

4.7 HAZARDS AND HAZARDOUS MATERIALS

This section discusses the potential hazards and hazardous materials impacts that would occur in association with implementation of the proposed Energy Source Mineral ATLiS Project. The discussion focuses on hazardous materials and hazards requiring remediation or mechanisms to prevent accidental release. Measures are identified to reduce or avoid adverse impacts anticipated from construction, operation, and decommissioning of the Project. Information contained in this section is summarized from the *Phase I ESA Report for Hudson Ranch Geothermal Plant* prepared by GS Lyon Consultants, Inc. (GS Lyon) in December 2019, included as Appendix F of this EIR. Phase I ESAs are location-dependent and describe the existing potential hazards on the site. Therefore, the contents of the Phase I ESA for HR1, are applicable to the Proposed Project.

4.7.1 Existing Environmental Setting

Regional Setting

The Project would be located in the unincorporated portion of Imperial County, which is situated in the southeasternmost portion of the State of California. The County encompasses an approximately 4,597-square-mile area and is bordered by Riverside County to the north, the State of Arizona on the east, Mexico to the south, and San Diego County to the west.

According to the County's General Plan, contributors to the potential for a hazardous material accident to occur in Imperial County include the agricultural economy, proliferation of fuel tanks and transmission facilities, the intricate canal system, and the confluence of major surface arteries and rail systems. The potential for an accident is increased in regions near roadways that are frequently used for transporting hazardous material and in regions with agricultural or industrial facilities that use, store, handle, or dispose of hazardous material (County 1997b).

Project Site

The Project site is located approximately 3.8 miles southwest of the community of Niland, a census-designated place, in the unincorporated area of Imperial County. The Project site is located on three parcels (APN 020-100-025, 020-100-044, and 020-100-046) north of West Schrimpf Road, east of Davis Road, and south of McDonald Road.

Based on a review of the historical information in the HR1 Phase I ESA (Appendix F), the southern portion of the HR1 property was first developed in 2011 for industrial use as a geothermal power plant. Prior to development of the power plant, ponds on the subject property were used for duck hunting; and, prior to that, the property was used for agricultural fields. Carbon dioxide wells were drilled southwest of the Project site (at the southeast corner of Davis Road and West Schrimpf Road) in the 1930s and 1940s. The wells have since been abandoned and are currently present as mud pots, pools, and dried craters.

The Phase I ESA reports much of the Project site was in agricultural use prior to the mid 1970s. Residues of currently available pesticides and currently banned pesticides such as DDT/DDE may be present in near-surface soils in limited concentrations. The concentrations of these pesticides found on other Imperial Valley agricultural sites are typically less than 25 percent of the current regulatory threshold limits and, at those levels, are not considered a significant environmental hazard.

Federal and State Database Review

Various hazardous materials sites were reviewed as part of the Phase I ESA to determine whether any government-regulated properties with known environmental conditions and potential environmental concerns are located near the Project site.

The primary reason for defining potentially hazardous sites is to protect health and safety and to minimize the public’s exposure to hazardous materials during Project construction and waste handling. Exposure can occur during normal use, handling, storage, transportation, and disposal of hazardous materials. Exposure may also occur due to hazardous compounds existing in the environment, such as fuels in underground storage tanks, pipelines, or areas where chemicals have leaked into the soil or groundwater. If encountered, contaminated soil may qualify as hazardous waste, thus requiring handling and disposal according to local, State, and federal regulations. EnviroStor, which is administered by the Department of Toxic Substances Control (DTSC), provides existing information on permits and corrective action at hazardous waste facilities, as well as site cleanup projects. Review of EnviroStor indicates that no land use restrictions or contaminated sites are within the Project site. EnviroStor indicates that seven contaminated sites are within 10 miles of the Project site, as shown in Table 4.7-1.

