

**FINAL ENVIRONMENTAL IMPACT REPORT  
FOR THE  
HELL'S KITCHEN POWERCO 1 AND LITHIUMCO 1  
PROJECT  
IMPERIAL COUNTY, CALIFORNIA**

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**December 2023**

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## **EXECUTIVE SUMMARY**

### **E.S.1 INTRODUCTION**

This Environmental Impact Report (EIR), 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.

### **E.S.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 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.

This Final Environmental Impact Report (Final EIR/FEIR) has been prepared in accordance with the requirements of the CEQA Guidelines in Section 15132 which states that the Final EIR must contain:

- a) Comments and recommendations received on the draft EIR either verbatim or in summary.
- b) A list of persons, organizations, and public agencies commenting on the draft EIR.
- c) Responses of the Lead Agency to significant environmental points raised in the review and consultation process.
- d) Any other information added by the Lead Agency.

The response and evaluation to public comments is an important part of the CEQA process as it allows the opportunity to review and comment on the methods of analysis in the Draft EIR, the ability to detect omissions which may have occurred during the preparation of the Draft EIR, the ability to review of accuracy of the analysis in the Draft EIR, to share expertise, and identify public concerns.

### **E.S.3 Organization of the Final EIR**

The Final EIR incorporates the Draft EIR and Technical Appendices to the Draft EIR, and a response to the comment letters received in response to the Draft EIR. The Final EIR is comprised by the following sections:

Chapter 1 Project Overview: This section provides an introduction and summary of the Proposed Project and list of commenters for the Draft EIR.

Chapter 2 Response to Comments: This section contains a copy of the actual comments submitted during the public review period and provides response to each comment which is broken down by topic or paragraph.

Chapter 3 Draft EIR Revisions: This section includes a summary of the changes made to the Draft EIR. Any changes made to the Draft EIR are shown in ~~strikeout~~ (with a strike through the text) and **additions** (noted in bold with an underline) to identify the changes that have been made.

#### **E.S.4 PROJECT DESCRIPTION**

Controlled Thermal Resources (US) Inc. via its subsidiary Hell's Kitchen Geothermal, LLC is proposing the Hell's Kitchen PowerCo 1 (HKP1), and Hell's Kitchen LithiumCo 1 LLC is proposing the Hell's Kitchen LithiumCo 1 (HKL1) in Imperial County, California. HKP1 involves the development of a geothermal power plant that will produce up to 49.9 megawatts (MW) net of geothermal green energy. HKL1 involves development of mineral extraction and processing facilities capable of producing lithium hydroxide, silica and polymetallic products, and possibly boron compounds, for commercial sale. HKP1 and HKL1 (together referred to as the Proposed Project) will be constructed by Hell's Kitchen PowerCo 1 LLC and Hell's Kitchen LithiumCo 1 LLC respectively, both subsidiaries of Controlled Thermal Resources (US) Inc. (CTR) and will have shared facilities. Hell's Kitchen Operating Services LLC, also a subsidiary of Controlled Thermal Resources (US) Inc. will operate and maintain these facilities.

#### **E.S.5 PROJECT ACTIONS**

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

- Imperial County Planning Department – Conditional Use Permit
- Imperial County Planning Department – Zoning Variance
- Imperial County Planning Department – Development Agreement (if required)
- Imperial County Building Department – Building and Grading Permits
- Imperial County Public Works Department – Encroachment Permit(s)

#### **E.S.6 PROJECT OBJECTIVES**

The Proposed Project has the following objectives:

The HKP1 objectives include the following:

- To produce 49.9MW (net) of geothermal green energy from within CTR's geothermal lease area.
- To provide power to the Imperial Irrigation District and other potential off takers.
- To minimize and mitigate potential impacts to sensitive environmental resources while producing renewable energy and creating jobs.

The HKL1 objectives include the following:

- To provide a sustainable domestic source of lithium, a designated critical material identified by the U.S. Department of Energy.

- To extract and produce lithium hydroxide, silica, bulk sulfide, and polymetallic products for commercial sale from the geothermal brine within the Hell's Kitchen lease area.
- To minimize the distance between the geothermal power plant and lithium extraction plant for production efficiency and to reduce the extent of pipeline required to convey brine and steam to and from the geothermal power facility to the mineral extraction plant, therefore minimizing the overall industrial footprint of the combined power and mineral operations.
- To minimize and mitigate potential impacts to sensitive environmental resources within the Project area.

#### **E.S.7 SUMMARY OF ALTERNATIVES AND ENVIRONMENTALLY SUPERIOR ALTERNATIVE**

As previously discussed, 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. The No Project Alternative would not meet most of the Project objectives including that it would not provide a sustainable domestic source of lithium, a designated critical material identified by the U.S. Department of Energy, (2) produce 49.9MW (net) of geothermal green energy from within CTR's geothermal lease area.; or (3) minimize the distance between the geothermal power plant and lithium extraction plant for production efficiency and to reduce the extent of pipeline required to convey brine and steam to and from the geothermal power facility to the mineral extraction plant, therefore minimizing the overall industrial footprint of the combined power and mineral operations. Furthermore, the No Project Alternative may result in future 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.

#### **E.S.8 TABLE OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES**

The Table ES-1 on the following pages summarizes potential significant adverse impacts of the Proposed Project. Each resource area is summarized in Chapter 3.0. Impacts found to be significant are listed with proposed mitigation measures. The resulting impact after each mitigation is indicated, and cumulative impacts, if any, will be identified as required under CEQA.

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

| Project Impacts  | Level of Significance before Mitigation | Mitigation              | Level of Significance After Mitigation |
|--|---|-------------------------|--|
| <b>Aesthetics</b>  |   |                         |  |
| <b>Threshold a) Have a substantial adverse effect on a scenic vista or scenic highway?</b>   |   |                         |  |
| <p>Due to the distance of the Project site from the nearest scenic highway, the Proposed Project is not anticipated to have a substantial adverse effect on a scenic highway. Additionally, as shown in viewpoint 3 in Figure 4.1-4, the Proposed Project would not result in substantial adverse effect on a scenic highway because it would neither be located near a scenic highway nor would its presence interrupt the views seen along Highway 111.</p> <p>Viewpoints 1 and 2 show that the Proposed Project would affect the existing viewshed by partially blocking the mountain ranges to the north of the Project, such as the Orocopia and Chocolate Mountains to the north/northwest. While the mountains within Imperial County provide visual character to the area, the Project site is not a designated scenic viewpoint and therefore, the presence of Project features would not be considered to have a substantial adverse effect on a scenic vista. Furthermore, the Sonny Bono Salton Sea Wildlife Refuge is located 4 miles southwest of the Project site. Due to its distance from the Project site, the construction and operation of the Proposed Project would not result in substantial adverse effect to its use.</p> | Less than Significant                   | No Mitigation Required. | Less than Significant                  |
| <b>Threshold c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surrounding? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?</b>  |   |                         |  |
| The construction and operation of the Proposed Project would not substantially degrade the existing visual   | 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 |
|---|---|--|--|
| <p>character of the area. While the Project is not designated to contain high visual quality, it would be designed and constructed to be consistent with the existing power plants in the region so as to maintain visual consistency. Furthermore, the proposed uses of the site would be consistent with the permitted uses of the area as the land use ordinance by the County authorizes the development and operation of renewable energy projects with a CUP. Impacts therefore are less than significant.</p>  |   |  |  |
| <b>Air Quality</b>  |   |  |  |
| <b>Threshold a) Conflict with or obstruct implementation of the applicable air quality plan?</b>  |   |  |  |
| <p>Both construction and operational emissions created from the Proposed Project would not 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 2.10), 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. The Proposed Project would have the potential to conflict with or obstruct implementation of the applicable air quality plans. However, the Project</p> | <p>Potentially Significant</p>          | <p><b>MM-AQ-1</b> Prior to commencing construction, the Project proponent shall submit a Dust Control Plan to the Imperial County Air Pollution Control District (ICAPCD) for approval identifying all sources of PM10 and PM2.5 emissions and associated mitigation measures during the construction and operational phases of the Project. The Project proponent shall submit a Construction Notification Form to the ICAPCD ten days prior to the commencement of any earthmoving activity. This plan would provide a detailed list of control measures to reduce fugitive emissions from construction and operational activities, including but not limited to watering of unpaved roads, vehicle speed limits, windbreaks, transport container covers, and cleaning and sweeping procedures. The Dust Control Plan submitted to the ICAPCD shall meet all applicable requirements for control of fugitive dust emissions, including the following measures designed to achieve the no greater than 20-percent opacity performance standard for dust control:</p> <ul style="list-style-type: none"> <li>All disturbed areas, including bulk material storage, that is not being actively used shall be effectively stabilized; and</li> </ul> | <p>Less than Significant</p>           |

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

| Project Impacts  | Level of Significance before Mitigation | Mitigation   | Level of Significance After Mitigation |
|--|---|--|--|
| <p>would implement mitigation measures AQ-1 and AQ-2 to reduce CO and NOx emissions. Table 4.2 7 shows that once mitigated, all criteria pollutants would be reduced to a level that is less than significant. Therefore, with implementation of the above mitigation measure, impacts to air quality plans would be reduced to a level less than significant.</p> |   | <p>visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps, or other suitable material, such as vegetative groundcover. Bulk material is defined as earth, rock, silt, sediment, and other organic and/or inorganic material consisting of or containing PM with 5 percent or greater silt content.</p> <ul style="list-style-type: none"> <li>• All on- and off-site unpaved roadway segments being used for 50 or more average vehicle trips per day shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by the use of restricting vehicle access, paving, chemical stabilizers, dust suppressants, and/or watering.</li> <li>• All unpaved traffic areas one acre or more in size with 75 or more average vehicle trips per day shall be effectively stabilized, and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering.</li> <li>• All track-out or carry-out, which includes bulk materials that adhere to the exterior surfaces of motor vehicles and/or equipment (including tires) that may then fall onto the pavement on paved public roads, shall be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road in an urban area.</li> <li>• Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water or chemical stabilizers, or by sheltering or enclosing the operation and transfer line except, where such material or activity is exempted from stabilization by the rules of ICAPCD.</li> </ul> |  |

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

| Project Impacts | Level of Significance before Mitigation | Mitigation  | Level of Significance After Mitigation |
|-----------------|---|---|--|
|                 |   | <ul style="list-style-type: none"> <li>• Any temporary unpaved road shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emission by paving, chemical stabilizers, dust suppressants and/or watering.</li> <li>• Fugitive dust generation during construction would be minimized by watering as needed to meet Imperial County standards for fugitive dust control. To further reduce fugitive dust emissions, vehicle traffic on unpaved roads would be kept below 15 miles per hour.</li> <li>• During grading, the Project would be watering actively disturbed on-site areas at least three times a day as necessary to reduce fugitive dust emissions.</li> <li>• Access to the site would be via Highway 111, McDonald Road, and Davis Road. All workers, vendors and haul trucks would be required to utilize these roadways.</li> <li>• An agreement between County of Imperial Public Works and the applicant would be established requiring the applicant to improve a two-mile section of the unpaved Davis Road adjacent to the site by installing a 12- to 18-inch- thick engineered Class II base section. In addition, at the request of the County, the applicant would utilize the improved section during construction and would wet the site continuously during construction activities. The road would be immediately paved after construction prior to operations of the plant to avoid damaging a new asphalt section.</li> <li>• During construction, the Project would be required to maintain daily dust suppression at the two-mile section of Davis Road adjacent to the site using a water truck operating continuously while vehicles are using the road.</li> </ul> |  |

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

| Project Impacts | Level of Significance before Mitigation | Mitigation  | Level of Significance After Mitigation |
|-----------------|---|---|--|
|                 |   | <ul style="list-style-type: none"> <li>• The Project would provide wheel shakers at the exit(s) of the construction site to minimize dust being tracked off the Project site and onto the roadways.</li> <li>• Operational on-road trips shall not operate on unpaved dirt roads.</li> </ul> <p><b>MM-AQ-2</b> Prior to commencing construction, the Project proponent shall submit and commit to a Combustion Exhaust Emissions Control Program. This plan would provide a detailed list of control measures to minimize exhaust emissions during Project construction, including but not limited to fuel use, engine maintenance, and procedures:</p> <ul style="list-style-type: none"> <li>• The Exhaust Emission Control Plan shall provide a detailed list of control measures to minimize exhaust emissions during Project construction, including but not limited to fuel use, engine maintenance, and procedures.</li> <li>• The construction contractor shall be required to utilize construction equipment using diesel engines less than 50 horsepower with certified NOx emissions rated as Tier 3 or better. All off-road diesel-powered equipment greater than 50 horsepower that is used on-site during construction of the Project shall meet USEPA Tier 4 offroad emission standards and Level 3 diesel particulate filters.</li> <li>• When commercially available, fossil fueled equipment shall be replaced with electrically driven equivalents (provided they are not run via a portable generator set).</li> <li>• Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California Airborne Toxics Control Measure, Title 13, Section 2485 of California</li> </ul> |  |

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

| Project Impacts  | Level of Significance before Mitigation | Mitigation  | Level of Significance After Mitigation |
|--|---|---|--|
|  |   | <p>Code of Regulations). Clear signage shall be provided for construction workers at all access points.</p> <ul style="list-style-type: none"> <li>All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.</li> <li>Where access to alternative sources of power are available, portable diesel engines shall be prohibited. Haul truck shall be 2010 model year trucks or newer (a gross vehicle weight rating of at least 14,001 pounds), or best commercially available equipment, that meet the California Air Resources Board 2010 engine emissions standards at 0.01 g/horsepower-hour of particulate matter and 0.20 g/horsepower-hour of NOx emissions or newer, cleaner trucks.</li> <li>The volatile organic compounds (VOC) architectural coating limits specify that the use paints and solvents with a VOC content of 100 grams per liter or less for interior and 150 grams per liter or less for exterior surfaces shall be required.</li> </ul> |  |
| <p><b>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?</b></p>   |   |   |  |
| <p>During start-up conditions, air emissions of CO and NOx associated with the HKP1 were estimated to exceed the CEQA significance thresholds and air emissions of CO associated with HKP1 were estimated to exceed the Rule 207, Section C.2.g thresholds. ICAPCD Rule 207 Section C.2 requires emissions offsets for sources with pollutant emissions that exceed 137 pounds per day. Pursuant Rule 207, Section C.2.g, the Proposed Project has prepared a CO Air Quality Impact Analysis (Part F of Rule 207), which</p> | <p>Less Than Significant</p>            | <p>None required.</p>   | <p>Less than Significant</p>           |

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

| Project Impacts   | Level of Significance before Mitigation | Mitigation  | Level of Significance After Mitigation |
|---|---|---|--|
| <p>demonstrates that the HKP1 would not cause or contribute to a violation of the CO NAAQS/CAAQS. The 1-hour and 8-hour CO modeled concentration plus background concentrations are 2,213 and 1,369 micrograms per cubic meter (µg/m<sup>3</sup>), respectively, which are well below the NAAQS/CAAQS. Therefore, the startup operations associated with the proposed standby/black-start diesel engine generator would have a less than significant impact on CO concentrations.</p>   |   |   |  |
| <b>Biological Resources</b>   |   |   |  |
| <p><b>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?</b></p>  |   |   |  |
| <p>The Project includes removal of cattails and other vegetation that provide breeding habitat for Yuma hispid cotton rat. Yuma hispid cotton rat could be impacted by construction activities if the species were to occur in the construction area at the time of construction. In addition, construction activities include excavation of trenches and steep walled foundations where cotton rat could become trapped. Because a qualified biologist would be on site to observe all vegetation removal activities and could relocate Yuma hispid cotton rat out of harm's way if one were observed in the area, the impact from vegetation removal activities would be less than significant. In addition, because open trenches will be covered to avoid cotton rats from becoming trapped and a biologist will observe open excavations daily, the impact of open excavations on cotton rats will be less than significant.</p> | <p>Potentially Significant</p>          | <p><b>BIO-1.</b> Designated Biologist: The Applicant shall retain the services of a Qualified Biologist. The Qualified Biologist will be employed during construction and all vegetation removal and ground-disturbing activities. The Qualified Biologist will document compliance with the projects mitigation measures and permits. The Qualified Biologist will have the authority to halt any Project activities that are in violation of the terms and conditions of the Project biological opinion(s) or incidental take permit, as appropriate.</p> <p><b>BIO-2.</b> Biological Monitors: Biological monitor(s) will be employed to assist the Designated Biologist in conducting preconstruction surveys and monitoring ground disturbance, grading, construction, decommissioning, and restoration activities. The biological monitor(s) will have sufficient education and field experience to understand resident wildlife species biology. To avoid and minimize effects to biological resources, the biological monitor(s) will assist the Designated Biologist with the following:</p> | <p>Less Than Significant</p>           |

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

| Project Impacts | Level of Significance before Mitigation | Mitigation  | Level of Significance After Mitigation |
|-----------------|---|---|--|
|                 |   | <ul style="list-style-type: none"> <li>• Conduct inspections for listed species during ground-disturbing construction activities and document that habitat within the construction zone is not occupied by Yuma Ridgway's rail or desert pupfish.</li> <li>• Document compliance with all conservation measures, including but not limited to monitoring for presence of listed species; halting construction activity in the area if an individual listed species is found; and checking the staking/flagging of all disturbance areas to be sure that they are intact and that all construction activities are being kept within the staked/flagged limits. If a Yuma Ridgway's rail or desert pupfish is found within a work area, the Biological Monitor(s) will immediately notify the Designated Biologist, who will determine measures to be taken to ensure that the individual is not harmed, such as temporarily halting construction.</li> </ul> <p><b>BIO-3.</b> Worker Environmental Awareness Program Training: A Worker Environmental Awareness Program will be implemented for construction crews prior to the commencement of Project activities. Training materials and briefings will include, but not be limited to, discussion of the federal and State statutes protecting threatened and endangered species, the consequence of noncompliance with these statutes, identification of values of wildlife and natural plant communities, hazardous substance spill prevention and containment measures, and review of all required conservation measures.</p> <p><b>BIO-4.</b> Flagging of Work Area Limits: All areas to be disturbed by the Project will be flagged prior to construction. All disturbance</p> |  |

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

| Project Impacts | Level of Significance before Mitigation | Mitigation  | Level of Significance After Mitigation |
|-----------------|---|---|--|
|                 |   | <p>will be confined to these flagged areas, and all employees will be instructed that their activities must be confined to locations within the flagged areas.</p> <p><b>BIO-5.</b> Power Wash Equipment: All equipment used during construction of the Project will be required to be power washed prior to arrival at the Project site to prevent the transportation and establishment of noxious weeds in the area.</p> <p><b>BIO-6.</b> Sediment and Erosion Control: The Project proponent will acquire the appropriate Clean Water Act regulatory permits, prepare a Stormwater Pollution and Prevention Plan (SWPPP), and implement BMPs prior to construction and site restoration. The SWPPP will identify specific actions and BMPs relating to the prevention of stormwater pollution from Project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP reflects localized surface hydrological conditions and will be reviewed by the USFWS prior to commencement of work. A SWPPP will be a condition of the contract with each contractor selected to build and decommission the Project. The SWPPP(s) at a minimum will incorporate soil stabilization and erosion control practices (e.g., hydroseeding, erosion control blankets, mulching), dewatering and/or flow diversion practices, sediment control practices (temporary sediment basins, fiber rolls), temporary and post-construction onsite and offsite runoff controls, and special considerations and BMPs for water crossings, wetlands, and drainages. The SWPPP will be prepared by a qualified SWPPP practitioner with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs is placed on controlling discharges of oxygen-depleting</p> |  |

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

| Project Impacts | Level of Significance before Mitigation | Mitigation   | Level of Significance After Mitigation |
|-----------------|---|--|--|
|                 |   | <p>substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. Performance and effectiveness of these BMPs are determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination (inadvertent petroleum release) is required to determine adequacy of the measure.</p> <p><b>BIO-7.</b> Solid Waste Management: Solid waste will be properly contained in designated collection areas on site and regularly disposed of.</p> <p><b>BIO-8.</b> A desert pupfish protection and relocation plan will be prepared prior to construction activities in any suitable habitat for desert pupfish. Its implementation will ensure construction in any suitable habitat for desert pupfish will be conducted with minimal effects on desert pupfish. This plan will be submitted to the Service and the CDFW for review and approval prior to any ground-disturbing activities that have a water component. This plan will provide:</p> <ol style="list-style-type: none"> <li>1. Protocols for pre-construction or pre-maintenance surveys to assess species presence and spawning within or immediately adjacent to work areas (e.g., in, or at the end of, the irrigation drains/drain canals, open water areas, and around the open water margins). The protocols will also outline the qualifications required for biologists to conduct desert pupfish survey, capture, and relocation activities and the process for biologist approval.</li> <li>2. Capture (e.g., trapping in the irrigation drains for construction and maintenance; or trapping, dip netting, and seining in open water areas that are</li> </ol> |  |

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

| Project Impacts | Level of Significance before Mitigation | Mitigation  | Level of Significance After Mitigation |
|-----------------|---|---|--|
|                 |   | <p>drained or if the water level is dropped) and transport methods to minimize handling and stress as well as exposure to heat, low dissolved oxygen (DO), and crowding.</p> <ol style="list-style-type: none"> <li>3. Identification of locations for release of captured desert pupfish.</li> <li>4. Timing windows when construction or maintenance in open water areas and in the irrigation drain mouths/canals may be conducted with minimal effects on desert pupfish spawning.</li> <li>5. Adaptive management procedures that include assessment of mitigation measure effectiveness, development of revised measures to improve effectiveness, and similar assessment of revised measures to verify effectiveness.</li> </ol> <p><b>BIO-9.</b> Construction Timing: Construction activities within habitat for Yuma Ridgway's rail (i.e., cattail marsh) will be scheduled to avoid the nesting and molting flightless season (i.e., February 15 – September 15). Pile driving activities adjacent to Yuma Ridgway's rail habitat will avoid Yuma Ridgway's rail nesting season.</p> <p><b>BIO-10.</b> Pre-Construction Surveys and Construction Monitoring for Yuma Ridgway's Rail and Black Rail: Pre-construction surveys for Yuma Ridgway's rail and black rail and construction monitoring will be conducted within all Project development areas within suitable habitat and a 500-foot buffer from suitable habitat. In the event that Yuma Ridgway's rail(s) or black rail(s) are detected within the work area (the area of active equipment use), all construction activities in the area will halt and the USFWS and CDFW will be notified no later than noon of the next business day. Project activities in the area may not proceed until</p> |  |

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

| Project Impacts | Level of Significance before Mitigation | Mitigation   | Level of Significance After Mitigation |
|-----------------|---|--|--|
|                 |   | <p>the birds have left the work area. The USFWS and CDFW will also be notified if any Yuma Ridgway's rail are detected within 500 feet of the construction area. Project activities may proceed with caution in this buffer area under the direction of the Designated Biologist.</p> <p><b>BIO-11.</b> Reduced Vehicle Speed Adjacent to Rail Habitat: Vehicle speeds will be reduced to 15 miles per hour (mph) on access roads adjacent to Yuma Ridgway's rail habitat. These areas will be appropriately signed to identify the speed limit.</p> <p><b>BIO-12.</b> Noise Attenuation: The following noise attenuation measures will be implemented to minimize noise impacts on Yuma Ridgway's rail during the nesting season:</p> <ul style="list-style-type: none"> <li>• At least 30 days prior to activities within 500 feet of Yuma Ridgway's rail habitat, the Applicant will conduct a noise study to evaluate the maximum predicted noise level within rail habitat.</li> <li>• If the maximum predicted noise is less than 60 A-weighted decibel scale (dBA) equivalent continuous sound level (Leq), no additional measures are required.</li> <li>• If the maximum predicted noise level exceeds 60 dBA Leq in rail habitat, noise attenuation measures such as noise walls or hay bales will be installed between the noise source and the suitable habitat. Noise monitors will be installed at the edge of the nearest Yuma Ridgway's rail habitat to assess the noise levels and verify that attenuation measures are successful. If necessary, additional noise reduction measures will be implemented to reduce the noise level to below 60 dBA at the edge of occupied habitat.</li> </ul> <p><b>BIO-13.</b> Habitat Conservation: To offset the loss of Yuma Ridgway's rail habitat, the Project proponent will preserve,</p> |  |

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

| Project Impacts | Level of Significance before Mitigation | Mitigation   | Level of Significance After Mitigation |
|-----------------|---|--|--|
|                 |   | <p>create, or enhance habitat near the Project site for Yuma Ridgway's rail. The Project proponent will provide funding for construction and long-term management of the created habitat and will provide financial assurance for the construction of the wetland habitat in the form of performance bonds, escrow accounts, casualty insurance, or letters of credit. The performance bond, escrow account, casualty insurance, or letter of credit shall be of sufficient value to cover all construction, monitoring and reporting costs until the habitat is fully established. The financial assurance shall be in place prior to ground disturbance. Long-term management funding will be provided sufficient to cover, at a minimum, the management costs related to procurement of water from IID, weed control, levee and control structure maintenance, and control structure repair or replacement. The Applicant will prepare a detailed Habitat Enhancement Mitigation and Mitigation Monitoring Plan for review and approval by the USFWS, Corps, and CDFW prior to Project construction. Habitat creation activities will be conducted outside of the bird breeding season (February 15 – September 15) to avoid potential noise impacts on Yuma Ridgway's rail.</p> <p><b>BIO-14.</b> Burrowing Owl. A pre-construction survey will be conducted for burrowing owls. The survey will be conducted during peak activity period (one hour before to two hours after sunrise or two hours before to one hour after sunset) no more than 14 days prior to the start of construction and within 500 feet surrounding the construction area. If owls are located during the pre-construction survey between February 1 and August 31 (nesting season), a buffer area will be established according to the guidelines in the 2012 Staff Report. A modified buffer reduction may be used with CDFW concurrence. If</p> |  |

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

| Project Impacts | Level of Significance before Mitigation | Mitigation  | Level of Significance After Mitigation |
|-----------------|---|---|--|
|                 |   | <p>burrowing owls are located during the nonbreeding season, owls may be passively relocated in coordination with CDFW, by a qualified biologist according to the procedures outlined in the 2012 Staff Report on Burrowing Owl Mitigation. If burrowing owls are found on site during pre-construction surveys, the Project proponent shall contact CDFW to prepare a plan of action for buffers or passive relocation.</p> <p><b>BIO-15.</b> Lighting. Except as necessary for safety or security purposes, no lighting shall be allowed to impact wetland or riparian habitats.</p> <p><b>BIO-16.</b> Nesting Bird Plan. Construction activities shall take place outside the general bird breeding season (February 15 to September 30), to the maximum extent practicable. Regardless of the time of year, prior to ground-disturbing activities, a qualified biologist shall conduct a nesting bird survey to comply with CDFW Code 3503 and 3503.5 and the Migratory Bird Treaty Act. The survey shall occur no more than three (3) days prior to initiation of proposed Project activities and shall include any potential habitat (including trees, shrubs, the ground, or nearby structures). Any occupied passerine and/or raptor nests occurring within the proposed Project area or the Project's zone of influence (generally 100-300 feet) shall be delineated and a no-disturbance buffer zone (as determined by the avian biologist) shall be established and maintained during Project activities. Additional follow-up surveys may be required by the resource agencies and Imperial County. The buffer zone shall be sufficient in size to prevent impacts to the nest. A qualified biologist shall monitor active nests to determine whether construction activities are disturbing nesting birds or nestlings. If the qualified biologist determines that construction activities pose a disturbance to nesting, construction work shall be</p> |  |

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

| Project Impacts | Level of Significance before Mitigation | Mitigation   | Level of Significance After Mitigation |
|-----------------|---|--|--|
|                 |   | <p>stopped in the area of the nest and the no disturbance buffer shall be expanded. Once nesting has ceased and the fledglings are no longer using the nest area as confirmed by a qualified biologist, the buffer may be removed. A nesting bird survey report shall be provided to Imperial County and CDFW. If an active nest is encountered during construction, construction shall stop immediately until a qualified biologist can determine the status of the nest and when work can proceed without risking violation to state or federal laws.</p> <p><b>BIO-17. Bird Flight Diverters.</b> Bird flight diverters will be installed on any new transmission and power lines serving the Project, to limit bird mortality associated with introducing new transmission lines in bird flyways. Flight diverters make transmission lines more visible to birds. The transmission and power lines will be designed to meet Avian Power Line Interaction Committee (APLIC) guidelines.</p> <p><b>BIO-18. Excavation Areas.</b> Any open trench or excavated area shall be securely covered anytime Project activities within the excavated/trenched area have ceased. The designated biologist shall oversee the covering of all excavated, steep-walled holes or trenches by placing plywood or other barrier materials such that animals are unable to enter and become entrapped. The use of temporary fencing around the perimeter or trenches or holes may be an acceptable minimization measure, if deemed appropriate by the biological monitor. Before holes or trenches are filled, the Biological Monitors shall thoroughly inspect the areas for trapped animals. If any worker discovers that any animal has become trapped, they shall halt Project-related activities and notify the biological monitor immediately.</p> |  |

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

| Project Impacts  | Level of Significance before Mitigation | Mitigation   | Level of Significance After Mitigation |
|--|---|--|--|
| <b>Threshold b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?</b>  |   |  |  |
| <p>The Project study area contains wetlands and riparian habitats that are potentially subject to RWQCB, CDFW, and USACE jurisdiction. The removal of vegetation and discharge of fill to these wetland and riparian resources from temporary construction activities, or permanent conversion to a developed land use during operation of the proposed Project, could be a significant impact. Hell's Kitchen PowerCo 1 LLC and Hell's Kitchen LithiumCo 1 LLC will obtain all required USACE, CDFW, and RWQCB permits for impacts to wetlands and riparian areas prior to construction in any jurisdictional wetland or riparian area. The agencies permit processes requires compensatory mitigation for impacts to jurisdictional water resources. Because the Project will comply with all permit requirements, including development of compensatory wetland and riparian mitigation, the impacts on wetlands and riparian areas would be less than significant. Further details on the proposed wetland mitigation plan can be found in Section 4.3.8, Mitigation Measure BIO-19.</p> | Potentially Significant                 | <p><b>BIO-19.</b> Wetland and Riparian Area Restoration/Compensation. The Project will provide restoration/compensation for all unavoidable impacts on areas under the jurisdiction of USACE, RWQCB, and CDFW. Impacts on jurisdictional areas will be avoided to the extent feasible. Where avoidance of jurisdictional areas is not feasible, the Project applicant will provide the necessary mitigation required as part of wetland permitting, by creation, restoration, or preservation of suitable jurisdictional or equivalent habitat along with adequate buffers to protect the function and values of jurisdictional areas. The Mitigation ratio will be 1:1 or as approved by the permitting agencies. The proposed Mitigation Plan area is located in Section 35 approximately 2 miles north of the HKP1 and HKL1 Projects at the corner of Beach Road and Access Road. The proposed mitigation area will total 159.61 acres; approximately 152 acres will be created native wetland/open water habitat and approximately 7 acres will be enhanced native upland habitat. Proposed native wetland communities include Willow Scrub Shrub, Cattail Bullrush Marsh and Desert Riparian Woodlands. Proposed upland communities include Sonoran Desert Scrub/Alkali Sink.</p> | Less than Significant                  |
| <b>Threshold 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?</b>  |   |  |  |
| <p>Project construction would occur within a relatively small area of comparatively low habitat quality along the roadside adjacent to the large, contiguous wetlands to the east. Following construction completion, vegetated areas and unvegetated open space would be converted</p>  |   | <p><b>BIO-19.</b> Wetland and Riparian Area Restoration/Compensation. The Project will provide restoration/compensation for all unavoidable impacts on areas under the jurisdiction of USACE, RWQCB, and CDFW. Impacts on jurisdictional areas will be avoided to the extent feasible. Where avoidance of</p>  | 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 |
|---|---|---|--|
| <p>permanently to developed land uses. The conversion of these vegetated and unvegetated open space areas would not result in a noteworthy loss of habitat compared to the large contiguous wetlands and open space areas to the north, west, and east, and would not impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their movement or reproduction. The Project impacts are collocated adjacent to Davis Road, IID's existing power line, and other infrastructure. As discussed in Section 4.3.4, the Project study area does not contain any wildlife nursery sites. The impact would be less than significant.</p> |   | <p>jurisdictional areas is not feasible, the Project applicant will provide the necessary mitigation required as part of wetland permitting, by creation, restoration, or preservation of suitable jurisdictional or equivalent habitat along with adequate buffers to protect the function and values of jurisdictional areas. The Mitigation ratio will be 1:1 or as approved by the permitting agencies. The proposed Mitigation Plan area is located in Section 35 approximately 2 miles north of the HKP1 and HKL1 Projects at the corner of Beach Road and Access Road. The proposed mitigation area will total 159.61 acres; approximately 152 acres will be created native wetland/open water habitat and approximately 7 acres will be enhanced native upland habitat. Proposed native wetland communities include Willow Scrub Shrub, Cattail Bullrush Marsh and Desert Riparian Woodlands. Proposed upland communities include Sonoran Desert Scrub/Alkali Sink.</p> |  |
| <p><b>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?</b></p>  |   |   |  |
| <p>Project construction would occur within a relatively small area of comparatively low habitat quality along the roadside adjacent to the large, contiguous wetlands to the east. Following construction completion, vegetated areas and unvegetated open space would be converted permanently to developed land uses. The conversion of these vegetated and unvegetated open space areas would not result in a noteworthy loss of habitat compared to the large contiguous wetlands and open space areas to the north, west, and east, and would not impede wildlife access to foraging habitat, breeding habitat, water</p>  | <p>Less than Significant</p>            | <p>No Mitigation Required.</p>  | <p>Less than Significant</p>           |

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

| Project Impacts  | Level of Significance before Mitigation | Mitigation  | Level of Significance After Mitigation |
|--|---|---|--|
| sources, or other areas necessary for their movement or reproduction. The Project impacts are collocated adjacent to Davis Road, IID's existing power line, and other infrastructure. As discussed in Section 4.3.4, the Project study area does not contain any wildlife nursery sites. The impact would be less than significant.  |   |   |  |
| <b>Threshold e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?</b>   |   |   |  |
| In accordance with the consistency analysis provided in Table 4.3-1, the proposed Project is not anticipated to conflict with the Imperial County General Plan. There are no other local policies or ordinances protecting biological resources that apply to the proposed Project. Therefore, construction and operation of the proposed Project is anticipated to have a less-than-significant impact with respect to conflicting with any local policies or ordinances protecting biological resources. However, the Imperial County Board of Supervisors provides the ultimate determination regarding the proposed Project's consistency with the Imperial County General Plan. | Less than Significant                   | No Mitigation Required.   | Less than Significant                  |
| <b>Cultural Resources</b>  |   |   |  |
| <b>Threshold a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?</b>  |   |   |  |
| <b>Threshold b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?</b>   |   |   |  |
| The intensive pedestrian survey resulted in identification of a newly recorded resources which consists of a remnant of a historic-era house dating back to 1953(TES-HK-001H). The structure is comprised of adobe brick. However, the structure has been altered over the years. The structure no longer contains walls, windows, doors, and room,  | Less than Significant                   | <b>CUL-1</b> The Applicant shall retain the services of a Qualified Archaeologist, meeting the Secretary of the Interior Standards or County standards, whichever is greater, and require that all initial ground-disturbing work be monitored by archaeological specialist (monitor) proficient in artifact and feature identification in monitoring contexts. The Consultant (Qualified | 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 |
|---|---|--|--|
| <p>and shows evidence of damage, graffiti, and other modern effects such as furniture and refuse. Based on the condition of the structure, there is not enough original structure remaining to understand the original appearance of the structure. Standard DPR site records have been completed for this resource and are waiting permanent designation from the information center. Its severely dilapidated condition does not allow for the structure to meet the criteria needed for listing on the CRHR and is not known to be affiliated with anyone of significance or contribute to local cultural heritage or yield additional information to local history. Therefore, the Proposed Project would not result in significant impact to a historical resource. Impacts would be less than significant. An archaeological investigation was conducted for the Project to determine if there are any impacts that would occur that would disrupt or adversely affect a prehistoric or historic-era archaeological site to a community, ethnic or social group. The investigation resulted in resources being found within the Project area. However, because of the conditions of these resources, these have not been determined to be significantly impacted by the Proposed Project. However, given the largely undeveloped nature of the Project site with no previous development, there remains potential that the Project's ground disturbing activity would</p> |   | <p>Archaeologist and/or monitor) shall be present at the Project construction phase kickoff meeting.</p> <p><b>CUL-2</b> Prior to commencing construction activities and thus prior to any ground disturbance in the Proposed Project site, the Consultant 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. A tribal monitor shall be provided an opportunity to attend the preconstruction briefing, if requested. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to archaeological resources and maintain environmental compliance. This WEAP training will educate the monitor(s) of construction procedures to avoid construction-related injury or harm. This training may be performed periodically, such as for new personnel coming on to the Project as needed.</p> <p><b>CUL-3</b> The Contractor shall provide the Consultant with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the Consultant of commencement of any initial ground-disturbing activities such as vegetation grubbing or clearing, grading, trenching, or mass excavation.</p> <p>A monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Archaeologist, shall observe initial ground-disturbing activities and, as they proceed, adjust the number of monitors as needed to provide adequate</p> |  |

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

| Project Impacts   | Level of Significance before Mitigation | Mitigation   | Level of Significance After Mitigation |
|---|---|--|--|
| <p>impact undiscovered resources. These resources could include but not limited to lithic materials, faunal, pottery, ceramics, building materials, or glassware. Therefore, mitigation measure CUL-1 through CUL-5 would be implemented to ensure that impacts would be less than significant.</p> |   | <p>observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations to serve as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.</p> <p>The Consultant 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 to provide appropriate oversight.</p> <p><b>CUL-4</b> In the event of the discovery of previously unidentified archaeological materials, the Contractor shall immediately cease all work activities within an area of no less than 100 feet of the discovery. After cessation of excavation, the Contractor shall immediately contact the County. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act (NAGPRA), California Health and Safety Code 7050.5, CEQA 15064.5, or California Public Resources Code 5097.98, the discovery of any cultural resource within the Project area shall not be grounds for a Project-wide “stop work” notice or otherwise interfere with the Project’s continuation except as set forth in this paragraph. Additionally, all consulting Native American Tribal groups that requested notification of any unanticipated discovery of archaeological resources on the Project shall be notified appropriately. If a discovery results in the identification of cultural items that fall within the scope of NAGPRA, the Contractor shall immediately cease all work activities within an area of no less than 100 feet (30 meters) of the discovery. In the event of an unanticipated discovery of archaeological materials</p> |  |

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

| Project Impacts  | Level of Significance before Mitigation | Mitigation  | Level of Significance After Mitigation |
|--|---|---|--|
|  |   | <p>during construction, the Applicant-retained Qualified Professional Archaeologist shall be contacted to evaluate the significance of the materials prior to resuming any construction-related activities near the find. If the Qualified Archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the Applicant shall implement an archaeological data recovery program.</p> <p><b>CUL-5</b> At the completion of all ground-disturbing activities, the Consultant shall prepare an Archaeological 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 SCCIC, as required.</p> <p>In the event unanticipated, buried prehistoric archaeological resources (lithic material, faunal, pottery, etc.) or historical archaeological resources (ceramics, building materials, glassware, etc.) are unearthed during construction or any ground disturbing activities within the Project area, additional resource treatments would become necessary. Once a potential resource has been identified, all work within 100 feet must be halted until the find can be assessed by a qualified archaeologist.</p> |  |
| <b>Threshold c) Would the project disturb any human remains, including those interred outside of formal cemeteries?</b>  |   |   |  |
| Construction of the Proposed Project would involve grading, which may have the potential to uncover unknown human remains. However, if human remains are encountered during the proposed work, no further excavation or disturbance may occur near the find until the County coroner has been contacted. HSC 7050.5 states (a) Every person who knowingly mutilates or | 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 |
|--|---|-------------------------|--|
| <p>disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in Section 5097.99 of the Public Resources Code. (b) In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains area discovered has determined that the remains are not subject to the provisions of Section 27481. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or to his or her authorized representative, notifying the coroner of the discovery if recognition of human remains. (c) If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. Compliance with these regulations would ensure impacts to human remains resulting from the Project would be less than significant.</p> |   |                         |  |
| <b>Energy</b>  |   |                         |  |
| <b>Threshold a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?</b>   |   |                         |  |
| The off-road construction equipment fuel usage was calculated through use of the off-road equipment  | 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 |
|---|---|------------|--|
| <p>assumptions and fuel use assumptions provided in Appendix H, which found that the off-road equipment utilized during construction of the Project would consume 636,310 gallons of diesel fuel. The on-road fuel consumption during construction was calculated through use of the construction vehicle trip assumptions and fuel use assumptions provided in Appendix H, which found that the on-road trips generated from construction of the Project would consume 8,554,787 gallons of fuel. As such, the combined fuel used from off-road construction equipment and on-road construction trips for the Project would result in the consumption of 9,191,096 gallons of diesel fuel.</p> <p>Construction activities associated with the Project would be required to adhere to all State and Imperial County Air Pollution Control District regulations for off-road equipment and on-road trucks, which provide minimum fuel efficiency standards. Construction activities for the Project would not result in the wasteful, inefficient, and unnecessary consumption of energy resources. In addition, the operation of the Project would result in a net increase of 147,732,2kilowatt-hours (kWh) per year.</p> <p>Operation of the Project would result in increased consumption of petroleum-based fuels related to vehicular travel to and from the Project site. Operations related to fuel consumption were calculated using information related to the estimated number of employees, their estimated vehicle miles traveled per day, and the number of operational days per year. The</p> |   |            |  |

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

| Project Impacts  | Level of Significance before Mitigation | Mitigation                     | Level of Significance After Mitigation |
|--|---|--------------------------------|--|
| <p>Based on these assumptions, the Project would consume 25,217,394 gallons of transportation fuel per year (diesel and gasoline). 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. Therefore, it is anticipated the Project will be designed and built to minimize transportation energy through the promotion of the use of electric-powered vehicles and that existing and planned capacity and supplies of transportation fuels would be sufficient to support the Project's demand. Thus, impacts regarding transportation energy supply and infrastructure capacity would be less than significant, and no mitigation measures would be required.</p> |   |                                |  |
| <p><b>Threshold b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?</b></p>  |   |                                |  |
| <p>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. The Proposed Project's consistency with the applicable energy-related policies in the Renewable Energy and Transmission Element of the General Plan are shown in Table 4.4-1.</p>   | <p>Less than Significant</p>            | <p>No Mitigation Required.</p> | <p>Less than Significant</p>           |

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

| Project Impacts  | Level of Significance before Mitigation | Mitigation  | Level of Significance After Mitigation |
|--|---|---|--|
| <b>Geology and Soils</b>   |   |   |  |
| <p><b>Threshold a) i) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving 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.</b></p>   |   |   |  |
| <p><b>ii) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?</b></p>  |   |   |  |
| <p>The CBC requires that a site-specific ground motion hazard analysis be performed in accordance with American Society of Civil Engineers (ASCE) 7-16 Section 11.4.8 for structures. The parameters were determined and provided in the Geohazard Evaluation Report. General earthwork considerations pertaining to the Project include remedial grading/over excavation, excavatability, and fill materials. Design considerations would take into account expansion potential, collapse potential, and corrosivity. The Geohazard Evaluation Report notes that based on the preliminary site plans, no conditions on the Project site would preclude development of the Proposed Project, provided that Mitigation Measures GEO-1 and GEO-2 would be implemented. Therefore, the Proposed Project would be less than significant and is considered feasible from a geotechnical standpoint.</p> | <p>Potentially Significant</p>          | <p><b>GEO-1:</b> A complete geotechnical engineering investigation shall be completed, with a Final Geotechnical Report to be prepared prior to submittal of a grading permit. The Final Geotechnical Report shall be prepared by a qualified consultant and be submitted to the County for review and approval. The investigation will include soil test borings; specific and detailed recommendations; soil and sediment analysis; detailed analysis and design standards; geotechnical design criteria; and detailed design recommendations.</p> <p><b>GEO-2:</b> All grading operations and construction shall be conducted in conformance with the recommendations included in the Geohazard Evaluation Report prepared on August 17, 2022, and Final Geotechnical Report on the Project site. Design, grading, and construction shall be performed in accordance with the recommendations of the project geotechnical consultant and corrosion engineer, subject to review by the County, prior to commencement of grading activities.</p> | <p>Less than Significant</p>           |
| <p><b>iii) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?</b></p>  |   |   |  |
| <p>As discussed, based on the presence of shallow groundwater and the nature of subsurface soils, the</p>  | <p>Potentially Significant</p>          | <p><b>GEO-1:</b> A complete geotechnical engineering investigation shall be completed, with a Final Geotechnical Report to be</p>   | <p>Less than Significant</p>           |

