DOCKETED

Docket Number:	15-AFC-02
Project Title:	Mission Rock Energy Center
TN #:	207151-12
Document Title:	5.5 Hazardous Materials Handling
Description:	N/A
Filer:	Sabrina Savala
Organization:	Mission Rock Energy Center, LLLC
Submitter Role:	Applicant
Submission Date:	12/30/2015 3:48:08 PM
Docketed Date:	12/30/2015

5.5 Hazardous Materials Handling

This section discusses the potential effects on human health and the environment from the use and storage of hazardous materials in conjunction with the MREC. Section 5.5.1 describes the existing environment that may be affected, and Section 5.5.2 identifies potential impacts on the environment and on human health from site development. Section 5.5.3 addresses potential cumulative effects, Section 5.5.4 presents proposed mitigation measures, and Section 5.5.5 presents the LORS applicable to hazardous materials. Section 5.5.6 describes the agencies involved and provides agency contacts. Section 5.5.7 describes permits required and the permit schedule. Section 5.5.8 provides the references used to develop this section. Hazardous waste management, including handling of potentially contaminated soil and groundwater, is addressed in Section 5.14, Waste Management.

5.5.1 Affected Environment

5.5.2 Land Use

Land use in the immediate vicinity of the MREC site (discussed in detail in Section 5.6, Land Use) is industrial and agricultural. Within a wider 6-mile radius of the MREC site, there are approximately 226 sensitive receptors. These receptors are listed in the receptor report found in Appendix 5.1D, and on Figure 5.1D-1 of the receptor report. The nearest residence, associated with an animal boarding business, is approximately 940 feet east of the MREC site, and a second residence is approximately 1,092 feet northeast of the MREC site. The Ventura County Jail is also located near the MREC and is approximately 940 feet from the MREC site.

The nearest school to the MREC site is Briggs Elementary, located at 14438 West Telegraph Road, Santa Paula, CA, 93060, approximately 1.1 miles northeast of the MREC site. The nearest medical facility is Clinicas Del Camino Real Inc., Ventura medical clinic, which is located at 200 South Wells Road, Ventura, California 93004, and is approximately 3.2 miles southwest. The nearest hospital is the Santa Paula Hospital, 5.8 miles by road to the north-northeast.

5.5.2.1 MREC Hazardous Materials Use

The MREC will use hazardous materials during construction and operation. The MREC will comply with applicable laws and regulations for the storage of these materials to minimize the potential for a release of hazardous materials, and will conduct emergency response planning to address public health concerns regarding hazardous materials storage and use. The following sections describe this use, followed by tables detailing the hazardous materials used, their characteristics, quantities to be used, and use locations.

Construction Phase

Relatively small quantities of hazardous materials will be onsite during construction and will be limited to gasoline, diesel fuel, motor oil, hydraulic fluid, solvents, cleaners, sealants, welding flux, various lubricants, paint, and paint thinner. There are no feasible alternatives to vehicle fuels and oils for operating construction equipment. The types of paint required are dictated by the types of equipment and structures that must be coated and by the service conditions and environment.

No regulated substances, as defined in California's Health and Safety Code, Section 25531, will be used during construction of the MREC. Therefore, no discussion on the storage or handling of regulated substances during construction is necessary.

Operations Phase

Storage locations for the hazardous materials that will be used during operation are described in Table 5.5-1. Table 5.5-2 presents information about these materials, including trade names, chemical

names, Chemical Abstract Service (CAS) numbers, maximum quantities onsite, reportable quantities (RQ), CalARP threshold planning quantities (TPQ), and status as Proposition 65 chemicals (chemicals known to be carcinogenic or cause reproductive problems in humans). Health hazards and flammability data are summarized for these materials in Table 5.5-3, which also contains information on incompatible chemicals.

Most of the hazardous substances that will be used by the MREC are required for facility maintenance, and lubrication of equipment, or will be contained within transformers and electrical switches. The only regulated substance that will be used for the MREC is aqueous NH_3 used for emissions control; toxicity characteristics and the exposure level criteria for this regulated substance are included in Table 5.5-4 and discussed in Section 5.5.2.3.2.

5.5.3 Environmental Analysis

Construction and operation of the MREC will involve the use of various hazardous materials and one regulated substance. The use of these materials and their potential to cause adverse environmental and human health effects are discussed in this section.

5.5.3.1 Significance Criteria

A project would have a significant effect on the environment in terms of hazardous materials handling if it would do the following (CEQA Guidelines Section 15002[g], Appendix G):

- Create a significant hazard to the public or the environment through the routine transport or use of hazardous materials
- 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
- Emit hazardous emissions or handle hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school
- 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 environment (refer to section 5.14, Waste Management)
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan

5.5.3.2 Transportation of Hazardous Materials

MREC operation will require regular transportation of hazardous materials to the MREC site (see also Section 5.12, Traffic and Transportation). Transportation of hazardous materials will comply with all California Department of Transportation (Caltrans), EPA, California Department of Toxic Substances Control (DTSC), California Highway Patrol (CHP), and California State Fire Marshal regulations. Aqueous NH_3, a regulated substance, will be delivered to the facility and transported in accordance with California Vehicle Code (CVC) Section 32100.5, which regulates the transportation of hazardous materials that pose an inhalation hazard. Additionally, NH_3 will only be transported along approved transportation routes. Compliance with applicable regulations will ensure that impacts from the transportation of hazardous materials will be less than significant.

Table 5.5-1 Use and Location of Hazardous Materials

Chemical	Use	Quantity (gallons, lbs, cu ft)	Storage Location (General Arrangement Location Code)	State	Type of Storage
Aqueous NH_3 (19.5 percent)	Control NO_x emissions through SCR	12,000 gallons	Onsite storage tank west of the chillers (21)	Liquid	Continuously onsite
R 134A (1-1-1-2-Tetrafluoroethane)	Refrigerant in the inlet air chiller system	26,960 pounds	Inlet air chiller system (57)	Liquid	Continuously onsite
Cleaning chemicals/detergents	Periodic cleaning of combustion turbine	3,000 gallons	Chemical storage tote or drums at a protected temporary storage location onsite.	Liquid	Continuously onsite
Diesel No. 2	Fuel for fire pump	200 gallons	Permanent onsite storage in above ground storage tank with secondary containment (17)	Liquid	Continuously onsite
Hydraulic oil	High-pressure combustion turbine starting system, turbine control valve actuators	150 gallons	Onsite 55-gallon drums (31)	Liquid	Continuously onsite
Laboratory reagents	Water/wastewater laboratory analysis	10 gallons	Laboratory chemical storage cabinets (stored in original chemical storage containers/bags) (31)	Liquid and granular solid	Continuously onsite
Lubrication oil	Lubricate rotating equipment (e.g., gas turbine and steam turbine bearings)	400 gallons	Onsite 55-gallon drums (31)	Liquid	Continuously onsite
Mineral insulating oil	Transformers	28,800 gallons	Inside the transformers; no mineral actually stored onsite (10, 26, 28, 43, 60, 61)	Liquid	Continuously onsite
Sodium bisulfite	Biocide/biofilm control for potable, fire, and service water systems	500 gallons	Water treatment chemical feed storage	Liquid	Continuously onsite; 250-gallon stackable totes inside secondary containment
Acetylene	Welding gas	185 lbs	Maintenance/Warehouse Building (31)	Gas	Continuously onsite
Oxygen	Welding gas	250 lbs	Maintenance/Warehouse Building (31)	Gas	Continuously onsite
Propane	Torch gas	300 lbs	Maintenance/Warehouse Building (31)	Gas	Continuously onsite
EPA Protocol gases	Calibration gases	25 lbs	CEMS Enclosures (11)	Gas	Continuously onsite
Cleaning chemicals	Cleaning	Varies (less than 25 gallons liquids or 100 lbs solids for each chemical)	Admin/Control Building, Maintenance/ Warehouse Building (31)	Liquid or solid	Continuously onsite