Table 4.7-1: Contaminated Sites within 10 Miles of the Project Site

Site Name	Address	City	Site/Facility Type	Cleanup Status	Distance from Project Site
CalEnergy – Leathers Facility	342 W Sinclair Rd	Calipatria	Tiered Permit Site	Certified as of 4/10/2013	1.51 miles
CalEnergy – Elmore Facility	786 W Sinclair	Calipatria	Tiered Permit Site	Certified as of 4/10/2013	1.58 miles
CalEnergy – Central Services	480 W Sinclair Rd	Calipatria	Tiered Permit Site	Certified as of 4/10/2013	1.68 miles
CalEnergy - Vulcan/Del Ranch (Hoch) Facilities	7001 Gentry Rd	Calipatria	Tiered Permit Site	Certified as of 4/10/2013	3.61 miles
CalEnergy – Units 1&2/Units 3&4/5 Facilities	6920 Lack Rd	Calipatria	Tiered Permit Site	Certified as of 4/10/2013	5.52 miles
Camp Dunlap	10 Miles N/E of Niland	Niland	State Response	Inactive - Needs Evaluation as of 7/12/2018	7.25 miles
Chocolate Mountain Naval Aerial Gunnery Range	Naval Weapons Range, East of Salton Sea	Niland	State Response	Active as of 6/12/2018	7.67 miles

Source: <https://www.envirostor.dtsc.ca.gov/public/>

Notes: N/E = Northeast; Rd = Road; W = West

GeoTracker, which is administered by the SWRCB, is used to track and archive compliance data from authorized or unauthorized discharges of waste to land, or unauthorized releases of hazardous substances

from underground storage tanks (UST). GeoTracker identifies no hazardous materials sites within 1 mile of the Project site (SWRCB 2021).

EnviroMapper, which is administered by the USEPA, includes geographic information, such as locations of federal Superfund sites and other hazardous materials sites. Review of EnviroMapper indicates that no designated Superfund or hazardous material sites are within 1 mile of the Project site (USEPA 2021).

According to the California Department of Conservation Geologic Energy Management Division's (CalGEM) Well Finder database, no oil or gas wells are located on the Project site. Well Finder did identify a geothermal well on the northwest side of the Project site; however, the well has been abandoned (DOC 2021).

Sensitive Receptors

Sensitive receptors that may be susceptible to health and safety impacts resulting from the construction and operation of renewable energy facilities generally include onsite workers and the young and elderly sectors of the population.

The Town of Niland is approximately 3.8 miles south southwest of the Project site. The nearest residence is approximately 1 mile north of the Project site, along Pound Road. The closest school is the Grace Smith Elementary School, which is located approximately 4 miles to the northeast. A commercial algae production facility is located approximately 0.3 mile south of the Project site. The commercial algae facility is no longer in operation and is not part of the Proposed Project.

Phase I ESA Report

As previously mentioned, a Phase I ESA for the HR1 Facility was prepared (Appendix F); and the footprint of the existing HR1 facility, located at 409 West McDonald Road, encompasses some of the Project site and the land directly adjacent to the Project site.

The purpose of the Phase I ESA is to identify, to the extent feasible, recognized environmental conditions (RECs) associated with past and present activities on the subject property or in the immediate subject property vicinity in general conformance to ASTM Standard E1527-13 "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" that may affect future uses of the subject property." The term REC includes hazardous substances and petroleum products even under conditions that might be in compliance with laws. The term is not intended to include "de minimis" conditions, which refers to a condition that generally does not present a threat to human health and/or the environment and that generally would not be subject to an enforcement action if brought to the attention of appropriate governmental agencies (Appendix F).

The Phase I ESA included results of a site reconnaissance to identify current conditions of the HR1 site parcels and adjoining properties; a review of various readily available federal, State, and local government agency records; and review of available historical site and site vicinity information.

HR1 Site Observations (2019)

Hazardous Substances and Petroleum Products

The HR1 facility uses and generates hazardous materials as part of the geothermal operation. Chemicals are stored on site for laboratory analysis. The extraction of the brine fluid produces filter cake (solids extracted from the brine fluid) which may contain potentially hazardous materials. Petroleum products are stored on the HR1 property.

Storage Tanks

Underground Storage Tanks (USTs) – No obvious visual evidence indicating the current presence of USTs (i.e., vent pipes, fill ports, etc.) was noted.

Aboveground Storage Tanks (ASTs) – No obvious visual evidence indicating the historical presence of ASTs (i.e., secondary containments, concrete saddles, etc.) was observed. Two fuel tanks, one diesel and one gasoline, are located within a secondary containment area and are used for fueling vehicles and equipment.

Odors

GS Lyon noted no obvious strong, pungent, or noxious odors during the site reconnaissance. Odors from the brine pond and brine material from the belt filter area were noted.