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

| Project Impacts   | Level of Significance before Mitigation | Mitigation   | Level of Significance After Mitigation |
|---|---|--|--|
| <p>potential for liquefaction is high. As such, site-specific liquefaction and dynamic settlement shall be evaluated with data obtained through the soils borings during the Project's geotechnical investigation phase. Implementation of Mitigation Measures GEO-1 and GEO-2, in addition to compliance with the CBC, would result in less than significant impacts.</p>  |   | <p>prepared prior to submittal of a grading permit. The Final Geotechnical Report shall be prepared by a qualified consultant and be submitted to the County for review and approval. The investigation will include soil test borings; specific and detailed recommendations; soil and sediment analysis; detailed analysis and design standards; geotechnical design criteria; and detailed design recommendations.</p> <p><b>GEO-2:</b> All grading operations and construction shall be conducted in conformance with the recommendations included in the Geohazard Evaluation Report prepared on August 17, 2022, and Final Geotechnical Report on the Project site. Design, grading, and construction shall be performed in accordance with the recommendations of the project geotechnical consultant and corrosion engineer, subject to review by the County, prior to commencement of grading activities.</p> |  |
| <p><b>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?</b></p>  |   |  |  |
| <p><b>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?</b></p>   |   |  |  |
| <p>Based on the Project's topography and relatively flat nature of the Project site, the risk of landslides is considered remote. However, unstable soils could result in subsidence, expansive soil, liquefaction and lateral spreading. Therefore, site-specific potential for these instabilities shall be evaluated with data from the soil borings during the geotechnical investigation phase. Implementation of Mitigation Measures GEO-1 and GEO-2, as well as the considerations provided in the Geohazard Evaluation Report, would ensure that construction of the Proposed Project would not result in significant impacts</p> | <p>Less than Significant</p>            | <p><b>GEO-1:</b> A complete geotechnical engineering investigation shall be completed, with a Final Geotechnical Report to be prepared prior to submittal of a grading permit. The Final Geotechnical Report shall be prepared by a qualified consultant and be submitted to the County for review and approval. The investigation will include soil test borings; specific and detailed recommendations; soil and sediment analysis; detailed analysis and design standards; geotechnical design criteria; and detailed design recommendations.</p> <p><b>GEO-2:</b> All grading operations and construction shall be conducted in conformance with the recommendations included</p>  | <p>Less than Significant</p>           |

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

| Project Impacts   | Level of Significance before Mitigation | Mitigation  | Level of Significance After Mitigation |
|---|---|---|--|
| <p>due to subsidence, expansive soil, liquefaction and lateral spreading.. Impacts would be less than significant with mitigation incorporated.</p>   |   | <p>in the Geohazard Evaluation Report prepared on August 17, 2022, and Final Geotechnical Report on the Project site. Design, grading, and construction shall be performed in accordance with the recommendations of the project geotechnical consultant and corrosion engineer, subject to review by the County, prior to commencement of grading activities.</p>  |  |
| <p><b>Threshold e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?</b></p>  |   |   |  |
| <p>The Proposed Project would include a septic system that would be constructed to handle wastewater generated during Project operation. The Geohazard Evaluation Report notes that based on the anticipated soil types, Project site soils are expected to be moderately to severely corrosive to ferrous metals in contact. Therefore, the Proposed Project's soils shall be evaluated with data from the soil borings during the geotechnical investigation phase and will include consultation with a corrosion engineer to identify the appropriate protective measures based on the soils samples. Therefore, impacts would be less than significant with mitigation measures GEO-1 and GEO-2 incorporated.</p> | <p>Potentially Significant</p>          | <p><b>GEO-1:</b> A complete geotechnical engineering investigation shall be completed, with a Final Geotechnical Report to be prepared prior to submittal of a grading permit. The Final Geotechnical Report shall be prepared by a qualified consultant and be submitted to the County for review and approval. The investigation will include soil test borings; specific and detailed recommendations; soil and sediment analysis; detailed analysis and design standards; geotechnical design criteria; and detailed design recommendations.</p> <p><b>GEO-2:</b> All grading operations and construction shall be conducted in conformance with the recommendations included in the Geohazard Evaluation Report prepared on August 17, 2022, and Final Geotechnical Report on the Project site. Design, grading, and construction shall be performed in accordance with the recommendations of the project geotechnical consultant and corrosion engineer, subject to review by the County, prior to commencement of grading activities.</p> | <p>Less than Significant</p>           |
| <p><b>Threshold f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?</b></p>   |   |   |  |
| <p>Based on information in the Geohazards Evaluation Report, sensitive Late Pleistocene- to Holocene-age Lake Cahuilla Beds exist within the Proposed Project area, and subsurface ground-disturbing activities have the potential</p>  | <p>Potentially Significant</p>          | <p><b>PALEO-1:</b> The Applicant shall retain the services of a Qualified Paleontologist and require that all initial ground-disturbing work be monitored by someone trained in fossil identification in monitoring contexts. The Qualified</p>   | <p>Less than Significant</p>           |

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

| Project Impacts   | Level of Significance before Mitigation | Mitigation   | Level of Significance After Mitigation |
|---|---|--|--|
| <p>to impact sensitive paleontological resources. Therefore, Mitigation Measures PALEO-1 through PALEO-5 would be implemented to reduce impacts to a less than significant level.</p> |   | <p>Paleontologist shall prepare a Paleontological Resource Mitigation Plan to be implemented during ground-disturbing activity for the proposed Project. This program should outline the procedures for paleontological monitoring, including extent and duration; protocols for salvage and preparation of fossils; and the requirements for a final mitigation and monitoring report. The Qualified Paleontologist and a paleontological monitor shall be present at the Project construction-phase kickoff meeting.</p> <p><b>PALEO-2:</b> Prior to commencing construction activities and, thus, prior to any ground disturbance in the Proposed Project site, the Qualified Paleontologist and paleontological monitor shall conduct initial Worker Environmental Awareness Program (WEAP) training to all construction personnel, including supervisors, present at the start of the Project construction work phase, for which the Applicant, or their designated 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 it shall be performed periodically for new personnel coming on to the Project as needed.</p> <p><b>PALEO-3:</b> The Applicant, or their designated Contractor, shall provide the Qualified Paleontologist with a schedule of initial potential ground-disturbing activities. A minimum of 48 hours will be provided to the consultant prior to the commencement of any initial ground-disturbing activities, such as vegetation grubbing or clearing, grading, trenching, or mass excavation.</p> |  |

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

| Project Impacts         | Level of Significance before Mitigation | Mitigation  | Level of Significance After Mitigation |
|-------------------------|---|---|--|
|                         |   | <p>As detailed in the schedule provided, a paleontological monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Paleontologist, shall observe 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 will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.</p> <p>The Qualified Paleontologist, paleontological monitor, and the Applicant, or their designated 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 to provide appropriate oversight.</p> <p><b>PALEO-4:</b> If paleontological resources are discovered, construction shall be halted within 50 feet of any paleontological finds and shall not resume until the Qualified Paleontologist can determine the significance of the find and/or the find has been fully investigated, documented, and cleared.</p> <p><b>PALEO-5:</b> At the completion of all ground-disturbing activities, the Qualified Paleontologist shall prepare a Paleontological Resources Monitoring Report summarizing all monitoring efforts and observations, as performed, and any and all paleontological finds and shall provide follow-up reports of any finds to the preferred paleontological repository, as required.</p> |  |
| <b>Greenhouse Gases</b> |   |   |  |

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

| Project Impacts   | Level of Significance before Mitigation | Mitigation                     | Level of Significance After Mitigation |
|---|---|--------------------------------|--|
| <b>Threshold a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?</b>  |   |                                |  |
| <p>The GHG emissions are based on the proposed design detailed in the Project Description as well as IID's adherence to the State's Renewable Portfolio Standards (RPS) that require 60 percent of electricity provided by IID to be from zero-carbon emissions sources by the year 2030. Table 4.7 3 shows that the operational GHG emissions do not exceed either the USEPA's 25,000 MTCO2e emissions threshold or ICAPCD Rule 903 – 20,000 MTCO2e emissions threshold, where exceedance of either threshold would require the Project to perform additional GHG emissions recordkeeping and reporting. Therefore, the Project would offset greenhouse gas emissions. and a less than significant impact would occur.</p> | <p>Less than Significant</p>            | <p>No Mitigation Required.</p> | <p>Less than Significant</p>           |
| <b>Threshold b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?</b>  |   |                                |  |
| <p>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. Impacts would be less than significant.</p>  | <p>Less than Significant</p>            | <p>No Mitigation Required.</p> | <p>Less than Significant</p>           |
| <b>Hazards and Hazardous Materials</b>  |   |                                |  |
| <b>Threshold a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?</b>  |   |                                |  |
| <p>During construction and operations of the Project, hazardous materials would be transported to and from the Project site. Traffic barriers would protect piping and</p>  | <p>Less than Significant</p>            | <p>No Mitigation Required.</p> | <p>Less than Significant</p>           |

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

| Project Impacts  | Level of Significance before Mitigation | Mitigation   | Level of Significance After Mitigation |
|--|---|--|--|
| <p>tanks on the site from potential traffic hazards. The Project Applicant would be required to follow all applicable federal, State, and local laws and regulations. Further, transportation would be subject to licensing and inspection by the CHP. With adherence to the regulatory measures and requirements for hazardous materials, impacts would be less than significant.</p>   |   |  |  |
| <p><b>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?</b></p>  |   |  |  |
| <p>Based on the assessment conducted at the Project site, further investigations may be required if the areas containing RECs cannot be avoided by future development. Therefore, for the Project to not have a significant impact to the public and environment, the Project shall comply with local, State and federal guidelines and to the Mitigation Measures HAZ-1 and HAZ-2 to ensure the any accidental releases would be mitigated to a less than significant impact.</p> | <p>Less than Significant</p>            | <p><b>MM HAZ-1:</b> To avoid health risks to construction workers, the Applicant shall require the contractor to prepare and implement a site Health and Safety Plan (HSP) if areas containing hazardous materials are to be disturbed. This plan will outline measures that will be employed to protect construction workers and the public from exposure to hazardous materials during construction activities. This plan shall be prepared prior to any ground-disturbing activities and shall be reviewed and approved by the Project Applicant. Workers shall review and sign the site HSP prior to proceeding with the assigned work.</p> <p><b>MM HAZ-2:</b> For any gen-tie structures or other areas of project ground disturbance that are close to a REC, a Phase 2 limited soil sampling shall be conducted to determine if there are any hazardous materials present on-site. The soil sampling shall be conducted during final design and prior to construction. Soil sampling will determine the California Human Health Screening Levels (CHHSL) of the testing protocol (CAM 17 metals, a list of 17 metals found typically in hazardous materials and mining sites). The CHHSLs are a list of 54 hazardous chemicals in soil or soil gas that the California Environmental</p> | <p>Less than Significant</p>           |

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

| Project Impacts   | Level of Significance before Mitigation | Mitigation   | Level of Significance After Mitigation |
|---|---|--|--|
|   |   | Protection Agency (CalEPA) considers to be below thresholds for risks to human health. The Imperial County Public Health Department, Division of Environmental Health (DEH) shall review the soil sampling results. If the results are above the CHHSLs, then the DEH would refer the project to the California Department of Toxic Substances Control for proper soil handling and removal procedures.  |  |
| <b>Threshold g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?</b>  |   |  |  |
| During operations, a brush control program would be prepared and implemented on those portions of the Project site that will not be developed. The Imperial County Fire District would be consulted to review and approve all proposed fire equipment, apparatus, and related fire prevention plans. Due to compliance with the measures identified above, and the distance from an identified area of high fire hazard risk, the Project would result in a less than significant impact associated with wildfires.                                       | Less than Significant                   | No Mitigation Required.  | Less than Significant                  |
| <b>Hydrology and Water Quality</b>  |   |  |  |
| <b>Threshold a) Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality?</b>  |   |  |  |
| Due to the size of the Project, Postconstruction Standards from the Phase II Small MS4 Permit will be applied to the Project. The proposed Project will implement site-design BMPs, source-control measures, low-impact development (LID) BMPs, and hydromodification-management BMPs to meet the permit criteria. The Project owner will maintain all on-site site-design BMPs, source-control measures, postconstruction BMPs, and retention basins during the lifetime of the Project. A full list of postconstruction BMPs is provided in Appendix I. | Less than Significant                   | <b>HWQ-1</b> Prepare SWPPP and Implement BMPs Prior to Construction and Site Restoration. The Project applicant or its contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP) specific to the Project and be responsible for securing coverage under the State Water Resources Control Board's National Pollution Discharge Elimination System stormwater permit for general construction activity (Order 2009-0009-DWQ). The SWPPP shall identify specific actions and best management practices (BMPs) related to the prevention of stormwater pollution from Project-related construction sources | 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 |
|---|---|---|--|
| <p>With implementation of Mitigation Measures HWQ-1 and HWQ-2 impacts to water quality standards and waste discharge requirements would be less than significant.</p> |   | <p>by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the appropriate agency prior to commencement of work and shall be made conditions of the contract with the contractor selected to build and decommission the Project. The SWPPP shall incorporate control measures in the following categories:</p> <ul style="list-style-type: none"> <li>- Soil stabilization and erosion control practices</li> <li>- Sediment control practices</li> <li>- Temporary and postconstruction on- and off-site runoff controls</li> <li>- Special considerations and BMPs for water crossings and drainages</li> <li>- Monitoring protocols for discharge(s) and receiving waters, with emphasis place on the following water quality objectives: dissolved oxygen, floating material, oil and grease, potential of hydrogen (pH), and turbidity</li> <li>- Waste management, handling, and disposal control practices</li> <li>- Corrective action and spill contingency measures</li> <li>- Agency and responsible party contact information</li> <li>- Training procedures that shall be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP</li> </ul> <p>The SWPPP shall be prepared by a Qualified SWPPP Practitioner and/or Qualified SWPPP Developer, with BMPs selected to achieve maximum pollutant removal and representative of the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of</p> |  |

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

| Project Impacts   | Level of Significance before Mitigation   | Mitigation   | Level of Significance After Mitigation |
|---|---|--|--|
|   |   | <p>oxygen-depleting substances; floating material; oil and grease; acidic or caustic substances or compounds; and turbidity. BMPs for soil-stabilization, erosion-control, and sediment-control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.</p> <p><b>HWQ-2</b> Incorporate Postconstruction Runoff BMPs into Project Drainage Plan. The Project Drainage Plan shall adhere to the County's Engineering Guidelines Manual, IID Draft Hydrology Manual or other recognized source with approval by the County Engineer to control and manage the on- and off-site discharge of stormwater to existing drainage systems. Infiltration basins will be integrated into the Drainage Plan to the maximum extent practical. The Drainage Plan shall provide both short and long-term drainage solutions to ensure the proper sequencing of drainage facilities and management of runoff generated from Project-related impervious surfaces as necessary.</p> |  |
| <b>Noise</b>  |   |  |  |
| <b>Threshold a)</b>   | <b>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?</b> |  |  |
| Implementation of the Project would not result in a substantial increase in ambient noise levels at off-site noise-sensitive receptors or exceed the County of Imperial Property Line Noise Standards (70 dBA anytime | 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 |
|---|---|-------------------------|--|
| for Light Industrial/Industrial Park Zones) and the applicable Noise/Land Use Compatibility criteria. Based on reported noise levels from similar operations, it is anticipated that noise levels would not exceed the County property line noise limits at the closest sensitive receptors. Therefore, operational noise impacts would be less than significant.                   |   |                         |  |
| <b>Transportation</b>   |   |                         |  |
| <b>Threshold a)</b>   | <b>Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?</b>  |                         |  |
| <b>Threshold b)</b>   | <b>Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?</b>   |                         |  |
| The Project's traffic analysis zone (TAZ 5600) has an estimated VMT per employee of 20.84, which is approximately 82.5% of the Countywide average of 25.25 and falls below the 85% threshold of 21.46. Therefore, based on the VMT analysis presented above, the Proposed Project represents a less than significant transportation impact and no further VMT analysis is required. | Less than Significant   | No Mitigation Required. | Less than Significant                  |
| <b>Tribal Cultural Resources</b>  |   |                         |  |
| <b>Threshold a)</b>   | <p><b>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:</b></p> <p><b>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</b></p> |                         |  |

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

| Project Impacts  | Level of Significance before Mitigation | Mitigation  | Level of Significance After Mitigation |
|--|---|---|--|
| <p><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 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.</b></p>   |   |   |  |
| <p>Based on the results of the Cultural Resources Survey and in consultation with the tribes, the County has determined there are no known tribal cultural resources within the Project site. However, the potential remains for the Project's ground-disturbing activity to impact undiscovered resources. These resources could include but not be limited to lithic materials, faunal, pottery, ceramics, building materials, or glassware. Impacts would be considered less than significant with implementation of the mitigation measures outlined in Section 4.4.</p> | <p>Less than Significant</p>            | <p><b>CUL-1</b> The Applicant shall retain the services of a Qualified Archaeologist meeting the Secretary of the Interior Standards or County standards, whichever is greater, and require that all initial ground-disturbing work be monitored by archaeological specialist (monitor) proficient in artifact and feature identification in monitoring contexts. The Consultant (Qualified Archaeologist and/or monitor) shall be present at the Project construction phase kickoff meeting.</p> <p><b>CUL-2</b> Prior to commencing construction activities and thus prior to any ground disturbance in the Proposed Project site, the Consultant 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. A tribal monitor shall be provided an opportunity to attend the preconstruction briefing, if requested. This WEAP training will educate construction personnel on how to work with the monitor(s) to identify and minimize impacts to archaeological resources and maintain environmental compliance. This WEAP training will educate the monitor(s) of construction procedures to avoid construction-related injury or harm. This training may be performed periodically, such as for new personnel coming on to the Project as needed.</p> <p><b>CUL-3</b> The Contractor shall provide the Consultant with a schedule of initial potential ground-disturbing activities. A</p> | <p>Less than Significant</p>           |

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

| Project Impacts | Level of Significance before Mitigation | Mitigation   | Level of Significance After Mitigation |
|-----------------|---|--|--|
|                 |   | <p>minimum of 48 hours will be provided to the Consultant of commencement of any initial ground-disturbing activities, such as vegetation grubbing or clearing, grading, trenching, or mass excavation.</p> <p>A monitor shall be present on-site at the commencement of ground-disturbing activities related to the Project. The monitor, in consultation with the Qualified Archaeologist, shall observe initial ground-disturbing activities and, as they proceed, adjust the number of monitors as needed to provide adequate observation and oversight. All monitors will have stop-work authority to allow for recordation and evaluation of finds during construction. The monitor will maintain a daily record of observations to serve as an ongoing reference resource and to provide a resource for final reporting upon completion of the Project.</p> <p>The Consultant 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 to provide appropriate oversight.</p> <p><b>CUL-4</b> In the event of the discovery of previously unidentified archaeological materials, the Contractor shall immediately cease all work activities within an area of no less than 100 feet of the discovery. After cessation of excavation, the Contractor shall immediately contact the County. Except in the case of cultural items that fall within the scope of the Native American Grave Protection and Repatriation Act (NAGPRA), the California Health and Safety Code 7050.5, CEQA Section 15064.5, or California Public Resources Code Section 5097.98, the discovery of any cultural resource within the Project area shall not be grounds for a Project-wide “stop work” notice or otherwise interfere with the Project’s continuation except as set forth in</p> |  |

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

| Project Impacts | Level of Significance before Mitigation | Mitigation   | Level of Significance After Mitigation |
|-----------------|---|--|--|
|                 |   | <p>this paragraph. Additionally, all consulting Native American tribal groups that requested notification of any unanticipated discovery of archaeological resources on the Project shall be notified appropriately. If a discovery results in the identification of cultural items that fall within the scope of NAGPRA, the Contractor shall immediately cease all work activities within an area of no less than 100 feet (30 meters) of the discovery. In the event of an unanticipated discovery of archaeological materials during construction, the Applicant-retained Qualified Professional Archaeologist shall be contacted to evaluate the significance of the materials prior to resuming any construction-related activities in the vicinity of the find. If the Qualified Archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, the Applicant shall implement an archaeological data recovery program.</p> <p><b>CUL-5</b> At the completion of all ground-disturbing activities, the Consultant shall prepare an Archaeological 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 SCCIC, as required.</p> <p>In the event unanticipated, buried prehistoric archaeological resources (lithic material, faunal, pottery, etc.) or historical archaeological resources (ceramics, building materials, glassware, etc.) are unearthed during construction or any ground disturbing activities within the Project area, additional resource treatments would become necessary. Once a potential resource has been identified, all work within 100 feet must be halted until the find can be assessed by a qualified archaeologist.</p> |  |

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

| Project Impacts   | Level of Significance before Mitigation | Mitigation   | Level of Significance After Mitigation |
|---|---|--|--|
| <b>Utilities and Service Systems</b>  |   |  |  |
| <b>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?</b>  |   |  |  |
| New facilities would be constructed for the purpose of water, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunications. Expansion of these facilities would utilize existing infrastructure no limited to existing irrigation canals and power/telephone lines which would minimize damage to existing facilities. Therefore, no significant environmental effects are expected to result. Impacts would be less than significant.  | Less than Significant                   | No Mitigation Required.  | Less than Significant                  |
| <b>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?</b>  |   |  |  |
| 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 normal year water supply because IID continues to rely on its entitlement for Colorado River water. Due to the priority of water rights and other agreements, drought affecting Colorado River water supplies causes shortages for Arizona, Nevada, and Mexico, but not California or IID. | Potentially Significant                 | <b>UTIL-1:</b> 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 |
|---|---|--------------------------------|--|
| <p>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 J 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.</p>   |   |                                |  |
| <p><b>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?</b></p>   |   |                                |  |
| <p>it is estimated that 90 percent of filter cakes would fall below California thresholds for soluble threshold limit concentration (STLC) and total threshold limit concentration (TTLC). The remaining 10 percent, or approximately 4,178 cy, would exceed these standards and would be trucked to the Copper Mountain Landfill located at 34853 County 12th Street in Wellton, Arizona, approximately 96 miles southeast of the Project site. This landfill has a design capacity for 2.5 million megagrams. Although the remaining landfill capacity is not available, the amount of solid waste sent to this facility would be minimal. If the filter cakes were to exceed Arizona's toxicity standards which is not expected to occur, the Applicant will arrange for hazardous materials to be trucked to Idaho or Nevada.</p> | <p>Less than Significant</p>            | <p>No Mitigation Required.</p> | <p>Less than Significant</p>           |

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

| Project Impacts  | Level of Significance before Mitigation | Mitigation                     | Level of Significance After Mitigation |
|--|---|--------------------------------|--|
| <p>As mentioned in Chapter 2: Project Description, approximately every three years the Project facilities will be shut down for about three weeks to complete a facility cleaning. This process would remove mineral scale from Project plant piping. The scale removed during this process has the potential to exceed STLC and TTLC standards for Arizona, in which case solid waste would be required to be trucked to Nevada. However, this is an extremely rare occurrence, and in the past 10 years only two truckloads have needed to be transported to Nevada. The implementation of the Proposed Project would not increase the amount of solid waste needing to go out of state.</p> <p>Therefore, solid waste facilities have adequate permitted capacity for solid waste materials generated by the Project. Impacts would be less than significant.</p> |   |                                |  |
| <p><b>Threshold e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?</b></p>   |   |                                |  |
| <p>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.</p>   | <p>Less than Significant</p>            | <p>No Mitigation Required.</p> | <p>Less than Significant</p>           |

## SECTION 1.0 – PROJECT OVERVIEW

### 1.1 INTRODUCTION

### 1.2 PROJECT SUMMARY

The Final Environmental Impact Report for the Hell's Kitchen PowerCo1 and Lithium Co Project (Proposed Project) has been prepared by the County of Imperial, in accordance with the California Environmental Quality Act (CEQA) Guidelines §15086: Consultation Concerning the Draft EIR, §15088: Evaluation of and Response to Comments, and §15132: Contents of Final Environmental Impact Report. This Final FEIR consists of the following information:

- a. The Draft EIR, which was circulated for more than the mandatory 45-day public comment period beginning August 30, 2023 and ending October 23, 2023; and
- b. A list of all commenters during the public comment period, including copies of written comment letters; and
- c. Responses to all comments;
- d. Revisions to the Draft EIR.

None of the revisions of the Draft EIR characterize a substantial increase in the severity of an identified impact, identification of a new significant impact, mitigation measure, of alternative different from those already considered in preparing the Draft EIR. The Draft EIR, and Final EIR, and administrative record are available for review upon request at:

801 Main St. El Centro, CA 92243 during normal working hours of 7:00 a.m. to 5:00 p.m., Monday through Friday.

### 1.3 PROJECT DESCRIPTION SUMMARY

Controlled Thermal Resources (US) Inc. via its subsidiary Hell's Kitchen Geothermal, LLC is proposing the Hell's Kitchen PowerCo 1 (HKP1), and Hell's Kitchen LithiumCo 1 LLC is proposing the Hell's Kitchen LithiumCo 1 (HKL1) in Imperial County, California. HKP1 involves the development of a geothermal power plant that will produce up to 49.9 megawatts (MW) net of geothermal green energy. HKL1 involves development of mineral extraction and processing facilities capable of producing lithium hydroxide, silica and polymetallic products, and possibly boron compounds, for commercial sale. HKP1 and HKL1 (together referred to as the Proposed Project) will be constructed by Hell's Kitchen PowerCo 1 LLC and Hell's Kitchen LithiumCo 1 LLC respectively, both subsidiaries of Controlled Thermal Resources (US) Inc. (CTR) and will have shared facilities. Hell's Kitchen Operating Services LLC, also a subsidiary of Controlled Thermal Resources (US) Inc. will operate and maintain these facilities.

*Refer to Chapter 2 of the Draft EIR for a complete description of the project.*

### 1.4 ADEQUACY OF THE FINAL FEIR

Under CEQA, the responses to comments on a Draft EIR must include good faith, well-reasoned responses to all comments received on the Draft EIR that raise significant environmental issues related to the project under review. If a comment does not relate to the Draft EIR or does not raise a significant environmental issue related to the project, there is no need for a response under CEQA.

CEQA does not require the EIR authors to conduct every test or perform all research or study suggested by commenters in responding to comments. The EIR need only to respond to significant environmental issues and need not provide all of the information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR (CEQA Guidelines Sections 15088, 15132, and 15204).

### **1.5 COMMENTS ON THE DRAFT EIR**

The Lead Agency, under the CEQA Guidelines §15086: Consultation Concerning Draft EIR, and §15088: Evaluation of and Response to Comments, is required to consult with and obtain comments from other public agencies who have jurisdiction or are included in the decision-making process of the project, and to provide the public an opportunity to comment on the project. The Lead Agency is required to respond in writing to substantive environmental comments.

Comments received during the public review period were submitted in the following formats: email, hand written comment cards, and letters between August 30, 2023 and October 23, 2023; however, the County in a good faith effort has accepted comments on the DEIR until November 30, 2023.

### **1.6 LIST OF COMMENTERS**

This section provides responses to written comments received during the 45-day public review period, and period following public review up until November 30, 2023. The following tables provides a list of agencies, individuals, and organizations that submitted comments on the Draft EIR during the public review period.

| <b>Comment Letter No.</b> | <b>Commenting Agency</b>                       | <b>Date of Comment</b> |
|---------------------------|--|------------------------|
| 1                         | U.S. Fish and Wildlife Service                 | 10.20.2023             |
| 2                         | California Department of Conservation          | 10.21.2023             |
| 3                         | California State Lands Commission              | 10.23.2023             |
| 4                         | California Department of Fish and Wildlife     | 10.23.2023             |
| 5                         | Imperial County Air Pollution Control District | 10.27.2023             |
| 6                         | Imperial Irrigation District                   | 11.22.2023             |

| <b>Comment Letter No.</b> | <b>Individual Comments</b>         | <b>Date of Comment</b> |
|---------------------------|------------------------------------|------------------------|
| 7                         | Performance Mechanical Contractors | 10.5.2023              |
| 8                         | Energy Source Minerals             | 10.22.2023             |
| 9                         | CYRQ – Hudson Ranch                | 10.23.2023             |
| 10                        | Law Offices of Jordan R. Sisson    | 10.23.2023             |
| 11                        | Courtney Ann Coyle Attorney at Law | 10.23.2023             |

| <b>Comment Letter No.</b> | <b>Organizations</b>   | <b>Date of Comment</b> |
|---------------------------|--|------------------------|
| 12                        | State Building and Construction Trades Council of California | 10.4.2023              |

## **SECTION 2.0 – RESPONSES TO COMMENTS**

### **2.1 AGENCY COMMENTS**

#### **Comment Letter #1:**



## United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE  
Ecological Services  
Palm Springs Fish and Wildlife Office  
777 East Tahquitz Canyon Way, Suite 208  
Palm Springs, California 92262



In Reply Refer to:  
2023-0096639-TA-COM-IMP

October 20, 2023  
*Sent Electronically*

David Black  
Senior Planner  
Imperial County Planning and Development Services  
801 Main Street  
El Centro, California 92243

Subject: Draft Environmental Impact Report for the Hell's Kitchen PowerCo 1 and LithiumCo 1 Project, Imperial County, California

Dear David Black:

We have reviewed the above-referenced draft Environmental Impact Report (EIR; Chambers Group 2023) received September 8, 2023, for the proposed development of Controlled Thermal Resources (CTR), Hell's Kitchen PowerCo 1 and LithiumCo 1 Project (Project) in unincorporated Imperial County, California. The Project proposes to construct, operate, and maintain a 49.9 megawatt (MW) geothermal power plant; well pads with geothermal production and injection wells; a mineral extraction facility; pipelines between the power plant and mineral extraction facilities; mineral handling and packaging facilities; shared administrative facilities; a 2-mile long, 230 kilovolt (kV), generation intertie (gen-tie) line and co-located power lines; and the paving of Davis Road from MacDonald Road to Noffsinger Road including ingress and egress to the Project site from Davis Road.

Based on information in the EIR, the Project area includes a 74-acre Project site located southeast of the Salton Sea within undeveloped land owned by Imperial Irrigation District (IID). The main vegetation communities and land cover types on the Project site include Southern cattail (*Typha domingensis*) marsh and similar emergent wetlands, tamarisk (*Tamarix* spp.) thickets, iodine bush (*Allenrolfea occidentalis*), dry playa, IID irrigation drains, open water, and bare ground.

We offer the following comments as they relate to potential impacts on public trust resources. The primary concern and mandate of the U.S. Fish and Wildlife Service (Service) is the conservation, protection, and enhancement of fish and wildlife resources and their habitats for the continuing benefit of the American people. The Service has legal responsibility for the welfare of migratory birds and threatened and endangered animals and plants occurring in the United States. The Service is also responsible for administering the Federal Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

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We preface our comments by recognizing the need for development of renewable energy and the challenge of balancing renewable energy development with conserving natural resources in the Salton Sea Basin. We are working with the agencies involved in this effort and offer our assistance to ensure all proposed projects are evaluated consistent with the various State and Federal renewable energy and environmental goals and policies.

Over the past 5 years, the Service has coordinated with CTR on several associated projects in the vicinity. These include the Geothermal Exploration and Monitoring Well Pad 1 (Service 2018), Hell's Kitchen Geothermal S-Berm Access Road and Minerals Test Project (Service 2019), and the IID drain extensions that are currently being restored to their original drain outlet locations. Based on this coordination, we have a current understanding of the vegetation dynamics of the area and have knowledge of the occurrences of federally listed species that are in, or adjacent to, the Project site. The two federally endangered species that may be adversely affected by Project activities are Yuma Ridgway's rail (*Rallus obsoletus yumanensis*) and desert pupfish (*Cyprinodon macularius*).

To effectivity evaluate the impacts of the proposed Project on the federally listed species in the action area, we recommend that information be provided on potential Project impacts that occur within, and adjacent to, the Project area, including total acres of habitat removed/disturbed (including any associated with the excavation of fill material); activities that may adversely impact listed species feeding, breeding, and sheltering activities, such as loss of water quality (e.g., increases in water temperature, salinity, or selenium) or dewatering activities, duration of impacts, and associated avoidance and minimization measures. Additionally, CTR is in the process of restoring IID irrigation drains to their original outlet locations. Once the drains are restored, water from these drains will likely drain into some Project areas. We recommend the EIR evaluate how water from the restored drain outlets will affect Project construction areas and how that water could be more effectively managed to avoid ponding and establishment of wetlands in some Project areas.

### **Migratory Birds**

The Project is located southeast of the Salton Sea, on dry playa. The Salton Sea and adjacent areas occur within the Pacific Flyway and provide permanent habitat and seasonal refuge to hundreds of species of resident and migratory birds (Shuford *et al.* 2002, Patten *et al.* 2003), and large populations of shorebirds, wading birds, waterfowl, raptors, upland gamebirds, neotropical migrants, and other passerines. To date, limited published information exists on bird collisions at renewable energy facilities within the Salton Sea Basin due to a lack of systematic, statistically rigorous monitoring. However, projects in the vicinity are reporting avian mortalities and injuries resulting from collisions with electrical distribution lines onsite, and gen-tie lines to regional substations on the grid. Therefore, it is likely the Project will contribute to an increase in avian fatalities through collision with newly installed fencing, onsite electrical distribution lines, and gen-tie lines.

The draft EIR includes a requirement for development of a Nesting Bird Plan but does not provide details of the content included in this plan. To help reduce adverse impacts to migratory

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birds we recommend the project applicant develop an Avian Protection Plan (APP) that would further the conservation of avian species. The APP should include, at a minimum, a nesting bird management plan and systematic post-construction mortality monitoring along the newly installed distribution and gen-tie lines to ensure the measures to reduce collisions with these lines are adequate. The Service is available to work with the project applicant to develop an effective APP. See the enclosure (Enclosure) for specific information on developing an APP.

Also, to further avoid or reduce adverse effects to migratory birds, we recommend the following measures be considered:

1. Undergrounding of on-site distribution lines.
2. Using monopoles for any above-ground distribution lines and gen-tie lines.
3. Marking fences to reduce avian collisions.
4. Avoiding the use of lattice-type structures or placing external ladders and platforms on Project infrastructure to minimize perching and nesting opportunities for birds on site.
5. Avoiding the use of guy wires, or where this is not feasible, placing markers on the guy wires to increase visibility of these hazards to birds.

#### ***Cumulative Effects***

The draft EIR concludes the proposed mitigation measures will ensure the Project does not cumulatively affect migratory birds. This conclusion is based only on five related projects near the proposed Project, listed in Figure 3.0-1, in the draft EIS. However, several other renewable energy projects are near the proposed Project (e.g., Midway Solar Farm IV, Lindsey Solar Farm, Wilkinson Solar Farm, Morton Bay Geothermal, Elmore North Geothermal, and Black Rock Geothermal) and are within the Pacific Flyway in the region that could have adverse effects on migratory birds. A more accurate analysis of the impacts of cumulative habitat loss and the potential for bird fatalities would include all renewable energy projects in the Imperial Valley that cover about 24,000 acres of converted agricultural fields within the Pacific Flyway and all the associated new electrical gen-tie lines. Therefore, we recommend the EIR incorporate all the renewable energy projects and associated infrastructure in Imperial County in the cumulative effects analysis.

#### **Yuma Ridgway's Rail**

In the U.S., the Yuma Ridgway's rail is currently restricted to wetlands along the Salton Sea and lower Colorado River, as well as several small temporary marshes along the Gila River in Arizona from Phoenix west to the Colorado River (Service 2009). Based on recent research, Yuma Ridgway's rails in the Salton Sea Basin are for the most part non-migratory, however, localized movements and some long-distance migrations occur within the range of the species (Harrity and Conway 2021). Radar studies conducted in the 1980s at the south end of the Salton

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Sea along the Alamo and New Rivers documented Yuma Ridgway's rails departing marsh habitats flying at relative low altitudes, 165 to 330 feet (McKernan 2018, pers. comm.). This dispersal behavior and low elevation flight patterns make all age classes of Yuma Ridgway's rails susceptible to collisions with many structures, including power lines, towers, and fences. We are aware of two Yuma Ridgway's rail fatalities that have occurred at nearby solar project sites near the Project area resulting from collision. Therefore, we recommend the Project incorporate measures to reduce this potential adverse effect with installation of fence and electrical line markers or undergrounding electrical facilities. See the enclosure for more information.

### **Desert Pupfish**

We appreciate the addition of BIO-8, Desert Pupfish Protection and Relocation Plan, to avoid or minimize adverse impacts to desert pupfish. We have provided some revisions to this measure (see Enclosure) for consistency with previous project reviews in the Project area.

We appreciate the opportunity to provide comments on the draft EIR. We have enclosed specific recommendations to assist in avoidance and minimization of impacts to public trust resources. Should you have any questions regarding these comments, please contact [Felicia Sirchia](mailto:Felicia_Sirchia@fws.gov)<sup>1</sup> of my staff by email or at 760-322-2070.

Sincerely,

VINCENT JAMES

Digitally signed by  
VINCENT JAMES  
Date: 2023.10.20  
09:12:25 -07'00'

for Rollie White  
Assistant Field Supervisor

Enclosure

cc:

Charley Land, California Department of Fish and Wildlife

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<sup>1</sup> felicia\_sirchia@fws.gov.

David Black (2023-0096639-TA-COM-IMP)

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#### LITERATURE CITED

- [APLIC] Avian Power Line Interaction Committee. 2006. Suggested practices for avian protection on power lines, the state of the art in 2006. Edison Electric Institute, Avian Power Line Interaction Committee, and California Energy Commission. Washington, D.C. and Sacramento, California.
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- Chambers Group. 2023. Draft Environmental Impact Report for the Hell's Kitchen PowerCo 1 and LithiumCo 1 Project Imperial County, California. San Diego, California
- Harrity, E.J., and C.J. Conway. 2021. Dispersal and Migration Behavior of Yuma Ridgway's Rails: 2021 Annual Report. Wildlife Research Report #2021-01. Idaho Cooperative Fish and Wildlife Research Unit, Moscow, ID.
- Patten, M.A., G. McCaskie, and P. Unitt. 2003. Birds of the Salton Sea. Status, Biogeography, and Ecology. University of California Press. Berkeley, California.
- Shuford W.D., N. Warnock, K.C. Molina, and K.K. Sturm. 2002. The Salton Sea as critical habitat to migratory and resident waterbirds. *Hydrobiologia* 473:255-274.
- [Service] U.S. Fish and Wildlife Service. 2009. Yuma clapper rail (*Rallus longirostris yumanensis*) recovery plan. Draft first revision. U.S. Fish and Wildlife Service, Southwest Region. Albuquerque, New Mexico. 73 pp.
- [Service] U.S. Fish and Wildlife Service. 2018. Concurrence letter for the Hell's Kitchen Geothermal Exploration and Monitoring Well (FWS-ERIV-16B0314-16I0625), Imperial County, California, May 8, 2018. Palm Springs Fish and Wildlife Office, Palm Springs, California.
- [Service] U.S. Fish and Wildlife Service. 2019. Biological Opinion on the Hell's Kitchen Geothermal S-Berm Access Road and Minerals Test Project (FWS-IMP-16B0314-19F0715), Imperial County, California, July 12, 2019. Carlsbad Fish and Wildlife Office, Carlsbad, California.

#### PERSONAL COMMUNICATION

- McKernan, R. 2018. Ornithologist, Oasis Bird Observatory and Director Emeritus San Bernardino County Museum. Email correspondence to Felicia Sirchia, USFWS, Palm Springs Fish and Wildlife Office, Palm Springs, California. Dated 10/09/2018. Subject: Yuma Ridgway's Rail flying altitudes.

**ENCLOSURE**

**U.S. Fish and Wildlife Service  
Avoidance and Minimization Recommendations on the  
Draft EIR for the Hell's Kitchen PowerCo 1 and LithiumCo 1 Project**

**Avian Recommendations**

1. Prepare and implement an Avian Protection Plan (APP) in consultation with Imperial County, the California Department of Fish and Wildlife (CDFW), and the U.S. Fish and Wildlife Service (Service) for review and comment. The APP will include the following:
  - a. A description and assessment of the existing habitat, risk characterization, and avian risk minimization measures.
  - b. An adaptive management and decision-making framework for reviewing, characterizing, and responding to monitoring results.
  - c. Specific conservation measures and/or programs to minimize and reduce avian injury or mortality over time and evaluation of the applicability and effectiveness of those measures using results from the monitoring program.
  - d. Water storage and brine pond management
2. Avoid using lattice-type structures and placing external ladders and platforms on towers to minimize perching and nesting.
3. Minimize use of outdoor lighting. If lighting is necessary, it should be focused downward to reduce skyward illumination. Lights should be equipped with motion detectors to reduce continuous illumination.
4. Where feasible, install transmission and distribution lines underground or on the surface as insulated, shielded wire to avoid avian collision and electrocution hazards. Use the most recent recommendations of the Avian Power Line Interaction Committee (APLIC 2006, 2012) for any required above-ground lines, transformers, or conductors to reduce collisions and electrocutions. When transmission lines must be above-ground, avoid placing lines within wetlands and over canyons.
5. Install and replace flight diverters, as needed on the proposed transmission line to render the line more visible to resident listed and migratory birds, including night-migrating birds.
6. Install fence markers or other devices on perimeter fences to render the fence more visible (both day and night) to resident listed and migratory birds to reduce collision risk.

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**Desert Pupfish Recommendation**

We recommend revising BIO-8, Desert Pupfish Protection and Relocation Plan, using the language below:

Prepare and implement a desert pupfish protection and relocation plan. This plan will be submitted to the Service and the CDFW for review and approval prior to any ground-disturbing activities that have a water component. This plan will provide:

1. Protocols for pre-construction or pre-maintenance surveys to assess species presence and spawning within or immediately adjacent to work areas (e.g., in, or at the end of, the irrigation drains/drain canals, open water areas, and around the open water margins). The protocols will also outline the qualifications required for biologists to conduct desert pupfish survey, capture, and relocation activities and the process for biologist approval.
2. Capture (e.g., trapping in the irrigation drains for construction and maintenance; or trapping, dip netting, and seining in open water areas that are drained or if the water level is dropped) and transport methods to minimize handling and stress as well as exposure to heat, low dissolved oxygen (DO), and crowding.
3. Identification of locations for release of captured desert pupfish.
4. Timing windows when construction or maintenance in open water areas and in the irrigation drain mouths/canals may be conducted with minimal effects on desert pupfish spawning.
5. Adaptive management procedures that include assessment of mitigation measure effectiveness, development of revised measures to improve effectiveness, and similar assessment of revised measures to verify effectiveness.

## **Response to Comment Letter #1**

Both Yuma Ridgway's rail and desert pupfish are addressed in the Draft EIR. The dynamic vegetation conditions are also described in the DEIR and associated technical studies and the DEIR noted the change in vegetation conditions from 2021 to 2022. The conditions are dynamic and are likely to continue to change prior to development of the project. The EIR describes a full range of impacts on those communities and is conservative in its analysis of effects.

The Draft EIR describes the range of impacts that could occur on federally listed species in the area. All of the suitable habitat for Yuma Ridgway's rail and desert pupfish within the Project development area is assumed to be impacted and developed by Project construction. Actual impacts on habitat for federally listed species would reflect the full extent of suitable habitat on the site at the time of construction. As noted in the prior comment and response, the habitat conditions on the Project site are dynamic and the EIR discloses the range of impacts that are likely to occur on the site including impacts on federally listed species. Impacts on habitat for Yuma Ridgway's rail are addressed through Mitigation Measures BIO-13 in the EIR, which was designed to be adaptive to the changing habitat conditions and allow for quantification of impacts and approaches to offset those impacts at the time of construction. In addition, Mitigation Measure BIO-19 includes creation of wetland and open water habitat that would include suitable habitats for Yuma Ridgway's rail and desert pupfish. The project could result in potential impacts on water quality as a result of sedimentation during construction and changes in post-project run off conditions. The site design measures to protect water quality are addressed in Section 4.9.5 of the DEIR and Mitigation Measure HWQ-1: Prepare SWPPP and Implement BMPs Prior to Construction and Site Restoration, HWQ-2: Incorporate Postconstruction Runoff BMPs into Project Drainage Plan, and BIO6: Sediment and Erosion Control. The impacts of temporary construction dewatering in desert pupfish habitat are addressed through Mitigation Measure BIO-8: Desert Pupfish Protection and Relocation Plan.

The Project design includes import of substantial fill material to create a raised development pad and retention basins for construction of stormwater runoff. The raised development pad would not be subject to routine flooding from the irrigation drains because it would be several feet higher in elevation than the surrounding areas.

The impact of avian collisions with power lines is documented in Reducing Avian Interactions with Power Lines: the State of the Art in 2012. The project would install a 1-mile long gen-tie line within Imperial Irrigation District (IID) right-of-way and adjacent to existing IID overhead power lines to the IID Substation. The impacts from the new segment of transmission line adjacent to the existing power lines are addressed through design of the gen-tie line in accordance with Avian Power Line Interaction Committee (APLIC Guidelines) and installation of bird flight diverters on the gen-tie line per Mitigation Measure BIO-17: Bird Flight Diverters. Implementation of APLIC Guidelines and use of bird flight diverters are best practices for reducing avian collisions with power lines. Geothermal power plants are not known to cause direct bird mortality. While other renewable energy facilities, such as photovoltaic solar facilities, can cause a lake effect and take up large swaths of land where avian impacts are known to occur from solar development, the geothermal and lithium power plant buildings/structures would not introduce elements to the environment that would be expected to cause bird mortality or collisions.

Mitigation Measure BIO-16: Nesting Bird Plan is intended to provide protection for nesting birds during Project construction. The mitigation measure does include specifics including scheduling construction to

start outside the nesting season (February 1 through August 31), having a qualified biologist conduct surveys of the development area if construction starts during the nesting season and employee procedures to avoid active nests until all nesting has ceased and the young have fledged the nest. Additional details have been added to Mitigation Measure BIO-16 as indicated below. Mitigation Measure BIO-16 was not intended to address operational impacts of the Project. As described above, the impact of the gen-tie line are addressed through implementation of APLIC guidelines in the gen-tie design and use of bird flight diverters (MM BIO-17).