Table 5.5-1 Use and Location of Hazardous Materials

Chemical	Use	Quantity (gallons, lbs, cu ft)	Storage Location (General Arrangement Location Code)	State	Type of Storage
Paint	Touchup of painted surfaces	Varies (less than 25 gallons liquids or 100 lbs solids for each type)	Maintenance/Warehouse Building (31)	Liquid	Continuously onsite
Lead-Acid Batteries	24 volt DC battery supply	12,000 lbs	Power Distribution Center	Solid	Continuously onsite
CO_2	Fire extinguishing of turbine package	6000 cu ft	Outside of Turbine Package	Gas	Continuously onsite

cu ft = cubic feet

Table 5.5-2 Chemical Inventory, Description of Hazardous Materials Stored Onsite, and Reportable Quantities

Trade Name	Chemical Name	CAS Number	Maximum Quantity Onsite (gallons, lbs, cu ft)	CERCLA SARA RQ[a]	RQ of Material as Used Onsite[b]	EHS TPQ[c]	Regulated Substance TQ[d]	Prop 65
Aqueous NH_3 (19.5 percent NH_3 by weight)	Aqueous NH_3	7664-41-7	10,200 gallons[g]	100 lbs	526 lbs	500 lbs	500 lbs	No
R134A	1-1-1-2-Tetrafluoroethane	811-97-2	26,960 gallons	e	e	e	e	No
Cleaning chemicals/detergents	Various	None	3,000 gallons	e	e	e	e	No
Diesel No. 2	Diesel No. 2	68476-34-6	200 gallons	e	e	e	e	No
Hydraulic oil	Oil	None	150 gallons	42 gallons[f]	42 gallons[f]	e	e	No
Laboratory reagents	Various	Various	10 gallons	e	e	e	e	No
Lubrication oil	Oil	None	400 gallons	42 gallons[f]	42 gallons[f]			No
Mineral insulating oil	Oil	8012-95-1	28,800 gallons	42 gallons[f]	42 gallons[f]			No
Sodium bisulfite	Sodium bisulfite	7631-90-5	500 gallons	5,000 lbs	5,000 lbs	e	e	No
Acetylene	Acetylene	47-86-2	185 lbs	e	e	e	e	No
Oxygen	Oxygen	7782-44-7	250 lbs	e	e	e	e	No
Propane	Propane	74-98-6	300 lbs	e	e	e	e	No
EPA Protocol gases	Various	Various	25 lbs	e	e	e	e	No

Table 5.5-2 Chemical Inventory, Description of Hazardous Materials Stored Onsite, and Reportable Quantities

Trade Name	Chemical Name	CAS Number	Maximum Quantity Onsite (gallons, lbs, cu ft)	CERCLA SARA RQ[a]	RQ of Material as Used Onsite[b]	EHS TPQ[c]	Regulated Substance TQ[d]	Prop 65
Cleaning chemicals	Various	Various	Varies (less than 25 gallons liquids or 100 lbs solids for each chemical)	[e]	[e]	[e]	[e]	No
Lead-Acid Battery	Lead-Acid Battery	Various	12,000 lbs	1,000	1,000	1,000	1,000	Yes
CO_2	CO_2	53569-62-3	6000 cu ft					No
Paint	Various	Various	Varies (less than 25 gal liquids or 100 lbs solids for each type)	[e]	[e]	[e]	[e]	No

[a] RQs for a pure chemical, per the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Superfund Amendments and Reauthorization Act (SARA) (Ref. 40 CFR 302, Table 302.4). Release equal to or greater than RQ must be reported. Under California law, any amount that has a realistic potential to adversely affect the environment or human health or safety must be reported.

[b] RQ for materials as used onsite. Since some of the hazardous materials are mixtures that contain only a percentage of an RQ, the RQ of the mixture can be different than for a pure chemical. For example, if a material only contains 10 percent of a reportable chemical and the RQ is 100 lbs., the RQ for that material would be (100 lb)/(10 percent) = 1,000 lb.

[c] Extremely Hazardous Substance (EHS) TPQ (Ref. 40 CFR Part 355, Appendix A). If quantities of extremely hazardous materials equal to or greater than the TPQ are handled or stored, they must be registered with the local Administering Agency.

[d] TQ is from 19 CCCR 2770.5 (state) or 40 CFR 68.130 (federal)

[e] No reporting requirement. Chemical has no listed threshold under this requirement.

[f] State RQ for oil spills that will reach California state waters [Ref. CA Water Code Section 13272(f)]

[g] The NH_3 tank capacity is 12,000 gallons; however, the tank is only filled to 85 percent of its capacity, or 10,200 gallons.

SARA = Superfund Amendments and Reauthorization Act

TQ = Threshold quantity

Table 5.5-3 Toxicity, Reactivity, and Flammability of Hazardous Substances Stored Onsite

Hazardous Materials	Physical Description	Health Hazard	Reactive and Incompatibles	Flammability*
Aqueous NH_3	Colorless liquid with pungent odor	Corrosive; irritation to permanent damage from inhalation, ingestion, and skin contact	Acids, halogens (e.g., chlorine), strong oxidizers, salts of silver and zinc	Liquid is incombustible; vapor is combustible, but difficult to burn
R 134A	Colorless liquid gas, slight ether-like odor	Inhalation in high concentrations is harmful, may cause heart irregularities, unconsciousness or death	Alkali, alkaline earth metals, and molten salts	Flammable
Cleaning chemicals/ detergents	Liquid	Refer to individual chemical labels	Refer to individual chemical labels	Refer to individual chemical labels

Table 5.5-3 Toxicity, Reactivity, and Flammability of Hazardous Substances Stored Onsite

Hazardous Materials	Physical Description	Health Hazard	Reactive and Incompatibles	Flammability*
Diesel No. 2	Oily, light liquid	May be carcinogenic	Oxidizers	Flammable
Hydraulic oil	Oily, dark liquid	Hazardous if ingested	Oxidizers	Combustible
Laboratory reagents	Liquid and solid	Refer to individual chemical labels	Refer to individual chemical labels	Refer to individual chemical labels
Lubrication oil	Oily, dark liquid	Hazardous if ingested	Oxidizers	Flammable
Mineral insulating oil	Oily, clear liquid	Minor health hazard	Oxidizers	Can be combustible, depending on manufacturer
Sodium bisulfite	Yellow liquid	Irritant	Incompatible with strong acids and oxidizers	Not flammable
Acetylene	Colorless gas	Asphyxiant gas	Oxygen and other oxidizers including all halogens and halogen compounds; forms explosive acetylide compounds with copper, mercury, silver, brasses containing >66 percent copper and brazing materials containing silver or copper	Flammable
Oxygen	Colorless, odorless, tasteless gas	Therapeutic overdoses can cause convulsions; liquid oxygen is an irritant to skin	Hydrocarbons, organic materials	Oxidizing agent; actively supports combustion
Propane	Propane gas (odorant added to provide odor)	Asphyxiant gas; causes frostbite to area of contact.	Strong oxidizing agents and high heat	Flammable
EPA Protocol gases	Gas	Refer to individual chemical labels	Refer to individual chemical labels	Refer to individual chemical labels
Cleaning chemicals	Liquid	Refer to individual chemical labels	Refer to individual chemical labels	Refer to individual chemical labels
Lead-Acid Battery	Battery	Refer to individual container labels	Refer to individual container labels	Refer to individual container labels
CO_2	Gas	Refer to individual container labels	Refer to individual container labels	Refer to individual container labels
Paint	Various colored liquid	Refer to individual container labels	Refer to individual container labels	Refer to individual container labels

Data were obtained from Material Safety Data Sheets (MSDS) and Lewis, 1991.