Pools of Liquid

The only pool of liquid observed during the site reconnaissance was at the concrete-lined brine pond.

Drums and Containers

GS Lyon observed multiple drums and storage containers on the HR1 property. These drums and containers stored petroleum-based products, chemicals, metals, acids, brine products, and process water.

Unidentified Substance Containers

GS Lyon did not observe open or damaged containers containing unidentified substances at the HR1 property.

Suspect Polychlorinated Biphenyl (PCB) Containing Equipment

Slab-mounted, sealed electrical transformers owned and maintained by IID are located within the HR1 property. The IID has documented that none of the transformers contain polychlorinated biphenyls (PCBs). No leaks were noted during the site visit. Potential PCB equipment such as hydraulic equipment and motor oils were observed during GS Lyon's site reconnaissance on the HR1 property.

Pits, Ponds, and Lagoons

A fresh makeup water pond is located at the northeast corner of the HR1 property. A concrete-lined brine pond with secondary containment liner and groundwater monitoring wells is located in the south-center of the property. Numerous shallow, water-filled and dry duck hunting ponds are located on the HR1 site.

Stained Soils or Pavement

No evidence of significantly stained soil or pavement was noted on the HR1 property. Small oil stains were observed on the asphalt near the warehouse building. An area was observed on the north side of the brine pond where some brine material had spilled during transfer from the brine pond into bins for transport to an approved landfill. The spill occurred on an asphaltic concrete paved area with a sump that drains back into the brine pond.

Stressed Vegetation

No evidence of stressed vegetation attributed to potential contamination was noted on the HR1 property.

Solid Waste

Dumpsters and solid waste containers exist at the HR1 site. Nonhazardous trash is collected by Republic Services of Imperial, California.

Concrete and asphalt debris piles were observed at the south end of the power plant site west of the stormwater basin. Multiple metal hazardous waste containers filled with drilling mud and metal shavings were being stored on site. Geothermal brine is being stored within the brine pond, a temporary containment area, and within hazardous waste containers. The brine fluid is re-injected into wells to maintain the operation of the closed-circuit geothermal fluids process.

Hazardous material separated from the brine at the belt filter area is transferred to hazardous waste trailers that haul the solid filter cake material off site to a hazardous waste landfill.

Wastewater

Wastewater generated at the HR1 property is limited to sinks, toilets, etc. is processed with tertiary treatment with a small onsite wastewater treatment plant; and the processed water is injected deep underground through a brine fluid injection well.

Wells

Groundwater monitoring wells are located around the concrete-lined brine pond at the HR1 site for semi-annual monitoring of groundwater by Landmark Geo-Engineers and Geologists of El Centro, California, at the brine pond. A background groundwater monitoring well is located at the southwest corner of the storm water retention basin on the south margin of the HR1 site.

Septic Systems

An onsite wastewater treatment system, consisting of septic tanks, aboveground aerobic treatment pods, filtration and ultraviolet (UV) light disinfection, is present on the HR1 property. The effluent from the

system is discharged into the brine pond and then re-injected into the geothermal brine fluid injection wells.

Asbestos-Containing Building Materials

The potential for asbestos-containing materials (ACM) existing at the HR1 property was determined to be very low due to the recent age (constructed in 2011) of the subject property structures.

Lead-Based Paint

The potential for lead-based paint residues existing at the HR1 property was determined to be very low due recent age (constructed in 2011) of the HR1 property structures.

Radon

The HR1 property is located in Zone 3, as shown on the USEPA Map of Radon Zones indicating a predicted average indoor radon screening level of less than 2 picocuries per liter (pCi/L); therefore, no further action is required (USEPA 2018). Radon gas is not believed to be a potential hazard at the HR1 property.

