

## 3.16 Hazards and Hazardous Material

This section of the Final Environmental Impact Report discusses the existing conditions at the Eagle Mountain Pumped Storage Project (Project) site, and the potential public health and environmental issues related to hazards and the use of hazardous materials associated with construction and operations proposed for the Project area. This section also describes potential wildland fire hazards. Section 3.1 Geology and Soils provides details on potential seismic and geologic hazards; Section 3.2 Surface Water contains a discussion of potential flood hazards; and Sections 3.13 Air Quality and 3.15 Greenhouse Gas Emissions provide details about air emissions.

### 3.16.1 Regulatory Setting

The following federal, state, and local laws and policies apply to the protection of public health and hazardous materials management. The proposed Project will be constructed and operated in conformance with all applicable federal, state, and local laws, ordinances, regulations, and standards (LORS).

#### 3.16.1.1 Federal

**U.S. Environmental Protection Agency (EPA)** is responsible for the implementation and enforcement of federal laws and regulations governing hazardous materials. The legislation includes the Resource Conservation and Recovery Act of 1986, which creates a framework for the management of hazardous wastes. The Superfund Amendment and Reauthorization Act of 1986 (SARA), Title III, the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, and the Clean Air Act of 1990. SARA, codified in 40 Code of Federal Regulations (CRF), Section 68.110 et seq., requires states to implement a comprehensive system to inform local agencies and the public when a significant quantity of such materials are stored or handled at a facility. The EPA is actively involved in the oversight and process for site investigations and remediation projects. The EPA has also established restrictions and treatment standards for the disposal of hazardous materials.

**The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III** and the Clean Air Act of 1990 established a nationwide emergency planning and response program and imposed reporting requirements for businesses which store, handle, or produce significant quantities of extremely hazardous materials. The SARA (codified in 40 CFR, §68.110 et seq.) requires states to implement a comprehensive system to inform local agencies and the public when a significant quantity of such materials is stored or handled at a facility. The requirements of these Acts are reflected in the California Health and Safety Code, Section 25531 et seq.

#### 3.16.1.2 State

**California Department of Toxic Substances Control (DTSC)** coordinates with the EPA to ensure implementation and enforcement of applicable laws and regulations pertaining to hazardous materials and waste disposal methods. The Hazardous Waste Control Act and

Hazardous Substance Account Act can be found under Title 22 of the California Code of Regulations (CCR).

**California Health and Safety Code Section 25534** directs facility owners, storing or handling acutely hazardous materials in reportable quantities, to develop a Risk Management Plan (RMP) and submit it to appropriate local authorities, the EPA, and the designated local Administering Agency for review and approval. The RMP must include an evaluation of the potential impacts associated with an accidental release, the likelihood of an accidental release occurring, the magnitude of potential human exposure, any preexisting evaluations or studies of the material, the likelihood of the substance being handled in the manner indicated, and the accident history of the material.

**California Health and Safety Code Section 41700** requires that “No person shall discharge from any source whatsoever such quantities of air contaminants or other material which causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause injury or damage to business or property.”

**Title 8, California Code of Regulations Section 5189** requires facility owners to develop and implement effective safety management plans to insure that large quantities of hazardous materials are handled safely. While such requirements primarily provide for the protection of workers, they also indirectly improve public safety and are coordinated with the RMP process.

**California Government Code Section 65850.2** restricts the issuance of an occupancy permit to any new facility involving the handling of acutely hazardous materials until the facility has submitted an RMP to the administering agency with jurisdiction over the facility.

### 3.16.1.3 Local

**Riverside County Ordinance 457** adopts specific building, mechanical, plumbing, and electrical codes from sources such as the California Building Standards Commission with county-specific modifications.

**Riverside County Ordinance 787** adopts the 2007 edition of the California Fire Code and portions of the 2007 edition of the California Building Code with county specific modifications.

**Riverside County Ordinance 615** establishes requirements for the use, generation, storage and disposal of hazardous materials within Riverside County.

**Riverside County Department of Environmental Health, Hazardous Materials Releases** adopts state requirements and guidelines to govern hazardous materials release response plans and inventories.

