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<b>Project Title:</b>	Gem Energy Storage Center
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<b>Document Title:</b>	Section 5_14_Waste Management_Gem Energy Storage Center
<b>Description:</b>	This section is designed to communicate the expected potential effects on human health and the environment from nonhazardous and hazardous waste generated at the Gem Energy Storage Center ("GESC" or the "Project"). The GESC for reference is a 500 MW Advanced Compressed Air Energy Storage (A-CAES) system in unincorporated Kern County, approximately 1 mile north of Willow Springs, CA as described in Section 2, Project Description. The Project will incorporate an Environmental and Sustainability Policy, that will reflect best economical available practices through the life cycle of the Project.
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## 5.14 Waste Management

This section is designed to communicate the expected potential effects on human health and the environment from nonhazardous and hazardous waste generated at the Gem Energy Storage Center (“GESC” or the “Project”). The GESC for reference is a 500 MW Advanced Compressed Air Energy Storage (A-CAES) system in unincorporated Kern County, approximately 1 mile north of Willow Springs, CA as described in Section 2, Project Description. The Project will incorporate an Environmental and Sustainability Policy, that will reflect best economical available practices through the life cycle of the Project.

Section 5.14.1 describes project site investigations and the waste and waste streams that the Project will be generate. Section 5.14.2 describes the Project’s environmental analysis in terms of waste and waste disposal sites. Section 5.14.3 discusses potential cumulative effects. Section 5.14.4 describes mitigation measures. Section 5.14.5 presents laws, ordinances, regulations, and standards (LORS) that apply to the generated waste. Section 5.14.6 lists the agencies that have jurisdiction over the generated waste and specifies whom to contact in those agencies. Section 5.14.7 describes permits required for generated waste and a schedule for obtaining those permits, and Section 5.14.8 provides the references used to prepare this subsection.

### 5.14.1 Affected Environment

This subsection discusses the condition of the approximate 71-acre site and the potential need to remove or otherwise treat contaminated soil or groundwater at the site. Additionally, this section identifies the various nonhazardous and hazardous waste streams for Project construction, operation, and decommissioning phases. The pre-construction and construction phases include mobilization, site preparation, construction, and facility testing and start up activities.

#### 5.14.1.1 Site Investigations

Existing site conditions were captured in a Phase I Environmental Site Assessment (ESA) conducted in July 2021 by Golder Associates Inc. for GESC (Golder 2021). Appendix 5.14A contains the Phase I ESA for GESC. The ESA was conducted in accordance with methods prescribed by the American Society for Testing and Materials (ASTM) document entitled “*Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process (Designation: E 1527-13)*.”

The Phase I ESA conforms with the scope and limitations of ASTM Practice E1527 of approximate address 8684 Sweetser Road, Rosamond, CA 93566 (the proposed GESC location). The Phase I ESA report concluded that *the assessment revealed no evidence of recognized environmental conditions in connection with the Project location or property (Golder 2021)*.

#### 5.14.1.2 Project Waste Generation

This section will identify nonhazardous waste, hazardous waste, and wastewater that the Project will generate during facility pre-construction, construction, operation, and decommissioning phases.

##### 5.14.1.2.1 Pre-Construction and Construction Waste Streams

During the construction phases, GESC will generate nonhazardous and hazardous waste. As discussed in Section 2, Project Description, the construction of the generating facility from site preparation and grading to commercial operation will require approximately 64 months, or 5 years. Table 5.14-1 presents a summary of anticipated waste streams created by construction activities. The quantities listed in Table 5.14-1 are estimates and are subject to change based on minor design modifications or market conditions. Section 5.14.4 discusses mitigation measures that detail waste management methods for waste streams described herein for construction phase.

**Nonhazardous Solid Waste:** Based on initial design estimates, the following describes the nonhazardous solid wastes generated from the construction phases of GESC:

- **Paper, Wood, Glass, Insulation and Plastics:** Design estimates indicate that GESC construction will generate approximately 5,500 tons of scrap wood, steel, glass, plastic, paper, calcium silicate, insulation, and mineral wool insulation waste per year. This category includes packing materials, waste lumber, insulation, and empty nonhazardous chemical containers from construction activities.
- **Concrete:** Construction activities are anticipated to generate approximately 700 tons of excess concrete. GESC will attempt to recycle concrete on site or offsite as clean fill.
- **Metal:** Construction will generate approximately 600 tons of metal, welding/cutting operations, packing materials, and empty nonhazardous chemical containers. Copper, aluminum, and special alloy waste also falls within this category.
- **Soil and Bedrock:** The proposed project requires several excavation activities to create underground caverns, a reservoir, and a stormwater retention pond(s). The cavern will include four 8-foot diameter shafts and one 4-foot diameter shaft all approximately 2,000 feet deep.
  - GESC estimates that collectively, 8-foot diameter shaft drillings leading to the cavern will require 19,000 cubic yards of cuttings to be removed. The estimated cuttings will be in the form of a dewatered slurry sludge.
  - GESC estimates that 1,100,000 cubic yards of waste rock will be excavated from construction of the underground cavern. The storage cavern will be constructed at a target depth of 1,970 feet, or 600 meters, below ground level.
- **Wastewater:** Waste streams from wastewater will come from sanitary waste, excavation water, stormwater, hydrotest water, equipment washdown water and dewatering activities from general construction activities. Approximately 1,350,000 gallons of used water from testing equipment and piping integrity. The water used to test equipment and piping is referred at hydrotest water.
- **Hazardous Waste:** GESC anticipates that construction will generate the following hazardous waste materials:
  - 950 empty hazardous packaging materials and containers of various sizes.
  - 4,700 pounds of waste oil filters from various machines and heavy equipment.
  - 39,000 gallons of waste oil.
  - 4,200 pounds of oily rags and sorbents used to clean small spills or wipe down oily equipment.
  - 6,200 gallons of solvents, detergents, glycols, and refrigerants including paint and adhesives for construction and startup activities.
  - Approximately 600 spent lead acid batteries and 1,500 pounds of spent alkaline batteries used for various pieces of equipment.
  - Pipe cleaning and flushing will generate approximately 20,000 gallons of passivating and chemical cleaning waste.