4.7.2 Regulatory Setting

Federal

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) grants authority to the USEPA to control hazardous waste from start to finish. This covers the production, transportation, treatment, storage, and disposal of hazardous waste. The RCRA also sets forth a framework for the management of nonhazardous solid waste. The 1986 amendments to the RCRA enabled the USEPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

Hazardous Materials Transport Regulations

The U.S. Department of Transportation (USDOT) regulates transportation of hazardous materials between states. The USDOT Federal Railroad Administration enforces the hazardous materials regulations, which are promulgated by the Pipeline and Hazardous Materials Safety Administration for rail transportation. These regulations include requirements that railroads and other transporters of hazardous materials, as well as shippers, have and adhere to security plans and also train employees involved in offering, accepting, or transporting hazardous materials on both safety and security matters. Additionally, the Federal Hazardous Materials Transportation Law is enforced by the USDOT's Federal Highway Administration with the purpose of protecting risks to life, property, and the environment resulting from the transportation of hazardous materials.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) is a program created to implement the Clean Water Act. The SWRCB and the nine regional water boards administer NPDES to regulate and monitor discharged waters and to ensure they meet water quality standards.

Occupational Safety and Health Act (OSHA)

Congress passed the Occupational Safety and Health Act (OSHA) to assure safe and healthful working conditions for working men and women. OSHA assists states with ensuring safe and healthful working conditions and provides for research, information, education, and training in the field of occupational safety and health. The Project would be subject to OSHA requirements during construction, operation, and maintenance.

State

Title 22 of the California Code of Regulations

Hazardous Materials Defined

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency or if it has characteristics defined as hazardous by such an agency. According to Title 22, Section 66260.10, of the CCR, a hazardous material is defined as:

...A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or, (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

Chemical and physical properties that cause a substance to be considered hazardous include the properties of toxicity, ignitability, corrosivity, and reactivity (Title 22, Sections 66261.20 through 66261.24). Factors that influence the health effects of exposure to hazardous materials include dosage, frequency, the exposure pathway, and individual susceptibility. The Proposed Project would require use of small amounts of hazardous materials (such as diesel fuel, oil, and grease for heavy equipment) during construction, operation, and reclamation.

California Environmental Protection Agency

The CalEPA and the SWRCB establish rules governing the use of hazardous materials and the management of hazardous waste. Applicable State and local laws include the following:

- Public Safety/Fire Regulations/Building Codes
- Hazardous Waste Control Law
- Hazardous Substances Information and Training Act
- Air Toxics Hot Spots and Emissions Inventory Law
- Underground Storage of Hazardous Substances Act
- Porter-Cologne Water Quality Control Act

Small quantities of hazardous materials will be used and stored on site for miscellaneous, general maintenance activities that would be subject to State and local laws.

California/Occupational Safety and Health Act (OSHA)

The Division of Occupational Safety and Health (DOSH), better known as Cal/OSHA, protects workers from health and safety hazards on the job in almost every workplace in California through its research and standards, enforcement, and consultation programs.

Hazardous Materials Management Plans

In January 1996, CalEPA adopted regulations implementing a Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The six program elements of the Unified Program are hazardous waste generators and hazardous waste onsite treatment, underground storage tanks, aboveground storage tanks, hazardous material release response plans and inventories, risk management and prevention program, and Uniform Fire Code hazardous materials management plans and inventories. The program is implemented at the local level by a local agency—the Certified Unified Program Agency (CUPA). The CUPA is responsible for consolidating the administration of the six program elements within its jurisdiction.

State and federal laws require detailed planning to ensure that hazardous materials are properly handled, used, stored, and disposed of, and, in the event that such materials are accidentally released, to prevent or to mitigate injury to health or the environment.

Hazardous Materials Disclosure Program

The Hazardous Materials Disclosure Program is found within the provisions of the California Health and Safety Code, Division 20, Chapter 6.95, Article 1. CUPAs are required to implement this Hazardous Materials Disclosure Program by reporting and disclosing the storage, use, or handling of hazardous materials on a site as a strategic measure to minimize loss of life and property. In addition, Hazardous Materials Business Plans must be submitted by all businesses that handle more than a threshold quantity of hazardous materials.

California Accidental Release Prevention Program

The California Accidental Release Prevention Program (CalARP) is found within the provisions of the California Health and Safety Code, Division 2, Chapter 4.5. CalARP is implemented at the local level by CUPAs as a strategy to minimize the accidental releases of stationary substances that can cause harm to the general public and the environment. Businesses are required to develop risk management plans if more than a threshold quantity of regulated substances is handled.

California Hazardous Materials Release Response Plans and Inventory Law

The California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act) requires hazardous materials business plans to be prepared and inventories of hazardous materials to be disclosed. A business plan includes an inventory of the hazardous materials handled, facility floor plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee safety and emergency response training (Health and Safety Code, Division 20, Chapter 6.95, Article 1.).

