as well as providing follow-up reports of any finds to the SCIC, as required. | |
| ***Greenhouse Gases*** | | | |
| **Threshold a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?** | | | |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| The Proposed Project would have a 49.5-percent reduction in GHG emissions when compared to the BAU scenario without IID's implementation of the RPS. Since a 28.3-percent reduction is required, the Proposed Project would result in a less than significant impact. Furthermore, as detailed above, the Proposed Project would not exceed either the USEPA's 25,000-$MtCO_2e$ emissions threshold or ICAPCD Rule 903 20,000-$MtCO_2e$ emissions threshold, where exceedance of either threshold would require the Project to perform additional GHG emissions recordkeeping and reporting. | Less than Significant | No Mitigation Required. | Less than Significant |
| **Threshold b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?** | | | |
| With implementation of the Project Design Features committed to by the project applicant and Statewide regulatory requirements including the CALGreen building standards, the Proposed Project would be consistent with all feasible mitigation measure for individual projects provided in the CARB's 2017 Scoping Plan. Therefore, implementation of the Proposed Project would not conflict with any applicable plan that reduces GHG emissions. | Less than Significant | No Mitigation Required. | Less than Significant |
| ***Hazards and Hazardous Materials*** | | | |
| **Threshold a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?** | | | |
| During construction and operations of the Project, hazardous materials would be transported to and from the Project site. Traffic barriers would protect piping and tanks on the adjacent HR1 site from potential traffic hazards. The Applicant would be required to follow all applicable federal, State, and local laws and regulations. Further, transportation would be subject to licensing and | Less than Significant | No Mitigation Required. | Less than Significant |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| inspection by the California Highway Patrol. With adherence to the regulatory measures and requirements for hazardous materials, impacts would be less than significant. | | | |
| **Threshold b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?** | | | |
| During construction and operation of the Project, hazardous materials would be stored in chemical storage containers. Secondary containment would be provided in all petroleum hydrocarbon and hazardous material storage areas. In general, all areas where hazardous materials are stored would have concrete ponds, be bermed, or have curbs in order to prevent accidental releases. The Applicant would develop and implement a SWPPP and a Hazardous Materials Business Plan (HMBP) that would include procedures for the following: hazardous materials handling, use, and storage; emergency response; a spill prevention control and countermeasure (SPCC) plan; employee training; and reporting and recordkeeping. | Less than Significant | No Mitigation Required. | Less than Significant |
| **Threshold 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, create a significant hazard to the public or the environment?** | | | |
| The Phase I ESA determined that evaporite deposits containing potential hazardous substances have potential to be located around the abandoned carbon dioxide wells (mud pots) southwest of the Project site. The chemical characteristics of the deposits are unknown. However, no RECs are located within the Project site. Additionally, the Phase I ESA revealed de minimis conditions or environmental concerns in connection with the HR1 | Less than Significant | No Mitigation Required. | Less than Significant |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| property. Impacts associated with hazardous materials on the Project site would be less than significant. | | | |
| ***Hydrology and Water Quality*** | | | |
| **Threshold b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?** | | | |
| IID, as a water wholesaler, does not derive any of its supplies from groundwater (IWF 2012). Groundwater underlying the Imperial Valley is generally of poor quality and unsuitable for domestic or irrigation purposes; thus, the IID's only source of water is the Colorado River. Untreated Colorado River water will be supplied to the Project via the "O" Lateral, gate 32 and a new gate and connection via the "N" Lateral. The water supply will be under an IWSP Water Supply Agreement with IID and Schedule 7 General Industrial Use, which sets water rates. The Project will not decrease groundwater supplies or interfere with groundwater recharge; thus, impacts would be less than significant. | Less than Significant | No Mitigation Required. | Less than Significant |
| **Threshold e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?** | | | |
| The Project would not allow any offsite discharges that could violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. The Project would not conflict with or obstruct implementation of the CRB RWQCB's Water Quality Control Plan; therefore, impacts would be less than significant.<br>The Applicant is proposing to draw water from two IID laterals for the Project's operational water needs. IID, as a water wholesaler, does not derive any of its supplies from | Less than Significant | No Mitigation Required. | Less than Significant |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| groundwater (IWF 2012). Groundwater underlying the Imperial Valley is generally of poor quality and unsuitable for domestic or irrigation purposes; thus, the IID's only source of water is the Colorado River. Untreated Colorado River water will be supplied to the Project via the "O" Lateral, gate 32 and a new gate and connection via the "N" Lateral. Therefore, the Project would not conflict with or obstruct implementation of a groundwater management plan. | | | |
| ***Noise*** | | | |
| **Threshold a)** **Result in 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?** | | | |