Per Caltrans regulations, under 49 CFR 173: “Flammable” liquids have a flash point less than or equal to 141 degrees Fahrenheit; “Combustible” liquids have a flash point greater than 141°F.

Table 5.5-4 Toxic Effects and Exposure Levels of Regulated Substance

Name	Toxic Effects	Exposure Levels-Pure NH_3
Aqueous NH_3 (19.5 percent solution)	Contact with pure liquid or vapor causes eye, nose, and throat irritation, skin burns, and vesiculation. Ingestion or inhalation causes burning pain in mouth, throat, stomach, and thorax, constriction of thorax, and coughing followed by vomiting blood, breathing difficulties, convulsions, and shock. Other symptoms include dyspnea, bronchospasms, pulmonary edema, and pink frothy sputum. Contact or inhalation overexposure can cause burns of the skin and mucous membranes, headache, salivation, nausea, and vomiting. Other symptoms include labored breathing, bloody mucous discharge, bronchitis, laryngitis, hemoptysis, and pneumonitis. Damage to eyes may be permanent, including ulceration of conjunctiva and cornea and corneal and lenticular opacities.	Occupational Exposures: • PEL = 35 mg/m^3 OSHA • TLV = 18 mg/m^3 ACGIH • TWA = 25 mg/m^3 NIOSH • STEL = 35 mg/m^3 Hazardous Concentrations: • IDLH = 500 ppm • LD_{50} = 350 mg/kg – oral, rat ingestion of 3 to 4 ml may be fatal Sensitive Receptors: • ERPG-1 = 25 ppm • ERPG-2 = 200 ppm • ERPG-3 = 1,000 ppm

ERPG	Emergency Response Planning Guideline
ERPG-1	Maximum airborne concentration below which nearly all individuals could be exposed for up to 1 hour without experiencing other than mild transient adverse health effects
ERPG-2	Maximum airborne concentration below which nearly all individuals could be exposed for up to 1 hour without developing irreversible or serious health effects
ERPG-3	Maximum airborne concentration below which nearly all individuals could be exposed for up to 1 hour without experiencing life-threatening health effects
IDLH	Immediately dangerous to life and health
LD_{50}	Dose lethal to 50 percent of those tested
mg/kg	milligrams per kilogram
mg/m^3	milligrams per cubic meter
PEL	OSHA-permissible exposure limit for 8-hour workday
STEL	Short-term exposure limit, 15-minute exposure
TLV	ACGIH threshold limit value for 8-hour workday
TWA	NIOSH time-weighted average for 8-hour workday

Trucks will typically be coming north on Highway 101 from the greater Los Angeles area. The proposed route for MREC is for trucks to use the Santa Paula Freeway (SR-126), exit at South Briggs Road, turn onto Pinkerton Road, bear south onto Mission Rock Road, and turn west onto Shell Road.

5.5.3.3 Hazardous Materials Use

Construction Phase

Construction will involve the transport of limited quantities of hazardous materials to the MREC site and will pose minor hazards associated with their use. Small oil spills may occur during onsite refueling. Equipment refueling will be performed away from water bodies to prevent contamination of water in the event of a fuel spill. Therefore, the potential environmental effects from fueling operations are expected to be limited to small areas of contaminated soil. If a fuel spill occurs on soil, the contaminated soil will be placed into barrels or trucks for offsite disposal as a hazardous waste. The worst-case scenario for a chemical release from fueling operations would be a vehicle accident involving a service or refueling truck.

The quantities of hazardous materials that will be handled during construction are relatively small. The BMPs described in Section 5.5.4.1 will be implemented by contractor personnel, therefore, the potential for environmental effects will be less than significant.

Project Operation

As stated previously, most of the hazardous substances that will be used by the MREC are required for NO_x emissions control (i.e., NH_3), facility maintenance, and lubrication of equipment, or will be contained within transformers and electrical switches. Their storage will be carefully contained within designated hazardous materials storage areas and their use will be carefully prescribed in terms of hazardous materials handling plans, facility Health and Safety Plans, and the HMBP. For the non-CalARP-regulated materials, therefore, the risk of public exposure and serious hazard is low and would not be significant. The only regulated substance that will be used for the MREC is aqueous NH_3, described in Table 5.4-4 and as follows.

Aqueous NH_3. The MREC facility will store the aqueous NH_3 solution (19.5 percent NH_3 mixed with water) in a 12,000-gallon, horizontal AST. The tank will be surrounded by an individual secondary containment structure which drains to a sub-surface vault capable of holding the full contents of the tank and accumulated precipitation. The truck unloading area will include a concrete pad, sloped to drain spillage to the storage tank containment sump. The truck unloading station will include a storage tank fill line and vapor return line for pressure equalization between the storage tank and truck.

Aqueous NH_3 will be used in a SCR process to control NO_x emissions from the combustion turbines. The SCR system will include catalyst modules, an NH_3 storage system, and an NH_3 injection system. The aqueous NH_3 will be vaporized and injected into the turbine exhaust flow upstream of the catalyst modules. The rate of injection will be controlled by a monitoring system that uses sensors to determine the correct quantity of NH_3 to feed to the injection system.

Approximately two to three times per month (for an average of 30 deliveries per year), a 7,500-gallon tanker truck will deliver aqueous NH_3 to the MREC. The aqueous NH_3 storage tanks will be equipped with continuous tank level monitors, automated leak detection system, temperature and pressure monitors and alarms, and emergency block valves.

Because of its hazardous properties, NH_3 is classified as a regulated substance, and an accidental release of the aqueous NH_3 solution could present a human health hazard. NH_3 is a volatile substance that is very soluble in water. Aqueous NH_3 consists of a solution of NH_3 and water. If the aqueous NH_3 solution were to leak or be released without proper controls, the NH_3 in solution could escape or evaporate as a gas into the atmosphere.

Potential toxic effects of NH_3 and acceptable exposure levels are summarized in Table 5.5-4. The odor threshold of NH_3 is about 5 ppm, and minor irritation of the nose and throat will occur at 30 to 50 ppm. NH_3 concentrations greater than 140 ppm will cause detectable effects on lung function even for short-term exposures (0.5 to 2 hours). At higher concentrations of 700 to 1,700 ppm, NH_3 gas will cause severe effects; death occurs at concentrations of 2,500 to 6,000 ppm (Smyth, 1956).