**Table 5.14-1: Potential Wastes Generated during Construction**

Waste	Origin	Composition	Classification	Disposal	Estimated Quantity Surface	Estimated Quantity Cavern	Estimated Quantity Total
<b>Nonhazardous Solid Waste</b>							
Scrap wood, steel, glass, plastic, paper, calcium silicate, insulation mineral wool	Construction waste	Normal refuse	Nonhazardous	Recycle and/or dispose of at Class II or III landfill	4,000 Tons	1,500 Tons	5,500 Tons
Concrete Waste	Construction	Solids	Nonhazardous	Recycle and/or dispose of at Class II or III landfill	400 Tons	300 Tons	700 Tons
Scrap metals	Construction	Parts, wire, and containers	Nonhazardous	Recycle and/or dispose of at Class II or III landfill	500 Tons	100 Tons	600 Tons
Soil and Bedrock	Excavation and grading cuttings	Subsurface soil and bedrock	Nonhazardous	See section 5.14.2.3.1	0 Ton	1,100,000 cubic yards	1,100,000 cubic yards
<b>Wastewater</b>							
Sanitary Waste	Portable toilet holding tanks	Water	Nonhazardous liquid	Remove by contracted sanitary service	2,125 gallons/day	139,440 gallons/total	--
Hydrotest water	Testing equipment and piping integrity	Water	Hazardous or nonhazardous liquid	Sample and characterize - manage accordingly and dispose of appropriately offsite	1,350,000 gallons	0	1,350,000 gallons

Waste	Origin	Composition	Classification	Disposal	Estimated Quantity Surface	Estimated Quantity Cavern	Estimated Quantity Total
<b>Hazardous Waste</b>							
Empty hazardous material containers	Construction	Drums, containers, totes	Hazardous and nonhazardous solids	Dispose of containers < 5 gallon as normal refuse. Return containers >5 gallons to vendors for recycling or reconditioning	650 Each	300 Each	950 Each
Spent welding materials (welding rods, wire and grinding wheels, etc.)	Construction	Solids	Hazardous	Dispose of at Class I landfill	16,000 lbs.	4,000 lbs.	20,000 lbs.
Waste oil	Construction equipment and vehicles, lube oil and flushes	Hydrocarbons	Non-RCRA hazardous liquid	Recycle or dispose of at a permitted TSD facility	30,000 gal	9,000 gal	39,000 gal
Waste oil filters	Construction equipment and vehicles	Solids	Hazardous	Recycle at permitted TSD facility	3,200 lbs.	1,500 lbs.	4,700 lbs.
Oily rags, oil sorbent excluding lube oil flushes	Cleanup of small spills	Hydrocarbons	Hazardous	Recycle or dispose of at a permitted TSD facility	3,200 lbs.	1000 lbs.	4,200 lbs.
Solvents, detergents, glycols, and refrigerants, paint, and adhesives	Maintenance	Solvents	Hazardous	Recycle at permitted TSD facility	4,000 gallons	2,200 gallons	6,200 gallons

Waste	Origin	Composition	Classification	Disposal	Estimated Quantity Surface	Estimated Quantity Cavern	Estimated Quantity Total
Spent lead acid batteries and electrical fuses	Equipment	Heavy metals	Hazardous	Store no more than 10 batteries (up to 1 year), recycle offsite	100 Each	500 Each	600 Each
Spent alkaline batteries	Equipment	Metals	Universal waste solids	Recycle or dispose of offsite at Universal Waste Destination Facility	500 lbs.	1,000 lbs.	1,500 lbs.
Passivating and chemical cleaning waste	Pipe cleaning and flushing	Water	Hazardous or nonhazardous liquid	Sample and characterize - manage accordingly and dispose of appropriately offsite	17,000 gallons	3,000 gallons	20,000 gallons
Controlled Waste Streams	Inerts/explosives packaging	Controlled Substance	Hazardous	Recycled or disposed by certified waste hauler	20 lbs.	180 lbs.	200 lbs.

Source: Hydrostor and TWD 2021

### 5.14.1.2.2 Operation Waste Streams

Section 2, Project Description includes a detailed description of the design, construction, and operations of GESC. The proposed project will be a 500-MW A-CAES facility and will consist of:

- 1) Using off-peak or surplus electricity from the grid to operate air compressors to create high pressured compressed air
- 2) Collecting heat from compression air and storing it in a thermal management system
- 3) Storing air in purpose-built underground storage cavern where hydrostatic compensation is used to maintain the system at a near constant air pressure during operation
- 4) Hydrostatic pressure forces air back to the surface where it is recombined with the stored heat and expanded through turbine generators to generate electricity on demand.

The operation of GESC is anticipated to generate nonhazardous and hazardous waste. Although the primary waste stream will be nonhazardous, the potential exists for varying quantities of hazardous waste to be generated on a periodic basis. Table 5.14-2 presents a summary of potential wastes generated during GESC operations. Section 5.14.4 discusses the mitigation measures that detail waste management methods for waste streams described herein for GESC's operational phase.

**Table 5.14-2: Potential Wastes Generated during Operations**

Waste	Origin	Composition	Classification	Disposal	Estimated Quantity
<b>Nonhazardous solid waste</b>					
Air-stream filters	Compressor inlet filters, turbine inlet filters	Paper, dust, particulate atmospheric pollution	Nonhazardous	Disposed of by certified waste hauler	23,100 lbs. per year
Spent activated carbon filters	Water Treatment system	Spent carbon, plastic, water contaminants	Nonhazardous	Disposed of by certified waste hauler	1,000 lbs. per year
Ultrafiltration membrane	Water treatment system	Composite polyamide, plastic, water contaminants	Nonhazardous	Disposed of by certified waste hauler	1,000 lbs. per year
Reverse osmosis membrane	Water treatment system	Composite polyamide, plastic, water contaminants	Nonhazardous	Disposed of by certified waste hauler	1,200 lbs. per year
Gas contact membrane	Water treatment system	Polypropylene fibre, plastic	Nonhazardous	Disposed of by certified waste hauler	20 lbs. per year

Waste	Origin	Composition	Classification	Disposal	Estimated Quantity
Cartridge filters	Water treatment system and HVAC systems	Polypropylene, plastic	Nonhazardous	Disposed of by certified waste hauler	500 lbs. per year
Manganese Greensand Filters	Water treatment system	Glauconite greensand, plastic	Nonhazardous	Disposed of by certified waste hauler	6,000 lbs. per year
Small office Operations	Incidental office waste	Paper, plastics, misc. solid waste	Nonhazardous	Disposed of via waste hauler	8 cubic yards per week
<b>Wastewater</b>					
Industrial wastewater	Oily water waste tanks, interceptor tank solids, process floor drains, maintenance activities	Compressor washwater waste, oily wastewater from equipment leaks	Nonhazardous	Wastewater placed in holding tank and trucked offsite by privately owned industrial wastewater processor	4,000 gallons per week
Sanitary	Facility bathrooms	Solid and Liquid sanitary waste	Nonhazardous	Septic Tank (trucked away) and leach field	788,400 gallons per year
<b>Hazardous waste</b>					
Lubricating and insulating oil	Maintenance from turbomachinery, lubricating oil systems and oil-filled transformers; small leaks and spills	Hydrocarbons	Hazardous	Cleaned up using sorbent and rags – disposed of by certified oil recycler	13,500 gallons per year
Lubricating oil filters	Turbomachinery lubricating-oil filters	Paper, metal, and hydrocarbons	Hazardous	Recycled or disposed of by certified oil recycler	2,000 lbs. per year
Oily rags	Maintenance, wipe-down of equipment etc.	Hydrocarbons and cloth	Hazardous	Recycled or disposed of by certified oil recycler	3,000 lbs. a year
Oil sorbents	Cleanup of small spills	Hydrocarbons	Hazardous	Recycled or disposed of by certified oil recycler	400 lbs. a year
Controlled Waste Streams	Smoke detectors, instrumentation, fire extinguishers	Controlled Substance	Hazardous	Recycled or disposed by certified waste hauler	1000 lbs. over the life of the project



