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Appendix 4.5B

Hazardous Materials Business Plan

Hazardous Materials Business Plan

Compass Energy Storage Project

FEBRUARY 2024

Prepared for:

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TABLE(S)

1 Introduction

The Compass Battery Energy Storage Project (Project) will be composed of lithium-ion batteries, inverters, medium-voltage (MV) transformers, a switchyard, a collector substation, and other associated equipment to interconnect into the existing San Diego Gas and Electric (SDG&E) Trabuco to Capistrano 138 kilovolt (kV) transmission line (Point of Interconnection). The switchyard will be owned and operated by SDG&E. The batteries will be installed in non-habitable enclosures. The enclosures will have battery storage racks, with relay and communications systems for remote, automated monitoring and managing of the batteries. The BESS will also include a battery management system to control the charging/discharging of the batteries, along with temperature monitoring and control of individual battery cell temperature with an integrated cooling system. Batteries operate with direct current (DC) electricity, which must be converted to alternating current (AC) for compatibility with the existing electric grid. Power inverters to convert between AC and DC, along with transformers to step up the voltage, will be included as part of the project. Electric energy will be transferred from the existing power grid to the Project batteries for storage and from the Project batteries to the power grid when additional electricity is needed. Following construction, the proposed use will not create air emissions, will not require sanitary facilities, will generate minimal vehicle trips, and will only require water for landscape irrigation and to supply on-site fire hydrants.

This Hazardous Material Business Plan (HMBP) has been written as part of the project development documents to describe anticipated hazardous materials, employee training and emergency response for the Project. HMBPs are "living documents" in that the documents will change based on changing activities and personnel at the project site. This originally submitted documentation will need to be reviewed and any changes will need to be updated just prior to construction, during the operating life of the Project and during decommissioning.

1.1 Elements of a Hazardous Materials Business Plan

The California Safety Code Division 20. Miscellaneous Health and Safety Provisions Chapter 6.95 §25505 establishes requirements for HMBPs in the State of California. An HMBP must contain the following:

- An inventory of hazardous materials onsite,
- An Emergency Response Plan including procedures and contacts for communicating an immediate response to a reportable release or threatened release of a hazardous material,
- Employee training in project safety procedures and emergency response plans and procedures in the event of a reportable release or threatened release.

1.2 Certified Unified Program Agency (CUPA)

In 1993 Senate Bill 1082, now the California Health and Safety Code Chapter 6.11, required establishment of the Unified Program for hazardous waste and hazardous materials management. Agencies under this program are known as Certified Unified Program Agencies (CUPA). The CUPA for the Project area is the Orange County Environmental Health Division, emergency contact information for the CUPA is included in Section 4, Emergency Action Plan.

Hazardous Materials Business Plans are submitted for electronic filing into a statewide database called the California Environmental Reporting System (CERS) once a project begins construction and will continue to be maintained online throughout operations until the site is decommissioned. The originally submitted documentation will need to be reviewed, and any changes will be uploaded, just prior to construction and re-certified at least once annually in the CERS system.

1.3 Is a Hazardous Materials Business Plan Required?

The facility is anticipated to qualify for a Hazardous Materials Business Plan, and oversight by CUPA, during construction, operations and decommissioning because it is anticipated to have materials onsite that are greater than the State of California thresholds for quantities of hazardous materials. Threshold quantities are hazardous materials at or above the reporting quantities of 55 gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of a compressed gas. A list of the hazardous substances which qualify for reporting is maintained in California Occupational Safety and Health Regulations Chapter 3.2 Article 5 §339. The anticipated hazardous materials anticipated at the Project are discussed in Section 3 of this Plan.

2 Project Description

2.1 Project Location

The Project site consists of developing an approximately 10 acres of a 40.8-acre parcel, Parcel B1 which is a portion of Assessor's Parcel Number 637-082-71, located in the city of San Juan Capistrano, California. The Project site is adjacent to Camino Capistrano with Interstate-5 and Union Pacific Railroad located to the east, Saddleback Church Rancho Capistrano to the north, mostly open space to the south, and Oso Creek to the south and east. The project site was selected given its location in an area of high energy demand near SDG&E facilities. The project site is one of the few remaining undeveloped lands in Orange County that has minimal topography and associated grading/civil improvements and is located immediately adjacent to existing roadways that provide readily available access for construction and operations.