The revised text of Mitigation Measure BIO-16 is as follows:

*Mitigation Measure BIO-16. Nesting Bird Plan. Construction activities shall take place outside the general bird breeding season (February 15 to September 30), to the maximum extent practicable. Regardless of the time of year, prior to ground-disturbing activities, a qualified biologist shall conduct a nesting bird survey to comply with CDFW Code 3503 and 3503.5 and the Migratory Bird Treaty Act. The survey shall occur no more than three (3) days prior to initiation of proposed Project activities and shall include any potential habitat (including trees, shrubs, the ground, or nearby structures). Any occupied passerine and/or raptor nests occurring within the proposed Project area or the Project's zone of influence (generally 100-300 feet) shall be delineated and a no-disturbance buffer zone (as determined by the avian biologist) shall be established and maintained during Project activities. Additional follow-up surveys may be required by the resource agencies and Imperial County. The buffer zone shall be sufficient in size to prevent impacts to the nest. A qualified biologist shall monitor active nests to determine whether construction activities are disturbing nesting birds or nestlings. If the qualified biologist determines that construction activities pose a disturbance to nesting, construction work shall be stopped in the area of the nest and the no disturbance buffer shall be expanded. Once nesting has ceased and the fledglings are no longer using the nest area as confirmed by a qualified biologist, the buffer may be removed. A nesting bird survey report shall be provided to Imperial County and CDFW. If an active nest is encountered during construction, construction shall stop immediately until a qualified biologist can determine the status of the nest and when work can proceed without risking violation to state or federal laws.*

The measures proposed in the comment were previously incorporated into the Project design as follows:

1. The Project will not have any on-site distribution lines.
2. The Project includes use of monopole structures for the gen-tie lines.
3. The fences for the facility will be standard chain link security fences employed at other geothermal power plants in the region.
4. No lattice-type structures are proposed as part of the Project. As mentioned in item 2, the poles will be monopole structures.
5. No guy wires are proposed as part of the Project

FWS' comment addresses the potential for cumulative effects on migratory birds from implementation of renewable energy projects throughout the Imperial Valley region. While it is noteworthy that all proposed renewable energy projects would convert approximately 24,000 acres of agricultural fields to renewable energy uses and there may be a regional impact from conversion of 24,000 acres of agricultural land to industrial use, the fact remains that the project's impact on that conversion of agricultural land to

renewable energy uses would be less than significant. The project is not located in an agricultural field and the 74 acres of direct project disturbance would be offset by the habitat mitigation included in the EIR. The mitigation would effectively reduce the projects contribution to any cumulative impact on migratory birds from habitat loss to less than considerable. Changing the geographic scale of the cumulative impact analysis does not change the conclusion that the projects contribution to a cumulative impact is less than significant with incorporation of the project specific mitigation measures.

The impact from avian collisions with power lines is a well known occurrence as noted in responses to comments above. The project includes specific measures to reduce potential for avian interactions with power lines including Mitigation Measure BIO-17 which requires bird flight diverters and design of the transmission lines in accordance with APLIC Guidelines.

The language of Mitigation Measure BIO-8 has been revised per FWS comments as follows:

*A desert pupfish protection and relocation plan will be prepared prior to construction activities in any suitable habitat for desert pupfish. Its implementation will ensure construction in any suitable habitat for desert pupfish will be conducted with minimal effects on desert pupfish. This plan will be submitted to the Service and the CDFW for review and approval prior to any ground-disturbing activities that have a water component. This plan will provide:*

- 1. Protocols for pre-construction or pre-maintenance surveys to assess species presence and spawning within or immediately adjacent to work areas (e.g., in, or at the end of, the irrigation drains/drain canals, open water areas, and around the open water margins). The protocols will also outline the qualifications required for biologists to conduct desert pupfish survey, capture, and relocation activities and the process for biologist approval.*
- 2. Capture (e.g., trapping in the irrigation drains for construction and maintenance; or trapping, dip netting, and seining in open water areas that are drained or if the water level is dropped) and transport methods to minimize handling and stress as well as exposure to heat, low dissolved oxygen (DO), and crowding.*
- 3. Identification of locations for release of captured desert pupfish.*
- 4. Timing windows when construction or maintenance in open water areas and in the irrigation drain mouths/canals may be conducted with minimal effects on desert pupfish spawning.*
- 5. Adaptive management procedures that include assessment of mitigation measure effectiveness, development of revised measures to improve effectiveness, and similar assessment of revised measures to verify effectiveness.*

**Comment Letter #2:**

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Gavin Newsom, Governor  
David Shabazian, Director

September 21, 2023

David Black, Planner  
[DavidBlack@co.imperial.ca.us](mailto:DavidBlack@co.imperial.ca.us)  
County of Imperial PDS  
801 Main Street  
El Centro, CA 92243

Subject: SCH Number 2022030704  
Hell's Kitchen PowerCo1 and LithiumCo 1 Project

Dear Mr. Black:

The California Geologic Energy Management Division (CalGEM) regulates the drilling, operation, maintenance and ultimate plugging and abandonment of geothermal production and injection wells located on private and state lands in California. Public Resources Code (PRC), Division 3, Chapter 4, Sections 3700 to 3776, and California Code of Regulations (CCR) Title 14 Sections 1900 to 1997.5 delineate the statewide geothermal statutes and regulations for geothermal wells and associated projects.

The Draft Environmental Impact Report analyzes Controlled Thermal Resources (US) Inc's proposed geothermal project Hell's Kitchen PowerCo 1 that includes exploration wells authorized under Conditional Use Permit #16-0001 issued June 14, 2017. Two of those 6 wells are already drilled and will be used for this project. Additional wells will be drilled to bring the total to seven for production and injection, including one well for injection of aerated fluids.

CalGEM will require a Notice of Intention (NOI) to be submitted for each new well to be drilled as required by the regulations. Subsequent well rework and eventual plugging and abandonment will also require an NOI. Wells that are proposed for injection require additional data to be submitted after the well is drilled including detailed geology, brine chemistry from the proposed injection zone and an area of review analysis that reviews other wells within one-quarter-mile radius of the proposed injection well(s) including abandoned wells. A Project Approval Letter (PAL) is issued authorizing injection and includes a set of conditions specific to injection operations.

A portion of the project area lies within the Imperial Carbon Dioxide Gas Field and there are carbon dioxide (CO<sub>2</sub>) wells located within and adjacent to the project area. The Imperial Carbon Dioxide Gas Field wells are found in Sections 1, 2, 3, 11, 12, 13, and 14 of Township 11 South, Range 13 East, SB B&M. If any wells, including any plugged,

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abandoned, or unrecorded wells are damaged or uncovered during the construction of the well pads, pipelines, and access roads, remedial plugging operations may be required. If such damage or discovery occurs, CalGEM must be contacted to obtain information on the requirements to address the wells, and to receive approval to perform any remedial operations. This CO<sub>2</sub> zone also affects drilling conditions and well construction, hence, the installation of blowout prevention equipment is required prior to setting the surface casing and the use of a CO<sub>2</sub> resistant cement during well construction. This is to ensure the integrity of the well for its life.

CalGEM's regulations section 1971 requires subsidence monitoring specifically in Imperial County to address concerns that geothermal fluid withdrawal could affect the surrounding area of a geothermal project. This requirement is to address concerns associated with Geology and Soils and is required for the life of the project.

Geothermal projects often occur in areas that are tectonically active. The Salton Sea Geothermal Field is located at the southern end of the San Andrea fault, at the north end of the Brawley Seismic Zone, and is also located near geologically young volcanoes. Earthquakes induced by geothermal activity are known to occur in The Geysers field because it is a steam dominated system. The Salton Sea geothermal system is a liquid dominated system that has not historically had this cause and effect. However, due to concerns about induced seismicity CalGEM requests that a seismic monitoring system be installed inclusive to the project boundary and that the system be connected to the USGS Southern California network to collect real time data.

If you have any questions regarding CalGEM's comments on this Draft EIR please contact us at [CalGEMGeothermal@conservation.ca.gov](mailto:CalGEMGeothermal@conservation.ca.gov) or 916-203-7785.

Sincerely,

*Charlene L Wardlow*

Charlene L Wardlow  
Geothermal Program Manager

cc: [CalGEMCEQA@conservation.ca.gov](mailto:CalGEMCEQA@conservation.ca.gov)

**Response to Comment Letter #2**

Comment is noted. A Notice of Intent will be submitted to CalGEM for each new well. The Proposed Project will adhere to all existing regulations, including CalGEMs required subsidence monitoring. Also, the seismic risk associated with Project site is well documented throughout the EIR and the use of a seismic monitoring station will be considered. The comment does not identify any deficiencies with the DEIR; therefore, no further comment is required.

**Comment Letter #3:**

STATE OF CALIFORNIA

GAVIN NEWSOM, Governor

**CALIFORNIA STATE LANDS  
COMMISSION**

100 Howe Avenue, Suite 100-South  
Sacramento, CA 95825-8202



*Established in 1938*

**JENNIFER LUCCHESI**, Executive Officer

**916.574.1800**

TTY CA Relay Service: 711 or Phone **800.735.2922**

from Voice Phone **800.735.2929**

or for Spanish **800.855.3000**

**Contact Phone: 916.574.1900**

October 23, 2023

File Ref: SCH #2022030704

David Black, Planner  
Imperial County Planning & Development  
801 Main Street  
El Centro, CA 92243

**RECEIVED**

By Imperial County Planning & Development Services at 7:56 am, Oct 23, 2023

**Subject: Draft Environmental Impact Report for the Hell's Kitchen Powerco 1 and  
Lithiumco 1 Project, Imperial County, California**

**Sent via email only:** [ICPDSCommentLetters@co.imperial.ca.us](mailto:ICPDSCommentLetters@co.imperial.ca.us)

Dear Mr. Black:

The California State Lands Commission (Commission) staff has reviewed the subject Draft Environmental Impact Report (Draft EIR) for the Hell's Kitchen Powerco 1 and Lithiumco 1 Project (Project), which is being prepared by Imperial County (County). The County, as the public agency with direct approval over the Project, is the lead agency under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.).

**Project Description**

Controlled Thermal Resources, Inc. (CRT) via its subsidiary Hell's Kitchen Geothermal, LLC is proposing the Hell's Kitchen PowerCo 1 (HKP1), and Hell's Kitchen LithiumCo 1 LLC is proposing the Hell's Kitchen LithiumCo 1 (HKL1) in Imperial County, California. HKP1 involves the development of a geothermal power plant that will produce up to 49.9 megawatts (MW) net of geothermal green energy. HKL1 involves development of mineral extraction and processing facilities capable of producing lithium hydroxide, silica and polymetallic products, and possibly boron compounds, for commercial sale.

The Draft EIR identifies the No Project Alternative as the Environmentally Superior Alternative.

**Environmental Review**

Commission staff requests that the County consider the following comments on the Project's Draft EIR.

General Comment

The Commission received and is currently processing applications from the Project proponent for a geothermal resources lease and a mineral extraction lease for subsurface use of State lands that are adjacent to the Project area (as identified in the Draft EIR). The Project proponent is seeking leases from the Commission to allow it to directionally drill from the Project area into the subsurface of adjacent State lands, most of which are owned in fee by the California Department of Fish and Wildlife (CDFW), and some of which the State holds a reserved mineral interest (RMI) in. For the lands owned by CDFW, the Commission would issue and manage a lease on behalf of CDFW, with CDFW's written consent, pursuant to Public Resources Code section 6924. The Draft EIR does not include any State lands in the designated Project area and neither the Project Description nor the Draft EIR analysis evaluate the potential impacts from any wells that would be drilled from the Project area into State lands.<sup>1</sup>

If considered part of the Project, the EIR must disclose that CRT plans to access subsurface geothermal reservoirs outside of the designated Project area through directional drilling from the proposed Project site. As part of this disclosure, the document should identify the parcels, prepare a separate figure showing the surface and subsurface locations, describe the directional drilling construction methods and timing, and include any other information that would contribute to the environmental impact analysis. Unless this information and analysis is included in the Final EIR, the Commission, as a CEQA Responsible Agency (identified in Section 2.2.2.2), will need to conduct further environmental review to evaluate new or increased levels of impacts. This review could include a supplemental or subsequent CEQA document and would be conducted prior to any Commission action. If the County is considering a subsequent document to evaluate off-site drilling locations, please consider that action may be interpreted as piecemealing under CEQA, as noted in the letter from the

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<sup>1</sup> The State lands that are the subject of the two applications to the Commission include APN 020-010-042, owned by CDFW. A portion of this parcel is included in the Project area for the Gen-Tie and Power Line, however it appears from the information provided in the Draft EIR that the Gen-Tie and Power Line will be constructed within existing rights-of-way, and thus would not require a Lease from CDFW or the Commission.

Imperial Irrigation District on the Project's Notice of Preparation, dated May 10, 2022.

The Draft EIR also lacks clarity and consistency regarding the number of wells to be drilled as part of the Project. Section 2.6.1 provides that the Project will include a total of seven wells for production and injection, including one well for injection of aerated fluids, and states that the two previously drilled exploration wells will be used as commercial production wells. Elsewhere, the Draft EIR notes that the Project site currently contains "four geothermal exploratory well pads and six separate geothermal exploratory wells." (See section 4.13.4.) It is not clear in the Draft EIR where the existing wells are located, how many there are, and into which lands the "total of seven wells" will be drilled (e.g., whether the seven total wells would be drilled directionally into State lands). In addition, the EIR must disclose whether drilling into State lands is necessary to meet the Project's objectives.

#### Groundwater Resources

The Draft EIR determined that the Project construction, development, and operation would not result in potentially significant impacts to groundwater supplies because the Project would not use any groundwater (See section 6.1.5). However, the Draft EIR does not identify off site directional drilling that may require groundwater during construction. Therefore, Commission staff request that the EIR clarify whether the directional drilling would require groundwater or otherwise impede groundwater basin management. If so, then the EIR must analyze those reasonably foreseeable impacts to groundwater resources.

#### Tribal Cultural Resources

Section 4.12 of the Draft EIR does not mention whether the County contacted the Native American Heritage Commission (NAHC) to obtain a list of all tribes that are traditionally and culturally affiliated with the geographic area of the Project for notification purposes and to assure a more thorough tribal consultation effort. Commission staff recommends that the County contact the NAHC to ensure that all traditionally and culturally affiliated tribes are aware of the Project and provided the opportunity to consult with the County.

Appendix L of the Draft EIR indicates that the County sent letters to the Fort Yuma Quechan Indian Tribe and the Torres-Martinez Desert Cahuilla Indians on March 21, 2022, in compliance with AB 52. Per page 4.12-4 of the Draft EIR, both tribes responded to the initial notification letter, with one tribe, the Quechan Indian Tribe, requesting consultation on April 5, 2022. During the County's consultation with the Fort Yuma Quechan Indian Tribe, the Tribe requested

changes to the cultural resources report. The Draft EIR states that "...these changes were made, and the updated cultural report was sent to the tribe." Commission staff request that the County elaborate on their effort to ensure the Tribe consented to the requested changes made to the Cultural Report. In addition, the Draft EIR does not provide the response from the Torres-Martinez Desert Cahuilla Tribe; therefore, Commission staff also request that the response from the Torres-Martinez Desert Cahuilla Indians be clarified in the Draft EIR.

#### Environmental Justice

In 2018, the Commission adopted an [Environmental Justice Policy](#). In this policy the Commission envisions a future in which environmental justice (EJ) communities are no longer disproportionately impacted by pollution or environmental hazards. The Draft EIR does not contain a separate EJ Discussion; however, EJ is discussed as part of the County's general plan policies in Table 4.5-1, specifically objective 3.7, which requires the County to evaluate environmental justice issues associated with job creation and displacement when considering the approval of renewable energy projects. The table indicates "No sensitive receptors are within 2 miles of the Project site. No impacts to disadvantaged communities would occur from implementation, and no Health Risk Assessment is required." According to [CalEnviroScreen](#) 4.0, the Project is located within a disadvantaged community as identified under Senate Bill (SB) 535 (De León, 2012). In addition, public concerns have been raised about the unknown public health impacts of lithium extraction and associated pollution burdens to nearby disadvantaged communities, including the impacts of chemicals used to separate lithium from the geothermal brine, and the potential link between geothermal activities at the Salton Sea and recent earthquakes. In light of these public concerns, Commission staff respectfully request more information be included in the document regarding impacts to adjacent disadvantaged communities due to Project implementation.

Thank you for the opportunity to comment on the Draft EIR for the Project. As a Trustee Agency, and as a Responsible Agency with respect to the activities contemplated by the applications currently under Commission review, the Commission may need to rely on the Final EIR for the issuance of any lease associated with the project that occurs on or in state lands; therefore, we request that you consider our comments prior to certification of the EIR. To the extent the State lands and wells are not included in the EIR, a further CEQA document will need to be prepared to address the Project-related development planned for State lands.

Please send copies of future Project-related documents, including electronic copies of the Final EIR, Mitigation Monitoring and Reporting Program, Notice of

### **Response to Comment Letter #3**

The application currently in review by the State Lands Commission is unrelated to the Proposed Project and any future required environmental review and compliance with CEQA will occur in coordination with State Lands Commission. Any impacts associated with directional drilling into State Lands will be accounted for and analyzed in a separate CEQA document.

With regard to the injection wells, HKP1 will include construction of the following structures: three production wells, four injection wells and associated well pads; geothermal fluid production and injection pipelines. The exploratory wells identified in the text are part of the exploratory portion of the project and do not represent project features. The Project Proponent will only develop the wells that show good potential for geothermal resources.

The County conducted and closed AB 52 Tribal Consultation in compliance with the regulation. All Tribes that have requested consultation on County projects were contacted and a request for consultation was made. Requests from consulting Tribes were considered and responded to as appropriate. The AB 52 Tribal Consultation process closed, and the Tribes input was incorporated into the DEIR.

The Town of Niland is approximately 3.6 miles east of the project site. The nearest residence is approximately 0.5 mile east of the project site, along Pound Road and over 0.75 miles from the main operations of the proposed facility. The closest school is Grace Smith Elementary School, which is located approximately 3.6 miles to the east. Primary highway access to the proposed project site will be via State Highway 111, then west on McDonald Road, then north on Davis Road until turning west into the driveway at or near the plant site. The nearby residence on Pound Road as well as Grace Smity Elementary School is not located along the project access route. The project site is in a rural environment. The properties bordering the project site are designated for agricultural land use to the north, east, and south, with government/special public land use also to the east. No land use is to the west of the project site as that area is the Salton Sea.

Generally, air districts do not require a health risk assessment for construction activities given the short-term duration (i.e., HKP1 project construction is anticipated to take place over a 10-month period and HKL1 project construction is anticipated to take place over a 23-month period). Secondly, air districts do not require a health risk assessment where sensitive receptors are located beyond 1,000 feet to 0.25 miles from the project site.

Construction of the project may result in temporary increases in emissions of air toxics, mainly diesel particulate matter (DPM) from offroad equipment and vehicle trips. PM exhaust from diesel-fueled engines was identified as a toxic air contaminant by CARB in 1998. Due to the limited intensity of construction and the distance to the nearest sensitive receptor, DPM generated by project construction activities is not expected to create conditions where the incremental cancer risk exceeds the ICAPCD's ten in one million significance threshold or non-cancer hazard index thresholds. Therefore, project construction would not expose sensitive receptors to substantial pollutant concentrations and impacts would be less than significant.

Nevertheless, a construction health risk assessment and operation (haul trucks, offroad equipment, generators, fire pumps) health risk assessment will be part of the application for the Authority to Construct /Operate permit as per APCD requirements.

Within the HKL1, potential process exhaust points (resulting in air toxics emissions) include, but not limited to, off-gas scrubber stack, hydrogen stack, steam rock muffler, HCL burner scrubber stack, LHM package stack, poly precip buffer tank, and deaerator water tank emit small quantities of non-condensable gases, water vapor, and other air emissions. It is anticipated that more detailed design and information on specific operational emissions will be available at the time of air permitting and more detailed quantification of operational emissions would be included in the air permit process with APCD.

**Comment Letter #4:**

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State of California – Natural Resources Agency  
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GAVIN NEWSOM, Governor  
CHARLTON H. BONHAM, Director



October 23, 2023  
Sent via email

Governor's Office of Planning & Research

October 24 2023

David Black, Planner  
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DavidBlack@co.imperial.ca.us

STATE CLEARINGHOUSE

Subject: Draft Environmental Impact Report  
Hell's Kitchen PowerCo1 and LithiumCo1 (Project)  
State Clearinghouse No. 2022030704

Dear Mr. Black:

The California Department of Fish and Wildlife (CDFW) received a Draft Environmental Impact Report (DEIR) from Imperial County (Lead Agency) for the Project pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.<sup>1</sup>

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

#### CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) Similarly for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority. (Fish & G. Code, § 1600 et seq.) Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the Project proponent may seek related take authorization as provided by the Fish and Game Code.

#### PROJECT DESCRIPTION SUMMARY

**Proponent:** Controlled Thermal Resources Inc. (CTR), via its subsidiary Hell's Kitchen Geothermal, LLC (Applicant)

**Objective:** The objective of the Project is to produce 49.9 megawatts (MW) of geothermal power and to extract and produce lithium hydroxide, silica, bulk sulfide, and poly metallic products for commercial sale from the geothermal brine from within CTR's geothermal lease area. The development area for the Project would be approximately 64 acres and would consist of the following activities:

<sup>1</sup> CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

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- Construction and operation of a 49.9 MW geothermal power plant;
- Construction of well pads with geothermal production and injection wells;
- Construction of pipelines between HKP1 and HKL1 to facilitate the movement of brine between the facilities;
- Construction and operation of a mineral-extraction facility to extract lithium hydroxide, silica, bulk sulfide, and polymetallic products from the geothermal brine;
- Construction and operation of mineral handling and packaging facilities;
- Construction of ingress and egress to the Project site from Davis Road;
- Paving of Davis Road from McDonald Road to Noffsinger Road (approximately 2 miles);
- Construction and operation of a 230 kV gen-tie line and collocated power line; and
- Construction of shared administrative facilities, offices, repair facilities, shipping and receiving facilities, and other infrastructure components.

**Location:** The proposed Project would be located within Imperial County, California, approximately 3.6 miles west of the town of Niland near the eastern shore of the Salton Sea. The Project would be adjacent to Davis Road and south of Noffsinger Road, within the CTR geothermal lease area and on lands owned by Imperial Irrigation District (IID). The gen-tie line will run from Noffsinger Road approximately 2 miles south to McDonald Road and then run approximately 0.3 miles east to Hudson Ranch. The gen-tie line will be located east of Davis Road and north of McDonald Road within IID's transmission right-of-way and within new right-of-way. The geothermal development area and lithium facilities would be within Sections 11 and 12 of Township 11 South, Range 13 East, San Bernardino Base Meridian, and the gen-tie/power line ROW corridor is located within Sections 12, 13, and 14 of Township 11 South, Range 13 East.

**Timeframe:** The construction phase of the Project is anticipated to last 24 months in total.

#### COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist the Lead Agency in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document.

#### Assessment of Impacts to Biological Resources

Executive Summary Biological Resources Threshold (a) (p. ES-10) states that the Project construction activities may impact the Yuma hispid cotton rat (*Sigmodon hispidus eremicus*), but omits other species identified in the DEIR that may be impacted. While the Yuma hispid cotton rat is a Species of Special Concern and impacts to it should be considered, this section of the Executive Summary should also acknowledge the other species listed under the California Endangered Species Act (CESA) that may be impacted by the Project, specifically Yuma Ridgway's rail (*Rallus obsoletus yumanensis*; CESA Threatened and Fully Protected), California black rail (*Laterallus jamaicensis coturniculus*; CESA Threatened and Fully Protected), and desert pupfish (*Cyprinodon macularius*; CESA Endangered).

#### Existing Environmental Setting

Compliance with CEQA is predicated on a complete and accurate description of the environmental setting that may be affected by the proposed Project. CDFW is concerned that the assessment of the existing environmental setting has not been adequately analyzed in the DEIR. CDFW is concerned that without a complete and accurate description of the existing environmental setting, the DEIR may provide an incomplete analysis of Project-related environmental impacts.

As described in Section 4.3, page 9, multiple studies and delineations have been conducted for the Project over the last several years. However, the shapes and acreages of the study areas differ between reference reports. The DEIR notes that vegetation mapping was updated during Great Ecology's 2022 delineation efforts and uses the results of that study to produce the current vegetation mapping. This differs from the mapping that was conducted by Panorama Environmental and depicted in the 2021 Biological Resources Technical Report. CDFW would like to note that the difference between the

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conditions in 2021 vs 2022 could be best attributed to changes in hydrology that were made in which areas were dewatered by the applicant without permits and have since been required to be corrected. Once the correction is completed it could be expected that the conditions would return to a similar state as 2021 where the entirety of the area is wetted and suitable marsh (i.e. the 2022 surveys were conducted during a window of time which may not accurately reflect the conditions).

#### **Fully Protected Species**

The DEIR identifies Yuma Ridgway's rail (*Rallus obsoletus yumanensis*) and California black rail (*Laterallus jamaicensis coturniculus*) as being present within the study area during field surveys. Both species are Fully Protected under Fish and Game Code section 3511 and may not be taken or possessed at any time, and no permit may be issued to authorize their take.

CDFW is concerned that Section 4.3.5 Project Impact Analysis (p.4.3-36) does not accurately characterize the potential impacts to marsh birds, including Yuma Ridgway's rail and California black rail. CDFW recommends the following impacts be further considered in the Final EIR:

- It should be noted that tamarisk stands in water or adjacent to cattail marshes may also provide suitable habitat, in addition to the existing native marsh vegetation communities.
- Ongoing continuous noise would have an impact on breeding birds calling for and locating mates and may impact the movement of birds throughout the marsh that surrounds the Project site.
- Construction activities involving any vegetation removal within cattail marsh or riparian scrub during the breeding season (February 1-September 30) may have the potential to adversely affect nesting marsh birds; as such vegetation removal activities within 500 feet of suitable habitat should be timed to occur outside that time period.
- Due to the secretive nature of these species, protocol presence absence surveys should be conducted to confirm that they are not there, otherwise all suitable habitat areas should be presumed to be occupied due to positive past detections. A full breeding season of call back surveys without detecting a single individual would be required to determine a suitable area unoccupied.

CDFW is also concerned that the DEIR does not provide an adequate explanation as to how Project elements or identified mitigation measures for these species will avoid or reduce Project-related impacts to a less than significant level. Mitigation Measure BIO-10 requires pre-construction surveys and construction monitoring within all Project development areas within suitable habitat and a 500-foot buffer. Note that CDFW does not support Project activities continuing within the buffer of known occupancy, and would instead recommend that all work stay outside of the 500-foot buffer of all suitable habitat that is adjacent to the survey point that was found to be occupied, as the birds are known to move throughout dense marsh patches and could be impacted directly by Project activities in the area and by the ongoing noise of construction.

#### **Nesting Birds**

It is the Project proponent's responsibility to comply with all applicable laws related to nesting birds and birds of prey. Migratory non-game bird species are protected by international treaty under the federal Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 U.S.C. 703 et. seq.). In addition, sections 3503, 3503.5, and 3513 of the Fish and Game Code also afford protective measures as follows: Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by Fish and Game Code or any regulation made pursuant thereto; Section 3503.5 states that it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by Fish and Game Code or any regulation adopted pursuant thereto; and Section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

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any areas containing suitable habitat for desert pupfish, and states that the impact on desert pupfish would be less than significant due to compliance with the ITP; however, the Applicant has not indicated that they intend to apply for a CESA ITP for pupfish. Furthermore, the formulation of mitigation measures may not be deferred to other agencies, even where a subsequent permit may be necessary.

#### **Lake and Streambed Alteration Program**

Fish and Game Code section 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following: Substantially divert or obstruct the natural flow of any river, stream or lake; Substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or Deposit debris, waste or other materials that could pass into any river, stream or lake. Please note that "any river, stream or lake" includes those that are episodic (i.e., those that are dry for periods of time) as well as those that are perennial (i.e., those that flow year-round). This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water.

Upon receipt of a complete notification, CDFW determines if the proposed Project activities may substantially adversely affect existing fish and wildlife resources and whether a Lake and Streambed Alteration (LSA) Agreement is required. An LSA Agreement includes measures necessary to protect existing fish and wildlife resources. CDFW may suggest ways to modify your Project that would eliminate or reduce harmful impacts to fish and wildlife resources.

CDFW's issuance of an LSA Agreement is a "project" subject to CEQA (see Pub. Resources Code § 21065). To facilitate issuance of an LSA Agreement, if necessary, the DEIR should fully identify the potential impacts to the lake, stream, or riparian resources, and provide adequate avoidance, mitigation, and monitoring and reporting commitments. Early consultation with CDFW is recommended, since modification of the proposed Project may be required to avoid or reduce impacts to fish and wildlife resources. To obtain a Lake or Streambed Alteration notification package, please go to <https://www.wildlife.ca.gov/Conservation/LSA/Forms>.

The Applicant has been coordinating with CDFW to obtain an LSA Agreement for impacts to 1602 resources. The Applicant submitted a notification to CDFW on March 2, 2023, which CDFW subsequently deemed incomplete on March 30, 2023 due to deficiencies in the Project description as it relates to 1602 resources. The Applicant has since been working on revising the notification, but as of this time has not yet resubmitted it.

CDFW appreciates the inclusion of Mitigation Measure BIO-19 Wetland and Riparian Area Restoration/Compensation. Note that the final mitigation ratio for impacts will be determined through the LSA Agreement process and may be greater than 1:1 as proposed. Additionally, the final mitigation plan should provide some form of guarantee that a sufficient and reliable supply of water will be available for the purposes of supporting the proposed mitigation site in perpetuity.

#### **ENVIRONMENTAL DATA**

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).) Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDDB). The CNDDDB field survey form can be found at the following link: [http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/CNDDDB\\_FieldSurveyForm.pdf](http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/CNDDDB_FieldSurveyForm.pdf). The completed form can be mailed electronically to CNDDDB at the following email address: [CNDDDB@wildlife.ca.gov](mailto:CNDDDB@wildlife.ca.gov). The types of information reported to CNDDDB can be found at the following link: [http://www.dfg.ca.gov/biogeodata/cnddb/plants\\_and\\_animals.asp](http://www.dfg.ca.gov/biogeodata/cnddb/plants_and_animals.asp).

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#### FILING FEES

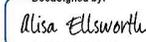
The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying Project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.)

#### CONCLUSION

CDFW appreciates the opportunity to comment on the DEIR to assist Imperial County in identifying and mitigating Project impacts on biological resources. CDFW recommends that the Applicant coordinate further on the issues identified in the letter, particularly those that pertain to avoiding and minimizing impacts to desert pupfish, Yuma Ridgway's rail, and California black rail.

Questions regarding this letter or further coordination should be directed to Rose Banks, Senior Environmental Scientist (Specialist) at (760) 218-0022 or [Rose.Banks@wildlife.ca.gov](mailto:Rose.Banks@wildlife.ca.gov).

Sincerely,

DocuSigned by:  
  
84FB8273E4C480...

Alisa Ellsworth  
Environmental Program Manager

ec: Office of Planning and Research  
State Clearinghouse, Sacramento  
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**Response to Comment Letter #4:**

The Executive Summary inadvertently limited the discussion of impacts on biological resources to only discuss Yuma hispid cotton rat. As noted by the comment, the EIR biological resources analysis more broadly addresses effects on burrowing owl, western snowy plover, Yuma Ridgway's rail, California black rail, least bittern, wood stork, white-faced ibis, and desert pupfish, in addition to Yuma hispid cotton rat. The discussion of impacts on special-status species in the ES has been expanded to include these species in the final EIR and errata.

The setting provided in the EIR reflected multiple years of biological study and various surveys performed on the Project site and surroundings. The setting is dynamic due to the changing limits of the Salton Sea. The multiple years of study and multiple studies incorporated in the record provide a broad context for the biological resource conditions on the site. The biological resource conditions are well documented in the EIR.

The maps and analysis of habitats included in the EIR reflect wide-spread open water and cattail marsh/emergent marsh vegetation within the area of analysis, particularly south of the R Drain and north of the Q Drain (see Figures 4.3-1 and 4.3-2 of the EIR). Analysis of aerial imagery of the Project area over the last decade has indicated a gradual reduction in the extent of open water habitats as those areas fill in with sediment from the irrigation drains and transition of the open water areas to emergent marsh. This transition has been occurring for many years prior to any modifications to the irrigation drains. Because the majority of the project area, with the exception of the unvegetated higher areas immediately adjacent to Davis Road, were mapped as open water or emergent wetlands, restoration of the drains would not change the limits of wetland or open water habitat beyond the limits described in the EIR.

The fully protected status of both Yuma Ridgway's rail and California black rail is noted.

It is noted that tamarisk stands adjacent to cattail marsh or in water could provide habitat for Yuma Ridgway's rail. Construction of infrastructure in tamarisk stands would comply with the same requirements for protection of Yuma Ridgway's rail and black rail as infrastructure in other habitat areas including Mitigation Measure BIO-9: Construction Timing, Mitigation Measure BIO-10: Pre-Construction Surveys and Construction Monitoring for Yuma Ridgway's Rail and Black Rail; Mitigation Measure BIO-11: Reduced Vehicle Speeds Adjacent to Rail Habitat, and Mitigation Measure BIO-12: Noise Attenuation. The proposed mitigation for protection of Yuma Ridgway's rail and black rail addresses the timing of construction consistent with the comment and the EIR has presume that all suitable habitat are occupied given the recent records of Yuma Ridgway's rail and California black rail in the Project area (as documented in the EIR).

The Draft EIR relies on not a single measure, but a suite of mitigation measures to reduce the impacts on Yuma Ridgway's rail. Mitigation Measure BIO-9 requires scheduling of construction activities within habitat for Yuma Ridgway's rail and pile driving adjacent to habitat to avoid the nesting and molting flightless season (February 15 - September 15). The construction timing measure would avoid impacts on any nests of Yuma Ridgway's rail by ensuring the construction occurs in habitat during periods when nesting activity would not be occurring. Noise would not affect individual birds outside of the nesting season. Mitigation Measure BIO-10 pre-construction surveys require halting work if Yuma Ridgway's rail or black rail are observed within 500 feet of construction. It is not feasible to avoid all suitable habitat for Yuma Ridgway's rail and California black rail as the entire project area is within 500 feet of suitable habitat

for both species. By avoiding construction in any habitat areas during the nesting season and employing intensive biological monitoring, it is feasible to avoid direct "take" as defined in Fish and Game Code of any Yuma Ridgway's rail or California black rail. The need to avoid take is recognized.

The regulatory standards of MBTA and Fish and Game Code are noted. It is understood that the Project proponent must comply with both MBTA and Fish and Game Code.

The text of Mitigation Measure BIO-16 has been revised as indicated in response to FWS comment above. Additional details on the contents of the Nesting Bird Plan and procedures for avoidance of nesting birds are now included in the measure. The mitigation measures in the EIR already included several measures for monitoring and reduction of noise including Mitigation Measure BIO-12: Noise Reduction. Mitigation Measure BIO-16 previously included restrictions on timing for the start of construction.

The DEIR assumes areas of open water are occupied by desert pupfish. While the recent findings of desert pupfish were not included in the EIR, the recent findings are consistent with the presumption that the drains and open water areas are occupied by desert pupfish. The recent survey results are incorporated into the EIR on Page 4.3-28 under the discussion of more recent surveys. It is noted that over 400 pupfish were captured and relocated from the extended area of the S Dran in 2023.

The need for an ITP for desert pupfish prior to Project implementation is noted, an ITP for desert pupfish has been obtained for Well Pad 4 and the S-Berm access road area (No.2081-2018-076-06). The remaining project area work is not proposed to occur in the drains and the bridge that would be installed would be designed to not require placement of any material in the drains. Therefore, no additional ITP for desert pupfish species are anticipated.

It is noted that handling and translocation of desert pupfish constitutes a form of a take under Fish and Game Code and requires an ITP. The mitigation for desert pupfish is not deferred to the ITP. Rather, the EIR includes Mitigation Measure BIO-8 Desert Pupfish Protection and Relocation Plan and Mitigation Measure BIO-19 Wetland and Riparian Area Restoration/Compensation, which address impacts on desert pupfish through proper handling of pupfish to minimize impacts and creation of open water habitats which would provide suitable habitat for desert pupfish.

The requirements of Section 1600 of Fish and Game Code are noted. CDFW's authority to define measures to protect fish and wildlife resources including modification of the Project through the Lake and Streambed Alteration Agreement is noted. The need for the EIR to fully define potential impacts to lake, stream or riparian resources and provide adequate avoidance, mitigation and monitoring and reporting commitments is noted.

The status of the existing 1602 application is noted. The applicant has been coordinating with IID and USACE and will inform CDFW of future meetings regarding water rights for the Wetland and Riparian Area.

**Comment Letter #5:**

150 SOUTH NINTH STREET  
EL CENTRO, CA 92243-2850

TELEPHONE: (442) 265-1800  
FAX: (442) 265-1799



October 27, 2023

**RECEIVED**

By Imperial County Planning & Development Services at 11:32 am, Oct 27, 2023

Mr. Jim Minnick  
Planning Director  
801 Main Street  
El Centro, CA 92243

SUBJECT: Draft Environmental Impact Report Hell's Kitchen PowerCo1 and LithiumCo1 Project

Dear Mr. Minnick,

The Imperial County Air Pollution Control District (Air District) thanks you for the opportunity to review and comment on the Draft Environmental Impact (EIR) report for the Hell's Kitchen PowerCo1 (HKP1) and LithiumCo1 Project (HKP2) (Project). The Project proposes the development and operation of a geothermal power plant that will produce up to 49.9 megawatts (MW) net of energy and mineral extraction and processing facilities capable of producing lithium hydroxide, silica and polymetallic products, and possibly boron compounds, for commercial sale. The Project will be located approximately 3.6 miles West of Niland within Sections 11 and 12, Township 11 South, Range 13 East in Imperial County.

Air District staff reviews all Air Quality Analyses to ensure enforceability and consistency of air analysis methodology to the Imperial County Air Pollution Control District CEQA Air Quality Handbook (Handbook), Air District Rules & Regulations, and Air District guidelines.

In previous comments provided by the Air District and dated June 20, 2023, one of the primary comments regarding the Administrative Draft EIR was that the document was missing a memo, adequately explaining any changes to default values of the CalEEMod Analysis. Typically, the Air District requests that any changes to Default CalEEMod values be discussed with the Air District and/or explaining the changes in a manner that addresses consistency with Air District guidelines and enforceability. This ensures the analysis is consistent with the Handbook and representative of the projects air quality impacts. The Air District finds that the Draft EIR is still missing any memo explaining CalEEMod default value changes.

Draft EIR HELLS KITCHEN POWERCO1 & LITHIUM CO1

AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER

Page 1 of 3

Reviewing the CalEEMod analysis various changes to default values were identified which can call the validity of the analysis into question as it is not consistent with the Handbook; the following three changes are of key concern to the Air District:

1. Changes to usage hours of Off-Road Equipment (various)

The changes to Off-Road Equipment hours from the CalEEMod analysis are, in large part, reducing the usage hours of equipment from 7-8 hours to 4 hours. This reduction of almost half from default values is quite significant and should be adequately explained.

2. Changes to On Road Dust for %pave for hauling, vendor, and worker trips (50 to 100)

Changes for On Road Dust %pave defaults were changed for all trip types from 50% to 100%, this is an unrealistic depiction of project impacts. The document mentions unpaved portions of McDonald Rd. and Davis Rd. that will serve as access to the project site and the Air District historically has allowed for a maximum of 85% due to high amounts of re-entrained dust in the area.

3. Changes to Trip Numbers for hauling, vendor, and trip number (various)

Various changes to the number of trips in the analysis, however, examples of large changes which bring the analysis in to question include a vendor trip change from 194 to 10 and a worker trip change from 497 to 100.

Given that the CalEEMod default value changes will largely impact the construction portion of the project and the Handbook allows for the approach to the Construction impacts to be qualitative in nature: the Air District finds that MM-AQ1 and MM-AQ2 are consistent with mitigation measures employed that typically maintain the construction of this level of project at less than significant. However, due to the combination of default value changes with a lack of prior discussion or inclusion of the previously requested memo adequately explaining the changes, the **Air District is unable to concur** with the CalEEMod analysis as performed. In order to assure the Project remains less than significant an Enhanced Construction Plan, that includes mobile and area sources mitigation measures is required.

The Greenhouse Gas (GHG) portion of the analysis uses the Sacramento Metropolitan Air Quality Management District's (SMAQMD) thresholds for analysis and also references the Air District Rules 900 and 903 as adopted by reference to federal regulation. The Air District generally recommends that GHG analyses employ the Mojave Desert Air Quality Management District's (MDAQMD) thresholds, as the geography and climate are more accurately representative of Imperial County. However, the MDAQMD thresholds are not more restrictive and therefore will not require a re-analysis. Informationally, the Air District would like to emphasize that the preferred modeling software for CEQA purposes is the most current CalEEMod software available at [www.caleemod.com](http://www.caleemod.com).

Air District rules and regulations can be found on our website at [www.co.imperial.ca.us/AirPollution](http://www.co.imperial.ca.us/AirPollution) under the planning section. If you would like to set up a discussion appointment or have any questions, please feel free to contact our office at (442) 265-1800.

Sincerely,

A handwritten signature in blue ink, appearing to read "Immanuel Garcia".

Immanuel Garcia  
Environmental Coordinator II

Reviewed by,  
Monica N. Soucier  
APC Division Manager

## **Response to Comment Letter #5:**

CalEEMod defaults are meant to provide reasonable default estimates; however, project specific activity may differ considerably. Site conditions, construction specifications, and other factors will result in project specific construction activities that differ from the default values. Notably, CAPCOA is currently reviewing CalEEMod construction default values (CalEEMod Construction Default Updates, June 2023). The review's associated memorandum describes the (i) process by which data was gathered to inform new defaults (via estimator survey), (ii) incorporation into the analysis of construction survey data previously gathered by the South Coast Air Quality Management District (SCAQMD), (iii) the methodologies used to analyze estimator survey data, and (iv) new CalEEMod defaults for select inputs. Based on the memorandum, in many instances, the equipment usage within survey data is lower than default values for the reasons stated previously.

CalEEMod is based on several land use types including educational, commercial, industrial, recreational, and retail. Furthermore, the industrial category is subdivided into warehouses, manufacturing, light industrial, and heavy industrial. For the proposed project, heavy industrial was chosen. However, given the unique characteristics of the proposed project such as process equipment, piping installation, and structure steel installation phases and not as much of the more typical building construction, the CalEEMod default values for the construction activities associated with the proposed project do not necessarily apply directly.

For the Proposed Project, the construction equipment schedule, construction start/end dates, construction phases, equipment types, equipment usage, and vehicle trips (where appropriate) were adjusted from the defaults based on construction engineering design and information available for the proposed project given that applicant teams extensive knowledge and understanding of construction of similar geothermal projects in the region and actual equipment usage hours during that construction. The schedule was non-default with regard to CalEEMod for the reasons stated previously. The final construction equipment schedule used for the proposed project is fully documented within the Air Quality Technical Report (Section 8: Construction Emissions Inventory).

Primary highway access to the proposed project site will be via State Highway 111, then west on McDonald Road, then north on Davis Road until turning west into the driveway at or near the plant site. The two-mile section of the unpaved Davis Road adjacent to the site (from its intersection with McDonald Road to its intersection with Noffsinger Road) will be coated with an asphaltic dust palliative (ARAM or equivalent) and/or treated with a 12-18" thick engineered Class II base section at the beginning of construction. The project would be required to maintain daily dust suppression at the two-mile section of Davis Road adjacent to the site using a water truck operating continuously while vehicles are using it. As this treatment was determined to be an equivalent fugitive dust control measure to actual asphalt paving, for the air quality analysis, all of Davis Road was considered "paved," whether coated with an asphaltic dust palliative and/or treated with a 12-18" thick engineered Class II base section and inclusion of a dedicated water truck (during construction). The road would be immediately paved after construction prior to operations of the plant to avoid damaging a new asphalt section.

As previously stated, CalEEMod defaults are meant to provide reasonable default estimates; however, project specific activity may differ considerably. The vendor trips were adjusted to reflect the number of vendors that are anticipated for this project based on construction of similar projects in the region and is

in line with the analysis for similar projects that have been completed in the region. The worker trip change is based on the number of workers that would be on site daily and the applicant's commitment to carpooling and shared transport of workers.

The Air Quality Technical Report (Section 7: Environmental Protection Measures) provides a description of Environmental Protection Measures that the proposed project will incorporate into its construction to avoid or minimize air quality impacts from fugitive dust and combustion exhaust. The Environmental Protection Measures specifically include the completion of a Fugitive Dust Suppression Plan and Exhaust Emissions Control Plan as well as emission reduction measures associated with project operations.

The Mojave Desert Air Quality Management District's (MDAQMD's) GHG significance thresholds are 548,000 pounds of CO<sub>2</sub>e per day and 100,000 tons of CO<sub>2</sub>e per year. As stated in the Draft EIR, the proposed project's GHG emissions were compared to the 10,000 metric tons of CO<sub>2</sub>e per year quantitative threshold. The substantial evidence for this GHG emissions threshold is based on the expert opinion of various California air districts, which have applied the 10,000 metric tons of CO<sub>2</sub>e per year threshold in numerous CEQA documents where those air districts were the lead agency. The MDAQMD thresholds are less restrictive than the thresholds used in the proposed project's analysis.

As stated in the Draft EIR, the operational GHG emissions would not exceed 10,000 metric tons of CO<sub>2</sub>e per year threshold and ICAPCD Rule 903 20,000 metric tons of CO<sub>2</sub>e emissions threshold, where exceedance of either threshold would require the proposed project to perform additional GHG emissions recordkeeping and reporting. Under the condition where the annual electrical demand (HKL1) is equal to the electrical generation (HKP1), there would be a net zero of electrical-related GHG emissions. The annual operational GHG emissions associated with other aspects of the proposed project (i.e., employee vehicles, delivery trucks, onsite equipment, generators, fire pumps) would be 2,890 metric tons of CO<sub>2</sub>e, which would not exceed 10,000 metric tons of CO<sub>2</sub>e per year threshold.