**Nonhazardous solid waste:** Waste streams generated during operations were estimated by the Applicant and consist of the following:

- **Compressor and Turbine Inlets.** Operation of the compressor and turbine inlets are estimated to collectively generate 23,100 pounds of air-stream filters per year.
- **Water Treatment System.** Operation of the water treatment system will generate several waste solid waste streams including 1,000 pounds of spent activated carbon filters per year, 1,000 pounds of ultrafiltration per year, 1,200 pounds of reverse osmosis membranes per year, 20 pounds of gas contact membrane per year and 15 pounds of cartridge filters per year.
- **Small office operations.** This waste stream will generally consist of empty containers, packaging from shipments refuse from small office operations, and other miscellaneous solid wastes. The applicant estimates that approximately 8 cubic yards of small office waste will be generated per week.
- **Maintenance.** Periodic maintenance operations may result in the generation of small metal or electrical materials that require disposal.

**Nonhazardous wastewater:** Section 2, Project Description, Appendix D includes a water mass balance diagram that illustrate the expected waste streams and describe waste stream flow rates. The proposed project has been engineered for maximum collection of wastewater streams to be recycled onsite by water treatment systems or collected in tanks for ultimate disposal by third party vendors. A full description of water use and storage is discussed in Section 5.15, Water Resources.

- **Water Treatment.** Water intended for the reservoir will undergo a filtration and then treatment during the first fill. Water required for semi closed-loop process systems will be made up by reservoir water undergoing additional filtration and water treatment. As part of this treatment there will be a form of brine which will be discharged into the stormwater collection ponds and evaporated.
- **Portable Water.** Portable water will be truck to GESC and stored in a portable water holding tank. Potable water will be used for bathrooms, showers, and kitchen facilities.
- **Equipment washing.** Turbine combustion generator equipment will require washing. The GESC facility will not have a practice of washing down any equipment with oily residues.
- **Stormwater.** The project site will be developed so that no industrial stormwater is discharged offsite. Industrial stormwater will be collected by perimeter culverts and directed to onsite retention ponds to be retained for future site use or evaporated. A thorough discussion on anticipated stormwater is discussed in Section 5.15, Water Resources.
- **Occasional wastewater streams.** Equipment leaks within the building as well as other miscellaneous wastewater streams will occur. Mitigation measures for handling these types of wastewater streams are presented in 5.14.4.2.1
  - The maintenance shop will primarily be operated as a dry shop. Wastewater from the shop will be collected into a holding tank. Once full, a third-party vendor will be responsible with transportation and water disposal at a permitted facility.

**Hazardous waste.** Waste streams generated during operations were estimated by the Applicant and consist of the following:

- **Lubricating and insulating oil.** Maintenance from turbomachinery and lubricating activities for oil systems and oil-filled transformers will all generate lubricating and insulating oil waste. On occasion, small leaks or spills may also generate lubricating or insulating oil waste. The Applicant estimates 13,500 gallons will be generated during operations.
- **Lubricating oil filters.** Approximately 2,000 pounds of lubricating oil filters waste will be generated from operation of the lubricating turbomachinery per year.
- **Oily rags.** General maintenance around the GESC will generate oily rags. Depending on the maintenance activities that occur in one year, it is estimated that 3,000 pounds of oily rag waste will be generated.
- **Oil sorbents.** If a spill or leak were to occur, oil sorbents would be used and would require proper disposal. The Applicant estimates that up to 400 pounds a year of oil sorbents waste could be generated from operations.

### 5.14.2 Environmental Analysis

The following section describes the project's environmental analysis in terms of waste and waste disposal sites.

#### 5.14.2.1 Significance Criteria

Environmental analysis of the GESC project for waste management is in accordance with the criteria from the California Environmental Quality Act (CEQA) Guidelines Section 15002[g], Appendix G. This Section evaluates GESC against the following criteria:

- Located on a site that is included on a list of hazardous materials sites (Cortese List) compiled pursuant to Government Code Section §65962.5 and, as a result, will create a significant hazard to the public or the environment.
- Have solid waste disposal needs beyond the capacity of appropriate landfills to accommodate them. The risks or hazards posed by the transportation of hazardous materials, including hazardous wastes, are described, and analyzed in Section 5.5, Hazardous Materials Handling.

#### 5.14.2.2 Cortese List

Government Code §65962.5 was originally enacted in 1985 and established a list consisted of sites bearing on the local permitting process as well as on compliance with the CEQA. Although it refers to a list, modern uses of the internet have propelled responsible organizations to make information web accessible (CalEPA 2021a). For those requesting a copy of the Cortese List, CalEPA now refers users to the following agencies where listed sites and associated information is available:

- List of Hazardous Waste and Substances sites from the Department of Toxic Substances Control (DTSC) Envirostor database
- List of Leaking Underground Storage Tanks from the State Water Board's GeoTracker database
- List of solid waste disposal sites identified by Water Board with waste constituents above hazardous waste levels outside the waste management unit
- List of "active" Cease and Desist Orders and Cleanup Abatement Orders

- List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of Health and Safety Code, identified by DTSC.

An examination of the each of the online accessible databases or lists was conducted. It was determined that there are no sites currently on the Cortese List within 1,000 feet of the GESC site (CalEPA 2021a). The closest listed site is the Osage Industries, 60<sup>th</sup> Street West Site. Although there is no mailing address, the location is described on the Envirostor DTSC website as WEST T9N, R13W, S10 SE CORNER, Rosamond CA 93560, with approximate coordinates of 34°52'59.57"N, 118°14'0.07"W. The Osage Industries site is approximately 3.04 miles west from the center of the proposed GEM site. Thus, it is highly unlikely that any impacts will result from Cortese-listed properties, nor will the Gem site present a significant hazard to the public or the environment.

### 5.14.2.3 Solid Waste Disposal

The following subsections assess the capacity of identified landfills for recycling and disposing of nonhazardous and hazardous waste produced by GESC. Section 5.12, Traffic and Transportation discusses the handling and transportation of hazardous materials and waste.

#### 5.14.2.3.1 Nonhazardous Waste Disposal

GESC will dispose of nonhazardous waste, including construction waste, municipal waste, and operational garbage at a Class III landfill. When practical, nonhazardous waste will be recycled to the extent possible. What cannot be recycled will be disposed of at any of the permitted landfills discussed below. Information about solid waste facilities, operations, and disposal sites was obtained from the CalRecycle Solid Waste Information System (CalRecycle 2021b).

#### Solid Waste Disposal

During operation, the Applicant has indicated that all solid waste will not rely on municipal resources and will employ third parties to properly recycle and dispose of solid waste. There are four facilities within a 50-mile radius of the proposed project location. Table 5.14-3 presents a summary of solid waste disposal facilities near GESC.