| The proposed construction activities would be below the County's 75-dBA noise standard at the nearest home. Additionally, the construction noise levels would be below the lowest measured ambient noise level in the Project vicinity of 48.5 dBA Leq and would be below both the residential sound level limits provided in Section 90702.00 of the County's Municipal Code of 50 dB between 7 a.m. and 10 p.m. and 45 dB between 10 p.m. and 7 a.m.<br>The Proposed Project's temporary noise increases to the nearby homes from the generation of additional vehicular traffic during construction activities would not exceed the FTA's allowable increase thresholds detailed above. The effects of the Proposed Project's permanent noise increases to the nearby homes from the generation of additional vehicular traffic during operation of the Project would not exceed the FTA's allowable increase thresholds detailed above. Therefore, operation of the Proposed | Less than Significant | No Mitigation Required. | Less than Significant |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| Project would not result in a substantial permanent increase in ambient noise levels for the existing year conditions. Impacts would be less than significant. | | | |
| ***Transportation*** | | | |
| **Threshold a)** **Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?** | | | |
| The construction phase of the Project would generate a maximum of 375 ADT total. The employee and miscellaneous portion of the construction phase would generate a maximum of 300 ADT, with 74 trips during the AM peak hour and 72 trips during the PM peak hour. Approximately 15 trucks are estimated during construction of the Project. In this analysis, a Passenger Car Equivalent (PCE) of 2.5 is applied to truck trips to account for the reduced performance characteristics (stopping, starting, maneuvering, etc.) of heavy vehicles in the traffic flow, resulting in a maximum of 75 truck trips total. The capacity analyses performed for the key roadway segments and unsignalized and signalized intersections indicate that impacts would be considered less than significant during the construction or day-to-day operations of the Project. | Less than Significant | No Mitigation Required. | Less than Significant |
| **Threshold b)** **Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?** | | | |
| The VMT per employee for TAZ 5600, where the Project is located, is 20.84. The Project's VMT amount is 0.01 more than the significance threshold of 20.83; therefore, the Project is not 15 percent below the regional VMT average (Table 4.10-11). In accordance with OPR's Guidance for VMT, this concludes a significant transportation impact | Potentially Significant | TRA-1: A Commute Trip Reduction (CTR) program shall be implemented to discourage single-occupancy vehicle trips and encourage alternative modes of transportation such as carpooling, taking transit, walking, and biking. The CTR program could include features such as carpooling encouragement, ride-matching assistance, preferential carpool parking, half-time | Less than Significant |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| would result from the Project and mitigation measures are needed. A Commute Trip Reduction (CTR) program would be required by Mitigation Measure (MM) TRA-1 to encourage carpooling, ride-matching assistance, preferential carpool parking, half time transportation coordination, vanpool assistance, and bicycle end-trip facilities. With implementation of MM TRA-1, the potential significant impacts would be mitigated and impacts would be less than significant. | | transportation coordinator, vanpool assistance, and bicycle end-trip facilities (parking, showers, and lockers) and provide employees with assistance in using alternative modes of travel. | |
| **Threshold c) Substantially increases hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?** | | | |
| The Proposed Project would not directly result in any new roadways or design features and would not directly alter any existing roadways or design features. However, a significant safety impact could potentially occur from traffic going to the Project site if improvements are not implemented at the Highway 111/McDonald Road intersection. Mitigation Measure (MM) TRA-2 would require that Highway 111/McDonald Road intersection be improved to Caltrans' satisfaction prior to the Project's certificate of occupation, including the installation of a northbound left-turn pocket prior to the Project's opening utilizing one of the four intersection control methods (existing two-way stop, all-way stop, signal, roundabout) which was analyzed in an Intersection Control Evaluation (ICE). Providing a southbound right-turn lane was considered but rejected due to the low volumes. The maximum peak hour volume in this movement is 12 during construction and 7 during operations. With the implementation MM TRA-2, the potential significant | Potentially Significant | TRA-2: The Highway 111/McDonald Road intersection shall be improved to Caltrans' satisfaction prior to the Project's certificate of occupation, including the installation of a northbound left-turn pocket prior to the Project's opening, utilizing one of the four intersection control methods (existing two-way stop, all-way stop, signal, roundabout) which was analyzed in an Intersection Control Evaluation (ICE) analysis. | Less than Significant |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| impact would be fully mitigated; and impacts would be less than significant. | | | |
| ***Tribal Cultural Resources*** | | | |
| **Threshold a)** **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:**<br><br>**Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as define in Public Resources Code Section 5020.1(k), or**<br><br>**A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth is subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.** | | | |