Department of Toxic Substances Control

The DTSC has primary regulatory responsibility for the management of hazardous materials and the generation, transport, and disposal of hazardous waste under the authority of the Hazardous Waste Control Law (HWCL). Enforcement is delegated to local jurisdictions that enter into agreements with DTSC.

California's Secretary of Environmental Protection established a unified hazardous waste and hazardous materials management regulatory program as required by Health and Safety Code Chapter 6.11. The unified program consolidates, coordinates, and makes consistent portions of the following six existing programs:

- Hazardous Waste Generations and Hazardous Waste Onsite Treatment
- Underground Storage Tanks
- Hazardous Material Release Response Plans and Inventories
- California Accidental Release Prevention Program
- Aboveground Storage Tanks (spill control and countermeasure plan only)
- Uniform Fire Code Hazardous Material Management Plans and Inventories

The statute requires all counties to apply to the CalEPA Secretary for the certification of a local unified program agency. Qualified cities are also permitted to apply for certification. The local CUPA is required to consolidate, coordinate, and make consistent the administrative requirements, permits, fee structures, and inspection and enforcement activities for these six program elements within the county. Most CUPAs have been established as a function of a local environmental health or fire department.

The Office of the State Fire Marshal participates in all levels of the CUPA program including regulatory oversight, CUPA certifications, evaluations of the approved CUPAs, training, and education. The DTSC serves as the CUPA in Imperial County.

Small quantities of hazardous materials will be transported to and from the Project area and used and stored on site for miscellaneous general operations and maintenance activities.

Government Code Section 65962.5 (Cortese List)

The provisions of Government Code Section 65962.5 are commonly referred to as the Cortese List. The Cortese List is a planning document used by State and local agencies to provide information about hazardous materials release sites. Government Code Section 65962.5 requires CalEPA to develop an updated Cortese List annually, at minimum. DTSC is responsible for a portion of the information contained in the Cortese List. Other State and local government agencies are required to provide additional hazardous material release information for the Cortese List.

California Emergency Response Plan

California has developed an emergency response plan to coordinate emergency services provided by federal, State, and local governments and private agencies. Response to hazardous material incidents is one part of this plan. The plan is managed by the Governor's Office of Emergency Services, which coordinates the responses of other agencies, including CalEPA, the California Highway Patrol (CHP) and the RWQCB.

Local

County of Imperial General Plan

Both natural and man-made hazards are addressed in the County of Imperial General Plan. The Seismic and Public Safety Element also contains a set of goals and objectives for land use planning and safety, emergency preparedness, and the control of hazardous materials. The goals and objectives, together with the implementation programs and policies, provide direction for development. Table 4.7-2 analyzes the consistency of the Project with specific policies contained in the Imperial County General Plan associated with biological resources.

Table 4.7-2: General Plan Consistency

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element		
<i>Seismic and Public Safety Element</i>		
Goal 1 – Include public health and safety considerations in land use planning.	Consistent	The Project includes health and safety measures such as lighting of the facility, fire suppression, and secondary containment that would be utilized in the event of accidental releases of hazardous and acutely hazardous materials.
Goal 2 – Minimize potential hazards to public health, safety, and welfare, and prevent the loss of life and damage to health and property resulting from both natural and human-related causes.	Consistent	See above response.
Objective 2.5 – Minimize injury, loss of life, and damage to property by implementing all state codes where applicable.	Consistent	The Project would comply with California Occupational Safety and Health Administration (Cal/OSHA) regulations and standards. These requirements address numerous worker safety issues including emergency action/evacuation, personal protective equipment, first aid, bloodborne pathogens, cranes and hoists, vehicle/traffic, and chemical exposures.
Goal 3 – Protect the public from exposure to hazardous materials and wastes.	Consistent	During construction of the Project, environmental monitoring and regular routine visual inspections of the development site would be performed in conjunction with County of Imperial Building Inspection. During operations, Job Hazard Analyses (JHAs) for would be prepared to identify any additional hazards associated with a job or task prior to performance. This would provide an opportunity to evaluate whether additional measures must be taken to minimize impacts from potential hazards. In addition, the Project would comply with Cal/OSHA regulations and standards. These requirements address numerous worker safety issues including emergency action/evacuation, personal protective equipment, first aid, bloodborne pathogens,