**Table 5.14-3 Solid Waste Disposal Facilities in the Vicinity of GESC**

Landfill / Transfer Station	Location	Class	Permitted Capacity (cubic yards)	Remaining Capacity (cubic yards)	Permitted Throughput (tons per day)	Estimated Closure Date*	Violation of Minimum State Standards Noted*
Tehachapi Sanitary Landfill	12001 Tehachapi Blvd, Tehachapi, CA 93561	III	4,000,000	522,298	1,000	6/1/2020	None
Mojave-Rosamond Sanitary Landfill	400 Silver Queen Road, Mojave, CA 93501	III	78,000,000	76,310.30	3,000	12/31/2123	None

Landfill / Transfer Station	Location	Class	Permitted Capacity (cubic yards)	Remaining Capacity (cubic yards)	Permitted Throughput (tons per day)	Estimated Closure Date*	Violation of Minimum State Standards Noted*
Boron Sanitary Landfill	11400 Boron Ave, Boron, CA 93516	III	1,057,000	191,380	200	1/1/2048	Yes (May 1989, June 1992)
Tehachapi Recycling, Inc	416 North Dennison Road, Tehachapi, CA 93561	NA	NA	NA	850	NA	Yes (September 2015)

TP = Transfer/Processing  
 Source: CalRecycle SWIS Database

### Excavated Soil and Bedrock

Construction of the Gem project would result in the excavation of approximately 1.1 million cubic yards of waste rock that is expected to be of aggregate quality. Where feasible, subsurface material will be used for grading the project site. As a result, the project intends to recycle approximately 50 percent of the excavated material for site grading and construction of the earthen berms for the surface compensation reservoir.

An evaluation was conducted and included reviewing online data and aerial imagery to identify off-site disposal facilities within a 60-mile radius of GESC. There may be unknown permitting restrictions, environmental impact concerns, or political concerns that will prevent identified sites from agreeing to accept the waste rock. This evaluation did not include non-commercial private landowners. *Please note that the sites and owners noted in this memorandum have not provided their consent for the Applicant to list them on permit applications or the submittal of other formal, external project documents.*

Table 5.14-4 lists eight potentially viable options for disposing of the estimated volume of waste rock. Acceptance of the waste rock for all of the viable sites will be dependent upon the waste rock being suitable for processing into a marketable aggregate product.

**Table 5.14-4 Viable Excavated Soil and Bedrock Disposal Locations in the Vicinity of GESC**

Disposal Facility	Location	Activity	Approximate Hauling Distance (miles)
Granite Construction – Big Rock Plant	Llano, CA	Active	49
Granite Construction – Littlerock	Littlerock, CA	Active	38
Hi Grade Materials	Palmdale, CA	Active	38
Holliday Rock Quarry	Mojave, CA	Active	7

Disposal Facility	Location	Activity	Approximate Hauling Distance (miles)
Holliday Rock Quarry	Littlerock, CA	Active	39
Ridgeline Mine	Mojave, CA	Active	6
Rio Tinto – Boron Mine	Boron, CA	Active	48
Vulcan Materials – Big Rock Creek	Pearblossom, CA	Active	49
Waste Management – Lancaster Landfill and Recycling Center	Lancaster, CA	Active	20

The following describes the facility characteristics for the three locations identified in Table 5.14-4:

- **Granite Construction – Big Rock Plant.** This is an operational aggregates plant that appears to have ample space, and likely has the capacity to accept the proposed volume of waste rock. It is Golder’s understanding that this site primarily works with alluvial material, and therefore may have limited crushing facilities. More thorough inquiries with the owner would be required to verify.
- **Hi Grade Materials.** This is an operational aggregates plant that appears to have ample space and likely has the capacity to accept the proposed volume of waste rock. It is Golder’s understanding that this site primarily works with alluvial material, and therefore may have limited crushing facilities. More thorough inquiries with the owner would be required to verify.
- **Holliday Rock Quarry – Mojave.** This is an operational aggregates plant that appears to have ample space and likely has the capacity to accept the proposed volume of waste rock.
- **Holliday Rock Quarry – Palmdale.** This is an operational aggregates plant that appears to have ample space and likely has the capacity to accept the proposed volume of waste rock. It is Golder’s understanding that this site primarily works with alluvial material, and therefore may have limited crushing facilities. More thorough inquiries with the owner would be required to verify.
- **Ridgeline Mine.** This is an operational mine that we understand has expressed interest to Hydrostor directly, regarding the acceptance of the proposed volume of waste rock.
- **Rio Tinto Boron Mine.** This is an operational mine that appears to have ample space and likely has the capacity to accept the proposed volume of waste rock. However, acceptance and storage of the waste rock may require additional environmental permitting.
- **Vulcan Materials – Big Rock Creek.** This is an operational aggregates plant that appears to have ample space and likely has the capacity to accept the proposed volume of waste rock.
- **Waste Management Lancaster Landfill and Recycling Center.** This is an operational landfill that appears to have ample space and likely has the capacity to accept the proposed volume of waste rock. It is Golder’s understanding that the landfill has a planned 80-acre expansion. It is possible that this facility might consider stockpiling waste rock for future use as an aggregate product or for a storage fee. More thorough inquiries with the owner would be required to verify.

The Applicant estimates that the remaining 50 percent of excavated material (approximately 550,000 cubic yards) will be aggregate quality and will be hauled offsite. The preferred location is Ridgeline Materials, LLC quarry located approximately 6 miles north on Tehachapi-Willow Springs Highway where it would be repurposed for beneficial uses. Additional recycling or disposal alternatives for excavated rock are discussed in Section 6, Alternatives.

#### 5.14.2.3.2 Hazardous Waste Disposal

Disposal of hazardous waste, including construction waste and operational waste, will be disposed of at a permitted be recycled or disposed of at a permitted treatment, storage, and disposal (TSD) facility. Hazardous waste generated at the GESC facility will not be stored on site for more than 90 days following its generation date and will be transported by a transported by a permitted hazardous waste transporter. Depending on quality, hydrotest water, wastewater, and excavated soil will be disposed at a facility appropriately licensed to accept the waste product.