| Based on the background research and results of the survey, Chambers Group archaeologists determined that the two newly discovered sites, 21268-001 and 21268-002, are unlikely to provide cultural value to any California Native American Tribes; and, since neither Tribe responded to the AB 52 consultation letters, do not require further archaeological testing or evaluation. No other sites listed or eligible for listing in a historical register were identified within or adjacent to the Project site.<br>Additionally, AB 52 letters were sent to the Fort Yuma – Quechan Indian Tribe and the Torres-Martinez Indian Tribe. Both Tribes had until December 9, 2020, to respond. As of February 2021, neither Tribe has responded to the AB 52 letters that were sent in the consultation process. | Less than Significant | No Mitigation Required. | Less than Significant |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| Based on the Cultural Resources Assessment and the lack of response from the tribes, the County has determined there are no known tribal cultural resources within the Project Site and impacts would be considered less than significant. | | | |
| ***Utilities and Service Systems*** | | | |
| **Threshold a)** **Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects?** | | | |
| No new facilities would be constructed for the purpose of water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications. Therefore, no significant environmental effects are expected to result. Impacts would be less than significant. | Less than Significant | No Mitigation Required. | Less than Significant |
| **Threshold b)** **Have sufficient water supplies available to serve the project from existing and reasonably foreseeable future development during normal, dry and multiple dry years?** | | | |
| The Project represents 14 percent of the unallocated supply set aside in the IWSP for nonagricultural projects and approximately 14 percent of forecasted future nonagricultural water demands planned in the Imperial IRWMP through 2055.The amount of water available and the stability of the IID water supply along with on-farm and system efficiency conservation and other measures being undertaken by IID and its customers ensure that the Project's water needs will be met for the next 30 years. When drought conditions exist within the IID water service area, as has been the case for the past decade or so, the water supply available to meet agricultural and nonagricultural water demands remains the same as | Potentially Significant | UTIL-1: If the IID does not receive its annual 3.1 maf water apportionment according to the QSA obligations of Colorado River water during the Project's 30-year lifespan, the Applicant shall work with IID to ensure any reduction in water availability can be managed by the Project. | Less than Significant |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| normal year water supply because IID continues to rely on its entitlement for Colorado River water. Due to the priority of their water rights and other agreements, drought affecting Colorado River water supplies causes shortages for Arizona, Nevada, and Mexico, not California or IID. Therefore, the likelihood that IID will not receive its annual 3.1 million AF apportionment under the QSA obligations of Colorado River water is low due to the high priority of the IID entitlement relative to other Colorado River contractors (see Appendix I for further details on the IID's water rights). If such reductions were to come into effect within the life of the 30-year Project, a significant impact would occur. If such reductions do occur, Mitigation Measure (MM) UTIL-1 would be implemented, requiring the Applicant to work with IID to ensure any reduction in water availability during the life of the Project can be managed. Therefore with implementation of MM UTIL-1, impacts would remain less than significant. | | | |
| **Threshold 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?** | | |
| The total combined staff of HR1 and the Project will be a maximum of 100 employees, requiring at most 500 gallons per day of capacity. This would leave a remaining 1,600 gallons per day to be processed by HR1 which would be sufficient capacity. Additionally, if needed, the Project would have access to the Calipatria Waste Water Treatment Plant and Holtville Waste Water Treatment Plant both of which have sufficient capacity for the Project in the foreseeable future. The sludge retained in the HR1 septic tank will continue to be pumped by licensed | Less than Significant | No Mitigation Required. | Less than Significant |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| contractors as needed and transported to the Calipatria or Holtville wastewater treatment plants.<br>The wastewater treatment plant serving the Project has adequate capacity for the Project; thus, impacts are less than significant. | | | |
| **Threshold 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?** | | | |
| All nonhazardous and hazardous wastes generated during Project construction and operation would be handled and disposed of in accordance with applicable laws, ordinances, regulations, and standards. Nonhazardous solid waste would be disposed of using a locally licensed waste hauling service, Allied Waste. Wastes that exceed CCR toxicity standards would be required to be trucked out of state to Arizona. If Arizona toxicity standards are exceeded, hazardous wastes would be sent to Idaho or Nevada. All facilities have available capacity to support the Project. Therefore, solid waste facilities have adequate permitted capacity for solid waste materials generated by the Project. Impacts would be less than significant. | Less than Significant | No Mitigation Required. | Less than Significant |
| **Threshold e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?** | | | |
| The Proposed Project would be operated in a manner that would be consistent with all source reduction and recycling goals set forth by the City to achieve compliance with the applicable regulatory plans consistent with the City's obligations under AB 939, including the Countywide Integrated Waste Management Plan for Imperial County, by appropriately distributing solid waste materials and recycling materials when feasible. | Less than Significant | No Mitigation Required. | Less than Significant |

**Table ES-1: Summary of Significant Impacts and Mitigation Measures**

| Project Impacts | Level of Significance before Mitigation | Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| Disposal of solid/hazardous wastes generated during Project construction and operations would be in compliance with local federal, State, and County regulations and disposed of at authorized facilities. Therefore, a less than significant impact would occur. | | | |