Storage and use of NH_3 will be subject to the requirements of the California Fire Code, Article 80, as well as CalARP. Article 80 of the California Fire Code contains specific requirements for control of liquid and gaseous releases of hazardous materials. Secondary containment in the form of a spill containment vault will be provided for the NH_3 storage tank and loading area. In addition, the facility will be required to prepare a RMP in accordance with CalARP, further specifying safe handling procedures for the NH_3 as well as emergency response procedures in the event of an accidental release. The RMP, which is discussed in more detail in Section 5.5.4.2.2, will be prepared for the MREC site using updated modeling guidance prior to operation of MREC.

With the implementation of these measures, impacts related to the storage and handling of aqueous NH_3 will be less than significant.

5.5.3.4 Accidental Release Hazards

If a chemical release were to occur without proper engineering controls in place, the public could be exposed to harmful vapors, and incompatible chemicals could mix, causing vapors that could also potentially have harmful effects. In addition, an uncontrolled release of liquid chemicals could run off and drain into the stormwater system and potentially degrade water quality. However, the California Fire Code, Articles 79 and 80, includes specific requirements for the safe storage and handling of hazardous materials that would reduce the potential for a release of hazardous materials, and mixing of incompatible materials. The design of the MREC will incorporate state-of-the-art chemical storage and handling facilities in compliance with the current California Fire Code and other applicable federal, state, and local regulations. With the implementation of these measures, the impacts related to the accidental release of hazardous materials, including NH_3, will be less than significant.

Offsite Consequences Analysis—Because there is human activity in the vicinity of the proposed MREC site, an Offsite Consequences Analysis (OCA) will be performed during the AFC process. The analysis will assess the risk to humans at various distances from the MREC if a spill or rupture of a aqueous NH_3 storage tank were to occur or if a spill from the supply truck were to occur while refilling the storage tanks, and will assess the MREC in relation to the CEC's significance threshold of 75 ppm. The modeling protocol for the OCA for NH_3 is presented in Appendix 5.5A.

5.5.3.5 Fire and Explosion Hazards

Table 5.5-3 describes the flammability for the hazardous materials that will be onsite. Article 80 of the California Fire Code requires all hazardous material storage areas to be equipped with a fire extinguishing system and also requires ventilation for all enclosed hazardous material storage areas.

Aqueous NH_3, which constitutes the largest quantity of hazardous materials to be stored onsite, is incombustible in its liquid state. Under normal storage conditions, NH_3 would not evaporate to the atmosphere because it is contained in a sealed tank that maintains the NH_3 in a state that precludes evaporation. In the unlikely event that a release were to occur, NH_3 could evaporate directly to the atmosphere. NH_3 vapor is combustible only within a narrow range of concentrations in air. The evaporation rate of aqueous NH_3 is similar to water, which is sufficiently low that the lower explosive limit of 15 percent (or 15,000 ppm) will not be reached.

The plant machinery lubrication oil is flammable. In accordance with Article 80 of the California Fire Code, the storage area for the lubrication oil would be equipped with a fire extinguishing system and the lubrication oil would be handled in accordance with an HMBP approved by the Ventura County Environmental Health – Certified Unified Program Agency (CUPA)/Hazardous Materials Program, Ventura County Fire Department (VCFD), and the CEC. With proper storage and handling of flammable materials in accordance with the California Fire Code and the site-specific HMBP, the risk of fire and explosion at the generating facility would be minimal.

The natural gas fuel the facility will use is flammable and could leak from the high-pressure pipeline that brings the gas from the main SoCalGas transmission pipeline (Line 404/406). Natural gas is composed mostly of methane, but also may contain ethane, propane, nitrogen, butane, isobutene, and isopentane. It is colorless, odorless, tasteless, and is lighter than air. Methane is flammable when mixed in air at concentrations of 5 to 14 percent, which is also the detonation range. Natural gas, therefore, poses a risk of fire and explosion if an accidental release were to occur. However, the risk of a fire and/or explosion would be reduced through compliance with applicable codes, regulations, and industry design/construction standards.

The federal safety and operating requirements for natural gas pipelines are contained in Title 49 of the CFR, Parts 190 through 192. These requirements vary according to population density and land use; the pipeline classes are defined as follows:

- Class 1 includes pipelines in locations with 10 or fewer buildings intended for human occupancy.
- Class 2 includes pipelines in locations with more than 10, but fewer than 46 buildings intended for human occupancy.
- Class 3 includes pipelines in locations with more than 46 buildings intended for human occupancy, or where the pipeline is within 100 yards of any building or small well-defined outside area occupied by 20 or more people on at least 5 days per week for 10 weeks in any 12-month period.
- Class 4 includes pipelines in locations where buildings with four or more stories aboveground are prevalent.

The MREC's pipeline will be designed to meet Class 1 service and will meet CPUC GO-112-D and 58-A standards, in addition to the federal requirements for gas pipeline construction and safety.

The closest fire station to MREC is Ventura County Fire Station Number 26, Saticoy at 12391 West Telegraph Road in Santa Paula, California. The station is approximately 2.2 miles away (via road) and would provide the first response to a fire at the MREC site, with an approximate 6 minute average response time (CH2M, 2015a). If hazardous materials were involved in the incident, Station No. 26 would be the first onsite, requesting additional resources from the hazmat team at the Department headquarters in Camarillo. If required, aid would also be provided by any of the neighboring cities and counties with which the VCFD has an automatic aid agreement in place. The VCFD also has mutual aid agreements with departments around the state (CH2M, 2015c). Response time for an incident at the MREC from the VCFD Headquarters, located at 165 Durley Avenue, Camarillo, California, would be approximately 35-45 minutes.

5.5.3.6 Schools

The nearest school to MREC is Briggs Elementary, located at 14438 West Telegraph Road, Santa Paula, California, approximately 1.1 miles north of the MREC site. The proposed transportation route for delivery of regulated materials such as aqueous NH_3 (and for all other hazardous materials used at MREC) will not pass near the school. The proposed route for MREC is for trucks to use the Santa Paula Freeway (SR-126), exit at South Briggs Road, turn onto Pinkerton Road, bear southeast onto Mission Rock Road, and follow Mission Rock Road southwest to the MREC site.

5.5.4 Cumulative Effects

A cumulative effect refers to a proposed project's incremental effect together with other closely related past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of the proposed project (PRC § 21083; CCR tittle 14, §§ 15064[h], 15065[c], 15130, and 15355).

Existing laws and regulations address the handling of hazardous materials and the transportation and use of aqueous NH_3, an acutely hazardous material, and will ensure that hazardous materials at MREC are safely managed.

The hypothetical accidental releases of aqueous NH_3 that will be evaluated for the MREC is described in the OCA modeling protocol in Appendix 5.5A. No sites containing major amounts of hazardous materials were identified in the vicinity of the MREC based on a review of Ventura County Environmental Health Department online CUPA inspection records (Ventura County, 2015a). There is a possibility that anhydrous NH_3, which is commonly used for agricultural purposes for crop fertilization, may be in the vicinity of the MREC area. Only a natural disaster such as a major earthquake or other catastrophe of

low probability could cause simultaneous accidental releases at multiple facilities. Simultaneous releases of aqueous NH_3 from the MREC and mobile agricultural anhydrous NH_3 tanks, if present near the MREC, could potentially cause cumulative impacts if the migrating clouds merged. However, previous OCAs for similar facilities show that NH_3 vapor plumes at hazardous levels rarely extend more than a short distance from their sources, if properly controlled and protected by containment basins and evaporation retardants. Therefore the likelihood of NH_3 vapor plumes combining in concentrations at or above 75 ppm is very improbable. Existing laws and regulations will thus ensure that the proposed project's incremental effect is not cumulatively considerable.