California has two active Class I landfill facilities that accept hazardous waste: Waste Management Kettleman Hills Landfill and Clean Harbor's Buttonwillow Landfill (DTSC 2021a). Class I landfill facilities vary considerably in what they can do with the hazardous waste they receive. Some waste disposal facilities can only store waste, some can treat the waste to recover usable products, and others can dispose of the waste by incineration, deep-well injection, or landfilling. The State of California does not permit the incineration and deep-well injection disposal of these materials. The following is a summary of the Class I landfills available for disposal in California:

- **Waste Management Kettleman Hills Landfill.** This landfill is on a 1,600-acre parcel that has 499 acres of permitted land for management of federal and state-listed hazardous wastes and municipal solid wastes. According to the 2003 Final Combination Permit, this landfill accepts Class I and II waste, including all hazardous waste except radioactive, medical, and unexploded ordnance. A comprehensive list of all hazardous waste accepted is included in Appendix A of the Kettleman Hills Landfill Part B permit. Based on the aforementioned list, all anticipated hazardous waste generated by GESC is accepted by Kettleman Hills Landfill (DTSC 2021b). A total of 17 landfill units and 16 surface impoundments are currently operational. The Kettleman Hills facility currently has three operational landfills (1) B-17 is permitted to have a 17.8 million cubic yard capacity Class II/III (2) B-18 is permitted to have a 15.6 million cubic yard capacity classified as a Class I/II and (3) B-19 is a permitted 7.7 million cubic yard capacity classified as a Class II/III landfill. According to a 2021 Statement of Qualifications for Kettleman Hills Landfill, 14.5 million cubic yards is available at B-17, 3.45 million cubic yards is available at B-18 and 375,000 cubic yards is available at B-19 landfill (Verdin 2021). Permit renewal for the facility is currently being reviewed by the Department of Toxic Substance Control and is expected to have an updated closure date of January 2055.
- **Clean Harbors Buttonwillow Landfill.** This landfill is permitted at 13.25 million cubic yards and can accept 10,500 tons per day (CalRecycle 2021b). The landfill is permitted to accept waste until 2040 (CalRecycle 2021b). Buttonwillow has been permitted to manage a wide range of hazardous wastes, including Resource Conservation and Recovery Act (RCRA) hazardous wastes, California hazardous waste, and nonhazardous waste for stabilization treatment, solidification, and landfill. The landfill can handle waste in bulk (solids and liquids) and in containers. Typical waste streams include nonhazardous soil, California hazardous soil, hazardous soil for direct landfill, hazardous waste for treatment of metals, plating waste, hazardous and nonhazardous liquid, and debris for microencapsulation (CalRecycle 2021b).

#### 5.14.2.4 Waste Disposal Summary

The Project will generate nonhazardous and hazardous waste during its construction, facility start up, testing, and operations. However, there are multiple locations that will accept anticipated waste streams generated by the GESC facility. The solid waste Class III landfills listed in Table 5.14-3 have a collective remaining capacity of over 83,000,000 cubic yards. Similarly, waste disposal needs for permitted hazardous waste and soil/bedrock is within thresholds that accepting facilities can accommodate without altering or impacting accepting facility structure. Waste generated during construction and operation of GESC alone is not expected to generate quantities of waste such that the surrounding accepting facilities cannot accommodate the additional materials. Therefore, the impact of the project on solid waste recycling, disposal capacity, and hazardous waste capacity will not be significant.

#### 5.14.3 Cumulative Effects

A cumulative impact is defined as a proposed project's incremental effect of closely related past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of the proposed project (Public Resources Code Section 21083; Title 14 California Code of Regulations, Title 14, Sections 15064 [h], 15065 [c], 15130 and 15355).

According to CalRecycle, approximately 1,560,746 tons of waste was landfilled within Kern County in 2019 (CalRecycle 2021a). This number represents waste landfilled, not recycled, transformed, exported for outside disposal or total waste generation for the county. Prior to disposal, source reduction and recycling efforts will be prioritized in operations of GESC as discussed in Section 5.14.4. Worst case scenario, if no waste can be recycled, transformed, or disposed by other means, it is estimated that 16.4 tons of nonhazardous solid waste can be landfilled per year during operations, which would only represent approximately 0.00001% of Kern County total waste landfilled. Likewise, it is estimated that 6,800 tons of non-rock, solid waste will be generated during construction and will only represent approximately 0.004% of County of Kern County total waste landfilled. All nonhazardous and hazardous landfills within the generally vicinity have sufficient landfill capacity. Therefore, anticipated waste generated by the GESC project will not result in a direct and indirect minor cumulative waste management impact to Kern County.

#### 5.14.4 Mitigation and Waste Management Methods

This section will discuss methods for managing nonhazardous and hazardous waste generated by GESC. The Project will manage the removal of all recycle and waste streams to minimize traffic impacts, inventory on site, impact of odor and rodent/pest infestation. GESC will adhere to the following hierarchical approach for both nonhazardous and hazardous waste management:

- 1) **Source reduction:** Reducing quantity of waste generated is one of the first approaches to managing waste. This could be accomplished by adopting pollution prevention methods and high-efficiency cleaning methods for all tasks conducted at GESC.
- 2) **Recycling:** If waste cannot be reduced, recycling options will be explored. Where applicable, wastes will be sent to facilities for recycling, neutralization, or reconditioning.
- 3) **Off-site disposal:** If source reduction or recycling options are not available, offsite disposal will be used.

### 5.14.4.1 Construction Phase Mitigation Measures

Requirements for handling and mitigation measures for handling waste generated during the construction phase are presented in below. Waste streams for nonhazardous and hazardous wastes generated at the proposed GESC facility during construction are presented in Section 5.14.1.2.1

#### 5.14.4.1.1 Nonhazardous Wastes Mitigation Measures

Prior to construction, best management practices to reduce waste production will be developed. The following mitigations measures have been identified:

- **Nonhazardous Solid Waste:** Nonhazardous wastes such as concrete, metal, and paper, wood, glass insulation and plastics, will be collected onsite in collection bins to limit pollution and pest infestation prior to recycle or disposal offsite. Where applicable, waste will be recycled at licensed facilities or sent back to the vendor for reconditioning. Product streams that cannot be recycled will be taken to a Class I, II or III landfill as discussed in Section 5.14.2.3.1.
- **Soil and Bedrock.** Soil and bedrock from excavation activities to create the berm, reservoir, stormwater retention ponds and cavern with associated shafts will temporarily be placed on site and recycled on site for project leveling and grading activities. Prior to disposal it will be bulk tested and categorized accordingly. Based on the results of the Phase I ESA, GESC anticipates that the quality of the excavated soil will be nonhazardous. For excavation material that cannot be used on site or recycled, aggregate quality excavation waste will be hauled off site as discussed in 5.14.2.3.1.
- **Wastewater.** Wastewater generated during construction will include sanitary waste and hydrotest water. Excavation wastewater and stormwater would also fall into this category. Depending on water quality, wastewater could be considered nonhazardous or hazardous. Prior to disposal, wastewater will be collected in bulk tanks or bins and sampled, and then classified and disposed of in accordance with appropriate legislation. Sampling and analysis of materials and waste for identification purposes shall be in accordance with the applicable EPA test method. Hazardous wastewater mitigation is discussed in Section 5.14.4.1.2. The Applicant will manage the following categories of nonhazardous wastewater as follows:
  - **Sanitary Waste:** Portable toilets will be housed on Site during construction phase. Sanitary wastewater from portable toilets will be collected in the self-contained in the toilets. The vendor of the portable toilets will be responsible of proper handling and transporting portable toilets offsite for disposal.
  - **Excavation Wastewater:** Groundwater for shaft and cavern drilling will be recycled through an above ground settling pond to allow for settlement of solids to occur. Once settled, water from settling pond will be re-used for the drilling process to the extent possible or left to evaporate. All excess wastewater that cannot be evaporated will be disposed off-site by licensed third part contractor. Prior to disposal, excavation wastewater will be tested for chemical quality.
  - **Stormwater:** Prior to the start of construction, a stormwater management permit will be obtained to outline best management practices for managing stormwater. Additional detail about stormwater management and mitigation measures are outlined in Section 5.15 Water Resources.
  - **Nonhazardous wastewater:** For all other wastewater generated, it will be managed by source reduction techniques, water conservation and reuse measures.



