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Document Title:	CEC Data Request #2 - Hazards and Worker Safety Response
Description:	This document responds to the CEC's April 7, 2025 second data request as it relates to Hazards and Worker Safety
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CEC Data Request #2 – Hazardous Materials Handling and Worker Safety Response

Potentia–Viridi Battery Energy Storage Project

MAY 2025

Prepared for:

CALIFORNIA ENERGY COMMISSION

Prepared by:

LEVY ALAMEDA LLC

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ATTACHMENTS

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1 Introduction

On May 6, 2025, Levy Alameda LLC and Affiliates (Applicant) received a Second Determination of Incompleteness and Request for Information from the California Energy Commission (CEC) for the Potentia-Viridi Battery Energy Storage Project (Project; Docket Number 24-OPT-04) in response to the Applicant's previous submittals. This document responds to the CEC's request and provides further clarification on the topic of Hazardous Materials Handing and Worker Safety as it relates to the Project.

2 Hazardous Materials Handling Response

2.1 Data Requests REV 1 DR HAZ-1 and REV 1 DR HAZ-2

2.1.1 Data Request REV 1 DR HAZ-1

REV 1 DR HAZ-1. ***Please provide a detailed description of the required Attachment 11 – Section 14 (TN 261454) contingency plan, including its specific provisions for emergency response scenarios, compliance with regulatory requirements, and how it will be made available and implemented on-site .***

Response: Contingency Plan: The freight company would be required to have a contingency plan prepared for emergency situations (vehicle breakdown, accident, diesel spill, fire, explosion, etc.) during transportation of goods. Once the freight company is selected, a contingency plan would be reviewed and available in every transport truck and on-site.

Additional clarification provided below:

Subject to the requirements on the individual freight companies, the following procedures will be followed in the event of a vehicle breakdowns, accident, or other event.

TRANSPORTATION CONTINGENCY PLAN

This plan outlines the procedures and requirements for the safe and compliant transportation of lithium batteries in bulk by truck, in accordance with the U.S. Department of Transportation (DOT) Hazardous Materials Regulations (HMR), 49 C.F.R. Parts 171-180.

1. **REGULATORY FRAMEWORK:** All activities covered by this plan shall be conducted in strict adherence to:
   1.1. **49 C.F.R. Part 171:** General Information, Regulations, and Definitions.
   1.2. **49 C.F.R. Part 172:** Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, Training Requirements, and Security Plans.

1.3. **49 C.F.R. Part 173:** Shippers - General Requirements for Shipments and Packagings, specifically **§173.185 Lithium cells and batteries**.

1.4. **49 C.F.R. Part 177:** Carriage by Public Highway.

1.5. **49 C.F.R. Parts 178 & 180:** Specifications for Packagings & Continuing Qualification and Maintenance of Packagings (as applicable).

2. **CLASSIFICATION OF LITHIUM BATTERIES (Ref: §172.101, §173.185)**

2.1. **Responsibility: The shipper is responsible for correctly classifying the lithium batteries. The freight company will verify shipper documentation.**

2.2. **Proper Shipping Name (PSN) & UN Number:**

2.2.1. UN3480, Lithium ion batteries

2.2.2. UN3481, Lithium ion batteries contained in equipment / packed with equipment

2.2.3. UN3090, Lithium metal batteries

2.2.4. UN3091, Lithium metal batteries contained in equipment / packed with equipment

2.3. **Hazard Class: Class 9 (Miscellaneous hazardous material).**

3. **Immediate Response:**

3.1. **Safety First:**

3.1.1. Apply the braking system, stop the engine and isolate the battery.
3.1.2. Turn on hazard lights, set up warning devices (safety triangles), and ensure the driver's safety.
3.1.3. When exiting the vehicle, take the transport documents and emergency procedure guides.
3.1.4. Move away from the vicinity of the accident or emergency. Advise other persons to move away and follow the advice of the emergency services.
3.1.5. Avoid sources of ignition. Do not smoke, use electronic cigarettes or similar devices, or switch on any electrical equipment.

3.2. **Contact and Reporting:**

3.2.1. Immediately notify dispatch or designated personnel about the breakdown, including location, nature of the problem, and any potential hazards.
3.2.2. Where possible, make any mobile phone calls away from the vehicle.
3.2.3. In the event of an accident or fire inform the appropriate emergency services, giving as much information about the incident or accident and substances involved as possible.
3.2.4. Keep transport documents readily available for responders on arrival.
3.2.5. Do not walk into or touch spilled substances. Avoid inhalation of fumes, smoke, dust and vapors by staying up-wind.

3.3. **Small Fires:**

3.3.1. Where appropriate and safe to do so, use fire extinguishers to put out small/initial fires in tires, brakes and engine compartments.
3.3.2. Drivers should only fight fires directly involving dangerous goods if it is safe to do so.
3.3.3. Where appropriate and safe to do so, use on-board equipment to prevent leakages into the environment or the sewage system and to contain spillages.