5.5.5 Mitigation Measures

The following sections present measures to mitigate potential public health and environmental effects of handling hazardous materials and regulated substances during construction and operation.

5.5.5.1 Construction Phase

The hazardous materials that would be used during construction present a relatively low public health risk, but could contaminate surface water or groundwater if a release occurred. Use of BMPs would reduce the potential for the release of construction-related fuels and other hazardous materials to stormwater and receiving waters as discussed in Section 5.15, Water Resources. BMPs prevent sediment and stormwater contamination from spills or leaks, control the amount of runoff from the MREC, and require proper disposal or recycling of hazardous materials.

Construction service personnel will follow general industry health, safety, and environmental BMPs for filling and servicing construction equipment and vehicles. The BMPs are designed to reduce the potential for incidents involving the hazardous materials, and include the following:

- Refueling and maintenance of vehicles and equipment will occur only in designated areas that are either bermed or covered with concrete, asphalt, or other impervious surfaces to control potential spills. Employees will be present during refueling activities.
- Vehicle and equipment service and maintenance will be conducted only by authorized personnel.
- Refueling will be conducted only with approved pumps, hoses, and nozzles.
- Catch-pans will be placed under equipment to catch potential spills during servicing.
- All disconnected hoses will be placed in containers to collect residual fuel from the hoses.
- Vehicle engines will be shut down during refueling.
- No smoking, open flames, or welding will be allowed in refueling or service areas.
- Refueling will be performed away from bodies of water to prevent contamination of water in the event of a leak or spill.
- When refueling is completed, the service truck will leave the MREC site.
- Service trucks will be provided with fire extinguishers and spill containment equipment, such as absorbents.
- Should a spill contaminate soil, the soil will be put in containers and disposed of as appropriate. All containers used to store hazardous materials will be inspected at least once per week for signs of leaking or failure. All maintenance and refueling areas will be inspected monthly. Results of inspections will be recorded in a logbook that will be maintained onsite.

In the unlikely event of a spill, the spill may need to be reported to the appropriate regulatory agencies and cleanup of contaminated soil could be required. Small spills will be contained and cleaned up immediately by trained, onsite personnel. Larger spills will be reported via emergency phone numbers

to obtain help from offsite containment and cleanup crews. All personnel working on the MREC during the construction phase will be trained in handling hazardous materials and the dangers associated with hazardous materials. An onsite health and safety person will be designated to implement health and safety guidelines and to contact emergency response personnel and the local hospital, if necessary.

If there is a large spill from a service or refueling truck, contaminated soil will be placed into barrels or trucks by service personnel for offsite disposal at an appropriate facility in accordance with law. If a spill involves hazardous materials quantities equal to or greater than the specific RQ (42 gallons for petroleum products), all federal, state, and local reporting requirements will be followed. In the event of a fire or injury, the local fire department will be called.

5.5.5.2 Operation Phase

During facility operation, various hazardous materials and one regulated substance will be stored onsite as shown in Table 5.5-1. Table 5.5-2 presents information about these materials, including trade names, chemical names, CAS numbers, maximum quantities onsite, RQs, CalARP TPQs, and status as Proposition 65 chemicals (chemicals known to be carcinogenic or cause reproductive problems in humans). Health hazards and flammability data are summarized for these materials in Table 5.5-3, which also contains information on incompatible chemicals. Table 5.5-4 describes the toxicity of the regulated substance and hazardous materials. The following sections list mitigation measures for minimizing the public health risks associated with hazardous material and regulated substance handling during facility operation.

Hazardous Materials

All hazardous materials will be handled and stored in accordance with applicable codes and regulations specified in Section 5.5.6. Specific requirements of the California Fire Code that reduce the risk of fire or the potential for a release of hazardous materials that could affect public health or the environment include:

- Provision of an automatic sprinkler system for indoor hazardous material storage areas.
- Provision of an exhaust system for indoor hazardous material storage areas.
- Separation of incompatible materials by isolating them from each other with a noncombustible partition.
- Spill control in all storage, handling, and dispensing areas.
- Separate secondary containment for each chemical storage system. The secondary containment is required to hold the entire contents of the tank plus the volume of water for the fire suppression system that could be used for fire protection for a period of 20 minutes in the event of a catastrophic spill.

In addition, a Business Emergency/Contingency Plan (i.e., HMBP) is required by CCR Title 19 and the Health and Safety Code (Section 25504). In accordance with these regulations, the HMBP will include an inventory and location map of hazardous materials onsite and an emergency response plan for hazardous materials incidents. Specific topics addressed in the plan will include:

- Facility identification
- Emergency contacts
- Chemical inventory information (for every hazardous material)
- Site map
- Emergency notification data
- Procedures to control actual or threatened releases
- Emergency response procedures

- Training procedures
- Certification

The HMBP will be filed with the Ventura County Environmental Health – Hazardous Materials Program, the designated CUPA for the MREC site, and will be updated annually in accordance with applicable regulations.

In accordance with emergency response procedures specified in the HMBP, designated personnel will be trained as members of a plant hazardous material response team, and team members will receive the first responder and hazardous material technical training to be developed in the HMBP, including training in appropriate methods to mitigate and control accidental spills. In the event of a chemical emergency, plant personnel will defer to the Ventura County Environmental Health – Hazardous Materials Program and first responders. VCFD Station No. 26 Saticoy would be the first onsite. The VCFD Hazmat team, located at 165 Durley Avenue, Camarillo, CA 93010 may also be called on to respond and would have a response time of approximately 35-45 minutes. Staff from the Ventura County Environmental Health –Hazardous Materials Program, which is also the CUPA Hazardous Emergency Response Headquarters, may also be dispatched to the MREC site, if warranted.

Aqueous NH_3

NH_3 is a regulated substance under the federal CAA pursuant to 40 CFR 68 (Subpart G) and the CalARP pursuant to Health and Safety Code Sections 25331 through 25543.3. The California program is similar to the federal program but is more stringent in some areas.

In accordance with CalARP regulations, an RMP will be prepared for the NH_3 tank. The RMP will be filed with the Ventura County Environmental Health – Hazardous Materials Programs the designated CUPA for the MREC site. The RMP will include a hazard assessment to evaluate the potential effects of an accidental release, a program for preventing an accidental release, and a program for responding to an accidental release to protect human health and the environment. The specific components of the RMP include:

- Description of the facility
- Accident history of the facility
- History of equipment used at the facility
- Design and operation of the facility
- Site map(s) of the facility
- Piping and instrument diagrams of the facility
- Seismic analysis
- Hazard and operability study
- Prevention program
- Consequence analysis
- Offsite consequence analysis
- Emergency response
- Auditing and inspection
- Record keeping
- Training
- Certification

A Process Safety Management plan will not be required under the Occupational Safety and Health Act, because the regulations apply only to aqueous NH_3 solutions above 44 percent (29 CFR Part 199).

Petroleum Products

Federal and California regulations require a Spill Prevention Control and Countermeasure (SPCC) plan if petroleum products above certain quantities are stored. Both federal and state laws apply only to

petroleum products that might be discharged to navigable waters. If stored quantities are equal to or greater than 660 gallons for a single container, or equal to or greater than 1,320 gallons total (including ASTs, oil-filled equipment, and drums), an SPCC plan must be prepared. Because the facility will store more than 1,320 gallons of petroleum products, an SPCC plan will be prepared.