#### 5.14.4.1.2 Hazardous Wastes Mitigation Measures

As mentioned previously, prior to disposal, wastewater will be tested with the applicable US EPA method to determine chemical quality. If wastewaters are to be found hazardous, they will be disposed of in accordance with the Clean Water Act. Hazardous solid waste or wastewater will be placed in a certified United States Department of Transportation (USDOT) containers and disposed of at a permitted and accepting facility.

The following waste management practices will be adopted:

- Nonhazardous materials will be used whenever possible to minimize the quantity of hazardous waste generated.
- The hazardous waste will be collected in satellite accumulation containers near the points of generation.
- Before the end of each workday, hazardous waste deposited in satellite accumulation containers will be moved to a designated location on-site for hazardous waste storage.
- All hazardous waste will be contained in certified USDOT containers and labeled appropriately.
- The waste will be delivered to an authorized hazardous waste management facility before expiration of the 90-day storage limit.

The construction contractor will be the generator of hazardous construction waste and will be responsible for proper handling in compliance with all applicable federal, state, and local laws and regulations. The construction contractor will be responsible for licensing, training of personnel, accumulation limits and times and record keeping.

**Energetic Waste.** According to EPA, energetic waste includes wastes that have potential to detonate and bulk military propellants which cannot safely be disposed of through other modes of treatment and can include explosives, munitions, consumer and commercial fireworks, signal flares, hobby rocket propellants and automobile airbag propellants (EPA 2021). The Resource Conservation and Recovery Act, under the Military Munitions Rule, includes safe storage and transport regulations for energetic wastes. All energetic waste generated during GESC construction will follow all application regulations with Title 40 CFR Part 266, Subpart M.

#### 5.14.4.2 Operation Phase Mitigation Measures

Requirements for handling hazardous waste and mitigation measures during operation are described in the following sections. Section. 5.14.1.2.2 presents waste streams for nonhazardous and hazardous wastes generated from GESC's operations.

##### 5.14.4.2.1 Nonhazardous Waste Mitigation Measures

The following mitigations measures for waste streams generated during operations have been identified:

- **Nonhazardous Solid Waste:** Nonhazardous solid waste will be collected and processed for potential material recycling. All waste that cannot be recycled will be deposited at a local landfill.
- **Wastewater:** Wastewater generated during operation will include portable water use, stormwater, and equipment washing. Other occasional wastewater streams such as small equipment leaks will occur. Depending on water quality, wastewater could be considered nonhazardous or hazardous. Prior to disposal, wastewater will be collected in bulk tanks or bins and sampled, and then classified and disposed of in accordance with appropriate legislation. Sampling and analysis of materials and waste for identification

purposes shall be in accordance with the applicable EPA test method. Hazardous wastewater mitigation is discussed in Section 5.14.4.2.2. The Applicant will manage the following categories of nonhazardous wastewater as follows:

- **Sanitary:** Wastewater from portable use will be collected in a septic tank. Sanitary discharges will be hauled off-site by an approved waste-hauler.
- **Stormwater:** As discussed in 5.15, Water Resources, the project site will be developed so that no industrial stormwater is discharged offsite. All treatment systems, with the exception of the cooling and thermal fluid loops, will be indoors and will not likely be point sources for stormwater runoff. Outside, industrial stormwater will be collected by perimeter culverts and directed to the onsite retention ponds to be retained for future site use or evaporated.
- **Industrial Water:** Wastewater generated from washing activities will be processed through an oil/water separator and collected in holding tanks, one for each combustion turbine generator. Once full, a licensed third-party vendor will be responsible with transportation and water disposal at a permitted facility. The GESC facility will not have a practice of washing down any equipment with oily residues. Equipment that has oily residues will be cleaned with rags and sorbents. After the cleaning, the oily rags and sorbents will be properly stored, manifested, and disposed of by licensed disposal companies in the regulatory-required time frames. Wastewater from Reverse Osmosis (RO) backwash system will be in the form of a brine and will be discharged into the collection ponds where it will be evaporated.
- **Occasional wastewater streams:** Wastewater (or other wastes) from occasional small equipment leaks within the building will be retained in the building and collected for testing and disposal.

#### 5.14.4.2.2 Hazardous Waste Mitigation Measures

To avoid potential effects on human health and the environment from handling and disposing of hazardous wastes, GESC will properly record, label, store, package, and implement approved disposal procedures. The Applicant estimates that GESC will not generate hazardous wastes in excess of 100 kilograms per month. As such, GESC will be considered as a very small quantity generator (VSQGs) as defined part 261 of title 40 of the Code of Federal Regulations. A very small quantity generator is not subject to the requirements of parts 124, 262 (except §§262.10 through 262.14) through 268, and 270, however the following would apply if volumes ever exceeded VSQGs criteria:

- GESC will obtain a site-specific U.S Environmental Protection Agency (USEPA) identification number that will be used to manifest all hazardous waste originating from GESC. All hazardous waste will be stored on site within proper containers. Waste generated will be stored on site 90 days or less and will be transported to a facility for disposal, treatment, or recycling.
- Hazardous wastes will be accumulated at the generating facility according to the Title 22 California Code of Regulations requirements for satellite accumulation.
- Hazardous waste will be stored in designated storage areas surrounded by berms to contain leaks or spills. The bermed areas will be sized to hold the full contents of the largest single container. If outdoors and not roofed, the bermed areas will be sized for an additional volume for the rainfall associated with a 25-year, 24-hour storm event. If indoors, the containment shall be sized for an additional volume equivalent to 20 minutes of the design flow of any fire protection water. These areas will be inspected weekly.

- For each disposal, hazardous waste will be collected by a licensed hazardous waste hauler using a hazardous waste manifest. Wastes will only be transported to a permitted and authorized waste management facility. Copies of historical manifests, reports, waste analyses and other documents for the past 3 years will be kept on site and readily accessible for inspections.
- Employees will be trained in hazardous waste procedures, spill contingencies and waste minimization.
- Procedures will be developed to reduce the quantity of hazardous waste generated. Nonhazardous materials will be used instead of hazardous materials whenever practical, and wastes will be recycled whenever practical.

Specifically, hazardous waste handling will include the following practices in order to minimize quantity:

- Waste lubricating oil will be recovered and recycled by a waste oil recycling contractor.
- Spent oil filters and oily rags will be recycled.