2.2 Project Components

The Project would consist of several components, including battery storage cabinets, transformers, inverters, a substation, an SDG&E switchyard, and an interconnection line to the SDG&E Trabuco to Capistrano 138 kV transmission line. The Project would also include stormwater detention improvements, landscaping, a perimeter wall, and access road improvements. The technologies that would be used at the Project site have been proven at energy storage facilities in the United States and globally. The Project's components that are subject to decommissioning are summarized below.

2.2.1 Grading

The Project site is fairly level with minimum topography, and as a result, only minor grading is anticipated to occur throughout the site. Materials suitable for compaction would be stored in stockpiles at designated locations using proper erosion-prevention methods. Materials unsuitable for compaction, such as debris and large rocks, would be stockpiled at designated locations for subsequent disposal at an acceptable off-site location. BESS containers, housing batteries connected in strings and housed on racks with monitoring, lighting, and cooling equipment, would be installed on concrete foundations.

2.2.2 Battery Energy Storage System

The lithium-ion batteries will be housed in racks similar to common computer server racks. The racks are typically made of aluminum, but sometimes may be composed of steel. The proposed facility will use a lithium-ion technology that has a long lifespan and boasts superior safety and stability characteristics. The battery racks will be designed and installed in accordance with the local seismic design requirements.

The battery racks will be housed in non-habitable enclosures. The BESS will be designed and installed in conformance with the nationally recognized National Fire Protection Association 855 Standard for the Installation of Stationary Energy Storage Systems, along with all applicable state and local fire protection requirements. Additionally, the BESS includes the following monitoring and safety components:

Modular battery racks designed for ease of maintenance

Fire suppression system

Heating, ventilation, and air conditioning system

Integrated battery management system

2.2.3 Power Inverters and Transformers

The Project inverters are unattended, stand-alone units that operate in all conditions. They operate in both a charge mode and a discharge mode. They are UL listed for bi-directional use and are monitored and controlled remotely. There will be on-site disconnects in the case of an emergency or unscheduled maintenance. They are robust in their design and are designed to last more than 30 years with proper preventive maintenance, scheduled maintenance, and occasional major overhauls.

Medium-voltage (MV) transformers and additional electrical equipment will be installed outside the BESS enclosure. Underground wires and cabling will run from the battery cable collection box to a concrete pad housing the inverter and transformer. From the MV transformer, cabling will be run to the Project substation. All outside electrical equipment will be housed in the appropriate National Electrical Manufacturers Association rated enclosures and screened from view, to the extent possible, on all sides.

2.2.4 Project Substation

A Project substation will be installed that will include open rack, air insulated switch gear and the main power transformer to step up from 34.5 kV to 138 kV, as well as a pole to connect the Project substation to the SDG&E switchyard.

2.2.5 SDG&E Switchyard

An SDG&E switchyard will be installed adjacent to the Project substation that will include open rack, air insulated switch gear and the main power transformer to deliver power to the nearby Trabuco to Capistrano 138 kV transmission line. The switchyard will be owned and operated by SDG&E.

2.2.6 Telecommunication Facilities

The Project will include telecommunication facilities for communication with the SDG&E/CAISO facilities and to support remote project operations monitoring. To provide for communication with SDG&E facilities, a fiber-optic cable will be used to connect the project site switchyard with the SDG&E point of interconnection. Utility interconnection regulations require the installation of a second, separate, redundant fiber-optic cable. The redundant fiber-optic cable will also be installed within the project footprint. For remote monitoring and operations communication, the project will use local exchange carrier services, connecting to existing telecommunication fiber-optic lines owned and managed by local telecommunication providers.

2.2.7 Loop-In Transmission Line

The Project will be interconnected with the regional electrical grid by a loop-in transmission line that will transfer power to and from the proposed Project and the SDG&E Trabuco to Capistrano 138 kV transmission line approximately 500 feet to the east of the Project site. The loop-in transmission line poles will be sited to avoid Oso Creek and construction and operation of the line and poles will fully avoid Oso Creek. Up to five poles will be constructed to support the line. The loop-in transmission line will be owned and operated by SDG&E. These poles consist of two poles on the project site within the SDG&E switchyard, west of Oso Creek, and three poles on the east side of Oso Creek (two of which will be replacing existing poles; only one pole on the east side of Oso Creek will be new).