Transportation/Delivery of Hazardous Materials and Regulated Substances

Hazardous materials and one regulated substance will be delivered periodically to the facility. As discussed in Section 5.12, Traffic and Transportation, transportation of hazardous materials will comply with all Caltrans, EPA, DTSC, CHP, and California State Fire Marshal regulations. Under the CVC, the CHP has the authority to adopt regulations for transporting hazardous materials in California. Aqueous NH_3, a regulated substance, will be delivered to the facility, and transported in accordance with CVC Section 32100.5, which regulates the transportation of hazardous materials that pose an inhalation hazard. In addition, NH_3 will only be transported along approved transportation routes. The proposed route for MREC is for trucks to use the Santa Paula Freeway (SR-126), exit at South Briggs Road, turn onto Pinkerton Road, bear south onto Mission Rock Road, and turn west onto Shell Road.

Security Plan

In addition to standard industrial business security measures, the MREC will be preparing a security plan that will include the following elements:

- Descriptions of site fencing and security gate
- Evacuation procedures
- A protocol for contacting law enforcement in the event of conduct endangering the facility, its employees, its contractors, or the public
- A fire alarm monitoring system
- Measures to conduct site personnel background checks, including employee and routine onsite contractors, consistent with state and federal law regarding security and privacy
- A site access protocol for vendors
- A protocol for hazardous materials vendors to prepare and implement security plans as per 49 CFR 172.800 and to ensure that all hazardous materials drivers are in compliance with personnel background security checks as per 49 CFR Part 172, Subpart I

The plan will also include a demonstration that the perimeter security measures will be adequate. The demonstration may include one or more of the following:

- Security guards
- Security alarm for critical structures
- Perimeter breach detectors and onsite motion detectors
- Video or still camera monitoring system

5.5.5.3 Monitoring

In accordance with applicable federal, state, and local regulations, MREC site personnel would regularly inspect all hazardous materials handling facilities for compliance with applicable regulations and would ensure that any deficiencies were promptly repaired. In addition, the MREC would be subject to regular inspections by the VCFD, which would ensure compliance with appropriate regulatory requirements for hazardous materials and regulated substances handling.

5.5.6 Laws, Ordinances, Regulations, and Standards

The storage and use of hazardous materials and regulated substances at the facility are governed by federal, state, and local laws. Applicable laws and regulations address the use and storage of hazardous materials to protect the environment from contamination and to protect facility workers and the surrounding community from exposure to hazardous and regulated substances. The applicable LORS are summarized in Table 5.5-5 and described below.

Table 5.5-5 Laws, Ordinances, Regulations, and Standards for Hazardous Materials Handling

LORS	Requirements/Applicability	Administering Agency	AFC Section Explaining Conformance
Federal			
Section 302, EPCRA (Public Law 99–499, 42 USC 11022) Hazardous Chemical Reporting: Community Right-To-Know (40 CFR 370)	Requires one-time notification if EHS are stored in excess of TPQs.	Ventura County Environmental Health – CUPA/Hazardous Materials Program	An HMBP will be prepared for submittal to Ventura County Environmental Health – CUPA/Hazardous Materials Program (Section 5.5.4.2.1).
Section 304, EPCRA (Public Law 99–499, 42 USC 11002) Emergency Planning and Notification (40 CFR 355)	Requires notification when there is a release of hazardous material in excess of its RQ.	Ventura County Environmental Health – CUPA/Hazardous Materials Program	An HMBP will be prepared to describe notification and reporting procedures (Section 5.5.4.2.1).
Section 311, EPCRA (Public Law 99–499, 42 USC 11021) Hazardous Chemical Reporting: Community Right-To-Know (40 CFR 370)	Requires that SDSs for all hazardous materials or a list of all hazardous materials be submitted to the SERC, LEPC, and Ventura County Environmental Health Hazardous Materials Program	Ventura County Environmental Health – CUPA/Hazardous Materials Program	The HMBP to be prepared will include a list of hazardous materials for submission to agencies (Section 5.5.4.2.1).
Section 313, EPCRA (Public Law 99–499, 42 USC 11023) Toxic Chemical Release Reporting: Community Right-To-Know (40 CFR 372)	Requires annual reporting of releases of hazardous materials.	Ventura County Environmental Health – CUPA/Hazardous Materials Program	The HMBP to be prepared will describe reporting procedures (Section 5.5.4.2.1).
Section 112, CAA Amendments (Public Law 101–549, 42 USC 7412) Chemical Accident Prevention Provisions (40 CFR 68)	Requires facilities that store a listed hazardous material at a quantity greater than the TQ to develop an RMP.	Ventura County Environmental Health – CUPA/Hazardous Materials Program	Not applicable for 19.5 percent aqueous NH_3; a CalARP RMP will be prepared and submitted to Ventura County Environmental Health – CUPA/Hazardous Materials Program (Section 5.5.4.2.2).

Table 5.5-5 Laws, Ordinances, Regulations, and Standards for Hazardous Materials Handling

LORS	Requirements/Applicability	Administering Agency	AFC Section Explaining Conformance
Section 311, CWA (Public Law 92–500, 33 USC 1251 et seq.) Oil Pollution Prevention (40 CFR 112)	Requires preparation of an SPCC plan if oil is stored in a single AST with a capacity greater than 660 gallons or if the total petroleum storage (including ASTs, oil-filled equipment, and drums) is greater than 1,320 gallons. The facility will have petroleum in excess of the aggregate volume of 1,320 gallons.	RWQCB	An SPCC will be prepared (Section 5.5.4.2.3).
Pipeline Safety Laws (49 USC 60101 et seq.) Hazardous Materials Transportation Laws (49 USC 5101 et seq.) Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards (49 CFR 192)	Specifies natural gas pipeline construction, safety, and transportation requirements.	U.S. Department of Transportation	The natural gas pipeline will be constructed in accordance with 49 CFR requirements (Section 5.5.2.5)
State			
Health and Safety Code, Section 25500, et seq. (HMBP)	Requires preparation of an HMBP if hazardous materials are handled or stored in excess of threshold quantities.	Cal-OSHA	A HMBP will be prepared for submittal to the Ventura County Environmental Health – CUPA/Hazardous Materials Program (Section 5.5.4.2.1).
Health and Safety Code, Section 25531 through 25543.4 (CalARP)	Requires registration with local CUPA or lead agency and preparation of an RMP if regulated substances are handled or stored in excess of TPQs.	Ventura County Environmental Health – CUPA/Hazardous Materials Program	An RMP will be prepared and submitted to the Ventura County Environmental Health – CUPA/Hazardous Materials Program (Section 5.5.4.2.1).
Health and Safety Code, Section 25270 through 25270.13 (Aboveground Petroleum Storage Act)	Requires preparation of an SPCC plan if oil is stored in a single AST with a capacity greater than 660 gallons or if the total petroleum storage (including ASTs, oil-filled equipment, and drums) is greater than 1,320 gallons. The facility will have petroleum in excess of the aggregate volume of 1,320 gallons.	RWQCB	An SPCC plan will be prepared (Section 5.5.4.2.3).
Health and Safety Code, Section 25249.5 through 25249.13 (Safe Drinking Water and Toxics Enforcement Act) (Proposition 65)	Requires warning to persons exposed to a list of carcinogenic and reproductive toxins and protection of drinking water from same toxins.	OEHHA	The site will be appropriately labeled for chemicals on the Proposition 65 list (Section 5.5.5.2.4).
CVC Section 32100.5.	Establishes the procedures for the state to determine transportation corridors for materials that may pose an inhalation hazard.	Caltrans, CHP	Transportation of aqueous NH_3 will follow designated routes (Section 5.5.4.2.4).