California Air Pollution Officers Association CalEEMod (California Emissions Estimator Model Version 2020.4.0) land use emissions model estimates emissions due to demolition and construction activities and operations for land use development and was used in the proposed project's analysis. This model version was available at the time of the project's Notice of Preparation and initiation/completion of the air quality analysis. Subsequent model versions for CalEEMod and other air quality models used in the analysis would be expected to yield similar results and conclusions.

**Comment Letter #6:**



www.iid.com

Since 1911

November 22, 2023

**RECEIVED**

NOV 29 2023

IMPERIAL COUNTY  
PLANNING DEVELOPMENT SERVICES

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

SUBJECT: Hell's Kitchen Power Co. Geothermal & Lithium Project Draft EIR

Dear Mr. Minnick:

On May 10, 2022 and June 19, 2023, the Imperial Irrigation District provided comments to the Imperial County Planning & Development Services Department on the Notice of Preparation of an Environmental Impact Report and on the Administrative Draft Environmental Impact Report for the Hell's Kitchen Power Co. Geothermal & Lithium Project (See attached letters). We are disappointed that our concerns were not addressed in the subsequent Draft EIR. As a responsible agency for this project, and for the purpose of supporting the project to allow for additional approvals to carry out the project and to avoid foreseeable setbacks in its implementation by not addressing the aspects of the project affecting IID facilities and resources in the Draft EIR, including impacts and mitigation, the district submits the following comments:

1. **General Comment:** The proposed project should be depicted in more detail on figures. The project footprint is shown at a high-level on the figures in Section 2.0, but there is not specificity of locations of project components in sections of analysis. There are no figures that locate the project components relative to other existing or planned facilities on the site, such as drain and transmission line right of ways. Without a project footprint and site plan, the project description is uncertain and unclear regarding how the project impacts the resources on the project site and IID's facilities and rights of way. Unless the project is depicted on figures to correspond with analysis, it will be difficult for responsible agencies to use the final EIR.
2. **Page iii, LIST OF APPENDICES - APPENDIX M Water Supply Assessment:** Should be identified as a draft. The Water Supply Assessment is incomplete and contains inaccurate data. See enclosed WSA Hell's Kitchen Comments June 2023 for detailed review findings of Appendix M.
3. **Page ES-2, ES-4 INTENDED USES OF THIS EIR:** Should identify Imperial Irrigation District's use of the EIR for proposed actions as a responsible agency: "Imperial Irrigation District – Encroachment Permit(s) and Imperial Irrigation District Water Supply Agreement, and other approvals not yet known for water and/or energy needs."
4. **Page ES-4, Table ES-1:** Should be updated based on the related comments received herein for the following resources, but not limited to air quality, utilities and service systems and hydrology.

IMPERIAL IRRIGATION DISTRICT • P.O. BOX 937 • IMPERIAL, CA 92251

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5. **Page ES-10, Table ES-1:** Summary of Significant Impacts and Mitigation Measures: Bio-19 should be listed as “Potentially Significant” under “Level of Significance before Mitigation” column.
6. **Page ES-40 Table ES-1 Utilities and Service Systems:** Should be updated as IID water facilities that may be impacted include the L, M, O, P, Q, R, S and Vail 3 Drains; Alamo River; the L, M, O, P, Q, R, S Laterals; as well as any additional IID facilities that may be impacted by alignment changes.
7. **Page 1.0-6 - APPENDIX M:** Water Supply Assessment should be identified as a draft. The Water Supply Assessment is incomplete and contains inaccurate data. See enclosed WSA Hell's Kitchen Comments June 2023 – for detailed review findings of Appendix M.
8. **Page 2.0-1 Section 2.2 Project Location:** The Draft EIR is still indicating that the project's interconnection to the electrical grid will be via a 2-mile gen-tie to the Hudson Ranch facility substation, which is incorrect. The project's point of interconnection will be the new, not yet built, IID Davis Switching Station. The project will be loping in and out of the IID 230kV MB transmission line into the proposed Davis Switching Station. The MB line cut-in will be just outside the Hudson Ranch facility.
9. **Page 2.0-7 Section 2.5 Project Summary:** The project description/summary should include a sentence stating that the project does not include any work within the P, Q, R and S Drains and that any such work in the future will require a separate approval and environmental review. IID and Hell's Kitchen Geothermal LLC (“HKG”) are entering into a series of agreements, pursuant to which HKG will be (i) extending the Q, R and S Drains from where they currently terminate on Section 11 to the Salton Sea or the westernmost edge of Section 10 in the event the Salton Sea is no longer on Section 10, and (ii) interconnecting one or more of the Q, R and S Drains within Section 10 or 11. The extension of the Q, R and S Drains are subject to a number of existing regulatory requirements and mitigation measures, with which HKG will be required to comply. It appears the current project excludes any drain extension or interconnection work or any other construction work within the Drains. It should be clear that the DEIR is not an environmental document for future drain extension or interconnection work, as well as any other work within the drains.

If the project approvals will encompass work within the P, Q, R and S Drains or the future extension and interconnection of these Drains (“Drain Work”), the DEIR must address the desert pupfish impacts associated with the Drain Work and incorporate the following regulatory mitigation measures that currently apply to the Drain Work and implementation must be consistent with the referenced conditions:

A. U.S. Fish and Wildlife Service Final Biological Opinion dated December 18, 2002 (“BO”):

- a. Pupfish Conservation Measure 1: Connectivity Impacts of the BO: IID is developing a joint pupfish drain connectivity and extension plan with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife. Drain Work shall be consistent and in compliance with any final plan jointly

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developed. If no final plan exists at the time the design of the Drain Work commences, the design, configuration, and management of the work will be developed jointly with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife staff, and will be developed in consideration of the specific physical characteristics of pupfish habitat (e.g., water depth and velocity, and channel width) and water quality (e.g., turbidity and selenium concentration).

b. Reasonable and Prudent Measure 1, Terms and Conditions No. 1.1. Work within the Drains shall be configured to maximize pupfish habitat and achieve no net loss of pupfish habitat in terms of drain length and width dimensions (i.e., areal extent) as the Salton Sea recedes.

c. Reasonable and Prudent Measure 3, Terms and Conditions No. 3.1. The Drain Work shall be designed to minimize the maintenance requirements that could result in take of pupfish to the extent possible without significantly reducing their habitat value.

d. Reasonable and Prudent Measure 3, Terms and Conditions No. 3.2. Where dewatering is required for construction within the Drains, the project shall implement gradual dewatering of the construction sites within potential pupfish Drains to allow pupfish to move out of the area such that they are not stranded by dewatering. A qualified biologist approved by U.S. Fish and Wildlife Service and California Department of Fish and Wildlife shall be present to relocate pupfish to a safe location if necessary to prevent stranding as a result of the physical structure of the drain. The biologist shall maintain a complete record of all pupfish moved from hazardous areas during the Drain Work. At a minimum, the information shall include: location (written description and map), date and time of observation, along with details of the relocation site; basic life history information (i.e., length and sex); and general condition and health, including any apparent injuries/state of healing.

e. Reasonable and Prudent Measure 3, Terms and Conditions No. 3.5. In the event emergency repairs are needed on the Drains and/or Drain Work, prior to the completion of the work, the Project proponent shall immediately notify IID, the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife regarding any needed emergency repairs that may result in disturbance of or impacts to the listed species so that the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife can provide technical assistance to minimize the impacts associated with implementing the repairs.

B. Conservation Agreement Among the Bureau of Reclamation, Imperial Irrigation District, Coachella Valley Water District, and San Diego County Water Authority ("Conservation Agreement"):

a. Article 2, Species Conservation Measures, Reasonable Prudent Measures, and Terms and Conditions, Section 2.3, Connectivity Impacts—Drains. The project shall implement the provisions of Pupfish Conservation Measure 1 of the BO and the BO

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Incidental Take Statement Terms and Conditions Nos. 1.1, 3.1, 3.2, and 3.5, as applicable to the Drain Work.

C. California Endangered Species Act, Incidental Take Permit No. 2081-2003-024-006 ("ITP"):

a. Conditions of Approval, No. 2. The Project proponent shall comply with the ITP and Mitigation Monitoring and Reporting Program attached to the ITP as Attachment 1, as applicable to the Drain Work.

b. Conditions of Approval, No. 4(j)(i). IID is developing a joint pupfish drain connectivity and extension plan with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife. The Drain Work shall be consistent and in compliance with any final plan jointly developed. If no final plan exists at the time the design of the Drain Work commences, the Drain Work shall be designed and configured in coordination with Seller, the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife to ensure the genetic interchange among the pupfish populations in the Drains. The design of the Drain Work shall minimize the maintenance requirements that could result in take of pupfish to the extent possible without significantly reducing their habitat value.

c. Conditions of Approval, No. 4(j)(ii). The Project proponent shall seek credit from the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife, for the linear channel distance of the Drain Work to qualify as linear channel distance of pupfish drain habitat required by the ITP. IID is developing a joint pupfish drain connectivity and extension plan with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife. The Drain Work shall be consistent and in compliance with any final plan jointly developed. If no final plan exists at the time the design of the Drain Work commences, the design, configuration, and management of the Drain Work will be developed jointly with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife (formerly CDFG) staff, and will be developed in consideration of the specific physical characteristics of pupfish habitat (e.g., water depth and velocity, and channel width) and water quality (e.g., turbidity and selenium concentration).

d. Conditions of Approval, No. 4(j)(xi). Where dewatering is required for construction of the Drain Work, the Project proponent shall implement gradual dewatering of the construction sites within potential pupfish drains to allow pupfish to move out of the area such that they are not stranded by dewatering. A qualified biologist shall be present to relocate pupfish to a safe location if necessary to prevent stranding as a result of the physical structure of the drain. The biologist shall maintain a complete record of all pupfish moved from hazardous areas during project construction. At a minimum, the information shall include: location (written description and map), date and time of observation, along with details of the relocation site; basic life history information (i.e., length and sex); and general condition of health, including any apparent injuries/state of healing.

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e. Permit Mitigation Measure No. 11. The Project proponent shall notify IID and the California Department of Fish and Wildlife within three working days if a pupfish is found dead or injured and the death or injury is reasonably attributable to activities by the applicants. A written notification will be made within five calendar days and will include the date, time, and location of the discovered pupfish, the expected cause of injury or death and any other pertinent information. The injured pupfish will be transported to a veterinarian or certified wildlife care facility and the Department informed of the final disposition of any surviving pupfish. All dead pupfish shall be submitted to educational/research institutions possessing the appropriate state and federal permits. If deposition to an institution is not possible, the pupfish will be marked, photographed, and left in the field.

f. Permit Mitigation Measure No. 12. The Project proponent shall immediately notify (i) IID of any emergency situation potentially impacting the Drains and/or pupfish habitat and/or pupfish, and (ii) shall notify the California Department of Fish and Wildlife and U.S. Fish and Wildlife Service within 24 hours of initiating emergency activities. In notifying the Department and Service, the project applicants shall describe the nature of the emergency and the actions necessary to correct the problem. Where multiple actions need to be taken, the IID Implementation Biologist will work with repair crews to prioritize repairs based on the risk to pupfish and habitats for pupfish provided under the Permit and threats to human health and safety and property. The Implementation Biologist will visit sites where emergency activities are being implemented as soon as possible. The biologist will take pictures of the damaged areas and note the general extent and species composition of any vegetation impacted by the emergency response activities. The project applicants will use this information to restore or create replacement habitat in accordance with Condition of Approval 4(j)(iv). Within one month of completing emergency actions, the project applicants will meet with the Department and Service to review the measures the project applicants will implement to mitigate any impacts resulting from the emergency actions. Following agreement with the Department and Service regarding appropriate mitigation, Seller will prepare a Post Incident Report for submittal to these agencies. This report will document: (a) the nature of the emergency, (b) the actions taken to address the emergency, (c) the impacts to pupfish and/or their habitats (e.g., area of drain habitat impacted), (d) the mitigation measures to be implemented to address the impacts, and (e) monitoring and reporting requirements (if any) for the mitigation measures. To facilitate effective and appropriate responses to emergencies, the Implementation Team may refine and further specify these general procedures to address specific types of emergencies that could arise.

g. Permit Mitigation Measure No. 79. IID is developing a joint pupfish drain connectivity and extension plan with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife. The Drain Work shall be consistent and in compliance with any final plan jointly developed. If no final plan exists at the time the design of the Drain Work commences, the design, configuration, and

Jim Minnick  
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management of the Drain Work will be developed jointly with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife staff, to ensure that an appropriate level of connectivity between pupfish populations within individual drains that are connected to the Salton Sea either directly or indirectly and that are below the first check will be maintained in the event that conditions in the Salton Sea become unsuitable for pupfish. The Drain Work shall be designed to minimize the maintenance requirements that could result in take of pupfish to the extent possible without significantly reducing their habitat value.

h. Permit Mitigation Measure No. 80. IID is developing a joint pupfish drain connectivity and extension plan with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife. The Drain Work shall be consistent and in compliance with any final plan jointly developed. If no final plan exists at the time the design of the Drain Work commences, the design, configuration, and management of the Drain Work will be developed jointly with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife staff, to ensure that the specific physical characteristics of pupfish habitat (e.g., water depth and velocity, and channel width) and water quality (e.g., turbidity and selenium concentration). The project applicants will monitor the drains for pupfish use as the drain habitat is extended or created. Monitoring will occur for five years after creation, to allow pupfish to begin using the habitat. If pupfish use of these areas cannot be established after the initial five years, the Project proponent will work with IID, the Service and Department to identify potential causes for pupfish absence. If pupfish do not use the habitat, IID, in coordination with the Service and Department, will implement actions in the management, operation or maintenance of the extended or modified drains that are appropriate to correct conditions that may be causing the absence of pupfish. These actions may entail adjustments to channel configuration (channel and pool depths, flow velocity, connectivity, and turbidity), vegetation management and timing of scheduled maintenance. If IID determines that those actions require channel configuration of the Drains, the project applicants shall cooperate with and will not impede or take any measures to impede IID's implementation of any adjustments to channel configuration. Until such time as pupfish use is established, the Project proponent shall continue working with IID, the Service and Department to correct the conditions that may be causing the absence of pupfish.

i. Permit Mitigation Measure No. 89. For any construction activities (i.e., in-channel modifications) that directly affect the Drains, 1 the Project proponent shall implement gradual dewatering of the construction site to allow desert pupfish to move out of the area such that they are not stranded by dewatering. A qualified biologist shall be present to relocate pupfish to a safe location if necessary to prevent stranding as a result of the physical structure of the Drains. The biologist shall maintain a complete record of all pupfish moved from hazardous areas during project construction. At a minimum, the information shall include: location (written description and map), date and time of

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observation, along with details of the relocation site; basic life history information (i.e., length and sex); and general condition and health, including any apparent injuries/state of healing.

D. Imperial Irrigation District Water Conservation and Transfer Project, Habitat Conservation Plan, Final Environmental Impact Report/Environmental Impact Statement (State Clearinghouse number 1999091142) Mitigation, Monitoring and Reporting Program, September 2003 ("EIR/EIS MMRP"):

a. Impact BR-51; Mitigation Measure Salton Sea-2. IID is developing a joint pupfish drain connectivity and extension plan with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife. The Drain Work shall be consistent and in compliance with any final plan jointly developed. If no final plan exists at the time the design of the Drain Work commences, the design, configuration, and management of the Drain Work will be developed jointly with the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife staff, to ensure an appropriate level of connectivity between pupfish populations within the Drains.

b. Impact BR-24, 26; Mitigation Measure Pupfish 3. The Project proponent shall increase the amount of potential pupfish drain habitat.

c. HCP Measure Pupfish-6. For any construction activities (i.e., in-channel modifications) that directly affect the Drains, the Project proponent shall gradually dewater the affected drain segment in a manner that will encourage the downstream movement of pupfish out of the affected area before construction activities commence. The Project proponent will ensure that a person qualified to capture and handle pupfish and that meets the approval of the USFWS and CDFW will be present during the dewatering process to salvage and transport any pupfish stranded in the affected portion of the drain. Prior to conducting construction activities that could result in the stranding of pupfish, Grantee shall work with the Habitat Conservation Plan Implementation Team to develop guidelines for relocating fish. Salvaged fish will be transported to a safe location downstream of the construction site or to a location determined by the HCP Implementation Team.

E. California State Water Resources Control Board Revised Order WRO 2002-0013 ("Order"):

a. Conditions No. 10 and 11. The Project proponent shall implement the Desert Pupfish Conservation Strategy found on pages A3-155 to A3-165 of the Habitat Conservation Plan for the IID water Conservation and Transfer Project, dated June 2002.

10. **Page 2.0-8, Section 2.5.1:** This section states that Hell's Kitchen LithiumCo1 (HKL1) will include construction of a 13.8kV power transmission cable from Hell's Kitchen PowerCo 1 (HKP1). IID is the sole load serving entity in its service area, thus the developer cannot carry this out because it would make them a de facto transmission provider. HKL1 can only be served directly from IID facilities, for that to happen IID needs to perform a System Impact Study (SIS) to determine the electrical infrastructure improvements required to

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serve the project. To initiate the SIS the developer must formally apply, which hasn't occurred. Consequently, the environmental factor "XIX. UTILITIES AND SERVICE SYSTEMS" was not appropriately assessed for potential impacts. To determine if the project would require or result in the relocation or construction of new or expanded electric power facilities, the construction or relocation of which could cause significant environmental effects, system impact study should have been performed. Additional analysis must be performed to identify the electric power facilities needed for the project, to fully analyze the environmental effects of the project and any needed electric power facilities, to identify any mitigation needed, and to identify approvals needed from IID for the project related to energy and IID's electrical system.

11. **Page 2.0-8 Section 2.61 Production and Injection Wells:** The components of the project are unclear and need to be further described with corresponding figures. Is Well Pad 4 and the S Berm or portions of the S Berm part of this project? If so the impacts to construction of the well pad and berm must be analyzed, including impacts to IID's S Drain. How will Well Pad 4 be accessed from the S Berm Road on the north side of IID's S Drain?
12. **Page 2.0-10, Table 2.0-2 Expected Brine Composition:** Clarification should be provided on the matter of what values are proposed to be reinjected into the ground.
13. **Page 2.0-23, fourth bullet, Transportation Plan:** Access to the site from Hwy. 111 to English Road along McDonald Road is an unpaved county road. IID's Managed Marsh Complex is located to the north (Phase 1) and south (Phase 2) of McDonald Road in this area. The traffic plan should note that the use of the Managed Marsh Complex berms is prohibited for commuting to the project site as these are not roads and are on private property.
14. **Page 2.0-14 Water Storage:** The capacity of the storage pond proposed is not identified. Impacts of the project cannot be analyzed adequately without this information.
15. **Page 2.0-18 Operational Water Supply Requirements:** Should be modified for consistency. The Draft EIR states "400 AFY of fresh water will be needed for normal operation." However, the Water Supply Assessment under Appendix M states the project "will require approximately 200 AFY of fresh water under normal operations" (WSA page 19, these volumes are in addition to the proposed 6,100 AFY to be used for cooling and processing).
16. **Page 2.0-19 Operational Water Supply Requirements:** Should be modified for consistency. The Draft EIR states the "S" Lateral may be a water source for the water supply needed, however, the "S" Lateral is not mentioned in the Water Supply Assessment under Appendix M as a potential water source.
17. **Page 2.0-24, Section 2.11.2 Responsible Agencies:** Imperial Irrigation District should be identified as a Responsible Agency. Other than an IID Encroachment Permit, the Project will require discretionary approvals over the project, including a Water Supply Agreement from IID and other agreements for energy purposes.

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18. **Page 3.0-4, Table 3.0-1 Related Projects:** The Quantification Settlement Agreement Water Transfer and Conservation Project, and associated environmental mitigation requirements including the Salton Sea Air Quality Mitigation Program should be included. The Salton Sea Management Program 10-Year Plan and Salton Sea Management Program Long Range Plan should be included. The cumulative impacts analysis should include these projects.
19. **Page 3.0-4, Table 3.0-1 Related Projects:** Related and similar project within close proximity to Hell's Kitchen should consider the three BHE Renewable projects currently under the permitting process: Morton Bay Geothermal, Black Rock Geothermal, and Elmore North Geothermal. These projects are closer and more related and similar in nature than some of the solar projects noted that are also pending approval.
20. **Page 4.1-11 Section 4.2:** In general, IID's comments under hydrology and utility systems (as it relates to water supply) are both directly and indirectly tied to air quality. A reduction of drainage flow into IID drains and the Salton Sea may affect the level of drainage vegetation and exposed playa which in turn could result in increased dust emissions without proper mitigation. A full assessment of the project and/or cumulative impacts to the Salton Sea is essential including the consideration of mitigation measures on how this project can contribute independently or to the Salton Sea Conservancy for Operation and Maintenance or apply other means of mitigation.
21. **Page 4.3-6, Habitat Conservation Plan:** A Draft Habitat Conservation Plan/Natural Communities Conservation Plan for the QSA Water Transfers covers the proposed project area and can be found <https://www.iid.com/water/library/qsawater-transfer/>.
22. **Page 4.3-37, Section 4.3.5, Project Impact Analysis, Fish, and page 4.3-42 Bio-8 Mitigation Measure:** The desert pupfish impact discussion in Section 4.3.5 on page 4.3-37 and the Bio-8 mitigation measure on page 4.3-42 do not mesh. The Bio-8 mitigation measure calls for a desert pupfish protection and relocation plan, which the impact discussion states should include approaches to dewatering to avoid or minimize species take, and requirements for habitat compensation. However, the desert pupfish impact discussion states, "The open water area adjacent to the Q Drain could provide suitable habitat for desert pupfish. Construction within the open water area could result in "take" of desert pupfish. A CDFW incidental take permit and USFWS authorization for take of desert pupfish would be required prior to construction in any areas containing suitable habitat for desert pupfish. The CDFW and USFWS take permits will include requirements for avoidance and mitigation of impacts on desert pupfish, including restrictions on the timing of construction activities, approaches to dewatering to avoid or minimize species take, and requirements for habitat compensation to support the species. The impact on desert pupfish would be less than significant due to compliance with the CDFW and USFWS incidental take permits and authorizations." The Bio-8 mitigation should include approaches to dewatering to avoid or minimize species take, and requirements for habitat compensation to support the species, which are discussed at page 4.3-37.

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23. **Page 4.9-5, Imperial Integrated Water Resources Management Plan:** The Imperial IWRMP is outdated and is no longer compliant with State standards and requirements and, therefore, no longer serves as the “governing document” for regional water planning.
24. **Page 4.9-6 , Imperial Irrigation District, bulleted items:** Please update this section regarding policy documents that govern IID operations as follows: i) remove “The Definite Plan” and replace with “Rules and Regulations governing the Distribution and Use of Water”, ii) Correct this sentence: “The Equitable Distribution Plan, which defines how IID will prevent overruns and stay within the cap on the Colorado River water rights” as follows: “The Equitable Distribution Plan manages the District’s available water supply, distributing it equitably as determined by the IID Board of Directors,” iii) Delete “Existing IID standards and guidelines for evaluation of new development and defining IID’s role as a responsible agency and wholesaler of water” as this is not referencing any specific policy document.
25. **Page 4.9-6, Imperial Irrigation District last paragraph:** The IWSP was adopted in 2009. Replace “from which water supplies can be contracted to serve new developments within IID’s water service area” with “under which water supplies, up to 25,000 acre-feet annually, have been assessed for new non-agricultural development and may be contracted for conservation at the discretion of the IID Board.”
26. **Page 4.9-7, Table 4.9-1, Conservation and Open Space Element Goal 1, Environmental resources shall be conserved for future generations by minimizing environmental impacts . . . :** Project should not be found consistent with this Goal without further analysis and mitigation. A net reduction of drainage flow to the Salton Sea will result in impacts associated with a permanent higher concentration of salinity levels and lower drainage flow, impacting environmental resources at the Salton Sea. The project analysis should include a discussion on these impacts and address possible mitigation (i.e. fund the proposed new Salton Sea Conservancy for O&M).
27. **Page 4.9-7, Table 4.9-1, Conservation and Open Space Element Goal 6, The County will conserve protect, and enhance water resources in the County. . . :** Project should not be found consistent with this Goal without further analysis and mitigation. A net reduction of drainage flow to the Salton Sea will result in impacts to this water resource and open space around it. The project analysis should include a discussion on this impact and possible mitigation (i.e. fund the proposed new Salton Sea Conservancy for O&M).
28. **Page 4.9-7, Table 4.9-1, Conservation and Open Space Element Goal 6.3, Protect and improve water quality and quantity for all water bodies in Imperial County. . . :** Project should not be found consistent with this Goal without further analysis and mitigation. A net reduction of drainage flow to the Salton Sea will contribute to water quality impacts via higher concentration of salinity levels and permanent reduction of water to the Salton Sea. The project analysis should include a discussion on this impact and possible mitigation (i.e. fund the proposed new Salton Sea Conservancy for O&M).
29. **Page 4.9-8, Table 4.9-1, first Program listed under Water Element calls for limiting the degradation of surface water resources:** Project should not be found consistent with this Program without further analysis and mitigation. As noted above decreased drainage flows contribute to increased salinity at the Salton Sea and degradation of water

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quality. The project analysis should include a discussion on this impact and possible mitigation (i.e. fund the proposed new Salton Sea Conservancy for O&M).

30. **Page 4.9-8, Table 4.9-1, last Program listed under Water Element calls for all development proposal brought before the County of Imperial be reviewed and be required to implement appropriate mitigation measures for significant impacts to water quality and quantity:** Project should not be found consistent with this Program without further analysis and mitigation. As noted above decreased drainage flows contribute to increased salinity at the Salton Sea and contributes to the degradation of water quality. The project analysis should include a discussion on this impact and possible mitigation (i.e. fund the proposed new Salton Sea Conservancy for O&M). The Water Supply Assessment (appendix M) does not adequately assess impacts to water quantity.
31. **Page 4.9-9, Project Impact Analysis:** This narrative should address the fact that the proposed project will result in a net annual reduction of drainage flow to the Salton Sea thus contributing to the degradation of the water quality at the Salton Sea. The discussion should determine the net anticipated reduction in drainage flow after taking into consideration that none of the project's 6,500 AFY of water supply will be discharged into the drains that support the Salton Sea.
32. **Page 4.9-10, 4.9.5 Impact Analysis, Operations:** Needs to address surface water quality impacts to drains and to the Salton Sea due to the net reduction flows during operation. See Prior comments.
33. **Page 4.9-13, 4.9.6 Cumulative Impacts:** Need to address surface water quality impacts to drains and to the Salton Sea due to the net reduction flows that will result from urbanization and planned non-agricultural development. Projects under the entitlement process through the County are implemented and cumulative result in permanent flow reductions to the Salton Sea, contributing to even higher salinity concentration and affecting water quality. This analysis needs to be incorporated.
34. **Page 4.9-13, Mitigation Measures:** Update this section to incorporate mitigation that may result from the requested analysis stated above.
35. **Page 4.13-1, Section 4.13 paragraph one references "Information in this section is based on information obtained from the WSA for the Project (Chambers Group 2023) included in Appendix M of this EIR":** The Water Supply Assessment in the appendices should be labeled as draft as it contains inaccurate and incomplete data. IID has not completed the technical review of this document.
36. **Page 4.13-1 Existing Environmental Setting, Regional Setting, Water and Sewer Service paragraph 3, second to last sentence:** Generally speaking, IID does not provide water to the West Mesa Unit. The Elder Canal serves the Imperial County and not the West Mesa Unit. Please delete this reference.
37. **Page 4.13-1 Existing Environmental Setting, Regional Setting, Water and Sewer Service:** Should be updated as IID water facilities that may be impacted include the L, M, O, P, Q, R, S and Vail 3 Drains; Alamo River; the L, M, O, P, Q, R, S Laterals; as well as any additional IID facilities that may be impacted by alignment changes.

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38. **Page 4.13-1 Existing Environmental Setting, Regional Setting, Colorado River Water Rights, paragraph 1:** The QSA is not the set of agreements that grant California the most senior water rights. The QSA, among other things, set an annual consumptive use cap for IID of 3.1 million acre-feet. For information regarding IID's water rights, please refer to the *Quantification Settlement Agreement Cases*, 201 Cal. App. 4th 758 (2011), cert. denied 133 S. Ct. 312 (2012), and *Arizona v. California*, 99 S. Ct. 995 (1979).
39. **Page 4.13-8 Imperial Integrated Water Resources Management Plan:** This narrative incorrectly states that the Imperial IWRMP meets the basic requirement of California Department of Water Resources for an IRWMP. The Imperial IWRMP is outdated and no longer meets the State requirements. It is also not the governing document for regional water planning. Update this entire section.
40. **Page 4.13-8 Imperial Irrigation District bulleted items under first paragraph:** Update this section regarding policy documents that govern IID operations as follows: i) remove "The Definite Plan" and replace with "Rules and Regulations governing the Distribution and Use of Water", ii) Correct this sentence: "The Equitable Distribution Plan, which defines how IID will prevent overruns and stay within the cap on the Colorado River water rights" as follows: "The Equitable Distribution Plan manages the District's available water supply, distributing it equitably as determined by the IID Board of Directors," iii) Delete "Existing IID standards and guidelines for evaluation of new development and defining IID's role as a responsible agency and wholesaler of water" as this is not referencing any specific policy document.
41. **Page 4.13-8 Imperial Irrigation District last paragraph:** The IWSP was adopted in 2009. Replace "from which water supplies can be contracted to serve new developments within IID's water service area." With "under which water supplies, up to 25,000 acre-feet annually, have been assessed for new non-agricultural development and may be contracted for conservation at the discretion of the IID Board."
42. **Page 4.13-10, Table 4.13-2 Preservation of Water Resources , Objective 6.3 Protect Water Quantity, Analysis column 3:** The analysis needs to be modified. The percentage of project demand to "IWSP water demand" is not related to an available "unallocated supply" but rather to an "unallocated water supply that may be created and set aside for new non-agricultural projects." The project's water supply needs to be conserved and is not readily available. This analysis shall address the Colorado River System's existing conditions and IID's ability to conserve the Project's anticipated water supply demand in addition to existing water supply demands and potential new water conservation commitments up to 250,000 acre-feet per year through 2026. The percentage needs to be updated to reflect the current IWSP balance.
43. **Page 4.13-10, Table 4.13-2 Preservation of Water Resources , Objective 6.10 Encourage Water Conservation, Analysis column 3:** See prior comment regarding water supply and delete "unallocated supply set aside" as there is no water supply set aside. The water needs to be conserved subject to the terms and conditions of a Water Supply Agreement. Additionally, the analysis must include Best Management Practices that the project incorporates for water conservation and must further address what measures the project plans to take if there is future water supply curtailment of the 6,500 AFY requested. Please see IID/IC WSA Template 2023. Appendix M is incomplete as it

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relates to incorporation and identification of best management practices for water conservation.

44. **Page 4.13-11 & 4.13.4, Methodology:** Incorrectly references a WSA dated April 2023 (Appendix J). This draft EIR incorporates an incomplete WSA and as Appendix M.
45. **Page 4.13-11, Regional Water Demand, Section 4.13.4, last paragraph:** Please replace “kilo” with “thousand” (as in KAF).
46. **Page 4.13-11, Table 4.13-4, Table 4.13-5:** All tables taken from IID’s WSA Template must recognize and date the source as Imperial Irrigation District. Table 4.13-5 also incorrectly states that Salton Sea mitigation is included in the nonagricultural delivery. That mitigation ended in 2017 and this information needs to be corrected. The data year is inaccurately labeled on title of Table 4.13-4.
47. **Page 4.13-13 Water:** IID water facilities that may be impacted include the L, M, O, P, Q, R, S and Vail 3 Drains; Alamo River; the L, M, O, P, Q, R, S Laterals. Expanded capacity, including new and modified facilities, needs to be analyzed.
48. **Page 4.13-15, Threshold b) narrative:** This section needs to be updated. The water supply assessment can’t extend beyond 30 years (through 2053) because the Water Supply Assessment template created by IID and Imperial County does not extend beyond 2055. Therefore, there is no 50-year water supply assessment that can be applied to this project. Additionally, the IWSP does not dedicate or set aside 25,000 AFY of IID’s annual water supply to serve new projects. Refer to prior comments regarding ability to “conserve” up to 25,000 acre-feet under the IWSP. The remaining IWSP balance is not 23,020, please refer to updated WSA template as this amount is under 19,620 AFY.
49. **Page 4.13-15 Table 4.13-6 Project Water Uses (AFY):** The table notes a total operational use of 299,000 AFY which is inaccurate. Change table to AF and not AFY.
50. **Page 4.13-16 Table 4.13-7 Project Water Uses (AFY):** The table notes a total water use summary of 299,000 AFY which is inaccurate. Change table to AF and not AFY.
51. **Page 4.13-16 Table 4.13-8 Amortized Project Water Uses (as percent of IWSP):** The table denotes the incorrect IWSP balance and thus this information is incorrect as the balance is under 19,620 AFY. Refer to an updated Water Supply Assessment.
52. **Page 4.13-16 Paragraph two:** The entire paragraph needs to be deleted as the statements are all inaccurate. The existing and near-term On-Farm Efficiency conservation and System Efficiency conservation undertaken by IID and its customers under the QSA and other near-term agreements **do not ensure** that the project’s water needs will be met over the next 50 years. Hell’s Kitchen, in coordination with IID, will need to implement a conservation program or project to generate the 6,500 AFY of water supply that it will need for its operations. Please refer to the IWSP: <https://www.iid.com/home/showpublisheddocument/IWSP>
53. **Page 4.13-16 Paragraph three:** The drought is entering its third decade (not for the past decade or so). This paragraph incorrectly references and Appendix J. Utility Mitigation Measures UTIL-1 as a blanket statement that the Applicant will work with IID to ensure

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reductions of water are managed is not an acceptable mitigation. As per the WSA Template approved by Imperial County and IID, the project proponent must identify specific measures of how a proportional percentage of water will be curtailed if water supply reductions were ordered by an agency having jurisdictional authority.

54. **Page 4.13-4 (error in renumbering, page 291 of pdf), paragraph two:** The entire paragraph needs to be deleted as the statements are inaccurate. The existing and near-term On-Farm Efficiency conservation and System Efficiency conservation undertaken by IID and its customers under the QSA and other near-term agreements **do not ensure** that the project's in addition to other cumulative water demand needs will be met over the next 50 years. Each independent new non-agricultural project, in coordination with IID, must implement a conservation program or project to generate their respective water supply demand. Please refer to the IWSP: <https://www.iid.com/home/showpublisheddocument/IWSP>
55. **Page 4.13-3, 4.13.7 Mitigation Measures (error in renumbering, page 292 of pdf):** Mitigation Measure UTIL-1 is not acceptable. As per the WSA Template approved by Imperial County and IID, the project proponent must identify specific measures of how a proportional percentage of water will be curtailed if water supply reductions were ordered by an agency having jurisdictional authority.
56. **Page 6.0-4, 6.1.5 Hydrology and Water Quality:** Hydrology and Water Quality should not be listed under "EFFECTS NOT FOUND TO BE SIGNIFICANT" unless an assessment/analysis is completed as previously noted above, and there is sufficient analysis and data to make such a finding.
57. **Page 6.0-10, 6.1.13 Utilities:** Utilities should not be listed under "EFFECTS NOT FOUND TO BE SIGNIFICANT" unless an assessment/analysis is completed as previously noted above, and there is sufficient analysis and data to make such a finding.

Thank you for the continued coordination with IID. Should you have any questions, please do not hesitate to contact Donald Vargas at (760) 482-3609 or via email at [dvargas@iid.com](mailto:dvargas@iid.com).

Respectfully,



Tina Anderholt Shields, PE  
Water Manager

Enclosure

Jamie Asbury – General Manager  
Mike Pacheco – Manager, Water Dept.  
Matthew H Smelser – Manager, Energy Dept.  
Geoffrey Holbrook – General Counsel  
Joanna Smith Hoff – Deputy General Counsel  
Michael P. Kemp – Superintendent General, Fleet Services and Reg. & Environ. Compliance  
Donald Vargas, - Compliance Administrator I  
Laura Cervantes. – Supervisor, Real Estate  
Jessica Humes – Environmental Project Mgr. Sr., Water Dept.  
Justina Gamboa-Arce-Senior Water Resources Planner

Enclosure 1

**SB610 WSA Hell's Kitchen PowerCo1 and LithiumCo 1 Project  
Water Supply Assessment Review Comments**

See tracked PDF for comprehensive and detailed edits.

- Title Page** – Label Draft. Document circulates as draft until it is reviewed for technical compliance from IID and accepted by Imperial County.
- Page 9, last ¶, third sentence:** This amount does not match the water supply demand in the draft EIR of 6,500 AFY or the water supply request submitted to IID of 6,500 AFY. This document will need to explain the difference of 626 AFY.
- Page 9, last ¶, third sentence:** This percentage needs to be updated once the correct IWSP balance is factored.
- Page 10, first ¶, first sentence:** adjust remaining AFY accordingly
- Page 10, last ¶, third sentence:** insert after 250,000 AFY (through 2026)
- Page 12, subtitle HKP1 Facilities:** Please describe the phasing time between HKP1 and HKL1 facilities.
- Page 19, fifth ¶, second sentence:** IID does not sell potable water. Please incorporate the treatment process.
- Page 23, first sentence:** This important information noted in the template that has been omitted and needs to be incorporated. See page 10 of template.
- Page 23, first ¶, first sentence:** IID is not a potable water service provider. The Project will need to have its own treatment system or purchase it from a qualified provider. Please correct this first statement.
- Page 23, second ¶, first sentence:** IID will not contract over the projected water supply demand. The Project and this document needs to reconcile these two figures.
- Page 23, before third ¶: Insert subheading:** "Water Use Efficiency Best Management Practices Incorporated Into Project" This information needs to be specific. Use of recycled water? How much?; cooling system not a single press system? how many cycles? Condenser recovery system? Water Monitoring? Please elaborate as this will be part of mitigation measures incorporated.
- Page 23, before fourth ¶, Insert subheading:** "Additional Project Measures Under Potential Curtailment" List what operational changes will be implemented if a reduction in water supply volume is implemented by an authorized regulatory agency post Project operations. Narrative must be specific as this will be a part of project mitigation.
- Page 25, map, bottom left corner:** Please differentiate between leased land and land owned by Hell's Kitchen Geothermal LLC
- Page 35, first ¶, second sentence:** update to June 2023, two water supply agreements totaling 5,380 AFY leaving a balance of 19,620
- Page 45, Figure 6 Lake Mead Water Elevation Levels January 2022:** Please see template most current update or replace with version in link.
- Page 50, last row (2022), column 7 (IID Underrun/Overrun):** Update to -6,470
- Page 54, first ¶, first sentence:** Please revisit this. Will you be purchasing potable water or will the Project incorporate a treatment facility for potable level needs? Or both? Please be specific.

- Page 54, second ¶, third sentence, highlighted text:** What needs to be identified here is entitlements for the proposed geothermal operation and lithium extraction operation: CUP, Zoning Variance, etc.
- Page 54, third ¶, end of sentence:** Include a sentence that states, "This Project is not subject to the TLCFP."
- Page 55, third ¶, second sentence, highlighted text:** Update stats per previous comment.
- Page 57, first ¶, eleventh sentence, highlighted text:** The table indicates that the current land use is receiving water. Please update this narrative for consistency with Table 15.
- Page 57, Table 14, row one, column two, highlighted text:** This is per year not in total. You can keep the total demand but please update table to insert the per year totals which is what is assessed.
- Page 57, Table 14, row two, column one:** As noted in the template Dust Control category is required. Please reinsert that row and identify the amount projected to be needed for dust control.
- Page 57, Table 14, row six, column one:** Add a row for fire suppression. This is per year and not in total.
- Page 57, second ¶, highlighted text:** Are there agricultural uses? Previously indicated as just wells and undeveloped land? Please make sure there is consistency
- Page 59:** These values in red need updated and all font converted to black font: "Losses" is 38.3 and Total System Operational Use is 80.3
- Page 60:** Please update all table figures per PDF redlines.
- Page 61, first sentence:** This template/table does not extend out for 50-years. We would not project over 30 years. Please correct this statement.
- Page 67, third ¶, first sentence:** This number needs to be consistent with EIR and vice versa.
- Page 67, fifth ¶, last sentence:** assessment period is not 50 years; 30 years would be the maximum and it would need to be consistent throughout.
- Page 68, first ¶, first sentence:** Imperial County to determine this recommended finding prior to circulation.
- Page 68, first ¶, second sentence:** change sentence to read "may dedicate" "up to" 25,000 AF of IID's annual "conserved" water supply
- Page 68, first ¶, fourth sentence:** This is a cumulative number to come from Imperial County and not just HKP1 and HKL1 project
- Page 68, second ¶, last sentence:** via the means identified herein or other equivalent measures.
- Page 68, fourth ¶, first sentence:** sentence should read supply "that may be set aside under" the IWSP
- Page 70, number 12:** 2022 Report is available in 2023, please update
- Page 72, Attachment B:** EDP was updated in July 2023, please use the 2023 version in your submission.

**Response to Comment Letter #6:**

Figure 2.0-1, included in the Draft EIR, shows the Project features related to HKL1 and HKP1, and their shared facilities. The features are inclusive of infrastructure associated with the Project site. As stated in the DEIR and reiterated in responses to comments above, the entire project site and a buffer from the project were analyzed for biological resources to address both impacts from land disturbance as well as potential indirect impacts. The analysis includes evaluation of indirect impacts such as noise and water quality impacts on adjacent areas.

Please note, an updated WSA was submitted to IID for review. All comments regarding water supply, water quality associated with water supply, project water use, water demand, specific measures for water conservation, and updated water availability will be addressed in the draft of the WSA submitted to IID 11/27/2023. Please also note that the revised WSA will also address the issues revolving around IWSP water supply.

The EIR has been revised to reflect IID's involvement with issuance of encroachment permit(s), issuing a water supply agreement, and additional yet unknown approvals.

Table ES-1 has been updated to reflect revisions to mitigation language and update impact findings, as necessary.

The Project Applicant will work with IID to establish IID Davis Switching Station as the Project's point of interconnection. If further environmental analysis is required due to the alternative interconnection point, then the Project Applicant will be required to do so.

The EIR has been revised to reflect that the Project does not include any work within the P, Q, R, and S Drains. Any such future work will require a separate approval and environmental review.

As stated in the comment, the extension of the P, Q, R and S Drains are subject to a number of existing regulatory requirements and mitigation measures, with which Project will be required to comply. The Project does not currently propose extensions to the drains; however, if in the future the Project extends or interconnects the drains, the action will incorporate the necessary regulatory mitigation measures. It should also be noted that mitigation measure BIO-8 has been revised to provide adequate protection to desert pupfish.

The Project Proponent will work with IID to perform the required System Impact Study. Should additional environmental review be required due to the results of the study, then the Project Proponent will work with IID to resolve any analysis gaps.

S Berm Road and Well Pad 4 we analyzed under the exploratory portion of this Project and it should be noted that Managed Marsh Complex berms are not proposed for commuting to the Project site.

As stated in Section 4.13, the proposed water storage pond has a capacity of 18 acre-feet of water. Section 2 of the EIR will also be revised to reflect the storage capacity.

The Imperial Integrated Water Resources Management Plan has been eliminated from the regulatory framework of the EIR and the discussion of Imperial Irrigation District has been updated in Section 4.9.

Project Proponent will work with IID to establish best management practices and protocols to ensure the Project does not result in impacts to inflow to the Salton Sea and is in compliance with the Salton Sea Conservancy for Operations and Maintenance. No impact has been established and impacts are theoretical; however, the Project Proponent will work with IID to ensure the Project is in compliance with all regulations and requirements regarding drainage flow into the Salton Sea.

Reference to West Mesa unit has been deleted from the EIR.

## **2.2 INDIVIDUAL COMMENTS**

### **Comment Letter #7:**



PERFORMANCE MECHANICAL CONTRACTORS

IMPERIAL VALLEY  
401 WEST 5<sup>TH</sup> ST  
HOLTVILLE, CALIFORNIA 92250  
760.356.4185 TEL  
[www.pmc-us.com](http://www.pmc-us.com)

October 5, 2023

Jim Minnick  
Planning & Development Services Director, County of Imperial PDS  
801 Main Street  
El Centro, CA. 92243  
(442) 265-1736  
[JimMinnick@co.imperial.ca.us](mailto:JimMinnick@co.imperial.ca.us)

**RECEIVED**

By Imperial County Planning & Development Services at 1:14 pm, Oct 10, 2023

Subject: SCH Number 2022030704  
Hell's Kitchen PowerCo1 and LithiumCo1 Project

Dear Director Minnick,

I am writing on behalf of Performance Mechanical Contractors (PMC) in support of the Hell's Kitchen PowerCo1 and LithiumCo1 Project (the "Project") with SCH Number 2022030704, whereby Controlled Thermal Resources (US) Inc. via its subsidiary Hell's Kitchen HoldingCo 1, LLC is proposing the Project in Imperial County, California. The Project involves the development of a geothermal power plant that will produce up to 49.9 megawatts (MW) net of geothermal green energy, and development of mineral extraction and processing facilities capable of producing lithium hydroxide, silica, and polymetallic products, and possibly boron compounds, for commercial sale.

PMC was founded here in the Imperial Valley, with its home office in Holtville. We are a general contractor that builds and maintains geothermal and now, lithium facilities. PMC is the selected General Contractor for all Hell's Kitchen projects.