#### 5.14.4.3 Facility Closure

Facility closure includes temporary or permanent closure that could be caused by various reasons. Temporary closure is considered periods of closure longer than the time required for normal maintenance, including overhaul or replacement of small system equipment. Causes for temporary closure can include, disruption of off-peak power lines, flooding of site, damage to the site from natural disasters, such as earthquakes, floods, or storms, labor disruptions, and other traditional force majeure events. Permanent closure will consist of complete cessation of operations with no intentions of restarting operations. Permanent closure could be caused by damage of the plant beyond repair, economic conditions, or other unforeseen reasons. Handling of facility temporary and permanent closure are outline below.

##### 5.14.4.3.1 Temporary Closure

If a release of hazardous materials does not occur prior to or during a temporary closure, GESC will maintain facility security and electronic monitoring of key components on a 24-hour basis. Furthermore, GESC will notify the California Energy Commission Compliance Manager in accordance with the facility's reporting requirements. Depending on the length of shutdown necessary, as part of the best practices program that will be implemented, procedures will be developed for the orderly shutdown and lay up of the facility. The Temporary Closure Plan, discussed more in Section 2.3 Facility Closure, of Section 2, Project Description will be prepared to ensure conformance with all applicable LORS and the protection of public health and safety and the environment.

The Temporary Closure Plan, depending on the expected duration of the shutdown, could include draining all chemicals from storage tanks and other equipment, and the safe shutdown of all equipment. All wastes will be disposed of according to applicable LORS, as discussed in Section 5.14.5 of Section 5.14, Waste Management. If temporary closure is in response to a facility upset including but not limited to damage and where there is a release or threatened release of regulated substances or other hazardous materials into the environment, procedures will be followed set forth in an Emergency Management Plan (EMP).

In order to minimize impacts to the personnel, environment, and surrounding communities, the EMP will outline risk mitigation strategies, identified through a risk and hazard operability assessment. The EMP will include methods to control releases, notification of applicable authorities, identify critical response equipment, training, and investigation requirements. Applicable training records for emergency events responding to and controlling releases of hazardous materials will also be included.

Once the immediate problem involving hazardous waste is contained, temporary closure will proceed. Systems and operations commence only after the immediate emergency has been safely handled, investigation and root cause analysis has been conducted and working conditions are within Occupational Safety and Health Administration standards. In all cases the Project will maintain the appropriate level of insurance.

#### **5.14.4.3.2 Permanent Closure**

The lifespan of GESC is anticipated to be at least 50 years. When the facility is permanently closed, the handling of nonhazardous waste and hazardous waste materials will be removed from site as part of the general closure plan.

All equipment will be depressurized, shut down and isolated to protect public health and safety and the environment. The cavern will be isolated and deadheaded, and it is anticipated that the rain collection systems will be re piped and the reservoirs will be drained and decommissioned.

The plan will attempt to maximize recycling of facility components through the decommissioning of all critical equipment specifically through the draining of all systems including but not limited to Chemical storage tanks, oil reservoirs, transformer oils, thermal fluids, cooling water and septic systems. All underground tanks if any will be drained, capped, or removed in accordance with regulatory requirements.

All nonhazardous wastes will be collected and disposed of in appropriate landfills or waste collection facilities. All hazardous wastes will be disposed of according to applicable LORS. The site will be secured 24 hours per day during the GESC decommissioning activities.

#### **5.14.4.3.3 Monitoring**

Because the environmental impacts caused by construction and operation of the facility are expected to be minimal, extensive monitoring programs for hazardous materials will not be required. Generated waste, both nonhazardous and hazardous will be monitored during GESC construction in accordance with the monitoring and reporting requirements mandated by the project's regulatory permits.

#### **5.14.5 Laws, Ordinances, Regulations, and Standards**

Nonhazardous and hazardous waste handling at GESC will be governed by federal, state, and local laws. Applicable laws and regulations address proper waste handling, storage, and disposal practices to protect the environment from contamination and to protect facility workers and the surrounding community from exposure to nonhazardous and hazardous waste. Table 5.14-5 presents a summary of the LORS applicable to waste handling at GESC.

**Table 5.14-5: LORs for Waste Management**

Laws, Ordinances, Regulations and Standards	Requirements/ Applicability	Administrating Agency	Application for Certification Section Explaining Conformance
<b>Federal</b>			
RCRA Subtitle D	Regulates design and operation of nonhazardous solid waste landfills. GESC solid waste will be collected and disposed of by a collection company in conformance with Subtitle D.	CalRecycle	Sections 5.14.5.1, 5.14.4.1, 5 14.4.2.1, 5.14.1.2.2
RCRA Subtitle C	Controls storage, treatment, and disposal of hazardous waste. Hazardous waste will be handled by contractors in conformance with Subtitle C.	DTSC	Sections 5.14.5.1, 5.14.4.1, 5 14.4.2.2, 5.14.1.2.2
Clean Water Act	Controls discharge of wastewater to the surface waters of the United States	RWQCB	Sections 5.14.5.1, 5.14.4.1.1, 5.14.4.2.1
RCRA Military Munitions Rule 40 CFR Part 266, Subpart M	Safe storage and transport of energetic hazardous waste is covered under RCRA	EPA	Section 5.14.4.1.2
<b>State</b>			
CIWMA	Controls solid waste collectors, recyclers, and depositors. GESC solid waste will be collected and disposed of by a collection company in conformance with CIWMA	CalRecycle	Sections 5.14.5.2, 5.14.4.1, 5 14.4.2.1, 5.14.1.2.2
Assembly Bill 341 / State Bill 1018 -- Mandatory Commercial Recycling	Requires commercial businesses generating 4 cubic yards per week or more of solid waste to adopt recycling practices	CalRecycle	Sections 5.14.1.2, 5.14.2.3, 5.14.3, 5.14.4.1, 5.14.4.2, 5.14.4.3
Hazardous Waste Control Law (HWCL)	Controls storage, treatment, and disposal of hazardous waste. Hazardous waste will be handled by contractors in conformance with the HWCL	DTSC	Sections 5.14.5.2, 5.14.4.1, 5 14.4.2.2, 5.14.1.2.2

Laws, Ordinances, Regulations and Standards	Requirements/ Applicability	Administrating Agency	Application for Certification Section Explaining Conformance
<b>Local</b>			
Kern County General Plan - Policies for Transportation of Hazardous Materials	The commercial transportation of hazardous material, identification and designation of appropriate shipping routes will be in conformance with the adopted Kern County and Incorporated Cities Hazardous Waste Management Plan. Kern County and affected cities should reduce use of County-maintained roads and city-maintained streets for transportation of hazardous materials.	Kern County Public Health Services Department – Environmental Health Services Division	5.14.5.3.1 and Section 5.12 Traffic Management
Kern County Public Health Services – Environmental Health Services Department, Hazardous Materials Program- CUPA and various programs	Kern County Public Health Services Department – Environmental Health Services Division is the CUPA for Kern County that regulates and conducts inspections of businesses that handle hazardous materials, hazardous wastes and/or have underground storage tanks. GEM will comply with Kern County's Hazardous Materials Program requirements concerning storage and handling of hazardous materials and wastes and will also cooperate with the agency on resolution of any environmental issues at the site.	Kern County Public Health Services Department – Environmental Health Services Division	Sections 5.14.6, 5.14.7,

### 5.14.5.1 Federal LORS

There are three federal mandates that apply to GESC for proper waste handling, storage, and disposal practices.