Table 5.5-5 Laws, Ordinances, Regulations, and Standards for Hazardous Materials Handling

LORS	Requirements/Applicability	Administering Agency	AFC Section Explaining Conformance
CPUC GO-112-E and 58-A	Specify standards for gas service and construction of gas gathering, transmission, and distribution piping systems.	CPUC	Construction of the natural gas pipeline will comply with the standards specified in these GOs (Section 5.5.5.2.5).
Local			
Ventura County Ordinance Code	Develop and implement safety management plans, HMBP, and RMP.	Ventura County Environmental Health – CUPA Hazardous Materials Program	Section 5.5.5.3

EPCRA = Emergency Planning and Community Right-to-Know Act of 1986
LEPC = local emergency planning committee
OEHHA = Office of Environmental Health Hazard Assessment
RWQCB = Regional Water Quality Control Board
SDS = Safety Data Sheet
SERC = State Emergency Response Commission

5.5.6.1 5.5.5.1 Federal LORS

Hazardous materials are governed under CERCLA, the CAA, and the CWA.

29 CFR 1910 et seq. and 1926 et seq.

These sections contain requirements for equipment used to store and handle hazardous materials for the purpose of protecting worker health and safety. This regulation also addresses requirements for equipment necessary to protect workers in emergencies. It is designed primarily to protect worker health, but also contains requirements that affect general facility safety. The California regulations contained in Title 8 (California equivalent of 29 CFR) are generally more stringent than those contained in Title 29. The administering agency for the above authority is the OSHA and the California Division of Occupational Safety and Health (Cal-OSHA).

49 CFR Parts 172, 173, and 179

These regulations provide standards for labels, placards, and markings on hazardous materials shipments by truck (Part 172), standards for packaging hazardous materials (Parts 173), and for transporting hazardous materials in tank cars (Part 179). The administering agencies for the above authority are the CHP and U.S. Department of Transportation.

CERCLA

The SARA amends CERCLA and governs hazardous substances. The applicable part of SARA for the proposed project is Title III, otherwise known as the EPCRA, which requires states to establish a process for developing local chemical emergency preparedness programs and to receive and disseminate information on hazardous substances present at facilities in local communities. The law provides primarily for planning, reporting, and notification concerning hazardous substances. Key sections of the law follow:

- Section 302—Requires one-time notification when EHSs are present in excess of their TPQs. EHSs and their TPQs are found in Appendices A and B to 40 CFR Part 355.
- Section 304—Requires immediate notification to the LEPC and the SERC when a hazardous material is released in excess of its RQ. If a CERCLA-listed hazardous substance RQ is released, notification

must also be given to the National Response Center in Washington, D.C. (RQs are listed in 40 CFR Part 302, Table 302.4). These notifications are in addition to notifications given to the local emergency response team or fire personnel.

- Section 311—Requires that either SDSs for all hazardous materials or a list of all hazardous materials be submitted to the SERC, LEPC, and local fire department.
- Section 313—Requires annual reporting of hazardous materials released into the environment either routinely or as a result of an accident.

The administering agencies for the above authority are EPA Region 9, the National Response Center, and the Ventura County Environmental Health Hazardous Materials Program. The Ventura County Environmental Health Hazardous Materials Program is the CUPA.

CAA

Regulations (40 CFR 68) under the CAA are designed to prevent accidental releases of hazardous materials. The regulations require facilities storing a TQ or greater of listed regulated substances to develop an RMP, including hazard assessments and response programs to prevent accidental releases of listed chemicals. Section 112(r)(5) of the CAA discusses the regulated substances. These substances are listed in 40 CFR 68.130. Aqueous NH_3 is a listed substance, and its TQ for solutions of 20 percent and greater is 20,000 pounds of solution. Aqueous NH_3 in concentrations less than 20 percent by weight is not subject to CAA RMP requirements.

CWA

The SPCC rule under the CWA is designed to prevent or contain the discharge or threat of discharge of oil into navigable waters or adjoining shorelines. Regulations (40 CFR 112) under the CWA require facilities to prepare a written SPCC plan if they store oil and its release would pose a threat to navigable waters. The SPCC rule is applicable if a facility has a single oil AST with a capacity greater than 660 gallons, total petroleum storage (including ASTs, oil-filled equipment, and drums) greater than 1,320 gallons, or underground storage capacity greater than 42,000 gallons. The SPCC rule is administered by the local CUPA, which is the Ventura County Environmental Health Hazardous Materials Program.

Other related federal laws that address hazardous materials but do not specifically address their handling, include the Resource Conservation and Recovery Act (RCRA), which is discussed in Section 5.14, Waste Management, and the Occupational Safety and Health Act, which is discussed in Section 5.16, Worker Health and Safety.

Natural Gas Pipeline Construction and Safety

Title 40 of the CFR, parts 190 through 192, specifies safety and construction requirements for natural gas pipelines. Part 190 outlines pipeline safety procedures, Part 191 requires a written report for any reportable incident, and Part 192 specifies minimum safety requirements for pipelines.

5.5.6.2 State LORS

California laws and regulations relevant to hazardous materials handling at the MREC include Health and Safety Code Section 25500 (hazardous materials), Health and Safety Code 25531 (regulated substances), and the Aboveground Petroleum Storage Act (petroleum in aboveground tanks).

Title 8, CCR, Section 339; Section 3200 et seq., Section 5139 et seq. and Section 5160 et seq.

Section 339 of Title 8 of the CCR lists hazardous chemicals relating to the Hazardous Substance Information and Training Act; 8 CCR Section 3200 et seq. and 5139 et seq. address control of hazardous substances; and 8 CCR Section 5160 et seq. addresses hot, flammable, poisonous, corrosive, and irritant substances.

Health and Safety Code Section 25500

California Health and Safety Code, Section 25500, et seq., and the related regulations in 19 CCR 2620, et seq., require local governments to regulate local business storage of hazardous materials in excess of certain quantities. The law also requires that entities storing hazardous materials be prepared to respond to releases. Those using and storing hazardous materials are required to submit an HMBP to their local CUPA and to report releases to their CUPA and the State Office of Emergency Services. The TQs for hazardous materials are 55 gallons for liquids, 500 pounds for solids, and 200 cubic feet for compressed gases measured at standard temperature and pressure.

Health and Safety Code Section 25531 (CalARP)

California Health and Safety Code, Section 25531, et seq., and the CalARP regulate the registration and handling of regulated substances. Regulated substances are any chemicals designated as an EHS by EPA as part of its implementation of SARA Title III. Health and Safety Code Section 25531 overlaps or duplicates some of the requirements of SARA and the CAA. Facilities handling or storing regulated substances at or above TPQs must register with their local CUPA and prepare an RMP, formerly known as a Risk Management and Prevention Program. The CalARP is found in Title 19, CCR, Chapter 4.5. The TPQ for NH_3 is 500 pounds. Portions of the aqueous NH_3 process that can be demonstrated to have a partial pressure of the regulated substance in the mixture (solution) under the handling or storage conditions (less than 10 millimeters of mercury) do not count toward the threshold.