CTR leadership has proactively engaged with the State Building and Trades Council of California to develop a Project Labor Agreement (PLA), and we recognize the opportunity for significant union jobs as the project is constructed over the next several years. Furthermore, we recognize the positive impact the project will have on Imperial County by way of job creation and tax revenue for the community.

Please consider this letter as an indication of dedicated support for the Hell's Kitchen Project on behalf of PMC.

Sincerely,

A handwritten signature in black ink, appearing to read "JT", is written over a light gray rectangular background.

Jason Turner  
President/Founder



**Response to Comment Letter #7:**

Comment communicates support for the Proposed Project. The comment does not identify any issues with the DEIR; therefore, no further response is necessary.

**Comment Letter #8:**



October 22, 2023

David Black, Senior Planner  
County of Imperial  
Planning & Development Services  
801 Main Street  
El Centro, CA 92243

**RECEIVED**

By Imperial County Planning & Development Services at 10:19 am, Oct 23, 2023

RE: Response to the Draft Environmental Impact Report for the Hell's Kitchen PowerCo1 and LithiumCo 1 Project, Imperial County, California [SCH Number 2022030704]

Dear Mr. Black:

On behalf of EnergySource Minerals LLC, we respectfully submit the following comments on the Draft Environmental Impact Report ("EIR") prepared by the County of Imperial ("County") for the proposed Hell's Kitchen Powerco1 and Lithiumco 1 Project ("Project").<sup>1</sup>

The Project has the potential to be a significant source of renewable energy and domestic lithium, with the stated goal to create jobs while "minimizing and mitigating" adverse environmental impacts. (Draft EIR, pp. ES-2, 1.0-1, 2.0-7.) EnergySource Minerals LLC supports this vision. We are concerned, however, that to date, the County's review of the proposed Project fails to account for the need to analyze and mitigate the Project's environmental impacts pursuant to the California Environmental Quality Act ("CEQA").

On May 10, 2022, we provided comments in response to the County's Notice of Preparation ("NOP") of an EIR for the proposed Project, concerning a number of environmental issues.<sup>2</sup> These comments focused on transportation and circulation, traffic safety and the need for an operational assessment of impacts to Caltrans facilities, as well as interconnection to the Imperial Irrigation District ("IID") grid. Having reviewed the Draft EIR for the Project and its treatment of these issues, we are concerned that the County plans to rely on an EIR that fails to inform the public and decision makers regarding the environmental impacts of the proposed Project. The County cannot lawfully certify the EIR and approve the Project without first complying with its duties under CEQA to adequately address the reasonably foreseeable direct, indirect, and cumulative impacts of constructing and operating the Project. (*Vineyard*

<sup>1</sup> / These comments are informed by, among other things, our extensive experience as experts in the energy and planning industries, particularly in Imperial County. A brief summary of our qualifications is attached hereto as **Exhibit A**.

<sup>2</sup> / EnergySource Minerals LLC incorporates its NOP comments herein by reference and attaches them hereto for the County's convenience as **Exhibit B**.



*Area Citizens for Responsible Growth v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 434.)

EnergySource Minerals LLC is not opposed to the Project and seeks only to ensure that it will be constructed and operated in a sustainable and environmentally sensitive manner. To that end, we provide the following detailed comments for the County's consideration.

### I. Project Description

Section 2.2 of the Draft EIR states that "[t]he Project is located within undeveloped land and a right-of-way [ROW] corridor for the gen-tie transmission line to the [Imperial Irrigation District (IID)] interconnect station near Hudson Ranch (HR1)." (Draft EIR, p. 2.0-1; see also *id.* at p. 2.0-13 ["[t]he high voltage side of the main step-up transformer will be connected to a new gen-tie line located within IID's transmission ROW to the IID interconnect station at HR1"].) According to the Draft EIR, "[t]he gen-tie line will be constructed as part of the power plant construction but turned over to IID for ownership and operation." (Draft EIR, p. 2.0-13.) The HR1 substation is jointly owned by IID and CYRQ Energy, however, and the Project's proposal is not workable because the substation cannot accommodate both the HR1 interconnection and the connection to the ATLiS project.<sup>3</sup>

Section 2.6.9 of the Draft EIR states that the proposed 230KV line will be installed within the IID ROW to the HR 1 substation. (Draft EIR, p. 2.0-13.) To our knowledge, however, the IID ROW is located on the south side of McDonald Road, while the Draft EIR describes the location of the line to be on the north side of McDonald Road. (See, e.g., Draft EIR, pp. 2.0-14, 3.0-1, 4.8-1.) To comply with CEQA, the Draft EIR's Project Description must be clear and consistent in its identification of basic Project components. (CEQA Guidelines, § 15124; see, e.g., *County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185; *Washoe Meadows Community v. Department of Parks & Recreation* (2017) 17 Cal.App.5th 277, 287.) This information concerning the location of the proposed 230KV line must be accurate and complete to allow meaningful analysis, because placing the line on the south side of McDonald Road will significantly interfere with planned infrastructure work being constructed as part of the ATLiS project, which includes a transmission connection between the substation and the ATLiS project, as well as several entrances to the HR1 and ATLiS project. (See footnote 3, *supra*.)

Section 2.9.1 of the Draft EIR is internally inconsistent in its description of the anticipated construction workforce and schedule, variously describing the expectation to

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<sup>3</sup> / The 40-acre ATLiS project is under development in Imperial County and will deliver the world's most sustainable Lithium, operating a fraction of the carbon, water and land footprints of other production facilities. (<https://www.esminerals.com/timeline>;



be “a maximum of approximately 450 workers per day during peak construction” and also “[u]p to 500 workers will travel to the site per day at the peak of construction.” (Draft EIR, p. 2.0-16.)<sup>4</sup>

## II. Impact Analysis

### a. Transportation and Circulation

The Draft EIR’s evaluation of the proposed Project’s effects on transportation and circulation in the vicinity, including but not limited to safety impacts as well as the Project’s relationship to the County’s General Plan, fails to comply with CEQA. (Draft EIR, pp. 4.11-1 – 4.11-7, 4.11-2 – 4.11-5.)<sup>5</sup> A transportation impact study is required to assess the transportation conditions associated with implementation of the proposed Project, particularly in the cumulative scenario.

While transportation impacts under CEQA generally are based on VMT (CEQA Guidelines section 15064.3), the Project also requires analysis of intersection and roadway segment operating conditions to determine the Project’s relationship to the County’s General Plan policies regulating transportation and circulation. The County has established LOS C as the standard for acceptable operating conditions. (Draft EIR, p. 4.11-4.) The qualitative and cursory evaluation of the proposed Project’s consistency with the County’s General Plan policies fails to discuss, much less show, whether transportation conditions expected with implementation of the Project would conflict with those policies. (Draft EIR, p. 4.11-5.) Section 4.11-4 of the Draft EIR states that, during construction alone, 54,000 trucks (approximately 25 trucks per day, and up to 250 trucks per day during grading) would travel to and from the Project site. Yet there is no mobility assessment in the Draft EIR that shows how this volume of traffic would enter

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<sup>4</sup> / Section 2.9.2 of the Draft EIR states the operational workforce of HKL1 to be 90 full-time, with 44 per shift, which equates to several hundred round trips per day for employees (in fact Table 4.11-2 shows it to be 432 estimated daily trips and 113 trucks per day). (Draft EIR, pp. 2.0-18, 4.11-2 (the second one – see fn. 5, *infra*.) Impacts to McDonald Road would be significant; they require evaluation in a transportation impact study as discussed in further detail in Section II.a of this letter.

<sup>5</sup> / The Draft EIR is improperly and confusingly paginated. For example, the Draft EIR begins its discussion of “Transportation” on page 4.11-1, which continues through page 4.11-7. The page that should be numbered 4.11-8 is incorrectly numbered as another page 4.11-2; page numbers 4.11-3 through 4.11-5 also are repeated, which concludes the chapter. The Draft EIR overall contains numerous typographical and referencing errors, such as its statement on page 4.11-4 (the first one) that “Table 4.10-4 analyzes the consistency of the Project with specific policies contained in the Imperial County General Plan associated with transportation and traffic.” The correct reference is to Table 4.11-1 on page 4.11-5 (the first one).



Highway 111 or what transportation conditions would result at that intersection, on McDonald Road, and on English Road.

The County (as well as other agencies and the public) cannot determine, for example, whether the proposed Project is consistent with County requirements for "the safe and efficient movement of people and goods within and through the County of Imperial with minimum disruption to the environment" (see Draft EIR, p. 4.11-5) without a meaningful analysis of transportation conditions with implementation of the Project. The proposed Project requires a roadway and intersection traffic study, including but not limited to study of roundabouts at Highway 111 and study of the intersection of Davis and McDonald Roads, to determine whether improvements (such as a signalized intersection at McDonald and Highway 111 to address traffic safety issues resulting from the proposed Project as well as traffic volumes) or other mitigation measures are warranted.

The Draft EIR further fails to include in its transportation discussion consideration of the proposed Project's impacts on the existing road and highway network and its status as a beneficiary of County-required improvements already made in connection with other projects. (See, e.g., Draft EIR, p. 4.11-5.) As you know, EnergySource LLC and EnergySource Minerals LLC were required to pave McDonald Road from Davis Road to Highway 111, which exceeded the constitutional limits of nexus and rough proportionality for conditions on its permits. Accordingly, the County could only require such improvements in connection with those permits by including provisions requiring reimbursement from any other development that impacts McDonald Road and/or the intersection of Highway 111. The Draft EIR fails to address this important constitutional concern. (See *Nollan v. California Coastal Commission* (1987) 483 U.S. 825; *Dolan v. City of Tigard* (1994) 512 U.S. 374.) The proposed Project must contribute its fair share to required (past and future) improvements and conditions of Project approval must require reimbursement.

Moreover, the "Transportation Plan" identified in the Draft EIR as a "project design feature" (Draft EIR, p. 2.0-23) is a mitigation measure that must be described in the EIR; impacts of the proposed Project must be disclosed prior to implementation of mitigation, and identification of the performance standards or criteria to be achieved by the mitigation plan cannot be deferred. (CEQA Guidelines, § 15126.4(a)(1); *Lotus v. Department of Transportation* (2014) 223 Cal.App.4th 645, 656-658.) Proper analysis of transportation impacts and identification of enforceable mitigation measures is crucial, particularly since construction traffic from multiple large-scale projects is likely to occur at the same time. This will substantially increase hazards and pose significant safety issues, particularly during the periods that McDonald Road is being temporarily, and subsequently permanently, constructed. The County can readily foresee there will be a significant amount of time that McDonald Road and its intersection with Highway 111 will not be open to traffic, which will require the use of other roads such as Shrimp, Pound or



English, none of which are even mentioned in the Draft EIR. The "Transportation Plan" is necessary to mitigate significant safety and circulation impacts of the proposed Project and must be included in the EIR.

Section 5.41. of the Draft EIR is internally inconsistent and misleading in its comparison of the "No Project Alternative" to the "Transportation" effects of the proposed Project, and neither the "Alternatives" discussion nor the "Transportation" discussions in the Draft EIR provide the necessary discussion of impacts and mitigation in relation to existing environmental conditions. (See, e.g., Draft EIR, p. 5.0-5; see also CEQA Guidelines, §15125.) The "Conclusion" paragraph concerning the "No Project Alternative" states, in part:

The No Project Alternative would not change existing conditions at the Project site. The No Project Alternative would result in mostly reduced environmental effects compared to the Proposed Project's less than significant impacts. However, under the No Project Alternative, impacts to transportation would be considered greater and potentially significant without the mitigation to install a northbound left-turn pocket lane to improve the current safety hazards at this intersection.

(Draft EIR, p. 5.0-5.)

Under "Transportation," the "No Project Alternative" discussion states:

No construction traffic would be generated in association with the No Project Alternative because no mineral extraction plant would be constructed. Additionally, fewer truck trips would occur under the No Project Alternative, resulting in less impacts and no need to mitigate the potential safety impact at the intersection of Highway 111 and McDonald Road. Although with mitigation, Project impacts to transportation would be less than significant, impacts under the No Project Alternative would be reduced when compared to the Project.

(Draft EIR, p. 5.0-5; see *id.* at p. 5.0-8.)

This conflicting discussion inadvertently discloses what should be obvious – the Project's contribution to safety impacts at the intersection of Highway 111 and McDonald Road is cumulatively considerable and requires mitigation – but the Draft EIR overall fails to acknowledge and disclose the Project's significant adverse transportation-related effects. (See Draft EIR, p. 5.0-8 [Project's transportation impacts are "less than significant with mitigation"].) Instead, the Draft EIR presents information in confusing and conflicting ways, and the Draft EIR's transportation discussion provides no evaluation whatsoever of the intersection of Highway 111 and McDonald Road. At a minimum, mitigation measures for impacts at this intersection clearly are necessary as a



result of the Project, yet the Draft EIR identifies none. (See Draft EIR, pp. ES-37, 4.11-5 (the second one).)

The Draft EIR must be revised and recirculated for public review to serve its basic informational purpose concerning the proposed Project's transportation-related impacts. (Pub. Resources Code, § 21092.1; CEQA Guidelines, § 15088.5; *Laurel Heights Improvement Association v. Regents of University of California* (1993) 6 Cal.4th 1112, 1130 ("Laurel Heights II").)

**b. Utilities and Service Systems**

Section 4.13.5 (and the Draft EIR as a whole) glosses over the proposed Project's need for a new onsite substation and provides no evaluation of associated environmental effects. (Draft EIR, p. 4.13-14; see also Draft EIR, pp. 2.0-13 [Section 2.6.9 (Substation and Electrical Power Transmission); 4.2-10 – 4.2-17 [substation description and evaluation absent from air quality impact analysis], 4.5-8 – 4.5-11 [substation description and evaluation absent from energy impact analysis].)<sup>6</sup> The new onsite substation is discussed only twice, in two superficial paragraphs, in the entire Draft EIR. (Draft EIR, pp. 2.0-13, 4.13-14.) Impacts of substation construction and operation, including but not limited to impacts related to aesthetics, lighting, and visual quality, biological and cultural resources, noise, geology and soils, and hazards (including impacts of herbicide use for vegetation management/maintenance) are ignored.

The Draft EIR repeatedly suggests that interconnection with the existing transmission system will occur at "the IID interconnect station near Hudson Ranch (HR1)." (Draft EIR, pp. 2.0-1, see also *id.* at pp. 2.0-8, 2.0-13, 3.0-1, 4.3-2.) We expect that CYRQ, the new owners, will also address this issue, but for the record, this substation is *jointly owned* by CYRQ and IID. To our knowledge, the HR1 substation does not have the capacity for additional substation equipment. Therefore, it is unclear how the proposed Project's new 230 KV line with associated substation(s) actually will interconnect to the existing transmission system and how it may adversely impact existing utilities and service systems. (See Draft EIR, pp. 4.13-13 – 4.13-18, 4.13-2 – 4.13-3 (second one).)<sup>7</sup>

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<sup>6</sup> / The Draft EIR's Executive Summary and Introduction fail even to mention the new substation at all among their identification of project activities. (See, e.g., Draft EIR, pp. ES-1, 1.0-1.)

<sup>7</sup> / As noted above, the Draft EIR is improperly and confusingly paginated. As another example, the Draft EIR begins its discussion of "Utilities and Service Systems" on page 4.13-1, which continues through page 4.13-18. The page that should be numbered 4.13-19 is incorrectly numbered as another page 4.13-2; page number 4.13-3 also is repeated, which concludes the chapter.



Basic information regarding the size, location, and character of essential project components is missing from the Draft EIR. For example, will there be one single 230 KV line with a single set of conductors, or will there be multiple conductors? Conflicting information abounds, and it appears from some information that power may be intended to be redirected from HR1 to a new substation along Davis Road, then back to the 230KV line at HR1. Is there in fact a new substation along Davis Road outside of the project site? Will the new steel poles actually be direct-bury steel structures as stated in the Draft EIR's Project Description? (Draft EIR, p. 2.0-13.) The Draft EIR fails to address the corrosive nature of the soil in this area, which make direct-buried steel poles an inappropriate and unsafe solution, not to mention their ineffectiveness and costliness for future maintenance by IID. It is critical for the Draft EIR to provide a clear description of this gen-tie line to inform the public and the decision makers of its impacts. For instance, the Draft EIR indicates that the new line would be north of McDonald Road, while IID ROW is located on the south side. A new 230 KV line in this location would result in construction and operational conflicts, directly, indirectly, and cumulatively, which the Draft EIR fails to evaluate.

#### **c. Air Quality Impacts and Health Risk Assessment**

Section 4.5.4 of the Draft EIR indicates that off-road construction equipment for the proposed Project will use 636,310 gallons of diesel fuel, and on-road Project trips will use 8,554,787 gallons of diesel fuel, for a total Project impact of 9,191,096 gallons of diesel fuel. (Draft EIR, p. 4.5-9.) Under the guidelines and procedures of the California Air Resources Board ("CARB") and the Office of Environmental Health Hazard Assessment ("OEHHA"), as well as per the NOP comments on the proposed Project by the Imperial County Air Pollution Control District ("APCD"), a comprehensive air quality analysis is required that includes a health risk assessment as well as hot spot modeling to determine compliance with the state CO standards at intersections and roadway links as determined by a traffic impact analysis. These requirements concerning CO hot spot modeling using an APCD approved model (such as CALINE4, developed by and available through Caltrans) are not addressed in the Draft EIR or in the underlying Air Quality Technical Report, which states only that "[t]here are no sensitive receptors within two miles of the proposed project, therefore a health risk assessment was not conducted." (Air Quality Technical Report, p. 2; see *id.* at pp. 17, 28-29.)

A CO hot spot analysis is not sensitive receptor dependent, however. It is a sub-regional transportation-related assessment of CO, PM<sub>10</sub> and PM<sub>2.5</sub> impacts on a smaller scale than the entire nonattainment or maintenance area, including, for example, congested roadways, intersections, and highway facilities. To determine the proposed Project's air quality impacts and health risks resulting from the use of heavy-duty diesel



equipment on local roadways, a traffic study/local mobility assessment and hot spot modeling are required.

As discussed above, the Draft EIR contains many errors, omissions, and inconsistencies that are procedural as well as substantive. We are very concerned that the County plans to rely on a CEQA process that fundamentally fails to inform the public and decision makers regarding the environmental impacts of the proposed Project. (*Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502.) EnergySource Minerals LLC is not opposed to the Hell's Kitchen Project and seeks only to ensure that environmental resources are managed cooperatively in a sustainable manner.

The EIR must be substantially revised and recirculated because the proposed Project will have significant adverse environmental effects related to, among others, transportation and circulation, utilities and service systems, water and wastewater, air quality and health risk, and energy, that were not analyzed and disclosed in the Draft EIR. (CEQA Guidelines, § 15088.5; *Laurel Heights II, supra*, 6 Cal.4th at p. 1130; *Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 449 ("*Vineyard Area Citizens*").) Importantly, EnergySource Minerals LLC's comments do not merely dispute the EIR's analysis or conclusions; rather, the Project EIR must be substantially revised and recirculated because it omits basic information and fails to discuss and evaluate fundamental environmental issues. (CEQA Guidelines, § 15088.5; *Banning Ranch Conservancy v. City of Newport Beach* (2017) 2 Cal.5th 918, 935; *Vineyard Area Citizens, supra*, 40 Cal.4th at p. 426.) Its hasty preparation and release, without proper consideration of important environmental issues as CEQA requires, is evident throughout the Draft EIR.

Finally, we note the incomplete and confusing manner in which the Draft EIR was circulated for public review, first calling for comments by October 18<sup>th</sup>, then by October 23<sup>rd</sup>, then acknowledging that portions of the Draft EIR had been omitted from the initial release and circulated later, for fewer than 45 days. (Draft EIR, p. 1.0-5; see Exhibit C [County/State Clearinghouse Correspondence dated September 6, 2023, October 3, 2023, and October 4, 2023].) We therefore request that the comment period on the Draft EIR be extended by at least another 30 days to afford the statutory minimum amount of time for interagency consultation as well as public review and comment. (Pub. Resources Code, § 21091(a); CEQA Guidelines, § 15105(a).)

Although there are numerous other deficiencies in this EIR we have only focused on the issues that directly and potentially adversely affect our project. Once again, we are not opposed to the project and only request that the above impacts are adequately addressed and mitigated.

Thank you for the opportunity to review the Draft EIR. Pursuant to Public Resources Code section 21092.2, please provide all notices concerning the review, processing, and consideration of the proposed Project to me at 2524 Gateway Road, Carlsbad, Ca. 92009 and by email at [jheuberger@esminerals.com](mailto:jheuberger@esminerals.com).



Sincerely,

A handwritten signature in blue ink, appearing to read "Jurg Heuberger", is written over the typed name and title.

Jurg Heuberger  
SVP, Permitting and Compliance

cc: Jim Minnick, County of Imperial, Planning & Development Services Director  
Diana Robinson, County of Imperial, Planning Division Manager

**Exhibit A:**

Brief Summary of Qualifications

For

Jurg Heuberger

2010-present: involved in the energy sector as a consultant which included permitting a Geothermal plant; compliance with regulatory requirements for a Geothermal plant, permitting a minerals/lithium project, and permitting several solar energy projects as well as transmission lines. All of these projects included compliance with the California Environmental Quality Act (CEQA).

1985-2010: Served as the Director of the Planning and Development Services Department for the County of Imperial, which also included being the Building Official; for a portion of that time, the Director of Economic Development; and also for part of that time the Parks and Recreation Director.

1975-1985: Served as Chief Building Official and Building Inspector for Imperial County.

1973: Earned a BS degree in Architecture from California Polytechnic State University at San Luis Obispo

**Exhibit B:**

Response to NOP filed on May 10<sup>th</sup>, 2022

**EnergySource Minerals, llc  
12544 High Bluff Dr., Suite 320  
San Diego, Cal. 92130**

May 10, 2022

Imperial County Planning & Development Services Dept.  
801 W. Main St.  
El Centro, Ca. 92243

ATTN: David Black, Sr. Planner  
RE: Response to NOP for CUP 20-0020, 20-0021 Variance 21-0004 & 21-0005  
(Response deadline May 13, 2022)

Mr. Black:

EnergySource Minerals llc (ESM), appreciates receiving the notice on the NOP for the Hell' Kitchen Power and Lithium projects and the opportunity to provide comments.

Please consider the following comments not as an opposition to the project rather issues that we feel need to be addressed during the preparation of the environmental and project reviews.

**TRAFFIC:**

- As you know Hudson Ranch Power I, llc was as part of its permit approval required to pave approximately two miles of McDonald Rd. Likewise ESM was required to pave the remaining two miles of McDonald Rd. Both of these requirements included provisions for "reimbursements" by other "projects" that may use McDonald Rd as their access. To determine the fair share contribution for the respective parties, a comprehensive traffic analysis needs to be done on this project to determine not only the traffic safety issues that could arise given the massive amount of traffic projected, but also the reimbursement to EnergySource llc for prior and current expenditures on this road.
- In addition to McDonald Rd improvement, similar or rather associated improvements are required on HWY 111 and McDonald Rd. These also include structural improvements to IID structures at those locations. Again, the traffic analysis needs to carefully analyze those impacts and mitigation measures.
- The scheduling of this project's construction phases should be spelled out early on, even before a draft EIR is released and shared with EESM. This is critical insofar that ESM is currently completing engineering and permitting for the above road improvement, which also includes a traffic management plan. While we do not expect Hell's Kitchen to be under construction in the near future there will be times that these roads may not be available and is critical that both companies understand the potential curtailments.
- Given the amount of construction traffic and the extreme amount of operational traffic on this road by Hell's Kitchen, consideration needs to be given on routine maintenance requirements.

**INTERCONNECTION:**

- Given that this project intends to connect at the substation located at Hudson Ranch, the gentle line location, scheduling and associated potential impacts need to be clearly addressed. The gentle line cannot interfere with the operations of HR1 or ESM Minerals both of which will be in operation at the time this line is built and connected.

ESM response to NOP on Hell's Kitchen project may 10, 22

**EnergySource Minerals, llc**  
**12544 High Bluff Dr., Suite 320**  
**San Diego, Cal. 92130**

- Tie-ins to the substation typically require the IID to take the 230 KV line out of service for a period of time. This will have an adverse effect on the HR1 poser? transmission side and on the operation of the ESM project and this project should be responsible for interruption and associated cost. In addition, the scheduling needs to be closely coordinated.

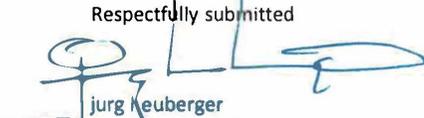
**AIR QUALITY & GHG:**

- Given the ever-increasing scrutiny and regulatory requirements in CA, the cumulative impacts of this project could have an impact on both HR 1 and ESM. The Air Quality analysis including the GHG and PM 10 and PM2.5 among others need to be closely analyzed and the cumulative impacts if any disclosed particularly if they have the potential to change the operations of HR1 or ESM.
- Given the proximity of the two projects, the Health Risk assessment is of concern to ESM and HR1.

**COMMUNICATION:**

- Given the lack of high-speed communication services in this area it is suggested that this be analyzed and a proposed improvement to this communication system(s) be considered as a shared responsibility for multiple operators in the area.

Respectfully submitted



Jurg Heuberger  
SVP Permitting & Compliance

760.996.0313 Mobile  
409 W. McDonald Rd.  
Calipatria, Ca. 92233



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[www.energysource.us.com](http://www.energysource.us.com)

CC:

Eric Spomer, CEO  
Derek Benson, COO  
Jim Minnick, Planning Director

ESM response to NDP on Hell's Kitchen project may 10, 22

**Response to Comment Letter #8**

The EIR has been revised to reflect the correct number of anticipated of workers accessing the Project site during peak construction; the Table reference (4.11-1) in the Transportation Section has been revised in the EIR; the EIR has been revised to reflect the correct number of truck trips during construction (4,000).

The Project Proponent has engaged Energy Source Minerals to resolve the issues raised in the comment letter associated with traffic and circulation and utilities. Additionally, the Project Proponent is working with IID to establish the interconnection point should an alternative be required. As the comment pertains to air quality, please see Response to Comment #3.

**Comment Letter #9**



October 23, 2023



David Black  
Planner  
Imperial County Planning & Development Services Department (the "County")  
801 Main Street  
El Centro, CA 92243

By email to: ICPDSComentLetters@co.imperial.ca.us

RE: Hell's Kitchen Project Draft Environmental Impact Report  
From Hudson Ranch Power I LLC

Dear Mr. Black:

This letter is with regard to the Hell's Kitchen (the "Proposed Project") draft Environmental Impact Report ("EIR"). These comments are submitted on behalf of Hudson Ranch Power I LLC ("Hudson Ranch"), owner of the John L Featherstone Geothermal Power Plant ("Power Plant"), which neighbors the Proposed Project. Specifically, we provide comments on: (1) transportation, (2) energy interconnection, (3) air quality, (4) communications infrastructure, and (5) resource management. This letter supplements concerns listed in our May 20, 2022 Comment Letter ("Original Comment").

#### Transportation

According to the EIR, during construction of the Proposed Project's power plant, there will be an estimated 54,000 truck trips over the approximately 25-month construction period. During grading, 250 truck trips are expected per day. During construction of the lithium facility: 25 trucks per day. Post construction (during operations), the two facilities are expected to have an estimated 432 daily trips. The EIR characterizes transportation impacts as "Less than Significant," however these volumes are significant increases from the current road use. Hudson Ranch respectfully asks that this finding be reconsidered.

Per the draft EIR, ingress and egress to the Proposed Project site will occur via Davis Road. The Proposed Project includes building a Class II base for Davis Road followed by paving between McDonald Road and Noffsinger Road, but only *after* construction of the Proposed Project is complete (2.0-2).

In our Original Comment, we noted that Hudson Ranch's predecessor, EnergySource Minerals, was required to pave approximately two miles of McDonald Road as part of the Power Plant's permit approval. The paving requirement included provisions for reimbursement by other projects that may, in the future, use McDonald Road for access. In light of the cost-sharing

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provisions of the Hudson Ranch Power Plant permit approval, and because the EIR notes that all workers, vendors, and haul trucks will be required to utilize Highway 111, Davis Road or McDonald Road to access the site, the County should require a more comprehensive traffic analysis. We believe that the increased traffic is a material impact to Imperial County roads. County law requires that "Developer shall mitigate any problems whenever they arise" 91702.00(E). Mitigation is warranted and should be addressed in the permitting process.

Hudson Ranch respectfully suggests that the County require the developer to prepare a traffic analysis to: (a) determine the projected quantity and impact of both construction and operational traffic, (b) evaluate potential traffic safety issues originating from two geothermal brine plants located in close proximity to each other, and (c) quantify the reimbursement amount to Hudson Ranch for prior and current expenditures in developing McDonald Road for industrial use. Based on the traffic analysis, Hudson Ranch respectfully asks the County to provide, through the permit process, a cost-sharing mechanism and maintenance requirements for McDonald Road.

Likewise, if McDonald Road is unavailable due to construction activities or access to our Power Plant is otherwise impeded, Hudson Ranch needs to be notified in advance to minimize impacts to our continued operations. We request the permit take into consideration these impacts and require appropriate mitigation from the developer.

#### **Energy Interconnection**

The transmission diagrams (Figures 2.0-1 through 2.0-4) show a 230-kilovolt gen-tie line for the Proposed Project running from Noffsinger Road for two miles to McDonald Road within IID's rights of way. They then show the proposed transmission line crossing McDonald Road north to south at the Hudson Ranch substation, and apparently connecting to the IID line *inside* the Hudson Ranch substation. The EIR states at 2.6.9 "The transformer will include air-insulated switchgear. The high voltage side of the main step-up transformer will be connected to a new gen-tie line located within IID's transmission ROW to the IID interconnect station at HR1."

Hudson Ranch owns the plant substation equipment, however, there currently is no agreement between the developer and Hudson Ranch for this connection. The substation includes a 230 KV bus and two sets of disconnect switches. One set of switches is connected to Hudson Ranch Unit 1. The second set is not connected, but that does not imply that it is available for use by others. The second connection is intended for future use by Hudson Ranch and is not for sale or lease. In addition, since Hudson Ranch owns the 230 KV bus inside the substation, we understand that, as a non-utility, we are prohibited by regulation from wheeling a third party's power through our system to IID.

If the Proposed Project is able to acquire the right to connect to the substation, Hudson Ranch has concerns about a forced outage when the Proposed Project takes the gen-tie line out of service to make the connection. As noted in our Original Comment, any work associated with the gen-tie line cannot interfere with the ongoing operations of Hudson Ranch. The developer should be required to coordinate scheduling and should be responsible for any service interruption and associated cost to Hudson Ranch.

### **Air Quality**

While no sensitive receptors are within two miles and therefore a health risk assessment was not required, Hudson Ranch is cognizant that an additional operation the size and scope of the Proposed Project in the vicinity may result in collective emissions that heighten air quality risks to the population. In light of the Proposed Project's size and in order to ensure no health risks are implicated, Hudson Ranch respectfully suggests asking the Imperial County Air Pollution Control District ("ICAPCD") to evaluate the effect of the Proposed Project and, if warranted, make a finding that the cumulative impacts do not require an air quality assessment. Such a finding will help to ensure cumulative air quality does not negatively impact both Hudson Ranch and the broader area. Alternatively, if mitigation is needed, it should be identified and included in the permit process.

Hudson Ranch further suggests imposing fugitive dust emission controls to mitigate air quality concerns from the Proposed Project's construction activities. Specific mitigation examples include frequent watering of unpaved roads, establishing vehicle speed limits on McDonald Road as well as Davis Road for unpaved portions, creation of both windbreaks and transport container covers to prevent dust migration, and requirements for cleaning and sweeping procedures.

### **Communications Infrastructure**

In our Original Comment, we highlighted the lack of high-speed communication services in this area. The draft EIR notes that the Proposed Project would utilize existing telephone lines and that there are no significant impacts, thus no mitigation is required. Hudson Ranch respectfully asks that this finding be reconsidered.

### **Resource Management**

The Salton Sea area holds great potential for renewable energy, but only if the existing operations are protected and the geothermal resource is properly managed for heat sustainability.

While this County proceeding involves the Proposed Project only, a fair analysis of cumulative impacts cannot ignore the other proposed developments dependent on the geothermal resource: adjacent to Hudson Ranch is the proposed Morton Bay Geothermal Plant (157 MW), which sites several of its wells very close to the Hudson Ranch Unit boundary and less than 1/2 mile from Hudson Ranch wells 13-1 and 13-2. Within several miles are additional proposed geothermal power plants including Black Rock Geothermal (87 MW) and Elmore North Geothermal (140 MW). These are in addition to the Proposed Project (49.9 MW) and the eighteen geothermal plants already in operation in the County.

Hudson Ranch respectfully suggests that the current operators and the County need to fully understand the geothermal resource through a performance analysis, with a particular focus on proximity between operators and their wells to ensure the resource remains viable for years to come. Operational spacing is implied in state law but does not explicitly focus on density of operators or proximity between wells. Rather, state law ensures that geothermal wells cannot be located within 100' of a public road or outer boundary of a parcel, or 25' of a public road or outer boundary when "all or substantially all of the [parcel] surface is unavailable for the location of a geothermal well." Cal. Public Resources Code 3757; 3757.1. This void in regulation creates an opportunity for the County to create its own more stringent spacing rules to protect the geothermal resource. As the County studies geothermal performance in the area and implements policy related to geothermal energy resources, we respectfully suggest that it should reference similar guidance in state law for oil and gas, which provides for set spacing between wells. *See* Cal. Public Resources Code 3600; 3602; 3606; 3607. While geothermal resources will not be identical to oil and gas, the goal and premise of state law can act as a guide for the County.

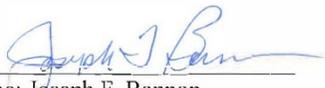
In addition to well spacing, Hudson Ranch respectfully suggests that the County should consider requiring a developer to bear the burden of demonstrating that its proposed use is an efficient use of the geothermal resource. For example, the Hudson Ranch Power Plant and all the BHE geothermal facilities in the Salton Sea use a triple flash geothermal process to maximize the steam extraction from the geothermal liquid/resource. The Hudson Ranch Power Plant consumes approximately 4,500 kph of geothermal fluid to generate 60 MW (gross), or a geothermal resource consumption rate of 75 kph per gross MW. The BHE facilities have similar energy conversion rate. However, the EIR indicates that the Hell's Kitchen power plant will be single flash facility, and section 2.9.2 indicates the facility will consume 5,900 kph of geothermal resource to generate 50 MW gross, or a geothermal resource consumption rate of 118 kph per gross MW (which is 57% of the other geothermal facilities in the Salton Sea reservoir). It merits consideration by the County whether this is an efficient use of the resource from a power generation perspective. It is difficult to comment on the energy efficiency of the Hell's Kitchen lithium minerals processing facility as practically no details about that facility are presented in the EIR. For example, the EIR notes that 90% percent of filter cake produced by the power plant would fall below California thresholds for STLIC and TTLIC, but makes no mention of the filter cake produced by the minerals extraction portion of the project.

**Conclusion**

We thank you for considering these comments intended to balance the benefits of new development with appropriate mitigation of environmental and economic effects to existing operators, like Hudson Ranch.

Sincerely yours,

HUDSON RANCH POWER 1 LLC

By:   
Name: Joseph F. Bannon  
Title: Vice President, Environment & Utility Relations

cc (by email only):

Nicholas Goodman, CEO, Cyrq Energy  
Jim Minnick, Imperial County Planning & Development Services Director  
David Black, Imperial County Planning & Development Services, Planner  
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### **Response to Comment Letter #9**

Please note, the number of truck trips throughout the life of construction has been updated in the EIR to correctly reflect the expected 4,000 truck trips. The limited number of trips are assumed to have a less than significant impact as identified in the EIR.

Interconnection with IID facilities will be determined through coordination and communication with IID and will be determined based on available capacity. If the Project is required to utilize an alternative IID interconnection station, then the Project will be required to analyze the impacts associated with interconnecting via different means.

See Response to Comment Letter #3 for issues regarding Air Quality. Also, please note the County does not have authority over IPAPCD analysis or permitting requirements.

The comment communicates concerns over the potential over-utilization of geothermal resources within the County and requests the County and current operators to protect the viability of the resource. The comment also requests the County establish a standard for measuring energy efficiency for geothermal power plants and mineral processing facilities. The comment, as it relates to geothermal resources within Imperial County, does not identify any specific flaws with the DEIR; therefore, no further comment is warranted.

**Comment Letter #10**

**LAW OFFICE OF JORDAN R. SISSON**

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October 23, 2023

**VIA EMAIL:**

David Black, Senior Planner  
Imperial County Planning & Development Services Department  
[davidblack@co.imperial.ca.us](mailto:davidblack@co.imperial.ca.us)  
[icpdscommentletters@co.imperial.ca.us](mailto:icpdscommentletters@co.imperial.ca.us)

**RE: DRAFT EIR COMMENTS REGARDING HELL'S KITCHEN POWERCO 1 AND LITHIUM CO 1 PROJECT (SCH NO. 2022030704)**

Dear Mr. Black and Imperial County Planning & Development Services Department ("ICPDS"):

On behalf of Comité Civico del Valle ("Comité"), this office respectfully submits the following comments to the County of Imperial ("County") on the Draft Environmental Impact Report ("EIR") for the construction of a geothermal power plant that will produce up to 49.9 megawatts net of geothermal green energy ("HKPI"), and construction of a related commercial lithium hydroxide production plant via a geothermal brine process facility or ("HKLI"). Controlled Thermal Resources (US) Inc., via its subsidiary Hell's Kitchen Geothermal, LLC, (collectively "Applicant") is proposing the HKPI and HKLI facilities that includes a 2.3--mile gen-tie line (collectively "Project") located within Salton Sea geothermal field near adjacent to Davis Road and south of Noffsinger Road in Imperial County, California ("Site").

Comité incorporates by this reference all DEIR comments made by this office (attached hereto as "Attachment A") and the six academic/experts in their respective fields (attached hereto "Exhibit A" through "Exhibit F"). In short, Comité is concerned with multiple areas of the Draft EIR's analysis. For example, the Project's operations lack sufficient information about processes, water usage, power needs, and the full operations of the HKLI off-site shipment.<sup>1</sup> Additionally, the DEIR fails to provide any real analysis of Project water impacts caused by the almost certainty of reduced Colorado River water allocations to the Imperial Irrigation District ("IID"). So too, the Draft EIR fails to consider cumulative impacts caused by related existing and proposed related projects that are demanding significant amounts of non-agricultural, industrial uses. Furthermore, many of the claimed project design features and mitigation measures lack performance standards and unlikely to be actually implemented.<sup>2</sup> Moreover, the various lack and/or flawed analysis skewed the Draft EIR's alternative analysis that should have considered more than just a no-project alternative.<sup>3</sup>

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<sup>1</sup> Under CEQA, an accurate, stable and finite project description is the sine qua non of an informative and legally sufficient EIR. (See *San Joaquin Raptor Rescue Ctr. v. Cnty. of Merced* (2007) 149 Cal.App.4th 645, 654-655.)

<sup>2</sup> CEQA requires lead agencies to craft mitigation measures that would be based on enforceable performance criteria. (See *City of Maywood v. Los Angeles Unified School Dist.* (2012) 208 Cal.App.4th 362, 407.)

<sup>3</sup> It is the County's affirmative duty to consider approval of the Project only after "meaningful consideration of alternatives and mitigation measures." (*Mountain Lion Foundation v. Fish & Game Com.* (1997) 16 Cal.4th 105, 134.)



Y

As fully discussed in the attached, the Draft EIR is fundamentally flawed that lacks critical information, analysis, and meaningful/enforceable mitigation. For this reason, Comité respectfully requests that the County recirculate the Draft EIR that address the issues discussed in the various attachments and exhibits, that considers a range of mitigation measures and project alternatives, including one with enhanced mitigation measures during operations. Furthermore, given the novelty of the lithium extraction operations by this applicant, the County should consider instituting some form of mandatory reporting and project approval renewal process (akin to a Conditional Use Permit renewal).

Thank you for your consideration. Comité may supplement these comments in the future.

Sincerely,



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Jordan R. Sisson  
Attorney for Comité Civico del Valle



**ATTACHMENT A**

Draft EIR Comments RE: Hell's Kitchen PowerCo 1 and LithiumCo 1 Project  
October 23, 2023  
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## 2. Air Quality

- a. DEIR proposes mitigation for air quality impacts during construction by using Tier 3 engines or better when commercially feasible (p. ES-8). There is no explanation why Tier 4 final engines is not appropriate here and/or what constitutes “commercially available” and who would make that determination.
- b. DEIR proposes limited VOC architectural coatings (p. ES-9). However, there is no explanation why “super compliant” coatings are not appropriate here as proposed in other air districts.<sup>2</sup>
- c. DEIR claims no receptors within 2 miles of the proposed project (p. 4.2-4), which is inconsistent with other areas of the DEIR that identifies sensitive receptor 0.5 miles from the Site (p. 4.1-10). Other sensitive receptor may be near intended and unintended truck routes that should also be considered.
- d. The DEIR cites “proven abatement systems” to control hydrogen sulfide (p. 2.0-12) but provides little to now information about said systems. The DEIR should substantiate claims of 95% reduction of said systems (p. 2.0-23) as well as ensure a routine monitoring/reporting program to ensure compliance.
- e. DEIR does not consider alternative mitigations than utilizing NOX mitigation fees (pp. 2.0-23, 4.2-8). Alternative mitigation measures including changed operations should be identified and clearly demonstrated to be not feasible before utilizing mitigation fees.
- f. The DEIR states start up emissions would exceed relevant CEQA thresholds but does not discuss whether said operations could be altered in order to reduce emissions on-site prior to seeking offsets under ICAPCD Rule 207 (p. 4.2-13). Onsite reductions should be prioritized prior to seeking offsets elsewhere.
- g. As discussed below, daily truck trips are not adequately discussed, limited, nor ensured to be electric. This means that the Project could be accessed by heavy-duty diesel equipment that must be considered in the EIR and human health risk assessment (“HRA”).

## 3. Greenhouse Gas Emissions

- a. DEIR utilizes a 20,000 MTCO<sub>2</sub>e threshold (pp. ES-32, 4.7-11). However, this conflicts with County’s prior practice of utilizing much lower thresholds.<sup>3</sup>
- b. The claim of 37,103 MTCO<sub>2</sub>e (avoided) is not fully justified (PDF pp. 203 [DEIR Tbl. 4.7-3] & 487 [Technical Report]). Here, this 37,103 of avoided emissions suggest the project is removing emissions that are currently existing—which is not the case for this vacant Site.
- c. Again, the use of Tier 4 engines is illusory given there is no meaningful distinction of what “commercially available” or other vague commitment that reference “appropriately available” means (DEIR, Tbl. 4.7-4).
- d. The DEIR should also consider the Project’s consistency with CARB’s 2022 Scoping Plan (p. 4.7-18 [only considering 2017 Scoping Plan]).

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<sup>2</sup> See e.g., South Coast AQMD, <https://www.aqmd.gov/home/rules-compliance/compliance/vocs/architectural-coatings/super-compliant-coatings>.

<sup>3</sup> See e.g., Hudson Ranch Power Project Report, PDF p. 47 (utilizing 900 MTCO<sub>2</sub>e/yr), <https://www.icpds.com/assets/hearings/CUP22-0020-IS22-0034-Hudson-Ranch-Power-I-EEC-ORIGINAL-Packet-04-13-23--1681833882.pdf>;



Draft EIR Comments RE: Hell's Kitchen PowerCo 1 and LithiumCo 1 Project  
October 23, 2023  
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#### 4. Traffic & Vehicle Miles Traveled (“VMT(s)”)

- a. Claims up to 500 workers per day during construction of the project (p. 2.0-16).
- b. During operations of both facilities, DEIR estimates roughly 112 full-time employees and 113 truck trips per day (p. 2.0-18). Yet, the VMT analyzed 40 trucks of product shipment (p. 4.11-7). This inconsistency needs to be addressed.
- c. The DEIR claims 20.84 VMTs per employee below the 15 percent below the 25.25 Countywide average (pp. ES-37, 4.11-4). Yet, this considers only VMTs generated by 112 employees (id., at Tbl. 4.11-2). This does not consider the VMTs travel by the 113 or 40 truck trips noted above. Even if these vehicles are entirely electric—which there is no meaningful requirement under current DEIR language—these vehicles will still produce VMTs, dust from unpaved roads, and toxic brake dust from breaking along truck routes that must be accounted for in this DEIR.
- d. The DEIR utilized ITE trip rates despite it not including any samples of geothermal power plants or lithium extraction facilities (p. 4.11-8). The assumption of ITE 170 rate is thus inappropriate. The DEIR should consider comparable projects to determine a reasonable assumption of trips.
- e. DEIR assumes Site being accessed via Davis Road via McDonald Road (Highway 111) (p. 4.11-3). This includes areas that are unpaved and produced substantial dust that should be adequately considered and mitigated. So too, the DEIR should consider the likelihood that the Site could be accessed from alternative routes.

#### 5. Water Supply

- a. The DEIR admits potential impacts on water supply if IID does not receive its annual appropriation but claims that Applicant will work with IID in the event to ensure water availability (p. ES-41).
- b. DEIR claims the Project will minimize reliance on external water sources to the “greatest extent practical” but fails to provide any meaningful details or performance standards to this measure (p. 2.0-19).