- **Nonhazardous solid waste:** Federal involvement is limited to establishing minimum criteria that prescribe the best practicable controls and monitoring requirements for solid waste disposal facilities. RCRA 42 United States Code 6901 Subtitle D assigns responsibility for the regulation of nonhazardous waste to the states.
- **Hazardous waste:** RCRA 42 United States Code 6901 Subtitle C establishes a “cradle to grave” system of hazardous waste management by instituting controls for generation, transportation, treatment, storage, and disposal of hazardous waste. Above certain levels of waste produced, Subtitle C applies to all states and all hazardous waste generators. RCRA also establishes waste regulations for energetic wastes (explosives) in 40 CFR Part 266, Subpart M.
- **Wastewater:** EPA regulates wastewater under the Federal Water Pollution Control Act (Clean Water Act), amended in 1972.

### 5.14.5.2 State LORS

There are five state mandates that apply to the GESC facility for proper waste handling, storage, and disposal practices.

- **Nonhazardous Solid Waste.** The California Integrated Waste Management Act (CIWMA), found in Public Resources Code Sections 40000 et seq, regulates a statewide system of solid waste management. It coordinates state and local efforts in source reduction, recycling, and land disposal safety. Counties are required to submit Integrated Waste Management Plans to the state. It also explicitly outlines that hazardous waste will not be disposed along with solid waste. The GESC facility's solid waste will be collected by a company in conformance with CIWMA. If GESC generates more than 4 cubic yards or more of commercial solid waste per week, then Assembly Bill 841 / State Bill 1018 requires a recycling program. The Applicant will avail itself of opportunities provided by the franchised waste hauler and disposal companies to divert as much waste as possible from landfills and, instead, will recycle the materials.
- **Hazardous Waste.** Within the Health and Safety Code Section 25100 et seq, California outlined the HWCL to develop its own hazardous waste materials management program. HWCL includes RCRA mandates instituted in Subtitle C and D and performs essentially the same functions. The HWCL is more stringent than RCRA guidelines and classifies additional materials and liquids as hazardous. GESC will adhere to the storage, record keeping, reporting, and training requirements mandated by HWCL. Additionally, the storage, use and wastes of storage of flammable/combustible liquids will be in accordance with the California Fire Code.
- **Wastewater.** Under the Porter-Cologne Water Quality Control Act, the Regional Water Quality Control Boards (RWCQBs) regulates wastewater management. Its focus is on controlling discharge to surface and groundwaters of California.

### 5.14.5.3 Local LORS

Local agency requirements will be addressed before the construction and operation of Gem facility and will conform to all local requirements. The Gem project site is located within the jurisdiction of the Kern County General Plan and the Willow Springs Specific Plan.

#### 5.14.5.3.1 Kern County General Plan

**Solid Nonhazardous Waste.** The laws administered and enforced are primarily through the Kern County Public Works Department, Waste and Recycling Division (KCPW 2021).

**Hazardous Waste.** Gem will adhere to the Hazardous Materials Program administered by the Kern County Public Health Services, Environmental Health Division. Gem will comply with Kern County's Hazardous Materials Program requirements concerning storage and handling of hazardous materials and wastes and will also cooperate with the agency on resolution of any environmental issues at the site (KCEHD 2021). As stated above, permits for above ground storage tanks as well as other storage containers will be obtained from the Kern County Fire Prevention Office. Kern County General Plan has specific goals to reduce risk to public health from transportation of hazardous materials (KCPD 2009). The commercial transportation of hazardous material, identification and designation of appropriate shipping routes will be in conformance with the adopted Kern County and Incorporated Cities Hazardous Waste Management Plan. Kern County and affected cities should reduce use of County-maintained roads and city-maintained streets for transportation of hazardous materials. Roads and highways utilized for commercial shipping of hazardous waste destined for disposal will be designated as such

pursuant to Vehicle Code Sections 31303 et seq. Permit applications shall identify commercial shipping routes they propose to utilize for particular waste streams (KCPD 2009).

For emergency spills, the closest fire station is Kern County Fire Station No. 15 located at 3219 35th St W in Rosamond, CA. The Fire Station is 8.1 miles southwest of site and will provide first response to fire at the Gem site.

### 5.14.5.3.2 The Willow Springs Site-Specific Plan

The Willow Springs Site-Specific Plan Safety Element Chapter has outlined general safety goals to protect human life and health and promote a safe and healthful living environment. Policy 12, mitigation measure 24 addressed source control mitigation measures to prevent stormwater pollution (wastewater runoff). For facilities handling or storing hazardous or toxic chemicals, control surveys for all industrial facilities are required in order to determine point sources of stormwater pollution.

### 5.14.5.4 Codes

The following applicable codes, for design, engineering, construction of hazardous waste storage and handling systems will be in accordance with all applicable codes and standards, as follows:

- California Building Code
- California Fire Code
- Kern County Fire Code

### 5.14.6 Agencies and Agency Contacts

Federal and some state level agencies discussed in this section will all be involved in the regulation of the waste generated by the Gem project. However, the regulations are administered and enforced primarily through the designated by CalEPA's Certified Unified Program Agency, the Kern County Environmental Health Services Department (CalEPA 2021b). On their associated websites, the persons to contact for nonhazardous and hazardous waste management are listed in Table 5.14-6.

**Table 5.14-6: Agency Contacts for Waste Management**

Issue	Agency	Contact
Solid Waste and Recycling	Kern County Public Works Waste Management Division 2700 M Street, Suite 400 Bakersfield, CA 93301	Brandon Fontes Engineering & Landfill Operations (661)-862-8975
Hazardous Waste	Kern County Public Health Services Environmental Health Division -- Hazardous Materials Program 2700 M Street, Suite 300 Bakersfield, CA 93301	Bilal Korin Hazardous Waste Program (661)-862-8730



### 5.14.7 Permits and Permit Schedule

The temporary storage for disposal of hazardous wastes at Gem will be included in the Hazardous Materials Business Plan (HMBP) submitted to the Kern County Environmental Health Services Department as described in Section 5.5 Hazardous Materials. Permits obtained from the Kern County Fire Prevention Office for above ground storage tanks will be obtained prior to operations. No additional permits are required.

### 5.14.8 References Cited or Consulted

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- Verdin, Reyna. Chemical Waste Management Kettleman Hills Facility. July 20, 2021. Personal communication, email to Reyna Verdin (Environmental Protection Manager at Kettleman Hills Facility) requesting Statement of Qualifications.