Table 4.7-2: General Plan Consistency

General Plan Policies	Consistency with General Plan	Analysis
Conservation and Open Space Element		
<i>Seismic and Public Safety Element</i>		
		cranes and hoists, vehicle/traffic, and chemical exposures.
Objective 3.1 – Discourage the transporting of hazardous materials/waste near or through residential areas and critical facilities.	Consistent	The Project is located within an area of the County which is not in close proximity to any residences or critical facilities such as a hospital or fire station. An Emergency Response Plan (ERP) would be prepared and implemented, which will identify proper hazardous materials handling, use, and storage; emergency response; spill control and prevention; employee training; and reporting and recordkeeping. The ERP would help limit risks associated with exposure to hazardous materials, with special consideration of the residential and critical facilities in the area.
Objective 3.2 – Minimize the possibility of hazardous materials/waste spills.	Consistent	See above response for Goal 3 and Objective 3.1.
Objective 3.4 – Adopt and implement ordinances, policies, and guidelines that assure the safety of County ground and surface waters from toxic or hazardous materials and wastes.	Consistent	The Project would preserve ground and surface water quality from hazardous materials and wastes during construction, operation and decommissioning activities. The Project would protect water quality during construction through compliance with NPDES General Construction Permit, Stormwater Pollution Prevention Plan (SWPPP), which will incorporate the requirements referenced in the State Regulatory Framework and BMPs. The Project will be designed to include site design, source control, and treatment-control BMPs. The use of source control, site design, and treatment BMPs would result in a decreased potential for stormwater pollution. It is anticipated that Project decommissioning activities would be subject to similar, or more stringent ground and surface water regulations than those currently required.

4.7.3 Thresholds of Significance

In order to assist in determining whether a project would have a significant effect on the environment, the County utilizes the State CEQA Guidelines Appendix G Guidelines. Appendix G states that a project may be deemed to have an impact on hazards and hazardous materials if it would:

Threshold a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

- 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?
- Threshold c)** Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- Threshold d)** Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?
- Threshold e)** Located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area?
- Threshold f)** Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- Threshold g)** Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Please refer to **Section 6.1: Effects Found Not to Be Significant** for an evaluation of those topics that were determined to be less than significant or have no impact and do not require further analysis in the EIR.

4.7.4 Methodology

The analysis of hazardous materials evaluates materials potentially existing on the Project site and those that would be used as part of Project construction, operations and maintenance, and reclamation. Potential existing hazards were assessed based on information contained in the Phase I ESA Report for the HR1 Facility (Appendix F).

Some hazardous materials would be used on a short-term basis during construction. Others would be stored on site for use during operations or transported off site as hazardous waste. Therefore, this analysis was conducted by examining the choice and amount of chemicals to be used, the manner in which the chemicals would be used, the manner by which any hazardous materials would be transported to and from the Project area, and the way in which the materials would be stored on the Project site.

4.7.5 Project Impact Analysis

- Threshold a)** Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Construction of the Project would require the limited transport of materials deemed to be hazardous, including unleaded gasoline, diesel fuel, oil, lubricants (i.e., motor oil, transmission fluid, and hydraulic fluid), solvents, adhesives, and paint materials.

Project operations would process geothermal brine from the neighboring HR1 Facility to produce lithium hydroxide, zinc, and magnesium products which would be sold commercially. The final products would be

in a solid, powder form. In order to transport these products, they would be sealed in indestructible containers prior to being loaded on trucks.

As further described in Section 4.12 Utilities and Service Systems, Project operations would also generate solid waste through geothermal brine processing, including iron-silica filter cakes, lead sulfide, and various laboratory wastes. Any hazardous wastes generated during Project construction and operations would be collected in hazardous waste accumulation containers near the point of generation and moved daily to the contractor's 90-day hazardous waste storage area or operational hazardous material storage area located on the Project site. It is estimated that 90 percent of the filter cakes, approximately 37,602 cubic yards of iron silica, would fall below California's thresholds for soluble threshold limit concentration (STLC) and total threshold limit concentration (TTLIC) and could be disposed of within the state of California. The accumulated waste would be subsequently delivered to an authorized Class I or Class II landfill authorized to accept the waste for proper disposal.