**National Fire Protection Association Standards 850, 58, 15, and 54** address the storage of and safety measures for Liquefied Petroleum gases.

### **3.16.2 Existing Conditions**

#### **3.16.2.1 Hazardous Materials**

The term hazardous substance refers to both hazardous materials and hazardous wastes. A material is defined as hazardous if it appears on a Substances Control list of hazardous materials prepared by a federal, state, or local regulatory agency, or if it has characteristics defined as hazardous by such an agency. The California Environmental Protection Agency, Department of Toxic Substances Control (Cal/EPA, DTSC) defines hazardous waste, as found in the California Health and Safety Code Section 25141(b), as follows:

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. (*CCR, Title 22, Section 66260.10*).

Hazardous materials include liquids, solids, and gases which, by themselves or when placed in contact with other materials, can result in contamination of soil or water, poisonous vapors, fires, or explosions. An inadvertent release of hazardous materials can enter the environment via air, soil transport, or surface runoff. When improperly stored or disposed, hazardous materials can contaminate soil and groundwater or surface water and pose a general health hazard to the population via poisonous vapors, fumes, or explosions. Hazardous materials are used and created by industry every day, and are commonly found in household items such as insecticides, waste motor oil, and cleaning fluids.

Public health is potentially at risk whenever hazardous materials are, or will be used. It is necessary to differentiate between the “hazard” of these materials and the acceptability of the “risk” they pose to human health and the environment. A hazard is any situation that has the potential to cause damage to human health and the environment. The risk to health and public safety is determined by the probability of exposure, in addition to the inherent toxicity of a material. Factors that can influence the health effects of exposure to hazardous materials include: the dose the person is exposed to, the frequency of exposure, the duration of exposure, the exposure pathway (route by which the hazardous material enters a person’s body), and the individual’s unique biological susceptibility.

The Cal/EPA, DTSC maintains a list of hazardous waste substance sites, also known as the “Cortese list.” The list receives information from the CalSites database of hazardous waste sites, Leaking Underground Storage Tanks database, and the California Integrated Waste Management Board database of sanitary landfill sites with evidence of groundwater contamination. The most

current list had one site located within the Project vicinity. The nearest site is over 10 miles away (EnviroStor Database, accessed April 2010).

The potential human and ecological health concerns related to hazards and the use of hazardous materials within the proposed Project include, but are not limited to: fire hazards, exposure to toxic air emissions, and exposure to petroleum products, during both construction and operations.

### 3.16.2.2 Background and Site Conditions

#### 3.16.2.2.1 *Existing Hazards Materials*

The Project area was an open pit iron mine, until large-scale iron ore mining was curtailed in 1983. Appendix P of the Eagle Mountain Landfill Specific Plan # 305 and 306 included a summary of all of the contaminant surveys conducted on the proposed landfill site. All of the surveys concluded that there was no evidence of hazardous substances or obvious signs of any effects of contamination. Upon completion of the Level I surveys, the Bureau of Land Management recommended that no subsequent, more detailed surveys need be conducted to assess for potential contamination (CH2MHill 1997).

#### 3.16.2.2.2 *Worker Safety*

The Central Project Area has been used for military training in recent years (Kaiser Eagle Mountain, LLC and Mine Reclamation, LLC, Protest and Motion to Intervene, Project Number 13123, filed with FERC, March 10, 2010). As a result, the Project site may contain unexploded ordinance (UXO). In addition, the Project site is in the vicinity of General George Patton's training camps, used during World War II. Live fire training occurred throughout this desert region at that time. Therefore, there is also the potential for UXO in the portion of the Project area where the linear features (transmission line and water pipeline) will be located.

#### 3.16.2.2.3 *Fire Hazards*

During construction and operation of the Project, there is the potential for both small fires and major structural fires. Electrical sparks, combustion of fuel oil, hydraulic fluid, mineral oil, insulating fluid at the powerplant switchyard or flammable liquids, explosions, and over-heated equipment, may cause small fires. Major structural fires in areas without automatic fire detection and suppression systems are unlikely to develop at powerplants. Compliance with all LORS would be adequate to assure protection from all fire hazards.