#### 6. Energy

- a. DEIR seems to include artifacts of EIR prepare notes states “these numbers are confusing, and unclear what the point is” (p. 4.5-10). This begs the question, if confusing to the EIR preparers, how can the EIR serve as an information document to the public and decisionmakers?
- b. DEIR claims operation of the HKLI would be offset by energy generated by HKPI (i.e., difference of 9.9 MW) (p. 20-19). However, the DEIR does not provide sufficient information to confirm that HKPI will consistency operate at level that off-sets HKLI’s normal and peak power demands. Nor does the DEIR consider the prospect of HKLI operating during extended periods where HKPI is underperforming or even shut down for extended periods of times.
- c. The DEIR’s surplus energy claim relies on various assumptions (p. 4.5-10 [operations-related electricity]), which needs to be substantiated.
- d. What requirement or limitation ensures that HKLI will not operate if HKLI is inoperable due to maintenance, outage, or for longer term (p. 4.5-10)?



Draft EIR Comments RE: Hell's Kitchen PowerCo 1 and LithiumCo 1 Project  
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**7. Alternatives**

- a. The DEIR examined only a no project alternative (p. 5.0-3). This is inadequate due to the inadequate analysis (discussed supra), which may have underestimated significant impacts and thus skewed the current alternatives analysis. At minimum, the DEIR should consider an alternative with enhanced mitigation measures during operations that would potentially reduce project/cumulative impacts discussed herein and elsewhere in the accompanied expert letters.

Thank you for consideration of these comments. We ask that this letter is placed in the administrative record for the Project.

Sincerely,



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Jordan R. Sisson  
Attorney for CCV



**EXHIBIT A**



To: David Black, Senior Planner, Imperial County  
From: James J. A. Blair, Associate Professor in Geography and Anthropology, Cal Poly Pomona  
Date: October 18, 2023  
Re: Comments on Draft Environmental Impact Report for Hell's Kitchen Project

Dear Mr. Black and Colleagues:

Thank you for the opportunity to comment on the Draft Environmental Impact Report (EIR) for the Hell's Kitchen PowerCo 1 (HPKP1) and LithiumCo 1 Project (HKL1). By describing the potential environmental effects associated with the development of a commercial lithium hydroxide production plant within the Salton Sea geothermal field in Imperial County, California, this draft report helps to identify some impacts, alternatives and mitigation measures. This has the potential to be an important reference contributing to a baseline because the proposed geothermal direct lithium extraction (DLE) technology is still not proven at a commercial scale, and there remain several unknowns about the potential cumulative impacts of the proposed Lithium Valley development projects until Imperial County's Specific Plan and Programmatic EIR become available. This draft EIR also gestures toward innovations to mitigate environmental impacts that may seem virtuous, such as statements indicating possible reuse of steam condensate and reverse osmosis for water needs, wetland habitat restoration for special status species, promotion of electric trucks for operations, and production of biproduct materials like silica that might divert some potentially hazardous solid waste from landfills. Nonetheless, it remains unclear exactly how some of these declarative statements factor into the proposed mitigation measures that the public is led to believe would result in less than significant levels across all categories.

Unfortunately, sufficient detail is also lacking on the proposed operations due to the proprietary nature of the geothermal DLE technology, so description of potential impacts of the processing of lithium involving acid and substantial amounts of water is rather opaque. The delayed addition of Chapters 6 and 7 also provided a narrow window of time within which to analyze all CEQA considerations and references. And the exceedingly short list of related projects shown in Table 3.0-1 demonstrate how this report treats this project in isolation and falls short of CEQA compliance on cumulative impacts, especially when we consider the ambitious, multi-sector land use planning for the Lithium Valley development project that is currently underway.

Still, I am grateful for the opportunity to review the document, and in what follows I highlight some areas of needed improvement. These suggestions are not exhaustive, but I hope that these modest observations may offer recommendations to enhance the report for a more robust consideration of potential alternatives and mitigations for the construction and operation phases, as well as cumulative impacts. Here are some comments on key aspects of the report that still need to be addressed:

#### **Air Quality**

Dust pollution is a serious concern in the Salton Sea region because toxic contaminants are already being swept into the atmosphere from the exposed playa due to the rapidly receding sea level. This has contributed to poor air quality and high rates of respiratory illness. Given this urgent local public health problem and the acknowledgment that the project has potentially significant impacts that conflict with or obstruct implementation of the applicable air quality plan, the Dust Control Plan is a welcome addition

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THE CALIFORNIA STATE UNIVERSITY Bakersfield, Channel Islands, Chico, Dominguez Hills, Fresno, Fullerton, Hayward, Humboldt, Long Beach, Los Angeles, Maritime Academy, Monterey Bay, Northridge, Pomona, Sacramento, San Bernardino, San Diego, San Francisco, San José, San Luis Obispo, San Marcos, Sonoma, Stanislaus

to this report. However, consideration of cumulative impacts of geothermal DLE development should include mitigation measures for exacerbating fugitive dust pollution indirectly through exploitation of water resources that might otherwise be used for the priority needs to conserve or replenish the reduced inflow to the Salton Sea.

The report offers contradictory information about compliance with air quality plans for O<sub>3</sub>, PM<sub>2.5</sub> and PM<sub>10</sub> for which the area is in serious non-attainment. This, as well as an explicit discussion of noncondensable gases and cooling tower drift, as well as HCl vapor emissions and airborne pollutants from brine ponds require further explanation and clarification. It is also concerning that the project exceeds the threshold for NO<sub>x</sub> in construction, as well as exceeding the threshold for CO and NO<sub>x</sub> in operation due to the diesel generator. These emissions call for mitigation measures and should be considered in relation to the other geothermal plants operating in the region, existing agriculture, as well as the proposed battery manufacturing, battery recycling and associated logistics industry that will form the inland port that the County has planned for development as part of its Lithium Valley Land Use Alternatives. Myriad cumulatively considerable construction projects are planned throughout the area near the project location, and it is unreasonably myopic to suggest that because none are within one mile of the site that a less than significant cumulative air quality impact would be expected.

#### **Biological Resources**

Given the direct destruction of wetland habitat for a high occurrence of special status wildlife to construct this project, the report's attention to potentially significant impacts is valuable. Still, it remains unclear if the location of the Mitigation Plan area is appropriate for constructed native wetland habitat in an area of restored wetland in which native species like cattails have already been removed because they are deemed to obstruct the view of hunters and leveling areas. Such wildlife areas are not ecological reserves or preserves and should be managed differently. Please also note that BIO-5 Power Wash Equipment seems to be missing from Table ES-1.

#### **Geology and Soils**

Imperial Valley already has significant earthquake risks, so there are heightened local concerns about induced seismic activity from geothermal drilling as well as subsidence due to geothermal brine extraction and reinjection. Downplaying concerns about seismic activity, subsidence, lateral spreading and liquefaction risks because the project area is not located within a fault zone elides the known potential for ground shaking and surface rupture. Sparse detail provided on a forthcoming geotechnical engineering investigation does not inspire confidence that the level of impact after mitigation would be less than significant. Full description of recommendations should be summarized in Table ES-1 rather than copied across all thresholds. This may include recommendations on site preparation, foundations and settlements, soil mixing, piles, concrete mixes and corrosivity, site fill, excavations, seismic designs, pavements, and more. Similarly Table 4.6.1 lacks direct responses to each of the land use planning objectives. These mitigations need further explanation.

#### **Hazards and hazardous materials**

Given the track record of spill-related contamination at most of the geothermal facilities in the Salton Sea Known Geothermal Resource Area (SSKGRA) after inaccurate predictions of low spill risk in previous EIRs, the level of potential impact is far from "less than significant," especially when we consider cumulative effects. It is worth noting that CalEnergy / BHE Renewables already agreed to pay a \$910,000 penalty and conduct soil remediation as part of a 2007 consent agreement. It would be prudent for Controlled Thermal Resources (CTR) to plan for this potential consequence of inaction by providing more detailed mitigation measures in this EIR (beyond the vague assertion that HKP1 and HKL1 would cooperate with responsible agencies to facilitate spill response cleanup and spill site

remediation in section 2.9.2). Mitigation is required to account for substantial risks from further spills of arsenic and lead-containing materials from blowouts, corrosion, abrasion, accidents and scaling. Scaling limits geothermal power plant operations and must be removed or diluted from brine to avoid clogging reinjection wells if silica becomes colloidal. This may increase the use of freshwater and/or hydrochloric acid (HCl). Spills of geothermal brine could potentially impact extensive habitat for the special status wildlife in the area listed in Biological Resources.

Moreover, it is critical for handling and disposal routes of hazardous solid waste to be described in greater detail, especially iron silica filter cakes. According to a forthcoming report on environmental justice in California's "Lithium Valley" by Comite Civico del Valle and Earthworks, when iron and silica are precipitated on filter cakes, the resulting solid waste may include hazardous or harmful elements, including arsenic, barium and lead. It is intriguing that CTR is already considering second life uses of silica scaling by aiming to produce not just lithium hydroxide, but also silica (as well as bulk sulfide and polymetallic products) for commercial sale. The report even states that "the mineral extraction process would not generate any waste but result in biproducts which will be sold" (4.13.5). If it were described more explicitly in this context how this might serve as a mitigation measure for storing and transporting hazardous materials, then a cradle-to-cradle approach might help to divert these potentially hazardous solid waste streams away from the surrounding area or landfills. Scientists have already successfully synthesized from geothermal water mesoporous silica, which is a material that may be used in a variety of industries—including energy and mineral resources—as catalysts, adsorbents, ion exchangers, optic materials, and solar panels. Furthermore, geothermal silica waste may also be used to synthesize zeolites, which may serve as water retainers in soil to mitigate water loss for irrigation in the area due to drought and increased apportioning of water for industrial uses like this project. Some zeolites even have the capacity to encapsulate lead in the soil through mineral remediation. If measures are described clearly and taken to prevent contamination, this circular approach to hazardous waste management might offer potential mitigation for soil contamination due to spills.

### **Hydrology and Water Quality**

Given recent significant hazardous flooding and quite shallow groundwater in the immediate area surrounding the project, the planned preparation of a Stormwater Pollution and Prevention Plan (SWPPP) will be a welcome contribution, though it would be helpful to provide more information at this moment because best management practices (BMPs) may not be sufficient in this environment. How will the Applicant mitigate flooding's impact on potential contamination from drilling sumps or brine ponds? Furthermore, despite poor quality groundwater with limited uses, cumulative impacts on water quality from disposal of geothermal fluids and upward mobility of fluids due to faulty injection well seals or seeps from brine ponds merit more detailed mitigation measures.

### **Transportation**

Again, it is intriguing that the Applicant has committed to using electric trucks for all product shipping (4.11.4), but it is unclear how these fleets or heavy duty vehicle charging infrastructure might be assembled in such a short timeframe, when they will become commercially available, or how the use of these trucks might help mitigate air pollution. Moreover, merging of thresholds a and b as "less than significant" contradicts the listing of threshold b (and c) as potentially significant in previous planning documents for geothermal lithium development in the area, such as the EIR for EnergySource's neighboring ATLiS project. In this Hell's Kitchen draft EIR there is no commute trip reduction or rideshare program because the proposed project is "not considered a major employment center" (Table 4.7-4). This remarkable acknowledgment might match the listed number of 112 jobs (22 jobs at HKP1 and 90 jobs at HKL1), but it pales in comparison to the cumulative job growth estimates of 4,000+

locally hired workers that CTR has advertised extensively to gain the support of fence-line community members in an area with high rates of unemployment.

### **Tribal Cultural Resources**

It is telling that undeleted comments from the report authors accidentally published in the available EIR document in section 4.12.5 acknowledge that “based on the consultation summary, Quechan did not want us to be involved.” Even if another accidentally published comment deemed the consultation complete, it would be helpful to provide details on the updates to the cultural resources report. Has the Cultural Committee from the Quechan Tribe had the opportunity to review this report? Assembly Bill 52 requires public agencies to consult with tribes during the CEQA process. Recent public hearings have revealed significant opposition to geothermal development from Indigenous elders and leaders who are working with the Native American Land Conservancy to register the Southeast Lake Cahuilla Active Volcanic Cultural District, and there have been serious failures to provide timely consultation to Tribes for the proposed Lithium Valley projects thus far.

It is critical to acknowledge not just the potential encounter of archaeological artifacts and site-specific cultural resources during development, but also to provide relevant mitigation measures for obtrusion on a viewshed within a broader cultural landscape that includes nearby sacred sites, including mud pots, steam vents, and Obsidian Butte, Southern California’s only source of obsidian that has been used by California Indian peoples who have imbued it with meaning and power in rituals, traditions and stories. The determination that “there are no known tribal cultural resources within the Project site” fails to recognize these potentially significant impacts on the surrounding viewshed and cultural landscape. CEQA Guidelines indicate that even if a site is not listed, this does not mean it is not significant. It does not help that in the section of Table ES-1 on Aesthetics, thresholds a and b are combined, circumventing CEQA guidelines on scenic vistas. What if Rock Hill or Red Hill were used for the visual plan rather than highways? Visual consistency with existing power plants is not a strong standard.

Finally, in addition to a qualified archaeologist, a Tribal monitor should be included for monitoring of Tribal cultural resources. These experts, as well as the paleontologist, should be given more than 48 hours notice if other contractors like the hired biologist are employed during a longer stretch to be present and document compliance. Even if some Tribes have not responded with requests for consultation since the 2021 reporting, it may bear reminding that in 2016 the “Morongo Band of Mission Indians expressed concern for the project and requested monitoring by a Cahuilla representative during construction activities” (4.4.4). Also note that Appendix C, not Appendix E seems to contain the Native American Contact Program. It would be helpful for the public if the appendices were more clearly organized.

### **Utilities and Service Systems**

Potential water constraints are mentioned in section 4.13 in the Environmental Issue Area of Utilities and Service Systems. Given the dominant historical legal standing of California relative to Arizona, Nevada and Mexico for access to water from the Colorado River, this report assumes that the Imperial Irrigation District (IID) will remain in a relatively stable position for the time being. However, this is misleading because the Colorado River Basin States Representatives of Arizona, California, and Nevada (Lower Division States) reached an agreement in May 2023 to conserve at least an additional 3 million acre-feet (MAF) of Colorado River Water in the Lower Basin by the end of calendar year 2026, with at least 1.5 MAF of that total being conserved by the end of calendar year 2024 (Lower Basin Plan). In this context, the Applicant’s general willingness to “work with IID to ensure any reduction in water availability can be managed by the Project” (section 4.13.7; see also Table ES-1) is not an adequate plan for the possibility that the IID might not receive its annual 3.1 million acre feet per year (AFY) according to the Quantification Settlement Agreement (QSA). It bears reminding

that the QSA already supplies nearly 415,000 AFY to San Diego County Water Authority (SDCWA), Coachella Valley Water District (CVWD) and LA's Metropolitan Water District (MWD). Water availability is thus already limited due to the QSA, as well as decreasing flows of the Colorado River due to long-term drought conditions, not to mention water needed to replenish the Salton Sea. The worst-case scenario must be addressed with a clear long-term plan if Lake Mead's water level drops to a "dead pool" point that may be too low to deliver water through the canal system to California and Imperial Valley in the first place.

Moreover, it is well known that the vast majority of IID water is apportioned to agriculture, and the listed number of AFY of water already distributed for non-agricultural uses is outdated in this draft report. The Applicant mentions in section 4.13.5-6 that "as of January 2022, 23,020 AFY remain available for new projects, ensuring reasonably sufficient supplies for new nonagricultural water users." However, we now know as a result of the August CEC public hearing for BHE's new proposed geothermal projects that as of July 2023, out of 25,000 AFY IID reserves for non-agricultural uses, 5,380 AFY were committed. Meanwhile, BHE Renewables has now requested 13,165 AFY for its three new proposed geothermal plants (not even including plans for lithium extraction), leaving only 6,455 AFY. Nonetheless, here the Applicant estimates that construction will require 240 AFY and once the geothermal DLE sites are fully constructed and operating the project will require 6,500 AFY of freshwater (200 for HKP1 operations and 6,300 for HKL1 operations). This appears to exceed the 6,455 AFY available after BHE's apportioned amount of water that IID has already supported in public letters submitted to the CEC docket.

Even though the DLE technology may have proprietary restrictions, it would be helpful to have a more detailed water supply assessment for both geothermal power and lithium extraction processes involved in the project. It remains unclear how this particular geothermal plant (HPKP1) will require just 200 AFY—far less water than other proposed geothermal plants in the study area (e.g. 5,560 AFY proposed for BHE's Morton Bay, 6,480 AFY proposed for Elmore North and 1,125 AFY proposed for Black Rock). This estimate of 200 AFY listed toward the end of the report does not even match the approximately 400 AFY of fresh water listed for normal operation of HKP1 in an early section of the same report in section 2.9.2 Project Operations.

Now, if one of the key claims to the ostensible environmental superiority of this project is decreased water use for lithium extraction relative to conventional methods of brine evaporation or open-pit mining, then the considerable use of freshwater for lithium extraction (6,300 AFY for HKL1's projected life of 46 years) needs to be more clearly mitigated. Again, here this estimate of 6,300 AFY listed toward the end of the report does not match the approximately 6,100 AFY of water listed for HKL1 operations in the earlier relevant section of the same report in section 2.9.2. We do not have much basis for comparison, but the approved EIR for EnergySource's ATLiS operation at neighboring Hudson Ranch listed 3,400 AFY for that project's life of 30 years, just over half the amount of water per year estimated for HKL1 and for 20 fewer years.

For cumulative impacts, it would be highly pertinent to provide mitigation measures that reflect the most recent Colorado River agreements and planning for drought, which may become a significant constraint for nonagricultural water demand in IID water service areas that is estimated to increase from 26 AFY in 2020 to 80 AFY in 2055 for industrial uses, according to Table 4.13-3. Evidence of potential mitigation measures like reverse osmosis or the viability of reusing water from steam condensate mentioned in section 2.9.2 should be considered in relation to the sustainability of the entire operation of the project, including reinjection. If aspirations toward more sustainable and circular approaches are sincere and not illusory, then these potentially innovative mitigation measures need to be considered in more detail in the accounting of cumulative impacts on water resources.

### Curriculum Vitae

JAMES J. A. BLAIR, Ph.D.

Department of Geography and Anthropology  
California State Polytechnic University, Pomona  
3801 West Temple Avenue, Pomona, CA 91768  
909.869.5085  
[jblair@cpp.edu](mailto:jblair@cpp.edu)

#### EDUCATION

- Ph.D.       **The Graduate Center, City University of New York, Anthropology: 2016.**  
M.Phil.     **The Graduate Center, City University of New York, Anthropology: 2013 (Distinction).**  
B.A.       **Boston College, History, Philosophy and Latin American Studies (Honors): 2007.**

#### ACADEMIC AND PROFESSIONAL EXPERIENCE

- 2023-Present   **California State Polytechnic University, Pomona, Department of Geography and Anthropology, Associate Professor (Early Tenure and Promotion).**  
2018-2023     **California State Polytechnic University, Pomona, Department of Geography and Anthropology, Assistant Professor.**  
2017-2018     **Mellon/American Council of Learned Societies (ACLS), Public Fellows Program, appointed as International Advocate, Natural Resources Defense Council (NRDC).**  
2016-2017     **Brooklyn College, City University of New York, Department of Anthropology and Archaeology, Visiting Assistant Professor.**

#### SELECT PUBLICATIONS

- Blair, J. J. A. 2023. *Salvaging Empire: Sovereignty, Natural Resources and Environmental Science in the South Atlantic*. Ithaca and London: Cornell University Press.
- Blair, J. J. A., G. Gutierrez and R. Balcázar. 2023. "From Watershed Moment to Hydrosocial Movement: Patagonia without Dams and The Free-Flowing Rivers Network in Chile." *Human Organization*. Vol. 82 (3): 288-303.
- Blair, J. J. A., R. Balcázar, J. Barandiarán and A. Maxwell. 2023. "The Alterlives of Green Extractivism: Lithium Mining and Exhausted Ecologies in the Atacama Desert." *International Development Policy*. Vol. 16 (co-authored with Ramón Balcázar M., Javiera Barandiarán and Amanda Maxwell).
- Blair, J. J. A., R. Balcázar, J. Barandiarán and A. Maxwell. 2022. "Exhausted: How We Can Stop Lithium Mining From Depleting Water Resources, Draining Wetlands, and Harming Communities in South America." Report for the NRDC in collaboration with the Plurinational Observatory of Andean Salt Flats (OPSAL).
- Blair, J. J. A. and R. Balcázar. 2022. "Plurinational Climate Action: Environmental Governance Beyond Green Extractivism." *Cultural Anthropology: Hot Spots, Fieldsites*.
- Blair, J. J. A. and C. Isenhour. 2022. "Introduction: Negotiating the Crisis: Critical Perspectives on Climate Governance." *Cultural Anthropology: Hot Spots, Fieldsites*, June 23.
- Blair, J. J. A. 2022. "Data Gaps: Penguin Science and Petrostate Formation in the Falkland Islands (Malvinas)." In *The Nature of Data: Infrastructures, Environments, Politics*. Edited by J. Goldstein and E. Nost. Lincoln: University of Nebraska Press.
- Blair, J. J. A. 2022. "Tracking Penguins, Sensing Petroleum: 'Data Gaps' and the Politics of Marine Ecology in the South Atlantic." *Environment & Planning E: Nature and Space*. Vol. 5 (1): 60-80.

- Blair, J. J. A. 2022. "Natural Resource Defense Council (NRDC)." In *The Palgrave Handbook of Global Sustainability*, edited by Robert Brinkmann. Cham: Palgrave Macmillan.
- Blair, J. J. A. 2020. "Extractivismo del Litio y el Problema de la Escala: Acción Climática Global y Justicia Ambiental Local." *Salares Andinos: Ecología de Saberes por la Protección de Nuestros Salares y Humedales*. Edited by B. J. Henríquez, S. Uribe Sierra and R. M. Balcázar. Santiago: Fundación Tanti.
- Blair, J. J. A. 2019. "South Atlantic Universals: Science, Sovereignty and Self-Determination in the Falkland Islands (Malvinas)." *Tapuya: Latin American Science, Technology and Society*. Vol. 2 (1): 220-236.
- Blair, J. J. A. 2019. "Splintered Hinterlands: Public Anthropology, Environmental Advocacy and Indigenous Sovereignty." *Journal of Ethnobiology*. Vol. 39 (1): 32-49.
- Blair, J. J. A. 2017. "Settler Indigeneity and the Eradication of the Non-Native: Self-Determination and Biosecurity in the Falkland Islands (Malvinas)." *The Journal of the Royal Anthropological Institute (JRAI)*. Vol. 23 (3): 580-602.

#### SELECT CONFERENCE PUBLICATIONS

- "Between Clean and Green: Mining and Maladaptive Mitigation of Climate Change." Invited talk in Climate Vulnerabilities: Panel at U.S. National Academy of Sciences and Indonesian Academy of Sciences, Kavli Frontiers of Science Symposium in Balikpapan, Indonesia, August 10, 2023.
- "Hydrosocial Movements and Green Extractivism: Water Protection and Renewable Energy Development in Chile." Invited talk in Special Lecture Series on Latin America hosted online by Hankuk University of Foreign Studies, Korea, May 24, 2023.
- "Avoiding Methodological Nationalism Through Critically Engaged Research in a Disputed Overseas Territory." Invited talk at Researching the Overseas Territories Online Workshop, Newcastle, Exeter, and Royal Holloway, University of London, May 23, 2023.
- "The Limits and Possibilities of 'Extractive Recovery.'" Paper presented in "STS Engagements with Critical Mineral Studies" panel at Annual Meeting of the Society for Social Studies of Science (4S) in Cholula, Mexico, December 14, 2022.
- "Risks and Best Practices of Extracting Critical Minerals in the Transition to Cleaner Fuels." Invited talk at 11<sup>th</sup> Annual Environmental Health Leadership Summit, Comite Civico Del Valle, Imperial Valley College in Imperial, CA, October 27, 2022 (with Jared Naimark).
- "The Disputed Hydrosocial Dynamics of Lithium Mining in Chile and California." Invited talk at the University Forum, Utah Tech University in St. George, UT, September 20, 2022.
- "Agotado: Cómo evitar que la minería del litio agote el recurso hídrico, drene los humedales y perjudique a las comunidades en América del Sur." Invited virtual webinar presentation with the Plurinational Observatory of Andean Salt Flats (OPSAL), May 17, 2022.
- "Developing Lithium Valley: Hydrosocial Dynamics and the Importance of Community Engagement for a Just Transition." Paper presented at California State University (CSU) Water Resources and Policy Initiatives (WRPI) Conference in Northridge, CA, April 7, 2022 (with Alexa Buss).
- "Energy Justice for Whom? Ethical Plateaus of Lithium Extraction and Electrified Transportation." Paper presented at Annual Meeting of the Society for Social Studies of Science (4S), Toronto, Canada, October 7, 2021.
- "Beyond Extractive Renewables: Addressing Ethical Dilemmas in Decarbonization." Invited presentation at the United Nations Association of Pomona Valley, November 17, 2020.
- "Transición Energética, Electromovilidad y Extractivismo del Litio en Salares de Chile, Argentina y Bolivia." Invited presentation at parallel civil society climate summit to the UN COP25 Global Climate Change Conference in Cerrillos, Chile, December 5, 2019.

#### SELECT EXTERNAL FUNDING

|           |  |
|-----------|--|
| 2023-2024 | Imperial County, California, Community Engagement and Outreach Grant: Salton Sea Renewable Specific Plan and Programmatic Environmental Impact Report (\$363,000 allocated to Comit  Civico del Valle to establish the Lithium Valley Equity Technical Advisory Group).  |
| 2023-2026 | Environmental Protection Agency (EPA)-G2022-STAR-F2, Early Career: Drivers and Environmental Impacts of Energy Transitions in Underserved Communities Grant (\$649,456 total amount, \$115,000 allocated to Cal Poly Pomona as subrecipient with: PI Alida Cantor, Portland State University; Co-PI Dustin Mulvaney, San Jose State University; and Co-PI Kate Berry, University of Nevada, Reno). |
| 2022-2025 | National Science Foundation, BCS Human-Environment and Geographical Sciences (HEGS) Grant (\$399,876 total amount, \$84,000 allocated to Cal Poly Pomona as subrecipient with: PI Alida Cantor, Portland State University; Co-PI Dustin Mulvaney, San Jose State University; and Co-PI Kate Berry, University of Nevada, Reno).  |
| 2019-2020 | Natural Resources Defense Council (NRDC), consultancy contracts (\$65,999).  |
| 2017-2019 | Mellon/ACLS, Public Fellowship (\$140,000, appointed as International Campaign Advocate, Natural Resources Defense Council (NRDC)).  |
| 2014-2015 | National Science Foundation, SBE Doctoral Dissertation Research Improvement Grant (\$17,703, co-funded by the Cultural Anthropology and Science, Technology, and Society (STS) programs).  |
| 2014-2015 | Fulbright-III, All-Disciplines Postgraduate Award to United Kingdom (£12,000).   |
| 2013-2014 | Wenner-Gren Foundation, Dissertation Fieldwork Grant (\$20,000).   |
| 2012      | Social Science Research Council, Dissertation Proposal Development Fellowship (DPDF), Governing Global Production subfield (\$5,000).  |

#### PROFESSIONAL AFFILIATIONS

- Lead expert in Comit  Civico del Valle's Lithium Valley Equity Technical Advisory Group established to conduct community-engaged research with fenceline communities regarding Imperial County's Salton Sea Renewable Specific Plan and Programmatic Environmental Impact Report, 2023-2024.
- Book Reviews Co-Editor, *American Anthropologist*, 2020-2023.
- Engaged Scholars Initiative participant, Campus Compact, 2021-2022.

#### EXTERNAL AWARDS AND HONORS

|           |  |
|-----------|--|
| 2023      | U.S. National Academy of Sciences and Indonesian Academy of Sciences, Kavli Frontiers of Science Fellowship, sponsored by the David and Lucile Packard Foundation. |
| 2021-2022 | Campus Compact Engaged Scholar Award.  |

#### SKILLS

##### Languages

Spanish (fluent reading, speaking and writing; trained in media communication).  
Portuguese (reading ability).

##### Computer

Data visualization (ESRI Story Maps and ArcGIS, Google Maps beta, OpenStreetMap).  
Qualitative data analysis (NVivo, Atlas TI, Zotero, Evernote, Scrivener, Microsoft Office).

##### Advocacy

Indigenous Peoples partnership training, Indigenous Leadership Initiative/NRDC.

**EXHIBIT B**



Environmental Studies  
College of Social Sciences

San José State University  
One Washington Square  
San José, CA 95192-0225

The California State University:  
Chancellor's Office  
Bakerfield  
Channel Islands  
Chico  
Dominguez Hills  
East Bay  
Fresno  
Fullerton  
Humboldt  
Long Beach  
Los Angeles  
Maritime Academy  
Monterey Bay  
Northridge  
Pomona  
Sacramento  
San Bernardino  
San Diego  
San Francisco  
San José  
San Luis Obispo  
San Marcos  
Sonoma  
Stanislaus

October 23, 2023

To the County of Imperial, Planning and Development Service Office,

Please find attached my comments on the proposed geothermal-lithium development with a draft environmental impact report (DEIR) currently under review called Hell's Kitchen. I appreciate the opportunity to present this feedback to help strengthen community input to the environmental review process. I have been conducting research on environmental impacts from energy development for 15 years and a short version of my CV is attached to this memo. My comments are organized by theme grouped below, though some issues overlap.

### **Water**

The project description lists several commercial outputs from the project including "lithium hydroxide, silica and polymetallic products, and possibly boron compounds, for commercial sale." What would be the implications for processing to recover all of these materials on water use? Would boron recovery increase the potential need for processing water? Or do processing water estimates include the maximum minerals recovery? What are the implications for wastewater disposal?

Dust control for construction and during operations is critical to air quality and public health, especially with the receding lake and rising incidences of valley fever in the region.<sup>1</sup> There seems to be some inconsistency in estimates for how much and where water use for dust control. In one place the document states rather precise amounts of water used to mitigate dust (240 AFY and 50,000 gallons per day), but elsewhere they describe water as one of several types of materials sprayed on land to do the same task. Do these other dust control techniques augment or reduce the amount of water needed for dust control? What is the contingency plan if the water use is not enough to adequately control dust?

Finally, what are the cumulative impacts to water resources in the area? Will water use on project site lead to decreased water use in agricultural operations? Will water use on the project site lead to reduced deliveries to nearby fields resulting in the loss of flows to marshes and wetlands?

### **Biological Resources**

The Salton Sea region is part of the California Desert Conservation Area (CDCA) and given its ecological significance, any project here that converts land or changes water flows can raise impacts of concern. My primary comments on biological resources are that the biological resource impacts from the proposed project should require stronger mitigations for avian species, and there are some avian impacts that are not described.

<sup>1</sup> Johnston, J. E., Razafy, M., Lugo, H., Olmedo, L., & Farzan, S. F. (2019). The disappearing Salton Sea: A critical reflection on the emerging environmental threat of disappearing saline lakes and potential impacts on children's health. *Science of the Total Environment*, 663, 804-817.

Does the project include an avian protection plan? Will the project monitor avian mortality related to the operations of its facilities or associated roads?

There are suggested impacts to burrowing owls and habitat, yet the mitigations seem weak compared to Burrowing owl mitigations in other nearby projects in the CDCA. For example, there are potential impacts to avian species from sound during construction and operation. The assumption that nests will not be abandoned because the construction sounds are continuous and will be mitigated by emplacing hay bale buffers seems inconsistent with mitigations used elsewhere that require work stoppage when nearby nests or burrow are discovered.

The biological resource section should also describe the potential for the project to attract species that could negatively impact local species. There is no mention of the potential for power lines to attract ravens. Many nearby military facilities, national parks, and energy generation facilities in the California desert have raven adaptive management plans because they are predators of small vertebrates and bird eggs subsidized by human infrastructures.<sup>2</sup> How will garbage/dumpsters be managed?

Regarding the endangered Yuma Ridgway's rail and Burrowing owl, will the pre-construction surveys include nesting and burrow surveys? The applicant describes burrow surveys for burrowing owl and these and any nest surveys should be conducted and with sufficient intensity to find actively used burrows. There is also no mention of impacts or mitigations that might occur with the maintenance of road and berms to the project site, which could also be used by avian species of concern.

It is suggested in the mitigations that Yuma Ridgway's rail habitat loss will be offset by protecting other habitat. How near will that habitat be? How long will it be protected? This bird species is shown to do much better with Colorado River water than agricultural runoff which can contain selenium, and is injurious to the rail. Where will the location be and what type of water is delivered to those marshes?

Collisions with powerlines have been a known cause of injury to avian species for 150 years. Transmission line extensions should employ best practices to reduce collisions and it is not clear this impact is being mitigated at all. Electrocution of avian species is another consideration with extending new power lines.<sup>3</sup> Will "avian safe" electrical equipment be used on the project? Project designs should avoid any ecological traps that attract avian species to habitat where they can be injured.

The loss of Iodine Bush Scrub habitat is small, is it possible to avoid altogether? Where will the mitigation iodine bush scrub be located? Will that offset be in perpetuity? This species in this ecosystem needs period flooding to reproduce and

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<sup>2</sup> Programmatic Environmental Assessment for Integrated, Adaptive Management of the Common Raven on Department of Defense Lands in the California Desert.  
<https://www.29palms.marines.mil/Portals/56/Docs/Environmental%20Affairs/FinalPEAandSignedFONSIforManagementoftheCommonRavenOnDODLandsintheCalifornia%20Desert.pdf>

<sup>3</sup> Avian Power Line Interaction Committee, *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006*

be sustained so should mitigation parcels should be carefully evaluated for suitability and water availability. Loss of this habitat would conflict with "Goal 4 – Support development of renewable energy resources that will contribute to the restoration efforts of the Salton Sea." This habitat loss alongside avian issues seems inconsistent with "the Project is being designed to minimize impacts to Salton Sea restoration areas."

**Environmental Justice**

There are a few places where the applicant claims DEIR claims consistent with General Plan, but where it seems several elements are not adequately evaluated. In Table 4.5-1, "Objective 3.7 – Evaluate environmental justice issues associated with job creation and displacement when considering the approval of renewable energy Projects." They note that "No sensitive receptors are within two miles of the Project site. No impacts to disadvantaged communities would occur from implementation, and no Health Risk Assessment is required." The applicant does not mention where construction worker housing might be and whether this might displace local resident or drive up the costs of housing. The project should have a health risk assessment for cumulative impacts from dust.

**Energy/Greenhouse Gases**

Similar to a question raised in the section on water, what would be the additional energy requirements for recovery of boron versus without the recovery of boron (or other materials that might be recovered/foregone)? Is more energy required?

There are a few areas where the project is deemed "Inconsistent" with the county plans for the area. For example the proposed project will not include pedestrian and bicycle pathways on site that connect to the offsite roads, due to the distance from the nearest community centers located in Niland.

The project claims that it will minimize GHG impacts by utilizing electric powered construction equipment, but there is not a threshold set for defining when this practice will be followed. How nearby does equipment need to be to be commercially available? What premium is the applicant willing to pay to use electric vehicles or does it simply need to be similarly cost-effective. This lack of detail, triggering thresholds, or performance criteria makes this mitigation seem unenforceable.

The project claims there is no plans for bus service to area. Is this a topic that has been discussed with the local community plans for growth and amenities in the area? Supporting bus service to the plan could allow some workers to travel on public transportation and reducing GHGs.

All building structures should include rooftop solar, not just solar-ready roofs as described. All structures should be designed to exceed Title 24 Part 6 building energy efficiency standards, including self-generation.

The applicant claims to credit the project's generation of renewable energy in excess of what the project operations would require to offset its direct GHGs, but these are incommensurable. Onsite emissions includes combustion of liquid fuels whereas the renewable energy generation is for electricity. In their assessment of renewable energy generation they assume a capacity factor of 95% whereas the average capacity factor in the U.S. for geothermal is 78%.<sup>4</sup>

Truck traffic operational emissions are assumed to be electric but there is nothing binding in the plan that would result in electric trucks being used. It is not clear if the applicant will own and control these trucks or whether it is expected the buyers will use electric trucks? A more accurate estimate operational delivery trucks should use a blended emissions factor and assume some portion of the trucks will operate on diesel fuel in the short term, as nearly all trucks do today. It can be assumed that electric engine proportions will increase over time.

The plan notes that EV vehicle use will be encouraged by installation of EV chargers. But there is no number of chargers specified, nor whether they will be for light-duty or heavy-duty vehicles. It is noted there will be 84 truck trips per day. What portion of these trucks will have access to EV chargers installed onsite? There are currently only three EV chargers in all of Imperial County.

The project claims it is inconsistent with the county's plans for adding to the bike lane network because the nearest connection is 3.5 away. Has the idea that no bike lane is needed to this area been vetted with local planning officials and the community? This project is one of multiple projects coming together would add to vehicle miles travelled to the site and the early development of bike lanes could help encourage use, if it is something the community sees as important infrastructure to build. As the area gets built out, who will contribute to building biking and public transportation opportunities.

Does the estimate of GHGs include the potential use of equipment for installation of buffers to protect avian species from construction disturbances, should they occur? Does the total number of truck trips for dust control and water application, also include equipment use for soil amendment/stabilization?

The plan for landscaping on the project is unclear. In one part of the cross-check for consistency with county planning, it is deemed "Consistent. No landscaping is proposed as part of the Project; thus, no increase demand for water for landscaping." Then further below in the same table, Consistent. 10% of the developed Project site will be landscaped per County requirements." What is the plan for landscaping? How will landscaping consider local habitat.

#### **Air Quality**

Air quality is critical to this region so its critically important these impacts are adequately mitigated given the county's challenges meeting the air quality

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<sup>4</sup> Energy Information Administration. <https://www.eia.gov/todayinenergy/detail.php?id=42036>

mitigation plans. Unfortunately the mitigations for this project look rather meager at lessening the impacts on the region's already overburdened air quality.

The main concern with air quality during all of construction, operation, and cumulatively are with dust emissions. Increased traffic on rural unpaved roads could be magnified by future developments.

Similar to issues related to GHG emissions, there are no binding requirements or thresholds that would hold project developers to using electric construction equipment, the primary mitigation for PM10, PM2.5, and ozone.

Instead of Tier 3 construction equipment standards for air quality, which were introduced in 1994, the applicant should propose tier 4 standards, a more recently final rule in 2004, and which would reduce emissions of PM and NOx by 90% from nonroad engines.<sup>5</sup>

During operations it is not clear how emissions of benzene or ammonia will be mitigated. There is no assessment of particulate matter emissions from tire dust or break pads which could increase particulate matter and heavy metal emissions.<sup>6</sup>

#### **Hazards and Hazardous Materials/Geology Soils**

There are numerous carbon dioxide wells in the area. Are there any known abandoned oil and gas wells nearby? Is there any concern that the project could result in disturbance to the integrity of the (purportedly) capped wells? Who is responsible for any disturbance to well integrity?

It would be helpful to understand the impacts of this project on fire protection resources or will the project require improvements off site that enhance road safety for emergency personnel and first responders. Transmission and distribution powerlines are the leading cause of wildfires in California, and recent fires in the area show this region is fire prone much like the rest of the state. Would the project stretch existing fire resources too far?

Finally, does the project have an adequate plan for decommissioning, including capping geothermal and injection wells? There should be a clear plan for how legacy wells that need to be capped and site cleanup will be financed managed.

Thank you for the opportunity to provide feedback in review of this project.

Sincerely,  
Dustin Mulvaney,  
Professor, Environmental Studies Department,  
San José State University, San José, California

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<sup>5</sup> U.S. Environmental Protection Agency. <https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-emissions-heavy-equipment-compression>

<sup>6</sup> California Air Resources Board. <https://ww2.arb.ca.gov/resources/documents/brake-tire-wear-emissions>

*Curriculum Vitae*

Dustin Mulvaney, Professor,  
Environmental Studies Department, San José State University

**(a) Professional Preparation**

|                                      |                |  |           |
|--------------------------------------|----------------|--|-----------|
| New Jersey Institute of Technology   | Newark, NJ     | Chemical Engineering                             | BS, 1999  |
| New Jersey Institute of Technology   | Newark, NJ     | Environmental Policy Studies                     | MS, 2002  |
| University of California, Santa Cruz | Santa Cruz, CA | Environmental Studies                            | PhD, 2007 |
| University of California, Berkeley   | Berkeley, CA   | Environmental Science,<br>Policy, and Management | 2009–2011 |

**(b) Appointments**

2020–, **Professor**, Environmental Studies Department, San Jose State University,

2020–, **Fellow**, Payne Institute for Public Policy, Colorado School of Mines,

2015–2020, **Associate Professor**, Environmental Studies Department, San Jose State University,

2016–2017, **Visiting Scholar**, Bill Lane Center for the American West, Stanford University

2011–15, **Assistant Professor**, Environmental Studies Department, San Jose State University,

2009–11, **Science, Technology, & Society Postdoctoral Scholar**, Department of Environmental  
Science, Policy, and Management, University of California, Berkeley

2008–09, **Teaching Fellow in Sustainability Engineering and Ecological Design**, Electrical  
Engineering, UC Santa Cruz.

**(c) Selected Publications**

Mulvaney, D., Bazilian, M. (2023). Price Volatility, Human Rights, and Decarbonization Challenges in  
Global Solar Supply Chains. *Energy Research and Social Science*, 102, 103167.  
<https://doi.org/10.1016/j.erss.2023.103167>

Turley, B., Cantor, A., Berry, K., Knuth, S., Mulvaney, D., Vineyard, N. (2022). Emergent landscapes of  
renewable energy storage: Considering just transitions in the Western United States. *Energy Research  
and Social Science*, 90, 102583. <https://doi.org/10.1016/j.erss.2022.102583>

- Mulvaney, D., Richards, R., Bazilian, M.D., Hensley, E., Seetharaman, S. (2021). Progress Towards a Circular Economy in Materials to Decarbonize Electricity and Mobility. *Renewable and Sustainable Energy Reviews*. 137: 110604. <https://doi.org/10.1016/j.rser.2020.110604>
- Sovacool, B.K., S.H. Ali, M. Bazilian, B. Radley, B. Nemery, J. Okatz, D. Mulvaney. (2020). Sustainable Minerals and Metals for a Low Carbon Future. *Science*. 367(6473): 30–33. <https://science.sciencemag.org/content/367/6473/30>
- Pellow, M. A., Ambrose, H., Mulvaney, D., Betita, R., & Shaw, S. (2020). Research Gaps in Environmental Life Cycle Assessments of Lithium ion Batteries for Grid-Scale Energy Storage Systems. *Sustainable Materials and Technologies*, 7: e00120. <https://doi.org/10.1016/j.susmat.2019.e00120>
- Mulvaney, D. (2020). *Sustainable Energy Transitions: Socio-Ecological Dimensions of Sustainability*. Palgrave-MacMillan, London. <https://www.palgrave.com/us/book/9783030489113>
- Mulvaney, D. (2019). *Solar Power: Innovation, Sustainability, and Environmental Justice*. University of California Press: Oakland, CA. <https://www.ucpress.edu/book/9780520288171/solar-power>
- Rebecca R. Hernandez, Alona Armstrong, Jennifer Burney, Greer Ryan, Kara Moore, Ibrahimia Diedhiou, Steven M. Grodsky, Leslie Saul-Gershenz, Davis R., Jordan Macknick, Dustin Mulvaney, Garvin A. Heath, Shane B. Easter, Brenda Beatty, Michael F. Allen, and Daniel M. Kammen. (2019). Techno-ecological synergies of solar energy produce beneficial outcomes across industrial-ecological boundaries to mitigate global environmental change. *Nature Sustainability*. 2(7): 560–568. <https://doi.org/10.1038/s41893-019-0309-z>
- Wade, A., R. Sinha, K. Drozdiak, D. Mulvaney, J. Slomka. (2018). Ecodesign, Ecolabeling and Green Procurement Policies – enabling more Sustainable Photovoltaics? *Proceedings of the IEEE Photovoltaic Specialist Conference and World Conference on Photovoltaic Electricity Conversion*. June 16, 2018.
- Mulvaney, D. (2014). Are Green Jobs Just Jobs? Cadmium Narratives in the Life Cycle of Photovoltaics. *Geoforum*, 54, 178–186. <http://dx.doi.org/10.1016/j.geoforum.2014.01.014>
- Newell, P. & Mulvaney, D. (2013). The Political Economy of the Just Transition. *The Geographical Journal*, 178(3), 1-12. <http://onlinelibrary.wiley.com/doi/10.1111/geoj.12008/abstract>

**(d) Synergistic Activities**

- External Evaluator, NASA, Center for Applied Atmospheric Research and Education.
- Voting member of the Joint Committee to develop the Sustainability standard for photovoltaics, an initiative led by the National Standards Foundation and the Green Electronics Council.
- Technical Advisory Committee, Waste Reduction Commission of Santa Clara County, to the Recycling and Waste Reduction Commission of Santa Clara County.
- Technical Committee, Ultra Low Carbon Solar Standard for photovoltaic manufacturing.
- Perovskite PV Accelerator for Commercial Technologies, Advisory Board Member, Electric Power Research Institute.

**EXHIBIT C**



**College of Liberal Arts and Sciences**  
Department of Geography

Post Office Box 751                      503-725-3165 tel  
Portland, Oregon 97207-0751          acantor@pdx.edu

To: County of Imperial Planning & Development Services

From: Alida Cantor, Associate Professor of Geography

Date: October 23, 2023

Re: Comments on Draft Environmental Impact Report for the Hell's Kitchen Powerco 1 and Lithiumco 1 Project, Imperial County, California

Thank you for the opportunity to provide comments on the Draft Environmental Impact Report for the Hell's Kitchen PowerCo 1 (HKP1) and Hell's Kitchen LithiumCo 1 (HKL1) Project, Imperial County, California. Geothermal power and geothermal direct lithium extraction (DLE) may provide important renewable energy resources. However, it is crucial to examine any new proposed infrastructure carefully to ensure disproportionate or unacceptable impacts on local and/or disadvantaged communities. Because impacts may result in environmental injustices and/or impacts on Indigenous communities, it is important to critically examine any proposal, particularly one that utilizes a relatively new technology.