The remaining 10 percent, or approximately 4,178 cubic yards, would exceed these standards and would be trucked to the Copper Mountain Landfill located at 34853 East County 12th Street in Wellton, Arizona, approximately 96 miles southeast of the Project site. Additionally, approximately every three years the Project facility would be shut down for about three weeks to complete a facility cleaning in alignment with the HR1 plant cleaning. This process would remove mineral scale from Project plant piping. The scale removed during this process has the potential to exceed STLC and TTLIC 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 truck loads have needed to go to Nevada. The implementation of the Proposed Project would not increase the amount of solid waste needing to go out of state.

Thus, during construction and operations of the Project, hazardous materials would be transported to and from the Project site. Traffic barriers would protect piping and tanks on the adjacent HR1 site from potential traffic hazards. The Applicant would be required to follow all applicable federal, State, and local laws and regulations. Further, transportation would be subject to licensing and inspection by the California Highway Patrol. With adherence to the regulatory measures and requirements for hazardous materials, impacts would be less than significant.

Threshold b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

During construction and operation of the Project, hazardous materials would be stored in chemical storage containers. Secondary containment would be provided in all petroleum hydrocarbon and hazardous material storage areas. In general, all areas where hazardous materials are stored would have concrete ponds, be bermed, or have curbs in order to prevent accidental releases. The Applicant would develop and implement a SWPPP and a Hazardous Materials Business Plan (HMBP) that would include procedures for the following: hazardous materials handling, use, and storage; emergency response; a spill prevention control and countermeasure (SPCC) plan; employee training; and reporting and recordkeeping.

All personnel working with chemicals would be trained in proper handling and emergency response to chemical spills or accidental releases. Adherence to applicable Cal/OSHA regulations and standards, JHAs for each job or task, safety showers and eyewash stations, and protective pipeline design and detailed inspection routine would ensure the proper storage and handling of hazardous materials and would

protect the workforce during construction and operation of the Project. Therefore, impacts would be less than significant.

Threshold d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?

According to the EnviroStor, GeoTracker, EnviroMapper, and Well Finder databases, the Project would not be located on a site that is included on the Cortese List, a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The Project components would not be located near known hazardous waste sites or noncontaminated permitted facilities, including gas stations, underground storage tanks, and land disposal sites (DTSC 2021; SWRCB 2021; USEPA 2021; DOC 2021). RECs were identified within 1 mile of the HR1 site, thus RECs are located within 1 mile of the Project site. The Phase I ESA determined that evaporite deposits containing potential hazardous substances have potential to be located around the abandoned carbon dioxide wells (mud pots) southwest of the Project site. The chemical characteristics of the deposits are unknown. However, no RECs are located within the Project site. Additionally, the Phase I ESA revealed de minimis conditions or environmental concerns in connection with the HR1 property. Impacts associated with hazardous materials on the Project site would be less than significant.

4.7.6 Cumulative Impacts

Cumulative impacts are defined in CEQA as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (CEQA Guidelines Section 15355). Stated in another way, “a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing relating impacts” (CEQA Guidelines Section 15130 [a][1]).

The geographic scope of the cumulative setting for hazards and hazardous materials is a 1-mile radius from the geographical center point of the Project site. One mile is the standard ASTM standard search distance for hazardous materials. This geographic scope encompasses an area larger than the Project area and provides a reasonable context wherein cumulative projects in the vicinity of the Proposed Project could affect hazards and hazardous materials. Based on Table 3.0-1: Related Projects in Chapter 3.0, Environmental Setting, no other projects from the cumulative projects list are within the geographic scope.

The Project would involve the storage, use, disposal, and transport of hazardous materials to varying degrees during construction and operations. Accidental release of hazardous materials can be mitigated to less than significant levels through compliance with various federal, State, and local laws, regulations, and policies regarding transport, storage, and use of hazardous materials. Therefore, the Project’s contribution to cumulative hazardous materials impacts is considered less than cumulatively considerable.

4.7.7 Mitigation Measures

No mitigation measures are required, as all Project impacts regarding hazards and hazardous materials are less than significant.

4.7.8 Level of Significance After Mitigation

No mitigation measures are required; impacts related to hazards and hazardous materials would remain less than significant.