Aboveground Petroleum Storage Act

The California Health and Safety Code Sections 25270 to 25270.13 ensure compliance with the CWA. The law applies to facilities that operate a petroleum AST with a capacity greater than 660 gallons or combined ASTs capacity greater than 1,320 gallons, or oil-filled equipment where there is a reasonable possibility that the tank(s) or equipment may discharge oil in “harmful quantities” into navigable waters or adjoining shore lands. If a facility falls under these criteria, it must prepare an SPCC plan.

Proposition 65

This California law requires the state to identify chemicals that cause cancer and reproductive toxicity, contains requirements for informing the public of the presence of these chemicals, and prohibits discharge of the chemicals into sources of drinking water. Lists of the chemicals of concern are published and updated periodically by California’s OEHHA. Some of the chemicals to be used at the MREC are on the cancer-causing and reproductive-toxicity lists of Proposition 65.

Natural Gas Pipeline Construction and Safety

The CPUC enforces GO-58-A, which specifies standards for natural gas service in the State of California, and GO-112-E, which specifies rules governing the design, construction, testing, operation, and maintenance of natural gas gathering, transmission, and distribution piping systems. The proposed project will connect to an existing SoCalGas high-pressure natural gas pipeline (Line 404/406).

CVC Section 32100.5

CVC Section 32100.5 regulates the transportation of hazardous materials that pose an inhalation hazard. Aqueous NH_3, a regulated substance, will be delivered to the facility and transported in accordance with this section by following the designated access routes, as described previously in Section 5.5.4.2.4.

5.5.6.3 Local LORS

The Ventura County Environmental Health Hazardous Materials Program is the designated CUPA and is responsible for administering HMBPs, Hazardous Materials Management Plans, SPCC Plans, and RMPs filed by businesses located in the county (Ventura County, 2015b). The Ventura County Environmental Health Hazardous Materials Program is also responsible under the CUPA program for underground storage tank compliance. In addition, the agency is responsible for ensuring that businesses and industry

store and use hazardous materials safely and in conformance with various regulatory codes. The agency performs inspections at established facilities to verify that hazardous materials are properly stored and handled and that the types and quantities of materials reported in a firm's HMBP are accurate (Ventura County, 2015).

Ventura County Ordinance Code lists fee schedules and identifies Ventura County as the CUPA. The ordinance closely follows and sites the state Health and Safety Code requirements.

5.5.6.4 Codes

The design, engineering, construction, and operation of hazardous materials storage and dispensing systems will be in accordance with all applicable codes and standards, including the following:

- CVC, 13 CCR 1160, et seq.—Provides the CHP with authority to adopt regulations for the transportation of hazardous materials in California. The CHP can issue permits and specify the route for hazardous material delivery.
- The California Fire Code, Articles 79 and 80—These are the hazardous materials sections of the Fire Code. Local fire agencies or departments enforce this code and can require that an HMBP and a Hazardous Materials Inventory Statement be prepared. The California Fire Code is based on the federal fire guidelines, which include the Uniform Fire Code.
- State Building Standard Code, Health and Safety Code Sections 18901 to 18949—Incorporates the Uniform Building Code, Uniform Fire Code, and Uniform Plumbing Code.
- The American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section VIII.
- Ventura County Ordinance Code.

5.5.7 Agencies and Agency Contacts

Several agencies regulate hazardous materials, and they will be involved in regulating the hazardous materials stored and used at MREC. At the federal level, EPA will be involved; at the state level, the Cal-EPA will be involved. However, local agencies primarily enforce hazardous materials laws. For MREC, the primary local agencies with jurisdiction will be the Ventura County Environmental Health Hazardous Materials Program and the VCFD. The persons to contact are shown in Table 5.5-6.

Table 5.5-6 Agency Contacts for Hazardous Materials Handling

Issue	Agency	Contact
CUPA for Hazardous Materials Inventory and Emergency Business Plan and RMP	Ventura County Environmental Health – CUPA/Hazardous Materials Program	CUPA Supervisor Brandi Starjack Ventura County Government Center Administration Building - 3rd Floor Environmental Health Division 800 S. Victoria Avenue #1730 Ventura, CA 93009-1730 (805) 654-2823 brandi.starjack@ventura.org
Fire Department Permits	VCFD	Captain Fallat Station 26 Saticoy 12391 W. Telegraph Road Santa Paula, CA 93060 (805) 371-1111 x26

Table 5.5-6 Agency Contacts for Hazardous Materials Handling

Issue	Agency	Contact
Hazardous Materials Response	Ventura County Environmental Health – CUPA/Hazardous Materials Program	CUPA Supervisor Brandi Starjack Ventura County Government Center Administration Building - 3rd Floor Environmental Health Division 800 S. Victoria Avenue #1730 Ventura, CA 93009-1730 (805) 654-2823 brandi.starjack@ventura.org Main office number for hazardous materials response: (805) 654-2813

5.5.8 Permits and Permit Schedule

The Ventura County Environmental Health Hazardous Materials Program requires that project developers obtain the permits listed in Table 5.5-7 before storing hazardous materials onsite.

Table 5.5-7 Permits and Permit Schedule for Hazardous Materials Handling

Permit	Agency Contact	Schedule
HMBP	Ventura County Environmental Health – CUPA/Hazardous Materials Program Ventura County Government Center Administration Building - 3rd Floor Environmental Health Division 800 S. Victoria Avenue #1730 Ventura, CA 93009-1730 (805) 654-2127	Approximately 30 days before any regulated substance comes onsite, and submitted through the California Environmental Reporting System
RMP	Ventura County Environmental Health – CUPA/Hazardous Materials Program Ventura County Government Center Administration Building - 3rd Floor Environmental Health Division 800 S. Victoria Avenue #1730 Ventura, CA 93009-1730 (805) 654-2127	Approximately 30 days before any regulated substance comes onsite, and submitted through the California Environmental Reporting System

5.5.9 References

CH2M HILL Engineers, Inc. (CH2M). 2015a. Telephone Conversation Record – Captain Fallat, Ventura County Fire Department, Station 25, Saticoy, September 24, 2015.

CH2M HILL Engineers, Inc. (CH2M). 2015b. Telephone Conversation Record – Brandi Starjack, CUPA Supervisor, Ventura County Environmental Health – CUPA/Hazardous Materials Program, September 28, 2015.

CH2M HILL Engineers, Inc. (CH2M). 2015c. Telephone Conversation Record – Mike LoMonaco, Fire Specialist, Public Information Office for the Ventura County Fire Department, September 29, 2015.

Ventura County Ordinance Code. Accessed September 2015 at http://www.ventura.org/rma/envhealth/cupa/pdf/VCORDINANCECODE.pdf

Ventura County. 2015a. Ventura County Environmental Health – CUPA/Hazardous Materials Program and Underground Tanks Online Records website, accessed October 2015 at http://www.vcenvhealth.org/hazmat/

Ventura County. 2015b. Ventura County Environmental Health – CUPA/Hazardous Materials Program website, accessed September 2015 at http://www.ventura.org/rma/envhealth/cupa/index.html.Lewis, Richard J., Sr. 1991. *Hazardous Chemical Desk Reference*. 2nd Edition.

Smyth H. F., Jr. 1956. "Improved Communication: Hygienic Standards for Daily Inhalation." *Am. Ind. Hyg. Assoc. Q*. 17 (2): 129-185.