The Project will rely on both on-site fire protection systems and local fire protection services. The on-site fire protection system provides the first line of defense for small fires. In the event of a major fire, fire support services, including trained firefighters and equipment for a sustained response, would be provided by the Riverside County Fire Department.

During construction, the permanent fire protection systems proposed for the pumped storage hydroelectric facility would be installed as soon as practical; until then portable fire

extinguishers would be placed throughout the site at appropriate intervals and periodically maintained. Safety procedures and training would be implemented according to the guidelines of the Construction Fire Protection and Prevention Plan.

### **3.16.3 Potential Environmental Impact**

#### **3.16.3.1 Methodology**

The environmental impact analysis focused on the hazardous materials potentially present on the site, worker safety, and fire hazards at the Project site. The reservoirs and powerhouse are not located within ¼-mile of an existing or proposed school nor within a two-mile radius of an existing public airport. The proposed Project would comply with Riverside County regulations regarding adequate emergency access for emergency evacuation or response.

#### **3.16.3.2 Thresholds of Significance**

The State Water Resources Control Board concludes that the Project may have significant impacts on hazards and hazardous materials if any of the following would occur:

- (a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials
- (b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment
- (c) Emits hazardous emissions or handles hazardous or acutely hazardous materials, substances or waste within ¼-mile of an existing or proposed school
- (d) Is located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment, (the Cortese list is compiled pursuant to Government Code Section 65962.5) and/or
- (e) Exposes people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas

#### **3.16.3.3 Environmental Impact Assessment**

Historical use of the site included General George Patton's Desert Training Camps during World War II. Live-fire training occurred throughout the area. In addition, military training has been conducted on Kaiser lands in the Central Project Area. Therefore, there is the potential for unexploded ordinance to be encountered during Project construction.

During the construction phase of the Project, hazardous materials proposed for use include paint, solvents, gasoline, diesel fuel, motor oil, lubricants, and welding gases. No acutely toxic hazardous materials will be used on-site during construction, and none of these materials pose significant potential for off-site impacts as a result of the quantities on-site, their relative toxicity, their physical state, and/or their environmental mobility. Any impact of spills or other releases of

these materials will be limited to the site because of the small quantities involved, their infrequent use (and therefore reduced chances of release), and/or the temporary containment berms used by contractors. Petroleum hydrocarbon-based motor fuels, mineral oil, lube oil, and diesel fuel are all very low volatility and represent limited off-site hazards even in larger quantities.

During operations, hazardous chemicals such as cleaning agents, water treatment chemicals, welding gasses, oils, activated carbon, and other various chemicals would be used and stored in relatively small amounts and represent limited off-site hazards because of their small quantities, low volatility, and/or low toxicity.

In order to maintain TDS at a level consistent with existing groundwater quality, a water treatment plant using a reverse osmosis (RO) desalination system and brine disposal lagoon will be constructed as a part of the Project to remove salts and metals from reservoir water and maintain TDS concentrations equivalent to source water levels.

Treated water will be returned to the Lower Reservoir while the concentrated brine from the RO process will be directed to brine ponds. In addition to removing salts from the water supply, other contaminants, nutrients, and minerals, if present, would be removed as well, preventing eutrophication from occurring.

Salts from the brine disposal lagoon will be removed and disposed of at an approved facility when the lagoons become full, approximately every 10 years. The lagoons will be maintained in a wetted condition, to maintain air quality in the project area.

The Clean Water Act Section 401 Water Quality Certification will require compliance with California Code of Regulations, Title 27, Environmental Protection Regulations. These regulations cover solid waste disposal and include regulatory authority of brine ponds.

Riverside County Ordinance 615 relates to establishments where hazardous waste is generated, stored, handled, disposed, treated, or recycled. Ordinance 615 is a program for the purpose of monitoring establishments where hazardous waste is generated, stored, handled, disposed, treated, or recycled, and to regulate by the issuance of permits, the activities of establishments where hazardous waste is generated. As such, the Project will be required to have a permit for the storage, handling, disposal, treatment, and recycling of hazardous waste and subject to periodic inspections by the county's Department of Environmental Health (Riverside County Ordinance 615 Section 4 (a)).