Below are my comments on the Draft Environmental Impact Report. I list comments in three areas: Water resources; cumulative impacts; and cultural and Tribal cultural resources.

**Water resources:**

The DEIR raises questions about water resources. Both HKP1 and HKL1 require water resources for their production processes, with additional water required for dust mitigation associated with construction and general operations.

In particular, future projected availability of Colorado River water presents a concern. The DEIR does not take into account recent developments around Colorado River Basin Drought Contingency Planning processes. Throughout Spring 2023, states using water from the Colorado River Basin have been negotiating; in May 2023, Arizona, California, and Nevada submitted a proposal to the federal government proposing to reduce Colorado River water use by 3 million acre feet. The plan is proposed to be implemented over the coming three years. This is an extremely meaningful development that could have significant impacts on IID's water allocations in the future.

The project proposes to utilize IID's "Interim Water Supply Policy (IWSP) for Non-Agricultural Projects." The plan notes the applicant will "work with IID to ensure reduction in water availability can be managed." However, this is vague and relies on a

third party's cooperation. If IID does not agree or is unable to provide the water needed, it would have implications for the project's functionality.

**Cumulative impacts:**

The project lightly addresses cumulative impacts throughout, noting that there are currently five other related projects nearby.

Related to the issue of water resources, there is potential for cumulative impacts of water availability which is not discussed adequately in the DEIR.

In section 4.13, "Utilities and services systems," the report notes that "As previously mentioned, the Project's water use represents 28.2% of the unallocated supply set aside in the IWSP for nonagricultural projects and approximately 28.2% of forecasted future nonagricultural water demands planned in the Imperial IRWMP through 2055." It is unclear how this project fits in with other planned projects, including the five other related projects nearby, as well as other geothermal and DLE projects within the IID's service area that are covered by the IRWMP.

If this project requires approximately 1/3 of the unallocated supply set aside, will there be sufficient water for the other planned projects? If other planned projects use more water, will there be enough water for this planned project? These are important questions that could have implications for the project's success.

This raises a concern that cumulative impacts need to be considered at multiple scales- that is, an assessment of cumulative impacts should consider not only the projects that are physically closest, but other projects that may draw upon the same resource bases, such as other projects relying upon the same nonagricultural water supply set aside by IID.

**Cultural resources and Tribal cultural resources:**

Consultation activities were somewhat unclear and inconsistent between section 4.4 and section 4.12.

Section 4.4 notes that "*The Morongo Band of Mission Indians expressed concern for the Project and requested monitoring by a Cahuilla representative during construction activities,*" but it is unclear whether there are actually plans in place for a Cahuilla representative to monitor construction activities, as requested.

If work activities and/or construction ceases due to discovery of cultural resources, it is unclear how long this pause will last until work resumes; how this could impact other aspects of the project; and what the archaeological data recovery program involves if a discovery contains significant and unavoidable impacts.

It appears that local Tribes were contacted in 2021, but it is unclear if all local Tribes have been consulted with regularly, up until the present date. There are several sentences in the document indicating that local Tribes have expressed concern with the project, and it is

not clear whether the Tribes consider the proposed mitigation measures to be adequate in addressing their concerns or not.

Thank you for the opportunity to provide comments.

Sincerely,



Alida Cantor, Ph.D  
Associate Professor  
Portland State University Department of Geography  
[acantor@pdx.edu](mailto:acantor@pdx.edu)

CURRICULUM VITAE

**Alida Cantor**

**Education**

|       |      |   |
|-------|------|---|
| Ph.D. | 2016 | Geography, Clark University, Worcester, MA  |
| M.S.  | 2008 | Community and Regional Development, University of California at Davis,<br>Davis, CA |
| B.A.  | 2005 | Geography, Simon's Rock College, Great Barrington, MA                               |

**Academic Employment**

Associate Professor, Department of Geography, Portland State University, 2023-present  
Assistant Professor, Department of Geography, Portland State University, 2017-2023  
Postdoctoral Research Fellow, Wheeler Water Institute, Center for Law, Energy & the  
Environment, UC Berkeley School of Law, 2017  
Teaching Assistant, Instructor, and Graduate Researcher, Graduate School of Geography, Clark  
University, 2011-2016

**Selected Publications**

- Cantor, Alida**, B. Turley,\* and K. Maxfield.\* Accepted, 2023. Energy storage and environmental justice: A critical examination of a proposed pumped hydropower facility in Goldendale, Washington. *Antipode*.
- Kay, Kelly, C. Knudson, and **A. Cantor**. 2023. "Plantation pasts, plantation futures: Resisting zombie water infrastructure in Maui, Hawai'i." *Journal of Peasant Studies*.
- Ross, Alexander,\* H. Chang, and **A. Cantor**. 2023. "Understanding Perspectives on Climate Hazards, Water Management, and Adaptive Transformation in an Exurban Community." *Sustainable and Resilient Infrastructures* 8(1): 48-67.
- Quimby, Barbara, C. Nichols, M. duBray, **A. Cantor**, J.C. Bauch, A. Wutich, C. Williams, S. Porter, W. Eaton, K. Brasier. 2023. "Changing Flows: Sociotechnical Tinkering for Adaptive Water Management." *Environmental Management* 71: 421-431.
- Song, Wonsuh, **A. Cantor** and H. Chang. 2022. "Virtual water and agricultural exports during recent drought in California." *International Journal of Geospatial and Environmental Research*. 9(1): Article 5.
- Cantor, Alida**, B. Turley,\* M. Glass,\* and C. Ross.\* 2022. "Changes to alfalfa production practices and perceptions during the 2011-2017 California drought." *The Professional Geographer* 74(4): 628-641.
- Turley, Bethani,\* **A. Cantor**, S. Knuth, D. Mulvaney, K. Berry, and N. Vineyard.\* 2022. "Emergent landscapes of renewable energy storage: Considering just transitions in the Western United States." *Energy Research and Social Science* 90: 102583.
- Cantor, Alida**, M. Kiparsky, R. Bales, S. Hubbard, R. Kennedy, L.C. Pecharroman, K. Guivetchi, G. Darling, and C. McCready. 2021. "Making a water data system responsive to information needs of decision makers." *Frontiers in Climate: Special issue on Democratizing Data: Environmental Data Access and its Future* 3:761444.
- Cantor, Alida**, L. Sherman, A. Milman, and M. Kiparsky. 2021. "Regulators and utility managers agree about barriers and opportunities for innovation in the municipal wastewater sector." *Environmental Research Communications* 3(3): 031001.

Alida Cantor CV

- Cantor, Alida.** 2021. "Hydrosocial hinterlands: An urban political ecology of Southern California's hydrosocial territory." *Environment and Planning E: Nature and Space* 4(2): 451-474.
- Cantor, Alida, K. Kay, and C. Knudson.** 2020. "Legal geography and political ecology of Hawai'i's public trust doctrine and water allocation in Maui." *Geoforum* 110: 168-179.
- Sherman, Lukas, A. Cantor, A. Milman, and M. Kiparsky.** 2020. "Examining the complex relationship between innovation and regulation through a survey of wastewater utility managers." *Journal of Environmental Management* 260: 110025.
- Owen, Dave, A. Cantor, N. Green Nylen, T. Harter, and M. Kiparsky.** 2019. "California groundwater management, science-policy interfaces, and the legacies of artificial legal distinctions." *Environmental Research Letters* 14(4): 045016.
- Cantor, Alida and S. Knuth.** 2019. "Speculations on the postnatural: Restoration, accumulation, and sacrifice at the Salton Sea." *Environment and Planning A: Economy and Space* 51(2): 527-544.
- Cantor, Alida and J. Emel.** 2018. "New Water Regimes: An Editorial." *Resources* 7(2).
- Cantor, Alida.** 2017. "Material, political, and biopolitical dimensions of "waste" in California water law." *Antipode* 49(5): 1204-1222.
- Stoddard, Elisabeth and A. Cantor.** 2017. "A relational network vulnerability assessment of the North Carolina hog industry." *Annals of the American Association of Geographers* 107(3): 682-699.
- Cantor, Alida.** 2016. "The public trust doctrine and critical legal geographies of water in California." *Geoforum* 72: 49-57.

#### **External grants and research funding (PI)**

- Environmental justice impacts across the life cycle of energy storage. PI: Alida Cantor. Co-PIs: Dustin Mulvaney, Kate Berry, James Blair. US Environmental Protection Agency. Early Career: Drivers of Environmental Impacts of Energy Transitions in Underserved Communities. 2023. (\$649,456).
- Building capacity for collaborative interdisciplinary research on water and society. PI: Alida Cantor. Co-PIs: Melissa Haeffner, Janet Cowal, Heejun Chang, Shelby Anderson. NSF Build and Broaden Program. 2022. (\$369,530).
- Hydrosocial dynamics and environmental justice in water-energy transitions. PI: Alida Cantor. Co-PIs: Dustin Mulvaney, Kate Berry, James Blair. NSF Human-Environment and Geographical Sciences Program. 2022. (\$399,876).
- California water law and policy research. PI: Alida Cantor. University of California Water Security and Sustainability Research Initiative. 2018-2019. (\$21,000)

#### **Awards and honors received**

- Outstanding Researcher Award, Sigma Xi Research Society, Columbia-Willamette. 2023.
- John Eliot Allen Outstanding Teaching Award, Portland State University. 2021.
- Excellence in Sustainability Research Award, Portland State University. 2019.

#### **Membership in Professional Organizations**

- American Association of Geographers  
Society for Applied Anthropology  
Society for Social Studies of Science

**EXHIBIT D**



CalPolyPomona

California State Polytechnic University, Pomona • 3801 West Temple Avenue, Pomona, CA 91768  
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Civil Engineering  
College of Engineering

To: Mr. David Black, Senior Planner, Imperial County

From: Dr. Ali Sharbat, Professor of Civil Engineering, Cal Poly Pomona

Date: October 20, 2023

Re: Comments on Draft Environmental Impact Report for Hell's Kitchen Project

Dear Mr. Black,

Thank you for the opportunity to review the Draft Environmental Impact Report (DEIR) for Hell's Kitchen Powerco 1 (HKP1) and Lithiumco 1 (HKL1) Project. I am pleased to have the chance to analyze the document in detail and offer my feedback from my academic perspective. I am a Professor of Civil Engineering at Cal Poly Pomona, specializing in water engineering. Below, I have provided my comments and questions reflecting my perspective on the DEIR:

1. **Section 1:** The DEIR presents HKP1 and HKL1 as a single interconnected package. While the primary purpose is to assess their cumulative effects, it would be beneficial for reviewers to provide clear details for HKP1 and HKL1 separately to enhance the clarity of the report.
2. **Section 2:** The report mentions a net power generation rating of 49.9 megawatts. The applicant needs to provide more specific details about power generation and consumption in various processes and stages. Additionally, the report needs to clarify the power consumption associated with the lithium extraction process in details.
3. **Section 2:** The report is presented in a manner that assumes both HKP1 and HKL1 will be operational simultaneously. It is, however, unclear whether and how HKL1 is going to operate if, for any reason, HKP1 is offline. The applicant needs to provide details on the contingency plans or operational strategies for HKL1 in case HKP1 experiences downtime. Clarity in this regard is essential for a comprehensive understanding of the project's operational resilience and environmental impacts.
4. **Section 2.6:** Has there been a hydrogeology study focused on the geological interconnection between deep well injection and geothermal resources specific to this proposal? This connection has not been discussed. Mismanagement of brine injection could potentially affect existing geothermal resources.
5. **Section 2.6:** What are the specific chemical characteristics of the brine that will be injected into the underground layers? Are there any trace chemicals associated with membrane, ion-exchange resin, or other processes?



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Civil Engineering  
College of Engineering

6. **Section 2.8:** Is the reference to a "3-inch/24-hour rain event" (i.e., the 100-year event) based on the county's stormwater manual? This information is not clear in the report.
7. **Section 4.2:** The report lacks information on water usage for air quality mitigation efforts. Additionally, the applicant needs to provide details on the water quality parameters associated with this particular water supply / usage.
8. **Section 4.6:** More details are needed on deep well injection, including injection pressure, well depth, and any potential seismic impacts.
9. **Section 4.9:** The report does not mention the disposal strategy for the RO concentrate (i.e. reject brine) stream. The applicant needs to provide information on how this waste stream will be managed.
10. **Section 4.8:** More information is needed on the composition and volume of the filter cake. The applicant needs to elaborate on transportation and disposal routes, and consider discussing any alternative disposal options.
11. **Section 4.8:** Have alternative locations been considered for the disposal facility for the filter cake?
12. **Section 4.8:** Regarding hazardous waste, is the spent resin considered hazardous waste or regular solid waste? What is the disposal plan for spent resin?
13. **Section 4.9:** For runoff water management, if a Stormwater Pollution Prevention Plan (SWPPP) is developed, what Best Management Practices (BMPs) are being considered? Conventional BMPs may not be effective due to the shallow groundwater table in the region. Is there any runoff water leaving the site? A detailed SWPPP, including alternative assessments, is needed.
14. **Section 4.13:** The DEIR states a total IID dependence of 6,500 acre-feet per year. However, recent developments and events related to the Colorado River's Quantification Settlement Agreement (QSA) allotment may affect IID's annual water supply. The report should address water supply sustainability, especially in light of changes in the Colorado River basin's hydrology and assess alternative scenarios. This is a major comment.
15. **Section 4.13:** The applicant should specify the chemicals used for regenerating resins in the HKL1 plant.

These clarifications would not only enhance the comprehensibility of the DEIR but also contribute to a more robust and informative assessment of the Hell's Kitchen Powerco 1 (HKP1) and Lithiumco 1 (HKL1) Project. Thank you for considering these comments. I am fully committed to assisting in any way possible to ensure that the report is as accurate and thorough as possible. Please feel free to reach out to me if there is any need for further clarification on my comments and questions. I am readily available to engage in further discussions and provide additional insights to support the refinement of the DEIR.



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**Civil Engineering  
College of Engineering**

The County's willingness to reflect these comments is greatly appreciated, and I look forward to collaborating to achieve a more comprehensive and transparent evaluation of this project.

Sincerely,



Ali Sharbat, PhD, PE  
Professor, Department of Civil Engineering  
Cal Poly Pomona  
Email: [sharbat@cpp.edu](mailto:sharbat@cpp.edu)  
Phone: 909-869-2175

**Ali Sharbat, Ph.D., P.E.**

Professor • Civil Engineering Department • California State Polytechnic University, Pomona  
3801 West Temple Ave, Pomona, CA 91768 • [sharbat@cpp.edu](mailto:sharbat@cpp.edu)

**Education:**

- **Post-Doctoral:** Institute for Energy and the Environment, New Mexico State University (NMSU), 2010-2012.
- **Ph.D. in Engineering: Environmental Engineering,** University of Nevada Las Vegas (UNLV), 2007-2010.
- **M.Sc. in Civil Engineering: Environmental Engineering,** Sharif University of Technology, Tehran-Iran, 2003-2005.
- **B.Sc. in Civil Engineering:** Science and Culture University, Tehran-Iran, 1999-2003.

**Patent at Cal Poly Pomona:**

- US 2021/ 63210948 A1: Baghaei Lakeh, R., **Sharbatmaleki, M.**, Engel, T., “A Heat Storage System using Storage Materials with Uncontrolled Thermo-physical Properties”.
- US 2014/0102980 A1: **Sharbatmaleki, M.**, Moe, N., “Process and Apparatus for Treating Perchlorate in Drinking Water Supplies”.
- US 2017/0050868 A1: **Sharbatmaleki, M.**, Michael Lepore, Tiffany Lai, Terrence Gaines, Kalvin Lam, Lucas Townsend, Ik-Hyoun Kim, Natalie La, Deanna Lestina, Christine Zheng, and Yaocihuatl Bourdon; “Photovoltaic Powered Electrodialysis Desalination System”.

**Book Chapters at Cal Poly Pomona:**

- Author, Chapter 9 of the book titled “Inland Desalination and Concentrate Management”, Publisher: American Water Works Association, 2018.
- Editor, Chapter 3 of the book titled “Electrodialysis and Electrodialysis Reversal”, Publisher: American Water Works Association. *In Press.*

**Funding History at Cal Poly Pomona:**

- PI: \$555K contract sponsored by the LA County Safe, Clean Water Program (SCWP): “Evaluation of Infiltration Testing Methods for Design of Stormwater Drywell Systems”, 2022-2026.
- PI: \$44K contract sponsored by the Eastern Municipal Water District: “Brine Concentration Demonstration Project Phase II”, 2020-2021.
- PI: \$45K contract sponsored by the Eastern Municipal Water District: “Purified Water Replenishment Brine Concentration Pilot Project”, 2019-2020.
- PI: \$10K grant sponsored by the Southern California Gas Company, Environmental Champion program: “Development of Carbon Sequestration Methods: Research, Education, and Outreach”, 2019-2020.
- PI: \$141K grant sponsored by the US Department of Interior, Bureau of Reclamation’s US Department of Interior (DSDI) research contract: “Evaluating Contaminates of Emerging Concern’s Fate in Potable Reuse Membrane Treatment”, 2020-2023.
- Co-PI: \$149K grant sponsored by the US Department of Interior, Bureau of Reclamation’s Desalination and Water Purification Research (DWPR) Program: “Repurposing Concentrate of Membrane Processes for Low-cost Thermal Energy Storage”, 2019-2020.
- PI: \$145K funded by King Lee Technologies for advancements phases in Development of Solar Decentralized Graywater Treatment Unit, 2018-2019.

- PI: \$182K (plus \$30K amendment) project (involving 5 other CPP faculty members) under CSU-WRPI for providing technical assistance (TA) to Sunbird Mobile Home Park disadvantaged community (DAC) for the California State Water Resources Control Board (SWRCB), 2017-2018.
- PI: \$60K grant sponsored by the US Department of Interior, Bureau of Reclamation's US Department of Interior research contract: "Contaminants of Emerging Concerns in Potable Reuse Concentrate – Phase II", 2017-2018.
- PI: \$10K grant sponsored by the Southern California Gas Company, Environmental Champion program: "Water Energy Nexus Development and Outreach", 2017.
- PI: \$70K grant sponsored by the US Department of Interior, Bureau of Reclamation's US Department of Interior (DSDI) research contract: "Contaminants of Emerging Concerns in Potable Reuse Concentrate". 2016-2017.
- Co-PI: \$100K grant sponsored by the Metropolitan Water District of Southern California titled "Solar Decentralized Graywater Treatment Unit", under 2016 Innovative Conservation Program (ICP), 2016-2018.
- PI: \$9,500 sponsored by the CPP SPICE funding program: "Improving the Quality of Computer Simulations in the Existing Environmental Engineering Courses at the CE department", 2016-2017.
- PI: \$10K grant sponsored by the Southern California Gas Company, Environmental Champion program: "CECs in Water Reuse", 2016.
- \$11K award sponsored by the Cal Poly Pomona's "Early Career Summer Support Program", 2016.
- Co-PI: \$25K research grant from the Strategic Interdisciplinary Research Grant Program (SIRG), Cal Poly Pomona: "Microalgae for a Synergistic Approach to Agricultural Nutrient Recovery", 2016.
- Co-PI: \$25K research proposal for the Strategic Interdisciplinary Research Grant Program (SIRG), Cal Poly Pomona: "Water for Communities in Need: Determining Processes, Priorities, and Successes": Spring 2016
- PI: \$10K grant sponsored by the Metropolitan Water District of Southern California under Southern California World Water Forum College Grant Program: "Solar-powered Desalination and Purification System of Inland Brackish Water Using Reverse Osmosis", 2016.
- PI: \$100K grant sponsored by the US Department of Interior, Bureau of Reclamation's Desalination and Water Purification Research (DWPR) Program: "Development of Photovoltaic Electrodialysis (PV-ED) Desalination System", 2014-2015.
- PI: \$10K grant sponsored by the US Department of Interior (DSDI) research contract: "Direct/Indirect Potable Reuse: Emerging Contaminants (ECE's) in Concentrate Stream of RO Facilities", 2014-2015.
- PI: \$6,164 proposal for release-time & student assistant grant for CPP SPICE grant opportunity titled: "Development of Campus-wide Workshops on Water Education Water Awareness", 2015.
- Co-PI: \$25K research proposal for the Strategic Interdisciplinary Research Grant Program (SIRG), Cal Poly Pomona: "A Solar-assisted Inland Water Desalination System Using Thermal Energy Storage": Spring 2015.
- Participated as one of the core team members at the CSU WRPI in preparation of applications for the Technical Assistance (TA) for Disadvantaged Communities (DAC) programs for the California State Water Resources Control Board (SWRCB) and California Department of Water Resources (DWR) to receive \$2.0M TA-DAC grant since spring 2015 till present.
- PI: \$8,061 proposal for release-time & student assistant grant for CPP SPICE grant opportunity titled: "Citation and Referencing Workshops for Cal Poly Pomona Academic Community: Mendeley Free Citation Tool": Summer 2014.

- PI: \$8,500 project (plus \$3,000 for a grad-student intern) for CSU Water Resources and Policy Initiatives (WRPI): “Drinking Water Technical Assistance and Training for Disadvantaged Communities in the California Central Valley”, 2014.
- PI: \$4,500 (plus \$2,826 for a student intern) from President’s Research, Scholarship, and Creative Activity (PRSCA), Cal Poly Pomona, proposal: “Renewable Energy for Desalination: Development of a Photovoltaic Reverse Osmosis (PV-RO) Desalination System”: Fall 2014.
- Team member on a collaborative multi-institutional project: “Engineers in Training: Expanding multi-institutional bonds to team up students for the creation of novel environmental projects” among Cal Poly Pomona and Pasadena Community College (PCC), 2012-2016.
- PI: \$20K Strategic Interdisciplinary Research Grant Program (SIRG), Cal Poly Pomona, proposal: “Perchlorate Removal from Ground Water by Electrodialysis”: Spring 2013.
- PI: \$4,000 President’s Research, Scholarship, and Creative Activity (PRSCA), Cal Poly Pomona, proposal: “Investigation of Possible Mechanism(s) of Ion-exchange Resin Biological Regeneration Used for Treatment of Oxyanion Pollutants from Drinking Water”, Fall 2012.
- PI: \$1,000 Kellogg FuTURE Mini-Grant, Cal Poly Pomona, proposal: “Removal of Nitrate from a Rural Water System Using Ion Exchange Media in Conjunction with Bioregeneration”: Spring 2013.

#### **Journal Publications at Cal Poly Pomona:**

- K.M. Sadeghi, S. Symons, S. Saneie, N. McIntosh, J. Jimenez, O. Murillo, S. Gonzales, M. **Sharbatmaleki**, and H.A. Loaiciga, "The New Headworks Odor Control BioTrickling Filter Project: Performance Data and Operations & Maintenance Challenges at Hyperion Water Reclamation Plant in City of Los Angeles, California," World Env & Water Resources Congress, 2023 (pp. 59-73).
- Sadeghi, K.M., Murillo, O., Symons, S., Saneie, S., Daycock, M., Kucherer, C., **Sharbatmaleki, M.** and Loaiciga, H., (2022) “Hyperion Water Reclamation Plant: Air Emission Control System at Hyperion BioEnergy Facility (HBEF) Using Catalytic Oxidation (CO) and Selective Catalytic Reduction in the City of LA, California”. In World Env and Water Resources 2022 (pp. 1196-1210).
- Medinilla, V. R., Sprague, T., Marseilles, J., Burke, J., Deshmukh, S., Delagah, S., & **Sharbatmaleki, M.** (2020). Impact of Ammonia-Based Aeration Control (ABAC) on Energy Consumption. Applied Sciences, 10(15), 5227.
- Huang, J., Xu, Q., Wang, X., Ji, H., Quigley, E. J., **Sharbatmaleki, M.**, ... & Li, C. (2021). Effects of hydrological and climatic variables on cyanobacterial blooms in four large shallow lakes fed by the Yangtze River. Environmental Science and Ecotechnology, 5, 100069.
- Li, S., Duran, K., Delagah, S., Mouawad, J., Jia, X., & **Sharbatmaleki, M.** (2020). Energy efficiency of staged reverse osmosis (RO) and closed-circuit reverse osmosis (CCRO) desalination: a model-based comparison. Water Supply, 20(8), 3096-3106.
- Li, Simeng, Celeste Y. Chan, **M. Sharbatmaleki**, Helen Trejo, and Saied Delagah. "Engineered Biochar Production and Its Potential Benefits in a Closed-Loop Water-Reuse Agriculture System." Water 12, no. 10 (2020): 2847.
- Shahrestani, H., Moghaddam, H., Delagah, S., **Sharbatmaleki, M.**: “Utilization of Local Water Supplies for the City of Los Angeles by Investment in Indirect Potable Water Reuse” Submitted to the Journal of Water Science and Technology.
- Farrokh Shad, M., Juby, G. J., Delagah, S., & **Sharbatmaleki, M.** (2019). Evaluating occurrence of contaminants of emerging concerns in MF/RO treatment of primary effluent for water reuse—Pilot study. Journal of Water Reuse and Desalination, 9(4), 350-371.
- Hanrahan, C., Karimi, L., Ghassemi, A., & **Sharbat, A.** (2016). High-recovery electrodialysis reversal for the desalination of inland brackish waters. Desalination and Water Treatment, 57(24), 11029-11039.

- Romeyn, T. R., Harijanto, W., Sandoval, S., Delagah, S., & **Sharbatmaleki, M.** (2016). Contaminants of emerging concern in reverse osmosis brine concentrate from indirect/direct water reuse applications. *Water Science and Technology*, 73(2), 236-250.
- **Sharbatmaleki, M.**, Unz, R. F., & Batista, J. R. (2015). Potential mechanisms for bioregeneration of perchlorate-containing ion-exchange resin. *Water research*, 75, 1-10.
- **Sharbatmaleki, M.**, “Dynamic Analysis Approach for Decision Making around Expansion of Wastewater Treatment Facilities”, Western Decision Sciences Institute (WDSI) 2013.
- **Sharbatmaleki, M.**, Batista, J. R., “Multi-cycle Bioregeneration of Spent Perchlorate-containing Macroporous Selective Anion-exchange Resin”, *Water Research*, Vol. 46 (1), pp 21-32, 2012.

#### **Conferences and Presentations at Cal Poly Pomona:**

- K.M. Sadeghi, S. Symons, S. Saneie, N. McIntosh, J. Jimenez, O. Murillo, S. Gonzales, M. Sharbatmaleki, and H.A. Loaiciga, "The New Headworks Odor Control BioTrickling Filter Project: Performance Data and Operations & Maintenance Challenges at Hyperion Reclamation Plant in City of LA, California," World Env & Water Resources Congress, Henderson, NV, May 21-24, 2023.
- Huang, J., Li, S., Delagah, S., Ahles, D., Mouawad, J., Sharbat, A., (2022)., High Recovery Water Reuse: An Innovative Method of Using Closed Circuit Reverse Osmosis (CCRO) – Pilot Study”., paper submitted for the American Water Works Association (AWWA) / American Membrane Technology Association (AMTA) Annual Conference, Las Vegas, NV, 2022.
- Gauri Mhamunkar, Joseph Kiriakos, Brian Camey, Saied Delagah, Aaron Mandell, Ali Sharbat, and Reza Baghaei Lakeh (2021), Techno-Economics of Using Concentrate of Membrane Processes as a Low-Cost Thermal Energy Storage Medium, ASME International Mechanical Engineering Congress
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- Baghaei Lakeh, R., Sharbat, A., (2017), “Decentralized, Renewable Off-grid, Water Treatment”, Annual Conference of CSU Water Resources and Policy Initiative (WRPI), San Jose, CA
- R. Baghaei Lakeh, S. Delagah, and M. Sharbatmaleki: “Reverse Osmosis Concentrate: A Waste or an Asset” at the ASME 2019 Int. Conference on Energy Sustainability, Bellevue, WA, July 2019.
- Alejandro Cerano-Lopez; Chad N. Contreras; Allison Y. Inanoria; Karla I. Duran; Mariya Borovska; Victoria R. Medinilla; Xudong Jia; Simeng Li.; and Ali Sharbat, "Purified Water Replenishment Brine Concentration Pilot Project" the 2019 Southern California Conferences for Undergraduate Research, November 23, 2019, San Marcos, CA.
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- Zabalza, C., Juby, G., Delagah, S., Farrokh Shad, M., Sharbatmaleki, M., "Suggested Monitoring for Direct Potable: Southern California Water Reclamation", WaterReuse California Annual Conference, Garden Grove CA, March, 17-19, 2019.
- Farrokh Shad, M., Juby, G., Delagah, S., Sharbatmaleki, M., "Tracking Contaminants of Emerging Concern through a Novel MF/RO Water Reclamation Process" Submitted to WEFTEC, the Water Environment Federation's Technical Conference, Chicago, IL, September 21-25, 2019.
- Farrokh Shad, M., Juby, G., Delagah, S., Noh, B., Sharbatmaleki, M., "Analysis and removal of CECs from a WWTP Primary Effluent by Novel MF/RO Treatment Process-Pilot Study" AWWA 2019 Membrane Technology Conference, New Orleans, LA, Feb. 25-28, 2019.
- Lakeh, Reza Baghaei, Daniel Andrade, Kyle Miller, Mohammad Masoud Modabernia, Thuan John Nguyen, Justine Nguyen, Elbon Flanagan et al. "Design and Testing of a Solar-Driven Wastewater Treatment Unit for Off-Grid Applications." In ASME 2018 International Mechanical Engineering Congress and Exposition, American Society of Mechanical Engineers, 2018.
- Graham Juby, Mojtaba Shad, Ilene Ramirez, and M. Sharbatmaleki: "Alternative Approach to Produce High Quality Water for Groundwater Replenishment" at the Inland Empire Utilities Agency, Chino, CA, April 2018.
- Lakeh, Reza Baghaei, Daniel Andrade, Kyle J. Miller, Bowen Du, Joshua Pham, Mohammad M. Modabernia, Pui Y. Ng et al. "A Case Study of Decentralized Off-Grid Water Treatment Using Reverse Osmosis." In ASME 2017 International Mechanical Engineering Congress and Exposition, American Society of Mechanical Engineers, 2017.
- Graham Juby, Mojtaba Shad, Saied Delagah, M. Sharbatmaleki: "Evaluating Management and Disposal of CECs in Water Reuse Projects" at the American Water Works Association (AWWA) / American Membrane Technology Association (AMTA) Conference, Long Beach, CA, Feb, 2017.
- Reza Baghaei Lakeh, and M. Sharbatmaleki: "Decentralized Renewable Off-grid Water Treatment" at the 2017 Annual Conference of California State University Water Resources and Policy Initiative (WRPI), San Jose, CA, April 2017.
- Reza Baghaei Lakeh, Daniel Andrade, Kyle Miller, Bowen Du, Joshua Pham, Mohammad Modabernia, Pui Ng, Thuan Nguyen, Kevin R. Anderson, M. Sharbatmaleki: "Solar-powered Desalination and Purification System of Inland Brackish Water Using Reverse Osmosis" at the Metropolitan Water District of Southern California for the Southern California World Water Forum College Grant Program (WWF). Los Angeles, CA, May 2017.
- M. Sharbatmaleki: "Development of a Zero-Carbon Footprint Brackish Water Desalination System" to American Water Works Association (AWWA) / American Membrane Technology Association (AMTA) Annual International Conference, San Antonio, TX, Feb 2016.
- Kevin R. Anderson, Maryam Shafahi, Pedro Perez, Benjamin Kampen, Chris McNamara, Suzanne Shihadeh, Ali Sharbat, Monica Palomo, Reza Baghaei Lakeh, Yasser Salem, Souha Jouhar, Saman Bahrani, Kaian Wang, Joseph Juarez: "Case Study of a Solar Tower/ Compost Waste-to-Energy Test Apparatus" at the 31st International Conference on Solid Waste Technology and Management, Philadelphia, PA, April 3-6, 2016. Awarded the "Russell Ackoff Award" for best paper.
- Team presentation "Algal Productivity in Brine Water for Biofuel Production: A Multi-disciplinary Approach to Investigating the Effects of TDS, Nitrate, and Anti-Scalant on Algal Growth" at the 2015 National Conference on Undergraduate Research (NCUR) conference in Cheney, WA. (April 16-18, 2015).
- Team presentation "Algal Productivity in Brine Water for Biofuel Production: A Multi-disciplinary Approach to Investigating the Effects of TDS, Nitrate, and Anti-Scalant on Algal Growth" at the 2015 National Conference on Undergraduate Research (NCUR) conference in Cheney, WA. (April 16-18, 2015).

- Team presentation “Drought Solutions through Green Treatment Technology: A Photovoltaic Electro-Dialysis Unit” at the 2015 WaterReuse California Annual Conference (March 16, 2015).
- Team presentation “Treatment Methods and Regulations for Contaminants of Emerging Concern in RO Brine Concentrate” at the 2015 WaterReuse California Annual Conference (March 16, 2015).
- Team presentation “Inland Desalination and Brine Management: Salt Recovery and Beneficial Uses of Brine” at the 2015 ASCE EWRI Congress, Austin, TX (May 16-19, 2015)
- Team presentation “Inland Desalination and Brine Management: Salt Recovery and Beneficial Uses of Brine” at the NSF 2015 Emerging Researchers National (ERN) Conference in STEM in Washington, DC (Feb. 19-21, 2015).
- Team presentation “Water Reuse, Contaminants of Emerging Concern, Current Practices, and Future Trends” at the 2015 American Water Resources Association (AWRA) conference (March 30, 2015)
- Conference Proceeding and Presentation titled “Contaminants of Emerging Concern In Reverse Osmosis Brine Concentrate From Indirect/Direct Water Reuse Applications”, 2015 AWWA/AMTA Annual Conference, Orlando, FL, March 2-6, 2015.
- Team presentation “Algal Productivity in Brine Water for Biofuel Production: A Multi-disciplinary Approach to Investigating the Effects of TDS, Nitrate, and Anti-Scalant on Algal Growth”, 2015 National Conference on Undergrad Research (NCUR) conference, Cheney, WA, April 16-18, 2015.
- Sharbatmaleki, M., Poster presentation titled “Assessing Local Implementation of Hexavalent Chromium Treatment Technologies” at the CSU COAST-WRPI Research Poster Reception, Long Beach, CA (March 8, 2016).
- Team presentation titled “Heavy Metal Pollution In The Santa Ana River Watershed Due To Passenger Vehicles” at the 2016 Creative Activities and Research Symposium, Cal Poly Pomona (August 17, 2016)
- Team presentation titled “The Design of a Photovoltaic Electrodialysis (PV-ED) Unit: Zero Carbon Footprint Desalination” at the 4th Annual RSCA Conference at Cal Poly Pomona (March 4, 2016).
- Team presentation titled “Geo-synthetics and Design of Pavements” at the 2016 Creative Activities and Research Symposium, Cal Poly Pomona (August 17, 2016)
- Team presentation titled “Drought: Direct and Indirect Water Reuse Case Studies” at the 2015 Southern California Conferences for Undergraduate Research (SCCUR) at Harvey Mudd College, Claremont, CA (November 21, 2015)
- Sharbatmaleki, M., “Dynamic Analysis Approach for Decision Making around Expansion of Wastewater Treatment Facilities”, Western Decision Sciences Institute (WDSI) 2013 Annual Conference, Long Beach, CA, March 2013.
- Lara, M., Perreyra, Y., Rodriguez, T., Grano, P., Sharbatmaleki, M., “Comparison of Concentrate Disposal/Management Methods”, LA Metropolitan Water District Exposition, May 1, 2014.
- Calderon, B., Espinoza, D., Kashifi, A., Williams, S., Yang H., Palomo, M., Sharbatmaleki, M., “The Removal of Nitrate and Perchlorate from RO Concentrate Stream”, 2014 Cal Poly Pomona Student Research Conference, Pomona, CA, March 2014.
- Calderon, B., Espinoza, D., Kashifi, A., Williams, S., Yang H., Palomo, M., Sharbatmaleki, M., “The Removal of Nitrate and Perchlorate from RO Concentrate Stream”, The 28th Annual CSU Student Research Competition, East Bay, CA, May 2014.
- Choe, A., Sharbatmaleki, M., “Inland Brine Disposal for Brackish and Saline Water Desalination Plants Producing Drinking Water”, Southern California Conferences for Undergraduate Research, Whittier, CA, Nov. 23, 2013.
- Palomo, M., DiFiori, R., Sharbatmaleki, M., “Expanding Multi-institutional Bonds to Team up Students for the Creation of Research Environmental Projects”, ASEE Zone IV Conference, Long Beach, CA, April 25, 2014.

- Sharbatmaleki, M., “Mass Transfer Studies of Ion-exchange Resin Bio-Regeneration Used for Treatment of Perchlorate from Drinking Water”, AWWA Water Quality Conference, Long Beach, CA, November 2013.
- Sharbatmaleki, M., “Mass Transfer Studies of Ion-exchange Resin Bio-Regeneration Used for Treatment of Perchlorate from Drinking Water” to AWWA Water Quality Conference. November 2013, Long Beach, CA.

**Honors and Awards:**

- **Excellence in Teaching Award:** Chi Epsilon 2019 James Robbins Award
- 2020-2021 **Outstanding Advisor Award** for the College of Engineering, Cal Poly Pomona
- **Tau Beta Pi, Chi Epsilon, and Phi Kappa Phi** Honor Society member.
- Co-adviser for a student team winning the **1<sup>st</sup> place** award for the Best Senior Project of the year: College of Engineering, Cal Poly Pomona, May 2019.
- Co-adviser for a student team winning the **2<sup>nd</sup> place** Eco Innovator Award of Excellence: 2017 Green Expo of the Metropolitan Water District of Southern California.
- Adviser for a student team winning the **2<sup>nd</sup> place** Eco Innovator Award of Excellence: 2016 Green Expo of the Metropolitan Water District of Southern California.
- **Best Paper** Award at the 2015 Water Reuse California Annual Conference (March 16, 2015).
- Adviser of the **2<sup>nd</sup> place** team: 2015 ASCE EWRI Congress – Senior Design Competition in Austin, TX (May 16-19, 2015).
- **Best Paper** Award at the 31<sup>st</sup> International Conference on Solid Waste Technology and Management, Philadelphia, PA (April 3-6, 2016).
- **Merit Scholarship**, Sharif University of Technology, Master’s Degree, 2003-2005.
- Ranked 89<sup>th</sup> among 9324 participants in the Nationwide Civil Engineering M.Sc. Entrance Exam, (**top 1%**), Iran, spring 2003.

**Professional Affiliations:**

- Professional Engineering (**PE**) # 022428, Nevada, 2013 to present.
- American Society of Civil Engineers (**ASCE**), 2006 to present.
- American Water Works Association (**AWWA**), 2007 to present. (active member)
- Water and Environment Federation (**WEF**), 2007 to 2010.
- International Desalination Association (**IDA**), 2012 to 2014.
- American Chemical Society (**ACS**), 2008 to 2010.

**Graduate Students at Cal Poly Pomona:**

- **Undergraduate students:** 200+ students, and most of them found their career in the water industry.
- **Graduate students:** Ignacio Ramirez, Darian Doyle, Travis Romeyn, Hoda Shahrestani, Ilene Ramirez, Mojtaba Farrokh Shad, Benson Lim, Christina Zabalza, Han Yang, Erik Cheung, Sahar Ahmed, Andres Convarrubias, Rommel Garcia, Nisarg Joshi (incomplete), Robert Kochan, Tiffany Tran, Han Yang, Victoria Medinilla, Ilene Ramirez, Jian Haung, Micheal Kim, Levon Tawilian.

**EXHIBIT E**

October 23, 2023

Sent via email

David Black, Senior Planner

[davidblack@co.imperial.ca.us](mailto:davidblack@co.imperial.ca.us)

Imperial County Planning and Development Services

801 Main Street El Centro, CA 92243

Dear Mr. Black,

Please find the attached comments from Earthworks on the Draft Environmental Impact Report (DEIR) for the Hell's Kitchen PowerCo1 and LithiumCo1 Project. Earthworks is an environmental nonprofit organization that protects communities and the environment from the adverse impacts of mineral and energy development while promoting sustainable solutions. We're driven by our commitment to collaborate with communities on the frontline, using science in innovative ways, and building people power to ensure a more just and livable future. For the past two years we have worked with communities in Imperial County to better understand the impacts of proposed lithium extraction projects. We have reviewed the DEIR and are concerned that it has failed to disclose and analyze several significant environmental impacts as required by the California Environmental Quality Act (CEQA). We ask that the DEIR be revised to address our comments below.

Please include this letter and references in your file for the project. Please also include me on your notice list for all future updates, notices, and documents related to the project.

Thank you for your consideration,



Jared Naimark

California Mining Organizer

Earthworks

1958 University Ave.

Berkeley, CA 94704

[jnaimark@earthworksaction.org](mailto:jnaimark@earthworksaction.org)

**Aesthetics**

brine is known to contain hazardous elements that may become airborne when wind blows across the pond. These impacts should be analyzed in the EIR and mitigation measures required.

The main contributor to poor air quality in the region is the receding Salton Sea and exposed playa.<sup>2</sup> By consuming additional freshwater that may otherwise flow into the Salton Sea, the project is contributing to worsening air quality. The DEIR does not include any analysis of indirect impacts to air quality from exacerbating Salton Sea degradation. The DEIR should be revised to analyze this as a connected action. Furthermore, the DEIR should be revised to include an analysis of how the project's impacts on water supply (and cumulative impacts of the lithium industry overall) may limit Salton Sea restoration options, such as voluntary fallowing to transfer agricultural water into the sea.

#### **Hazards and hazardous materials**

The DEIR fails to analyze the impact of brine spills from drilling, pipeline, processing, reinjection or descaling. Brine is known to contain hazardous materials such as lead and arsenic, and has been spilled by similar operations in the area.<sup>3 4 5 6</sup> The DEIR should be revised to analyze the impact of brine spills and include specific mitigation measures.

#### **Utilities and service systems**

The DEIR finds that when drought conditions occur, water supply will be unaffected because of IID high priority Colorado River water rights (4.13-16). However, there is no discussion of negotiated cuts to IID's Colorado River use agreed to in 2023, nor is there discussion of the

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<sup>2</sup> Frie, A. L., Dingle, J. H., Ying, S. C., & Bahreini, R. (2017). The Effect of a Receding Saline Lake (The Salton Sea) on Airborne Particulate Matter Composition. *Environmental Science & Technology*, 51(15), 8283–8292.  
<https://doi.org/10.1021/acs.est.7b01773>

<sup>3</sup> Department of Toxic Substances Control. (n.d.). *CALENERGY - CALENERGY - VULCAN/DEL RANCH(HOCH)FACILITIES*. EnviroStor. Retrieved May 17, 2023, from [https://www.envirostor.dtsc.ca.gov/public/profile\\_report?global\\_id=71003831](https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=71003831)

<sup>4</sup> Department of Toxic Substances Control. (n.d.). *CALENERGY - ELMORE FACILITY*. EnviroStor. Retrieved May 17, 2023, from [https://www.envirostor.dtsc.ca.gov/public/profile\\_report?global\\_id=71003832](https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=71003832)

<sup>5</sup> Department of Toxic Substances Control. (n.d.). *CALENERGY - LEATHERS FACILITY*. EnviroStor. Retrieved May 17, 2023, from [https://www.envirostor.dtsc.ca.gov/public/profile\\_report?global\\_id=71003833](https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=71003833)

<sup>6</sup> Department of Toxic Substances Control. (n.d.). *CALENERGY - UNITS1&2/UNITS 3&4/5 FACILITIES*. EnviroStor. Retrieved May 17, 2023, from [https://www.envirostor.dtsc.ca.gov/public/profile\\_report?global\\_id=71003830](https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=71003830)

likelihood of future cuts. The DEIR should be revised to include an analysis of water supply within the context of extreme drought and likely cuts throughout the Colorado River basin.

Furthermore, the mitigation measure listed simply states that the project will work with IID should reductions come into effect, but does not include any details. The DEIR should be revised to include detailed mitigation steps, including whether or not water be cut to the project or if reductions would come from elsewhere, and analysis of the impacts of cutting water supply during the project's operation.

As the lithium industry in Imperial Valley expands, it may be limited by water supply. IID has reserved up to 25,000 acre-feet of water per year for non-agricultural use. However, the DEIR does not include an analysis of cumulative impacts to this water supply. The DEIR should be revised to include a cumulative analysis of how this project, along with other past, present, and reasonably foreseeable lithium projects, including geothermal, battery plants, and associated infrastructure with lithium valley, would impact the region's non-agricultural water supply. This should include discussion of whether water may have to be diverted from agriculture or Salton Sea restoration to supply the growing lithium industry.

Finally, the DEIR finds that the descaling process, estimated to be required every three years, has the potential to exceed hazardous waste standards for both California and Nevada. In this case it would have to be trucked to Nevada. The DEIR states this is an extremely rare occurrence, occurring only twice in the past 10 years (4.13-2). However, this is a new project. It is not clear what record of waste disposal is being cited here. This section should be revised to include a clear analysis of the hazardous waste expected to be produced by Hell's Kitchen descaling operations and appropriate mitigation measures.