2.2.8 Landscaping and Security

To conform with the City General Plan Policy 7.1 and visually screen the BESS, the Project will incorporate a 20-foot landscape buffer around the perimeter. The landscape buffer will consist of a mixture of trees, shrubs and groundcover, and vines to create a varied, aesthetically pleasing visual buffer. Trees within the landscape buffer will include species native to southern California, ranging from 24- to 36-inch box size, with heights of 20 to 60 feet and widths of 15 to 40 feet, depending on the tree type. All plantings will require minimal supplemental irrigation once established.

The Project site is surrounded by open space and Oso Creek. There are no public roads within or adjacent to the Project site.

A 10-foot-tall perimeter wall will be constructed. This will consist of a prefabricated decorative wall that will be utilized for both visual enhancement and fire protection. Access to the Project site will only be available to authorized personnel. A Knox box will be provided at all access gates to allow for emergency access.

Permanent motion-sensitive, directional security lights will be installed to provide adequate illumination around the substation area and points of ingress/egress. All lighting will be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties. Security cameras will be placed on site and monitored 7 days a week and 24 hours per day.

2.2.9 Stormwater Detention Improvements

Stormwater runoff from the Project site currently outflows to an unchannelized section of Oso Creek. To meet regulatory standards and reduce potential for stormwater to be discharged off site in exceedance of existing conditions, onsite stormwater will be detained in an underground storage chamber system located under or adjacent to the access roads. From here, the water will be pumped north to one of two existing Orange County Flood Control District (OCFCD) outfalls north of the Project site. The Project's onsite discharge pumped into the channelized portion of Oso Creek via the outfalls will be incorporated into, and consistent with the OCFCD's National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region (Order No. R9-2013-0001, NPDES No. CAS0109266, as amended by Order No., R9-2015-0001) authorized by the San Diego RWQCB. With respect to offsite flows, based on the existing topography, an additional area drains toward the Project site from the west. The proposed stormwater design is to reroute stormwater runoff from the offsite area

utilizing a drainage ditch along the western boundary of the project site, that gradually releases water to the east of the project site. To recreate existing flow conditions and mitigate erosive impacts associated with this discharge, the design ties the release point to a level spreader. The level spreader distributes the stormwater runoff evenly along the entire east edge of the site, promoting even and controlled release to the existing grade.

2.2.10 Other Site Improvements

Access to the Project site will be provided via an existing access road off Camino Capistrano approximately 0.6 miles northeast of the Project site. A new access road will be improved from the access road off Camino Capistrano to the Project site. Road improvements shall consist of converting dirt roads into gravel roads and widening the roads to meet Orange County Fire Authority standards (20-feet wide).

3 Hazardous Materials

Limited amounts of hazardous materials would be stored or used on the site during operations, including diesel fuel, gasoline, and motor oil for vehicles; mineral oil to be sealed within the transformers; and lead-acid-based and/or lithium-ion batteries for emergency backup. Appropriate spill containment and cleanup kits would be maintained during operation of the Project.

The hazardous materials that are anticipated to be used at the project site are safe under normal handling and operating conditions. Each individual module will be monitored and controlled to ensure safe and efficient operations, and every BESS enclosure will be equipped with an integrated fire suppression system, ventilation, as well as gas, heat and smoke detection and alarms. The systems will be designed, constructed, and operated pursuant to the 2022 California Fire Code.

The following is an inventory of hazardous materials that may be found at the project site during construction, operation and decommissioning of the project site:

- Petroleum such as Diesel No. 2 or gasoline, may be stored onsite during construction and decommissioning to fuel construction and decommissioning equipment, though it is not anticipated to be stored onsite during the operation of the site.
- Llithium-ion batteries commonly contain the heavy metals cobalt, copper and nickel as well as other trace heavy metals depending on the location of the source of the mined components. The exact components will not be fully known until the batteries are sourced closer to construction.

Once specific properties and quantities of onsite materials are known, a hazardous materials inventory for any hazardous materials that are greater than the State of California thresholds for quantities of hazardous materials can be uploaded onto the CERS system.