The findings of impact are based on an assessment of the changes attributable to implementation of the Project relative to the thresholds of significance listed above.

Environmental Impact Assessment Summary:

- (a) *Would the project create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?* No. Transport of such materials is subject to regulatory controls.
- (b) *Would the project 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?* No. The use, storage, and disposal of such materials are subject to regulatory controls.
- (c) *Would the project emit hazardous emissions or handles hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?* No. The closest school is located more than 1 mile away.
- (d) *Is the project site 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?* No. The site is not located on this list.
- (e) *Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas?* No. The Project is a pumped storage facility whereby the not posing any significant risk to wildfires.

**Impact 3.16-1 Hazardous Materials during Construction.** Due to the proximity of the transmission line to the World War II-era camps, and the recent history of military training on the Central Project Area, any unexploded ordnance (UXO) found on-site could be hazardous to workers on-site. This impact is considered *potentially significant and subject to the mitigation program* (MM HM-1). The Project Contractor and Environmental Coordinator will implement a UXO Identification, Training, and Reporting Plan (UXO Plan) to properly train all site workers in the recognition, avoidance and reporting of military waste debris and ordnance.

Hazardous materials transported, stored and/or used on-site during proposed Project construction and operation (i.e., petroleum products, lubricants, solvents) could potentially be spilled or released into the atmosphere if improperly stored and/ or handled. However, the Project will comply with federal, state, and local hazardous material LORS to insure that construction products will not be improperly stored or handled.

**Impact 3.16-2 Hazardous Materials during Operation.** Hazardous material usage in the vicinity will be limited to the Project site. This includes the brine pond which will be used as a component of the water treatment facility. The Project site is not located within ¼ mile of a school. This impact is therefore considered to be *less than significant*.

**Impact 3.16-3 Located on a Hazardous Materials Site per Government Code Section 65962.5.** The site is not on a list of hazardous materials sites pursuant to Government Code Section 65962.5. This impact is therefore found to be *less than significant*.

### **3.16.4 Mitigation Program**

The mitigation program includes project design features (PDFs) and mitigation measures (MMs). Project design features are design elements inherent to the Project that reduce or eliminate potential impacts. Mitigation measures are provided to reduce impacts from the proposed Project to below a level of significance, where applicable. As appropriate, performance standards have been built into mitigation measures.

As mentioned under Regulatory Settings, LORS are based on local, state, or federal regulations or laws that are frequently required independent of the California Environmental Quality Act review, yet also serve to offset or prevent certain impacts. The proposed Project will be constructed and operated in conformance with all applicable federal, state, and local LORS.

**MM HM-1. UXO Plan.** The Licensee, in consultation with the Licensee's Environmental Coordinator, shall implement a UXO Identification, Training and Reporting Plan (UXO Plan) to properly train all site workers in the recognition, avoidance and reporting of military waste debris and ordnance. Implementation shall include: (1) a description of the training program outline and materials, and the qualifications of the trainers; (2) identification of available trained experts that will respond to notification of discovery of any ordnance (unexploded or not); (3) a work plan to recover and remove discovered ordnance; and (4) work stoppage until site is determined clear by the Environmental Coordinator.

**Verification:** The UXO Plan shall be implemented no less than 60 days prior to the initiation of construction activities at the site.

### **3.16.5 Level of Significance after Implementation of Mitigation Program**

**Impact 3.16-1 Hazardous Materials during Construction.** Hazardous materials will be transported, stored and/or used on-site during proposed Project construction and operation in compliance with federal, state, and local LORS making the potential impacts less than significant. Risks to workers from UXO will be reduced to *less than significant* through the implementation of mitigation measure HM-1.

**Impact 3.16-2 Hazardous Materials during Operation.** This impact is considered to be *less than significant* and no mitigation required.

**Impact 3.16-3 Located on a Hazardous Materials Site per Government Code Section 65962.5.** This impact is considered to be *less than significant* and no mitigation required.

No residual impacts to hazards or hazardous materials would occur with Project implementation.