[← BACK TO STAFF](#)

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## Jared Naimark

California Mining Organizer

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Jared joined Earthworks in 2022. He works to support frontline communities at risk from existing and proposed mining throughout California. Before joining Earthworks, Jared worked for two years as a program associate at the 11th Hour Project, where he helped develop new grantmaking initiatives to support Indigenous self-determination, protect the right to protest, and address the impacts of mining in the context of the renewable energy transition.

Jared has a background in political ecology and is passionate about movements for environmental and social justice. He previously worked in solidarity with the Karen Indigenous rights movement in Myanmar, conducting research and advocacy for campaigns to defend territory from mining, mega-dams, oil palm, and other extractive projects.

He holds a BS in Earth Systems from Stanford University, and a Master of Environmental Science from the Yale School of the Environment. Outside of work, Jared loves to hike, bike, and listen to old jazz records.

### Contact Jared (he/him)

Email: [jnaimark\[at\]earthworks\[dot\]org](mailto:jnaimark@earthworks.org)

Phone: 202-887-1872 X 156

Twitter: [@JaredNaimark](https://twitter.com/JaredNaimark)

Location: Palo Alto, California on unceded Ohlone lands

**EXHIBIT F**

October 19, 2023

David Black, Senior Planner  
Imperial County Planning & Development Services Department  
801 Main Street  
El Centro, CA 92243

Dear Mr. Black and staff:

I am a Professor of Geography at the University of Nevada, Reno and have been working on water and natural resource issues for over 30 years. My CV is attached.

As part of the Lithium Valley Environmental and Technical Advisory Committee developed by Comite Civico del Valle, I have been asked to review the Draft Environmental Impact Report (DEIR) for the Hell's Kitchen Power Co1 and Lithium Co1 Project (Hell's Kitchen project) proposed by Controlled Thermal Resources Inc. (CTR). Below you will find comments on the DEIR for the Hell's Kitchen project organized around construction phase, operations, and cumulative impacts.

Construction Phase

- In CUL-3 it is mentioned that a tribal monitor shall be provided an opportunity to attend briefings and be present onsite, if requested. It is unclear whose tribal monitor this is and what they can actually do while onsite. Moreover, this minimal effort does not satisfy the need for free, prior, and informed consent with Tribes.
- In Cultural Resources, Threshold c, how can finding human remains be considered "less than significant" both before and after mitigation, given NAGPRA and other cultural resource protection statutes and regulations?
- In Hazards and Hazardous Materials, Threshold b – MM HAZ-2, will the soil sampling be targeting surface or subsurface samples? Need to describe the goal of soil sampling, the process to be used in sampling and analysis, what the thresholds are, and what will be done if thresholds are exceeded.

Operations

- In BIO-13 it is mentioned that to offset the loss of the Yuma Ridgway Rail's habitat, it is necessary to procure water from IID. Who will procure this water? How is this specifically accounted for in the overall water demands and water planning for the Hell's Kitchen project?
- In BIO-19 there is a discussion of mitigation wetland loss by creating ~152 acres of native wetland/open water habitat. Who will procure this water? How is this specifically accounted for in the overall water demands and water planning for the Hell's Kitchen project?

- In Utilities and Service Systems, threshold b, the likelihood of drought is not adequately addressed. The mitigation listed under UTIL-1 is not actually mitigation.

Cumulative Impacts

- While the Hell's Kitchen project is highly dependent on receiving water from Imperial Irrigation District (IID), this DEIR has not adequately addressed the evolving situation with allocations of Colorado River water. The U.S. Department of Interior has new guidelines for managing the Colorado River starting in 2027 that establish new operating rules for water allocations in the Lower River. Moreover, a consensus-based proposal from the Lower Basin states that included California agreed to a 3 million acre-foot reduction, which also impacts IID's allocation of Colorado River water. Better water planning for the Hell's Kitchen project needs to be done to take into account the long-term and cumulative impacts of declining allocations for IID. In addition, the Hell's Kitchen project needs to be evaluated in terms of the cumulative impacts of broader development proposals within Imperial County.

Sincerely,



Kate A. Berry, Ph.D.

### Biographical Sketch

Kate A. Berry, Professor  
Department of Geography  
University of Nevada, Reno

#### (a) Professional Preparation

|                                 |   |           |
|---------------------------------|---|-----------|
| Northern Arizona University     | Flagstaff, AZ – For. & Natural Resources Mgt. | BS, 1980  |
| Colorado State University       | Ft Collins, CO - Watershed Science & Mgt.     | MS, 1985  |
| University of Colorado, Boulder | Boulder, CO – Geography                       | PhD, 1993 |

#### (b) Appointments

2012-present **Professor**, Department of Geography, University of Nevada, Reno  
2011-2013 **Director**, University Core Curriculum, University of Nevada, Reno  
2011-2012 **Acting Director**, Nevada State Climate Office  
2008-2011 **Chair**, Department of Geography, University of Nevada, Reno  
1999-2011 **Associate Professor**, Department of Geography, University of Nevada, Reno  
1993-1999 **Assistant Professor**, Department of Geography, University of Nevada, Reno  
1991-1993 **Adj. Fac. & Prog. Advisor**, Env. Policy & Mgt. Division, University of Denver  
1985-1991 **Environmental Consultant**, ERO Resources, Denver, CO  
1980-1982 **Forester**, Columbia Gorge Ranger District, Mt Hood National Forest, Troutdale, OR

#### (c) Selected Publications

Borgias SL\*, **Berry KA**. (accepted & being revised) Beyond injustice: Diverse visions and coalitions for water justice in rural-urban water conflicts. *Water Alternatives*.

Vineyard, N\*, **Berry KA**, Ormerod KJ. (2023) Legal geographies of water. *WIRES Water* e1652. <https://doi.org/10.1002/wat2.1652>.

**Berry KA**, Cohn TC. (2023) Space, time, and hydrosocial imaginaries: Water quality governance of the Pyramid Lake Paiute Tribe. *Professional Geographer*. <https://doi.org/10.1080/00330124.2022.2075403>.

Turley B, Cantor A, **Berry KA**, Knuth S, Mulvaney D, Vineyard N. (2022) Emergent landscapes of energy storage: Considering just transitions in the Western United States. *Energy Research & Social Science* 90: 102583. <https://doi.org/10.1016/j.erss.2022.102583>.

Cohn TC, Higheagle S, Whyte KP, **Berry KA**, Green K, Carter M. (2022). “We had to jump over, but we’re still here”: *Nimiipiu* spatio-temporalities of water and fish in times of climate change, *Indigenous Water and Drought Management in a Changing World*, ed. Sioui M. Elsevier Publishers, pp 91-108.

Hillis V, **Berry KA**, Swette B, Aslan C, Barry S, Porensky L. (2020) Unlikely alliances and the future of social-ecological systems in the American West. *Environmental Research Letters* 15: 045002. <https://doi.org/10.1088/1748-9326/ab6fbc>.

Cohn TC, **Berry KA**, Whyte KP, Norman E. (2019) Spatio-temporality and tribal water quality governance in the United States. *Water* 11(1): 99. doi:10.3390/w11010099. Also published in: Wilson NJ, Harris LM, Nelson J, Shah SH. (2019) *Water Governance: Rethinking Politics* Basel, Switzerland: MDPI, p. 236-249. ISBN 978-3-03921-560-7. doi.org/10.3390/books978-3-03921-561-4.

**Berry KA**, Jackson S, Saito L, Forline L. (2018). Reconceptualising water quality governance to incorporate knowledge and values: Case studies from Australian and Brazilian Indigenous communities. *Water Alternatives* 11(1): 40-60. <https://www.wateralternatives.org/index.php/alldoc/articles/vol11/v11issue1/408-a11-1-3/file>.

**Berry KA**, Matsui K, Jackson S, Cavazos Cohn T. (2017) Indigenous water histories II: Water histories and the cultural politics of water for contemporary Indigenous groups, *Water History* 9(1): 1-8. doi:10.1007/s12685-017-0195-0.

Horangic A, **Berry KA**, Wall T. (2016) Influences on stakeholder participation in water negotiations: a case study from the Klamath Basin. *Society & Natural Resources* 29(12): 1421-1435. doi:10.1080/08941920.2016.1144837.

Perry D, **Berry KA**. (2016) Central American regional integration through infrastructure development: A Costa Rican case study of hydropower. *Regions & Cohesion* 6(1): 96-115. doi:10.3167/reco.2016.060105.

Mann K, **Berry KA**, Bassett S, Chandra S. (2013) Voting on floodplain conservation: the role of public values and interactions along the Carson River, Nevada. *Society & Natural Resources* 26(5): 568-585. doi:10.1080/08941920.2012.713449.

Berry KD, Saito L, Kauneckis D, **Berry KA**. (2012) Understanding perceptions of successful cooperation on water quality issues: a comparison across six western US interstate watersheds. *Regions & Cohesion* 2(2): 57-82. doi:10.3167/reco.2012.020204.

**Berry KA**. (2012) Tribes and water, In *A twenty-first century U.S. water policy*, edited by Gleick P, Christian-Smith J. Oxford: Oxford University Press pp 90-108.

**Berry KA**, Mollard E. (2010) Editors, *Social participation in water management and governance: Critical and global perspectives*, London: Routledge/Earthscan Publishers.

**(d) Synergistic Activities**

Member, Board of Directors of Great Basin Resource Watch (since 2017).

Discussions with Tribal leaders and rural residents on water and hard rock mining issues in Nevada, in association with the Great Basin Resource Watch (2018-2020).

Chair, International Programme Advisory Committee for CoCooN (Conflict & Cooperation in Natural Resource Management in Developing Countries), Netherlands Organization for Scientific Research (NWO-WOTRO) (2009-2018).

Member, Association of American Geographers' project on Catalyzing Research on Geographies of Broadening Participation (2012-2014).

## **Response to Comment Letter #10**

Many of the comments associated with Comment Letter #10 request further information on the Project Description; however, the comment does not specifically state any errors in analysis of Project Description. The absence of the requested information does not inherently result in flaws with the Project Description. Many of the comments are highly speculative and request information that would in no way benefit the analysis or directly result in a better understanding of the Project or its impacts on the environment. However, below are responses to the comments which require a direct response.

Tier 4 construction equipment is generally commercially available given improvements in engine efficiencies and standards over the last several years. The County will be responsible for reviewing the Combustion Exhaust Emission Control Program, which will define the construction equipment used. ICAPCD is also expected to review the plan.

The volatile organic compounds (VOC) architectural coating limits specify that the use of paints and solvents with a VOC content of 100 grams per liter or less for interior and 150 grams per liter or less for exterior surfaces shall be required. When available, super compliant VOC coatings for all architectural applications shall be used, based on a regulatory schedule of VOC limits for architectural coatings. Many manufacturers have reformulated their coatings to levels below these limits. These are referred to as "Super-Compliant" and contain less than 10 grams of VOC per liter.

See Response to Comment #3 for discussion of health impacts associated with sensitive receptors.

The proposed project will use the best available control technology for proven abatement systems as required by the APCD. The ICAPCD will require use of best management practices and require use of best available control technologies. Additional details will be provided to the ICAPCD and the APCD will be the decision body on the approval of the final system installed.

Mitigation Measure AQ-2 includes measures that would reduce NOX to a less than significant level and no mitigation fees are anticipated.

The Draft EIR states "HKP1 would not cause or contribute to a violation of the CO NAAQS/CAAQS. The 1-hour and 8-hour CO modeled concentration plus background concentrations are 2,213 and 1,369 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ), respectively, which are well below the NAAQS/CAAQS. Therefore, the startup operations associated with the proposed standby/black-start diesel engine generator would have a less than significant impact on CO concentrations." The impact on CO concentrations is less than significant prior to use of offsets.

The applicant commits to the use of electric vehicles for product movement as commercially practicable. Additionally, the proposed project will adhere to APCD regulations, as it will require an Authority to Construct permit issued by APCD prior to starting construction and an Authority to Operate permit prior to starting operations. It is anticipated that more detailed design and information on specific operational emissions will be provided to APCD at the time of air permitting and more detailed quantification of operational emissions would be included in the air permit process with APCD. The applicant will prepare any required additional modeling as required by the APCD. See response to comment 17 regarding health risk assessment.

The project would not exceed either the 10,000 MTCO<sub>2e</sub> threshold or the 20,000MT CO<sub>2e</sub> threshold.

HKL1 would consume approximately 275,940,000 kilowatt-hours per year of electricity (per 90 percent availability or 7,884 hours); (assumed to be “brown” power via the electrical grid). However, HKP1 would generate approximately 430,567,140 kilowatt-hours per year of (renewable) electricity (per 98.5 percent availability or 8,630 hours); assumed to be “green” power avoiding the electrical grid. Therefore, there will be a surplus of renewable electrical generation of approximately 154,627,140 kilowatt-hours per year of electricity, which results in a net reduction of GHG emissions.

The electrical generation of the HKP1 would likely be greater than the electrical demand of the HKL1. Importantly, the HKL1 would not operate if the HKP1 was not operating due to maintenance or outage. The air quality analysis conservatively assumes that the electrical demand of the HKL1 would be provided by the electrical grid (“brown” power) instead of being provided by the HKP1 (“green” power). Nevertheless, under this conservative condition, the operations of the HKP1 and the HKL1 would have a net 154,627,140 kilowatt-hours per year of (renewable) electricity generation. The GHG emission calculations are based on this conservative condition.

The amount of renewable electricity generation would be even greater under the condition that HKP1 supplies the entire power demands of HKL1. There would be an avoidance of the 275,940,000 kilowatt-hours per year of electricity from the HKL1 plus generation of the 154,627,140 kilowatt-hours per year of (renewable) electricity. This results in a surplus of renewable electrical generation of approximately 430,567,140 kilowatt-hours per year of (renewable) electricity (assumed to be “green” power avoiding the electrical grid); which results in an even greater reduction of GHG emissions.

The estimated annual operational GHG emissions for HKP1 will result in a reduction of a total 35,308 metric tons of CO<sub>2</sub>e due to the generation of renewable energy (i.e., the geothermal plant would produce electrical output resulting in the avoidance of 37,103 metric tons of CO<sub>2</sub>e while requiring equipment using 1,803 metric tons of CO<sub>2</sub>e). The estimated annual operational GHG emissions for HKL1 are 24,865 metric tons of CO<sub>2</sub>e. The net annual operational GHG emissions will be a reduction of 10,443 metric tons of CO<sub>2</sub>e.

The proposed project would be consistent with CARB’s Scoping Plan by avoiding GHG emissions associated with geothermal electrical production and lithium production (electric vehicles) to advance statewide objectives for renewable energy. Thus, the proposed project would have a less-than-significant impact related to a conflict with a GHG reduction plan.

CARB’s 2022 Scoping Plan was adopted in December 2022. The three previous scoping plans focused on specific GHG reduction targets for the state’s industrial, energy, and transportation sectors — first to meet 1990 levels by 2020, then to meet the more aggressive target of 40 percent below 1990 levels by 2030. The 2022 Scoping Plan addresses recent legislation and direction from Governor Newsom, extending and expanding upon earlier scoping plans with a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045.

See previous response regarding proposed project resulting in a net decrease in GHG emissions and forthcoming response regarding proposed projects construction and operation emissions being less than significant and thus not conflicting with applicable air quality plans.

The proposed project will adhere to APCD regulations, as it will require an Authority to Construct permit issued by APCD prior to starting construction and an Authority to Operate permit prior to starting

operations. It is anticipated that more detailed design and information on specific operational emissions will be provided to the APCD at the time of air permitting and more detailed quantification of operational emissions would be included in the air permit process with APCD. Additionally, the proposed project will use the best available technology to mitigate air pollutants.

The Imperial County Planning Division shall require that construction equipment such as concrete/industrial saws, pumps, aerial lifts, light stands, air compressors, and forklifts be electric or alternative-fueled (i.e., non-diesel), where feasible. Pole power shall be utilized at the earliest feasible point in time and shall be used to the maximum extent feasible in lieu of generators.

Benzene or ammonia emission will be mitigated through the use of best available technology if required by APCD, additionally 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.

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 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 and impacts would be less than significant.

Only cars and light duty trucks are considered as vehicle miles traveled (VMT) per CEQA Guidelines Section 15064.3, subdivision (a), which states, "For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project." The Office Planning and Research (OPR) define the term automobile as "on-road passenger vehicles, specifically cars and light trucks" in the Technical Advisor on Evaluating Transportation Impacts in CEQA (2018). Heavy duty trucks are not considered automobiles for the purposes of determining VMT.

The ITE trip generation was selected from the most comparable type of project in the ITE Manual and reflects the number of workers for the project specifically. The trip generation is a reasonable method of defining the number of trips generated by worker. Given the remote location of the site, the number of trips generated would likely be less than those estimated in the DEIR.

The proposed access approach from McDonald Road and Davis Road is the ideal access approach as other roads in the area are very narrow and would not support heavy duty truck access to the site.

Applicant is committed to the use of electric vehicles for mineral shipping as commercially practical and the infrastructure to support that. The Project includes the following design feature (page 2.0-23 of the DEIR): A Transportation Plan will be prepared for implementation during all phases of the project. The Transportation Plan will address methods for reducing construction worker traffic volumes and Project-related equipment and materials transport by implementing the following strategies: (1) provide a construction worker rideshare program; (2) schedule shift changes and deliveries to avoid conflict with

peak-hour traffic patterns; (3) establish traffic controls for transport of facility hazardous and nonhazardous materials, components, main assembly cranes, and other large pieces of equipment; and (4) evaluate alternative transportation approaches depending on specific object sizes, weights, origin, destination, peak-hour traffic, and unique handling requirements. Rideshares are factored into the project.

A Water supply Assessment will be approved along with the EIR. Approval of the Water Supply Assessment will ensure impact on water supply is less than significant.

The Energy Section has been updated to eliminate any language remaining from a previous draft. Please note, the stricken language does not apply to the analysis and was revised following the comment.

As stated in the EIR, no feasible alternatives were identified during the Scoping process.

**Comment Letter #11**

COURTNEY ANN COYLE  
ATTORNEY AT LAW

HELD-PALMER HOUSE  
1609 SOLEDAD AVENUE  
LA JOLLA, CA USA 92037-3817

TELEPHONE: 858-454-8687 E-MAIL: COURTCOYLE@AOL.COM FACSIMILE: 858-454-8493

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**Re: County of Imperial Draft Environmental Impact Report (DEIR)  
for Hell's Kitchen PowerCo1 and LithiumCo1 Proposed Project**

Dear Mr. Black,

October 23, 2023

These comments on the subject DEIR are timely submitted on behalf of Carmen Lucas, Kwaaymii Laguna Band of Indians.

1. In a previous letter to the County, Ms. Lucas asked to be included in AB 52 notifications for proposed geothermal and lithium projects in Imperial County and related environmental documents. She is on the Native American Heritage Commission's (NAHC) contact list and has been designated for Ancestral remains found in Imperial County by the NAHC. However, the DEIR indicates that only the Quechan and Torres-Martinez tribes were sent AB 52 letters. AB 52 consultation with Ms. Lucas must be initiated without further delay by the County and integrated into the CEQA process. During consultation, a copy of the tribal cultural landscape boundary for the Southeast Lake Cahuilla Active Volcanic Cultural District (SELCAVCD) can be shared. We also request a copy of Appendix E, Tierra's 2021/2022 cultural study, be sent to Ms. Lucas or my office on a confidential basis.
2. The DEIR incorrectly asserts that there are no Tribal Cultural Resources (TCRs) in the project area and that the proposed project would not affect any TCRs. The DEIR fails to mention that the SELCAVCD has been identified by affiliated tribes and overlaps portions of the proposed project area. It would also have effects on cultural features including Mullet Island and the (new) mud pots, important areas to tribes for medicine and training. The DEIR also fails to mention whether a NAHC Sacred Lands File (SLF) search was conducted; if it had been, it would have shown a positive hit indicating this area has been entered on the SLF. The TCR section must be revised to include this information and consultation must be held with Ms. Lucas on these identifications.
3. The DEIR applies solely archaeologically based mitigation to TCRs, in violation of CEQA and current best practices in cultural resources management. Notably, the mitigation measures omit reference to requiring qualified tribal monitors during project surveys

and construction and do not involve affiliated tribes in the identification, evaluation, documentation, or treatment of discovered resources.

4. The DEIR fails to examine any alternatives to the proposed action. This is highly unusual and unsupported. Alternatives that reduce effects on the SELCAVCD must be analyzed which include alternative design options and off site alternatives. Effects to be studied and reduced include those related to direct/indirect/cumulative effects on biological resources, noise, visual, aesthetics, feeling, setting, and induced access.
5. The DEIR fails to examine the cumulative effects from other geothermal projects, including those currently being processed through the California Energy Commission (CEC) including BHE Renewable's Black Rock Geothermal, Elmore North Geothermal, and Morton Bay Geothermal or future phases at Hell's Kitchen. Taken together, these proposed projects would have serious cumulative effects on the SELCAVCD as well as the traditional spiritual and cultural practices of affiliated tribes. Consultation must occur on this issues and the DEIR revised accordingly.

For these reasons, we request that the DEIR be revised to reflect more complete tribal consultation efforts and be recirculated for comment. Please place my office on the list of those to receive project related notices, including hearing notices.

Sincerely yours,



Courtney Ann Coyle  
Attorney at Law

Cc:  
CEC  
NAHC  
Quechan Indian Tribe  
Torres-Martinez Tribe  
Native American Land Conservancy

29 Sept 2022

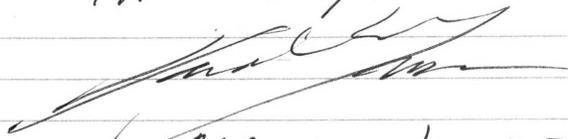
DIRECTOR,  
PLANNING AND DEVELOPMENT SERV,  
801 MAIN STREET  
EL CENTRO, CALIF. 92243

to whom it may concern

I AM CARMEN LUCAS A  
KWAAYMII LAGUNA MOUNTAIN INDIAN  
WHO IS LISTED WITH THE NATIVE  
AMERICAN HERITAGE COMMISSION  
CONTACT LIST.

I AM REQUESTING THAT MY  
NAME AND ADDRESS BE ADDED  
ON THE IMPERIAL COUNTY SB-18  
AND SB52 CONSULTATION LIST  
IF I'M NOT ALREADY ON IT. THIS  
REQUEST INCLUDES THE SPECIFIC  
PLAN & PEER FOR LITHIUM  
RECOVERY. I AM ALSO SPECIFICALLY  
REQUESTING CONSULTATION ON THAT  
PROJECT.

THANK YOU



CARMEN LUCAS  
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91962

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**ROB BONTA**  
*Attorney General*

## Attorney General Bonta Files Amicus Brief Supporting Koi Nation in Lawsuit Against City of Clearlake

Press Release / Attorney General Bonta Files Amicus Brief Supporting Koi Nat...

Friday, October 20, 2023

Contact: (916) 210-6000, [agpressooffice@doj.ca.gov](mailto:agpressooffice@doj.ca.gov)

**OAKLAND** — California Attorney General Rob Bonta today announced that the Lake County Superior Court has granted the Department of Justice's application to file an amicus brief in support of the Koi Nation of Northern California's lawsuit against the City of Clearlake. The Koi Nation contends that the site of a proposed 75-room hotel — known as the Airport Hotel and 18th Avenue Extension — contains tribal cultural resources and that the city did not adequately conduct consultation with the Koi Nation or consider the project's impacts on tribal cultural resources, in violation of the California Environmental Quality Act's (CEQA) tribal consultation requirements added by Assembly Bill 52 (AB 52). The Department of Justice's amicus brief supports the Koi Nation's position, providing information on the legislative history and intent of AB 52's requirements.

"The Clearlake area is home to Native American tribes who have lived there since time immemorial," said **Attorney General Rob Bonta**. "The preservation of tribal cultural resources is of great importance. We stand with the Koi Nation in seeking justice and accountability. The California Legislature passed AB 52 to ensure that government agencies' consultation with tribes regarding their tribal cultural resources would be meaningful — that simply didn't happen here."

"As a Southeastern Pomo Tribe with an area of traditional and cultural affiliation that stems from the Pomo homeland of Southeastern Clear Lake to the Russian River Valley in Sonoma County, the Koi Nation of Northern California is grateful for the action and leadership of Attorney General Rob Bonta and his hardworking team," **said Vice Chairman of the Koi Nation Dino Beltran**. "We hope this will be helpful for all California Native American Tribes in their protection of Tribal Cultural Resources moving forward. It is important to recognize traditional cultural knowledge as evidence. Our case is strengthened by the expertise and knowledge of Tribal Cultural Resources shared by Tribal Historic Preservation Officer and cultural practitioner Robert Geary."

In the amicus brief, Attorney General Bonta argues that:

- **Meaningful consultation under CEQA requires more than the city's cursory approach.** As amended by AB 52, CEQA requires consultation to be a "meaningful and timely process." In this case, the city held a single meeting with the Koi Nation and did not respond to the Koi Nation's subsequent communications flagging concerns about tribal cultural resources and suggesting mitigation measures. The city then unilaterally ended consultation without informing the Koi Nation of its conclusion or explaining in the record why mutual agreement was not possible.
- **Agencies must consider tribal expertise in determining tribal cultural resources, significant impacts to those resources, and mitigation measures under CEQA.** When the Legislature amended CEQA under AB 52, it distinguished tribal cultural resources from archaeological resources or historical resources under CEQA and required lead agencies to evaluate impacts to tribal cultural resources as a separate resource category. The Legislature also required lead agencies to incorporate tribal expertise and input when determining the existence of those resources, the potential for impacts on them, and the sufficiency of mitigation measures for avoiding those impacts. In this case, the city relied solely on a study by the city's archaeologist — and ignored tribal input and expertise — in identifying tribal cultural resources on the project site.

A copy of the amicus brief can be found **here**.

###

### **Response to Comment Letter #11**

The County conducted the required AB 52 Tribal Consultation Process in compliance with the requirement. The County contacted all the Tribes that have requested consultation on projects within its jurisdiction. Please refer to DEIR Section 4.12 for a discussion of the AB 52 process conducted for this Project. Please note, the Tribal Cultural Section of the DEIR was prepared based on the consultation process.

Additionally, the letter dated September 29, 2022 is a request to be added to the Imperial County SB-18 and SB-52 (AB 52) consultation list for a different project. The letter references the Imperial Valley Specific Plan for lithium recovery. The Kwaaymii Laguna Band of Indians has been added to the Tribal notification list for this Project and future consultation requests will be distributed to the Tribe.

Additionally, the Scoping Period found no feasible alternatives to the Project.

## **2.3 ORGANIZATION COMMENTS**

### **Comment Letter #12**

## State Building and Construction Trades Council

CHRIS HANNAN  
PRESIDENT

of California

Established 1901  
Chartered By  
BUILDING AND CONSTRUCTION TRADES  
DEPARTMENT  
AFL - CIO

J. TOM BACA  
SECRETARY/TREASURER

October 4, 2023

Mr. Jim Minnick  
Planning & Development Services Director, County of Imperial PDS  
801 Main Street  
El Centro, CA 92243  
[JimMinnick@co.imperial.ca.us](mailto:JimMinnick@co.imperial.ca.us)



**RE: SCH Number 2022030704 - Hell's Kitchen PowerCo1 and LithiumCo1 Project**

Dear Director Minnick:

On behalf of the State Building and Construction Trades Council of California, I write in support of the Hell's Kitchen PowerCo1 and LithiumCo1 Project (the "Project") with SCH Number 2022030704, whereby Controlled Thermal Resources (US) Inc. via its subsidiary Hell's Kitchen HoldingCo 1, LLC is proposing the Project in Imperial County, California. The Project involves the development of a geothermal power plant that will produce up to 49.9 megawatts (MW) net of geothermal green energy, and the development of mineral extraction and processing facilities capable of producing lithium hydroxide, silica, and polymetallic products, and possibly boron compounds, for commercial sale.

The State Building Trades is an umbrella organization representing nearly 500,000 highly skilled women and men in the construction industry, including roughly 65,000 enrolled in our state-of-the-art apprenticeship programs around the state. We work tirelessly with our 14 affiliated trades to ensure that our members receive world-class training and are prepared to provide the highest quality work when they step onto a jobsite.

CTR leadership has proactively engaged with us to develop a Project Labor Agreement (PLA), and we recognize the opportunity for significant union jobs as the project is constructed over the next several years. Furthermore, we recognize the positive impact the project will have on Imperial County by way of job creation and tax revenue for the community.

For these reasons, we are in strong support of the Hell's Kitchen Project and our members stand ready and able to bring the project to fruition. Please feel free to contact my office if you have any further questions.

Sincerely,

A handwritten signature in black ink, appearing to read "C. Hannan".

CHRIS HANNAN  
President

CH:bp  
opeiu#29/afl-cio

1231 I Street, Suite 302 • Sacramento, CA 95814-2933 • (916) 443-3302 • FAX (916) 443-8204

**Response to Comment #12**

Comment communicates support for the Proposed Project. The comment does not identify any issues with the DEIR; therefore, no further response is necessary.

### SECTION 3.0 – DRAFT EIR REVISIONS

The following section includes revisions to the Draft EIR made in response to comments received during the comment period. Text revisions and corrections to the Draft MND are indicated by changes in font styling; deleted text is indicated by a strike-through (~~example~~), and added text is indicated by a bold underline (**example**). Minor editorial corrections (e.g., typographical, grammatical, etc.) have been made throughout the document and are not indicated by strikethrough or bold underlined text. These changes, which have been incorporated into the Draft EIR, constitute the Final EIR, to be presented to the [Planning Commission] for certification and approval. These modifications clarify, amplify, or make insignificant changes to the EIR. Revisions to the EIR have not resulted in new significant impacts or mitigation measures or increased the severity of an impact. None of the criteria for recirculation set forth in the CEQA Guidelines section 15088.5 for recirculation have been met, including:

- No new significant environmental impacts due to the project or due to a new mitigation measure has been identified;
- No substantial increase in the severity of an environmental impact has been identified; and
- No additional feasible project alternative or mitigate measure considerably different from others analyzed in the DEIR has been identified that would clearly lessen the significant environmental impacts of the project.

Revisions are as follows:

PAGE ES-2:

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

- Imperial County Planning Department – Conditional Use Permit
- Imperial County Planning Department – Zoning Variance
- Imperial County Planning Department – Development Agreement (if required)
- Imperial County Building Department – Building and Grading Permits
- Imperial County Public Works Department – Encroachment Permit(s)
- Imperial Irrigation District – Encroachment Permit(s)
- Imperial Irrigation District – Water Supply Agreement
- Imperial Irrigation District – Other approvals not yet known for water or power

PAGE ES-10:

The Project includes removal of ~~cattails and other vegetation that provide~~ potential breeding habitat for Yuma hispid cotton rat, burrowing owl, western snowy plover, Yuma Ridgway's rail, California black rail, ~~least bittern, wood stork, white-faced ibis, and desert pupfish.~~ Yuma hispid cotton rat These species could be impacted by construction activities if the species were to occur in the construction area at the time of construction. ~~In addition, construction activities include excavation of trenches and steep walled foundations where cotton rat could become trapped.~~ Because a qualified biologist would be on site to observe all vegetation removal activities and could relocate these species ~~Yuma hispid cotton rat~~ out of harm's way if one were observed in the area, the impact from vegetation removal activities would be less

than significant. In addition, because open trenches will be covered to avoid cotton rats from becoming trapped and a biologist will observe open excavations daily, the impact of open excavations on cotton rats will be less than significant.

PAGE ES-12

**BIO-5. Power Wash Equipment:** All equipment used during construction of the Project will be required to be power washed prior to arrival at the Project site to prevent the transportation and establishment of noxious weeds in the area.

PAGE ES-13

**BIO-8. Desert Pupfish Protection and Relocation Plan:** A desert pupfish protection and relocation plan will be prepared prior to construction activities in any suitable habitat for desert pupfish. Its implementation will ensure construction in the drain mouths and channels will be conducted with minimal effects on desert pupfish. The plan will provide the following:

- Avoidance of construction activities within suitable habitat for desert pupfish during the desert pupfish spawning season (April to October).
- Protocols for preconstruction surveys to assess species presence and spawning within or immediately adjacent to work areas (i.e., areas with ponded water).
- Protocols for capture (e.g., trapping for construction) and transport methods that will minimize handling and stress as well as exposure to heat, low dissolve oxygen, and crowding.
- Identification of locations for release of captured desert pupfish.

A desert pupfish protection and relocation plan will be prepared prior to construction activities in any suitable habitat for desert pupfish. Its implementation will ensure construction in any suitable habitat for desert pupfish will be conducted with minimal effects on desert pupfish. This plan will be submitted to the Service and the CDFW for review and approval prior to any ground-disturbing activities that have a water component. This plan will provide:

1. Protocols for pre-construction or pre-maintenance surveys to assess species presence and spawning within or immediately adjacent to work areas (e.g., in, or at the end of, the irrigation drains/drain canals, open water areas, and around the open water margins). The protocols will also outline the qualifications required for biologists to conduct desert pupfish survey, capture, and relocation activities and the process for biologist approval.
2. Capture (e.g., trapping in the irrigation drains for construction and maintenance; or trapping, dip netting, and seining in open water areas that are drained or if the water level is dropped) and transport methods to minimize handling and stress as well as exposure to heat, low dissolved oxygen (DO), and crowding.
3. Identification of locations for release of captured desert pupfish.
4. Timing windows when construction or maintenance in open water areas and in the irrigation drain mouths/canals may be conducted with minimal effects on desert pupfish spawning.
5. Adaptive management procedures that include assessment of mitigation measure effectiveness, development of revised measures to improve effectiveness, and similar assessment of revised measures to verify effectiveness. Yuma Ridgway's Rail Measures, Black Rail, and Other Marsh Bird Measures.

PAGE ES-18

**BIO-16. Nesting Bird Plan.** ~~A Nesting Bird Plan will be prepared that defines procedures for avoidance of nesting birds during Project construction. The Project will be scheduled to start construction activities outside the nesting season (February 1 through August 31), to the extent feasible. In the event that construction has to start during the nesting season, a qualified biologist will conduct surveys of the Project development area no more than 72 hours before any ground disturbance. If an active nest is observed in the Project development area, the qualified biologist will employ appropriate procedures for nest avoidance, and construction activities will not begin in the area of the active nest until all nesting activities have ceased and the young have fledged the nest.~~ Construction activities shall take place outside the general bird breeding season (February 15 to September 30), to the maximum extent practicable. Regardless of the time of year, prior to ground-disturbing activities, a qualified biologist shall conduct a nesting bird survey to comply with CDFW Code 3503 and 3503.5 and the Migratory Bird Treaty Act. The survey shall occur no more than three (3) days prior to initiation of proposed Project activities and shall include any potential habitat (including trees, shrubs, the ground, or nearby structures). Any occupied passerine and/or raptor nests occurring within the proposed Project area or the Project's zone of influence (generally 100-300 feet) shall be delineated and a no-disturbance buffer zone (as determined by the avian biologist) shall be established and maintained during Project activities. Additional follow-up surveys may be required by the resource agencies and Imperial County. The buffer zone shall be sufficient in size to prevent impacts to the nest. A qualified biologist shall monitor active nests to determine whether construction activities are disturbing nesting birds or nestlings. If the qualified biologist determines that construction activities pose a disturbance to nesting, construction work shall be stopped in the area of the nest and the no disturbance buffer shall be expanded. Once nesting has ceased and the fledglings are no longer using the nest area as confirmed by a qualified biologist, the buffer may be removed. A nesting bird survey report shall be provided to Imperial County and CDFW. If an active nest is encountered during construction, construction shall stop immediately until a qualified biologist can determine the status of the nest and when work can proceed without risking violation to state or federal laws.

PAGE ES-20

~~Less than Significant~~ Potentially Significant

PAGE 2.0-7

The development area for the Project would be approximately 68 acres. The Project site layout is illustrated in Figure 2.0-2. The Project does not include any work within the P, Q, R, and S Drains. Any such future work will require a separate approval and environmental review.

PAGE 2.0-14

A high-density polyethylene (HDPE)-lined freshwater pond with a capacity of 18 AF will be constructed at the southern end of the Project site and just north of the Q Drain.

PAGE 2.0-16

An average of approximately 225 workers will be on site daily during construction, with a maximum of approximately ~~450~~ 500 workers per day during peak construction. The power portion will be complete prior to the remainder of the Project, and it is anticipated to be complete in the 4th quarter of 2024.

The HKP1 Project will require approximately 54,000 truck trips over the course of the project construction.

PAGE 2.0-24

The following permits/agreements would be required from IID:

- Imperial Irrigation District – Encroachment Permit(s)
- Imperial Irrigation District – Water Supply Agreement
- Imperial Irrigation District – Other approvals not yet known for water or power

PAGE 2.0-25

A responsible agency includes all public agencies other than the lead agency that have discretionary approval power over a project. Due to the location of the Project, the California State Lands Commission would be a responsible agency. Additionally, IID is a Responsible Agency.

PAGE 4.3-28:

The most recent confirmed observation of desert pupfish in the Q Drain was in 1994, and in the R Drain was in 2002. During a 2023 survey and salvaging effort conducted by CDFW presence of pupfish has been confirmed in all three drains. Over 400 pupfish were captured and relocated from the extended area of the S Drain.

PAGE 4.3-42:

~~**BIO-8. Desert Pupfish Protection and Relocation Plan:** A desert pupfish protection and relocation plan will be prepared prior to construction activities in any suitable habitat for desert pupfish. Its implementation will ensure construction in the drain mouths and channels will be conducted with minimal effects on desert pupfish. The plan will provide the following:~~

- ~~• Avoidance of construction activities within suitable habitat for desert pupfish during the desert pupfish spawning season (April to October).~~
- ~~• Protocols for preconstruction surveys to assess species presence and spawning within or immediately adjacent to work areas (i.e., areas with ponded water).~~
- ~~• Protocols for capture (e.g., trapping for construction) and transport methods that will minimize handling and stress as well as exposure to heat, low dissolve oxygen, and crowding.~~
- ~~• Identification of locations for release of captured desert pupfish.~~

A desert pupfish protection and relocation plan will be prepared prior to construction activities in any suitable habitat for desert pupfish. Its implementation will ensure construction in any suitable habitat for desert pupfish will be conducted with minimal effects on desert pupfish. This plan will be submitted to the Service and the CDFW for review and approval prior to any ground-disturbing activities that have a water component. This plan will provide:

1. Protocols for pre-construction or pre-maintenance surveys to assess species presence and spawning within or immediately adjacent to work areas (e.g., in, or at the end of, the irrigation drains/drain canals, open water areas, and around the open water margins). The protocols will

also outline the qualifications required for biologists to conduct desert pupfish survey, capture, and relocation activities and the process for biologist approval.

2. Capture (e.g., trapping in the irrigation drains for construction and maintenance; or trapping, dip netting, and seining in open water areas that are drained or if the water level is dropped) and transport methods to minimize handling and stress as well as exposure to heat, low dissolved oxygen (DO), and crowding.

3. Identification of locations for release of captured desert pupfish.

4. Timing windows when construction or maintenance in open water areas and in the irrigation drain mouths/canals may be conducted with minimal effects on desert pupfish spawning.

5. Adaptive management procedures that include assessment of mitigation measure effectiveness, development of revised measures to improve effectiveness, and similar assessment of revised measures to verify effectiveness. Yuma Ridgway's Rail Measures, Black Rail, and Other Marsh Bird Measures.

PAGE 4.3-44

**BIO-16. Nesting Bird Plan.** A Nesting Bird Plan will be prepared that defines procedures for avoidance of nesting birds during Project construction. The Project will be scheduled to start construction activities outside the nesting season (February 1 through August 31), to the extent feasible. In the event that construction has to start during the nesting season, a qualified biologist will conduct surveys of the Project development area no more than 72 hours before any ground disturbance. If an active nest is observed in the Project development area, the qualified biologist will employ appropriate procedures for nest avoidance, and construction activities will not begin in the area of the active nest until all nesting activities have ceased and the young have fledged the nest. Construction activities shall take place outside the general bird breeding season (February 15 to September 30), to the maximum extent practicable. Regardless of the time of year, prior to ground-disturbing activities, a qualified biologist shall conduct a nesting bird survey to comply with CDFW Code 3503 and 3503.5 and the Migratory Bird Treaty Act. The survey shall occur no more than three (3) days prior to initiation of proposed Project activities and shall include any potential habitat (including trees, shrubs, the ground, or nearby structures). Any occupied passerine and/or raptor nests occurring within the proposed Project area or the Project's zone of influence (generally 100-300 feet) shall be delineated and a no-disturbance buffer zone (as determined by the avian biologist) shall be established and maintained during Project activities. Additional follow-up surveys may be required by the resource agencies and Imperial County. The buffer zone shall be sufficient in size to prevent impacts to the nest. A qualified biologist shall monitor active nests to determine whether construction activities are disturbing nesting birds or nestlings. If the qualified biologist determines that construction activities pose a disturbance to nesting, construction work shall be stopped in the area of the nest and the no disturbance buffer shall be expanded. Once nesting has ceased and the fledglings are no longer using the nest area as confirmed by a qualified biologist, the buffer may be removed. A nesting bird survey report shall be provided to Imperial County and CDFW. If an active nest is encountered during construction, construction shall stop immediately until a qualified biologist can determine the status of the nest and when work can proceed without risking violation to state or federal laws.

PAGE 4.5-10

~~These numbers are confusing, and unclear what the point is. HKP1 will generate about 416,000 MW-hr/yr (assuming 50 MW at 95% availability), while HKL1 will consume about 276,000 MW-hr/yr,~~

producing a surplus of 140,000 MW-hr/yr of renewable electric power (assumed to be “green” power avoiding the electrical grid); which results in an even greater reduction of GHG emissions.

PAGE 4.9-5

#### Imperial Integrated Water Resources Management Plan

~~The Imperial Integrated Regional Water Management Plan (IRWMP) serves as the governing document for regional water planning to meet present and future water resource needs and demands by addressing such issues as additional water supply options, demand management and determination, and prioritization of uses and classes of service provided. In November 2012, the Imperial County Board of Supervisors approved the Imperial IRWMP, and the City of Imperial City Council and the IID Board of Directors approved it in December 2012. Approval by these three stakeholders meets the basic requirement of the DWR for an IRWMP. Through the IRWMP process, IID presented the regional stakeholders with options in the event long-term water supply augmentation is needed, such as water storage and banking, recycling of municipal wastewater, and desalination of brackish water.~~

PAGE 4.9-6

#### Imperial Irrigation District

The IID is an irrigation district organized under the California Irrigation District Law, codified in Section 20500 et seq. of the CWC. Critical functions of IID include diversion and delivery of Colorado River water to the Imperial Valley; operation and maintenance of the drainage canals and facilities, including those in the Project area; and generation and distribution of electricity. Several policy documents govern IID operations and are summarized below:

- The Law of the River and historical Colorado River decisions, agreements, and contracts;
- The Quantification Settlement Agreement and Transfer Agreements;
- ~~The Definite Plan~~ Rules and Regulations governing the Distribution and Use of Water, now referred to as the Systems Conservation Plan, which defines the rigorous agricultural water conservation practices being implemented by growers and IID to meet the Quantification Settlement Agreement commitments;
- ~~The Equitable Distribution Plan, which defines how IID will prevent overruns and stay within the cap on the Colorado River water rights~~ The Equitable Distribution Plan manages the District's available water supply, distributing it equitably as determined by the IID Board of Directors; and,

~~During the development of the Imperial IRWMP, IID has adopted an Interim Water Supply Policy (IWSP) for Non-Agricultural Projects from which water supplies can be contracted to serve new developments within IID's water service area under which water supplies, up to 25,000 acre-feet annually, have been assessed for new non-agricultural development and may be contracted for conservation at the discretion of the IID Board.~~ For applications processed under the IWSP, applicants shall be required to pay a processing fee and, after IID board approval of the corresponding agreement, will be required to pay a reservation fee(s) and annual water supply development fees.

PAGE 4.11-2

The HKP1 Project will require approximately 54,000 truck trips over the course of the project construction.

PAGE 4.11-4

Table ~~4.10-4~~ 4.11-1 analyzes the consistency of the Project with specific policies contained in the Imperial County General Plan associated with transportation and traffic.

PAGE 4.11-7

As discussed in **Chapter 32.0: Project Description**, the HKP1 Project will require approximately 54,000 truck trips over the course of the Project construction.

PAGE 4.13-1

~~The East Mesa Unit and the West Mesa Unit are located within the IID boundaries; however, the East Mesa Unit relies on four groundwater wells that are approximately 600 feet deep, and the West Mesa Unit has water delivered from the Elder Lateral Canal.~~

~~The 2003 Quantification Settlement Agreement and Related Agreements (QSA) serve as the laws, regulations, and agreements granting California the most senior water rights along the Colorado River and specifying—specifies that IID has access to 3.1 million acre-feet (maf) of Colorado River water per year.~~

PAGE 4.13-8

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- ~~The Equitable Distribution Plan, which defines how IID will prevent overruns and stay within the cap on the Colorado River water rights~~ The Equitable Distribution Plan manages the District's available water supply, distributing it equitably as determined by the IID Board of Directors
- ~~Existing IID standards and guidelines for evaluation of new development and defining IID's role as a responsible agency and wholesaler of water~~

IID has adopted an Interim Water Supply Policy (IWSP) for Non-Agricultural Projects during the development of the Imperial IWRMP, ~~from which water supplies can be contracted to serve new developments within IID's water service area~~ under which water supplies, up to 25,000 acre-feet annually, have been assessed for new non-agricultural development and may be contracted for conservation at the discretion of the IID Board. For applications processed under the IWSP, applicants shall be required to pay a processing fee and, after IID board approval of the corresponding agreement, will be required to pay a reservation fee(s) and annual water supply development fees.