Threshold quantities are hazardous materials at or above the reporting quantities of 55 gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of a compressed gas. A list of reportable hazardous substances is maintained in California Occupational Safety and Health Regulations Chapter 3.2 Article 5 §339.

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4 Emergency Action Plan

The following Emergency Action Plan covers potential onsite chemical spills, fires and earthquakes involving the hazardous materials described in Section 3 above:

Notify Internal and Onsite Personnel

1. Onsite alarm system(s) will automatically alert Internal Staff and Orange County Fire Authority.
2. Notify facility personnel via cell phone and evacuate if necessary.
3. Proceed to a Project Muster Point.

Notify Emergency Response

4. Notify local emergency responders by calling 9-1-1.
5. Onsite alarm system(s) will automatically alert Internal Staff and Orange County Fire Authority.

Notify Neighboring Facilities That May Be Affected by an Off-Site Release

6. Notify Neighboring Facilities that may be affected by an off-site release (Verbally/Via Cell Phone)

Notification to CUPA and State

7. (if needed) Notify the local CUPA (Orange County CUPA; 714-433-6000)
8. (if needed) Notify the State Warning Center at (800) 852-7550.

Prior to Resumption of Operations

Following notification and before facility operations are resumed in areas of the facility affected by the incident, the Emergency Coordinator shall notify the local CUPA and the local hazardous materials program, if necessary that the facility is in compliance with requirements to:

- Provide for proper storage and disposal of recovered waste, contaminated soil or surface water, or any other material that results from and explosion, fire, or release at the facility; and,
- Ensure that no material that is incompatible with the released material is transferred, stored, or disposed of in areas of the facility affected by the incident until clean up procedures are completed.

4.1 Emergency Response Phone Numbers

Table 1. Emergency Response Phone Numbers

Resource	Phone Number	Address
Emergency Coordinator	TBD	TBD
Ambulance, Fire, Police and CHP	9-1-1	Call or Text
Orange County Fire Authority	Office of Emergency Services (714) 573-6000	1 Fire Authority Rd., Irvine, CA 92602
Nearest Fire Station	Orange County Fire Authority Station #9 (714) 573-6000	9 Shops Blvd., Mission Viejo, CA 92691
Nearest Police Station	Laguna Niguel Police Services (949) 770-6011	30111 Crown Valley Pkwy., Laguna Niguel, CA 92677
Nearest Medical Facility	Providence Mission Hospital Mission Viejo Emergency Department (949) 365-2202	27700 Medical Center Rd., Mission Viejo, CA 92691
Local Unified Program Agency	Orange County Environmental Health Division (714) 433-6000	1241 E. Dyer Rd., Ste. 120, Santa Ana, CA 92705
California State Warning Center / CAL OES	(800) 852-7550	
National Response Center (NRC)	(800) 424-8802	
Poison Control Center	(800) 222-1222	

4.2 Agency Notification Phone Numbers

Table 2. Agency Notification Phone Numbers

Agency	Phone Number / Email
California Department of Toxic Substance Control (DTSC)	(916) 255-3545
San Diego Regional Water Quality Control Board	(619) 516-1990
US Environmental Protection Agency (EPA)	(800) 300-2193
California Department of Fish and Wildlife (CDFW)	(916) 358-2900
CAL OSHA	(916) 263-2800
CAL Fire Office of the State Fire Marshal (OSFM)	(916) 323-7390

4.3 Facility Evacuation Procedures

The following alarms and routes will be used in the event there is a need to evacuate the facility.

Onsite Alarm

- The onsite alarm system(s) will sound a warning siren or horn and automatically alert employees to begin evacuation of the facility.

Emergency Assembly Areas

- The muster point will be used for an emergency assembly area.
- No workers or visitors should leave the facility until they have checked in with the emergency coordinator to confirm that they have successfully evacuated the facility.

Evacuation Routes

- Evacuation routes should be posted in clearly visible site locations onsite to direct employees to the Project exits.

4.4 Pre-Arranged Emergency Services

It is anticipated that the project operators will coordinate emergency action and response procedures with the Orange County Fire Authority as part of requirements for the facility to start operations.

It is also anticipated that facility alarm systems will simultaneously notify the operators offsite 24-hour facility monitoring center and the Orange County Fire Authority.

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5 Clean-up and Containment

5.1 Emergency Equipment

The following emergency response equipment, containment supplies and personal protective equipment are anticipated to be available onsite. The location of the equipment will be determined based on accessibility during construction, operations and decommissioning and the Site Plan should be updated to denote the location.

Safety and first aid equipment: Safety glasses, hard hats, chemical protective gloves, first aid kits, portable eyewash kits and/or station.

Communication Equipment: Cell phones and automatic alarm systems as described in Section 2.2.4.

Firefighting equipment: Portable Fire extinguishers and each BESS will be equipped with a self-contained fire suppression system and individual fire detection system as described in Section 2.2.4.

Spill Control and Cleanup Equipment: All in one spill Kit and spill kits with absorbent materials to absorb battery fluids, and leak proof, lined drums.

5.2 Emergency Containment and Cleanup Procedures

The following are anticipated procedures for preventing, mitigating and containing releases and fires at the project site.

Monitoring

- In person inspections on a minimum of a weekly basis for leaks, ruptures and pressure build up of project battery systems and other facility components.
- 24-hour operator remote facility monitoring.
- Fire detection includes battery cell monitoring and infrared cameras to monitor cell temperatures. The system is designed to remove cells from operation should an anomaly be detected.

System Design

- The BESS units are designed such that electrolytes added to the cells is absorbed into the cell material and is contained by the cell casing which prohibits material leaking from the cell even with water fire suppression techniques.
- The units are designed such that should a fire occur, it would not propagate to a neighboring cabinet.
- The BESS unit will be compliant with all applicable federal and international codes.
- Onsite facility will be surrounded with fire resistant materials, usually a gravel surface, maintained free of weeds and other combustible materials.

- The onsite facility drains to a detention basin at the southwest corner of the project allowing for containment of larger releases if needed.

Safe Temporary Storage of Hazardous Waste

- Safe designated Hazardous Waste Storage Location (to be determined) for storage of any hazardous waste generated during normal and emergency actions.
- Use of spill kits and containers specifically designed for onsite materials.

6 Training and Recordkeeping

Employee training is required for all employees and contractors handling hazardous materials or hazardous wastes during normal or emergency situations. The actual training plan will be determined based on the specific company's requirements in their Illness Injury Preventative Program Documents.

6.1 Training

Training of personal should be a combination of formal classroom videos, regularly scheduled safety meetings, onsite guides and manuals and hands on training for specific tasks for the following subject areas:

- The 2012 federal Hazard Communication Standard (HCS, 29 CFR 1910.1200(g)) and other applicable state and local laws. The HCS contains general information about the chemical, identification, hazards, composition, safe handling practices, and emergency control measures (e.g., firefighting).
- The procedures outlined in this plan for emergency response, and emergency evacuation.
- Notification and coordination procedures for onsite personnel, neighboring properties, local emergency responders, CUPA, and Cal OES.
- Communication and alarm systems specific to the project site.
- Location and availability of personal protective equipment, and how to use them.
- Location and availability of spill containment and response materials and equipment and how and when to use them (Fire extinguishers, respirators, spill control kits).
- Identification of facility areas, equipment and systems vulnerable to earthquakes, fire, and other natural disasters.

Training of employees should be documented and refreshed on a regular (i.e., annual) basis.

6.2 Recordkeeping

6.2.1 HMBP As Needed and Annual Updates

This Hazardous Material Business Plan (HMBP) has been written as part of the project development documents to describe anticipated hazardous materials, employee training and emergency response for the Project.

Hazardous Materials Business Plans are submitted for electronic filing into a statewide database called the CERS once a project begins construction and will continue to be maintained online throughout operations until the site is decommissioned. The originally submitted documentation will need to be reviewed, and any changes will be uploaded, just prior to construction and re-certified at least once annually in the CERS system.

6.2.2 Inspections

It is recommended that the weekly onsite inspection information be recorded and kept for a period of at least one year.

7 References

Cal EPA. *Instructions for completing the CERS*. Instructions for Preparing CERS Consolidated Emergency Response/Contingency Plan (ca.gov). Accessed March 12, 2023.

Orange County Health Care Agency. 2023. CUPA Homepage. https://ochealthinfo.com/about-hca/public-health-services/environmental-health-division/hazardous-materials. Accessed March 12, 2023.

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