3.4. **Documentation:** Document the incident, including time, location, driver's name, and any relevant details.

3.5. **Call for Assistance:** Initiate the process for towing, repair, or alternative transportation, depending on the situation and location.

4. **Communication:**
   4.1. **Internal Communication:** Keep dispatch, management, and relevant departments informed about the breakdown and its potential impact.
   4.2. **External Communication:** Notify customers of the potential delay, providing estimated delivery times and any alternative options.
   4.3. **Transparency:** Maintain open communication with customers throughout the process, keeping them updated on the situation.
5. **Long-Term Solutions and Alternatives:**
   5.1. **Identify Backup Resources:** Have a plan for alternative vehicles, drivers, and routes in case of a breakdown.
   5.2. **Evaluate Repair Options:** Assess the feasibility of repairing the vehicle on-site, at a nearby facility, or at a designated maintenance location.
   5.3. **Consider Alternatives:** If repairs are not feasible, explore options like rerouting, rescheduling, or utilizing alternative transportation methods.
6. **Additional Considerations:**
   6.1. **Technology:** Utilize technology like GPS tracking, telematics, and communication tools to monitor vehicles and facilitate communication.
   6.2. **Risk Assessment:** Regularly assess potential risks and update the contingency plan accordingly, considering factors like weather, traffic, and road closures.
   6.3. **Training:** Provide adequate training for drivers on how to handle breakdowns and communicate effectively with dispatch and customers.
   6.4. **Emergency Kit:** Ensure vehicles have a well-stocked emergency kit with essential tools and supplies.

2.1.2 Data Request REV 1 DR HAZ-2

REV 1 DR 2. ***Please provide the name and associated contact information for a CUPA official who will serve as the contact person for CEC staff regarding hazardous materials and hazards .***

Response: The Alameda County Department of Environmental Health (ACDEH) is the Certified Unified Program Agency (CUPA) that coordinates and enforces numerous local, state, and federal hazardous materials management and environmental protection programs in the county. The ACDEH CUPA has jurisdiction in the cities of Alameda, Albany, Castro Valley, Dublin, Emeryville, Newark, Oakland, Piedmont, San Lorenzo, Sunol; the unincorporated areas of Fremont, Hayward, Livermore, Pleasanton and San Leandro; and parts of Byron, Mountain House and Tracy. The CUPA official who will serve as the contact person for CEC staff regarding hazardous materials and hazards is Tim Hildreth, Hazardous Materials Specialist for the Alameda County Environmental Health Department. Tim can be reached at (510) 639-1266 or Timothy.Hildreth@acgov.org.

3 Worker Safety Response

3.1 Data Requests REV 1 DR WS-1 through REV 1 DR WS-3

3.1.1 Data Request REV 1 DR WS-1

REV 1 DR WS-1. ***Please clarify whether a fire suppression system would be provided in the absence of a requirement by the manufacturer for the thermal runaway management system. If no fire suppression system is planned, explain the passive fire protection measures and other operational techniques that would be implemented at the onset of and during a fire event.***

Response: As non-walk-in enclosures do not have any occupants to protect, the fire code does not require any fire suppression system unless it is required by the manufacturer as part of the UL 9540 listing for thermal runaway control. The Applicant is still finalizing which supplier will be used, but has narrowed it to one of three suppliers which all utilize passive thermal runaway protection methods (i.e. insulation between cells/modules) and no active fire suppression systems will be provided.

Note that passive designs are more reliable and effective than water or another extinguishing agent. Water-based suppression systems frequently can cause additional electrical shorting which can cause additional fires. Gaseous / Clean Agent systems provide short term protection against electrical fires but are not effective against a longer duration lithium fire and are negated in scenarios where an explosion ventilation system actively removes the agents. As such no Gaseous / Clean Agent systems will be provided either.

In regard to other operational techniques during an exterior fire event please reference the previously provided Fire Protection Technical Assistance Report and Emergency Operation Plan (EOP) for general wildfire containment measures (water tanks and access points).

3.1.2 Data Request REV 1 DR WS-2

REV 1 DR WS-2. ***Provide more details related to explosion control and if both passive and active explosion control systems would be provided. Provide the number of hours of backup power available for the ventilation system to ensure continuous operation when flammable gas levels require ventilation.***

Response: The Applicant is still finalizing which supplier will be used, but has narrowed it to one of the three suppliers. A high-level summary of the supplier's explosion control approaches are provided.

Supplier 1

Supplier 1 includes an explosion control system to mitigate the risk of an uncontrolled deflagration. The system includes pressure-sensitive vents (overpressure vents) and sparkers installed throughout the battery module bay.

The sparkers are designed to ignite flammable gases very early in a thermal runaway event before they accumulate within enclosure and become an explosion hazard. They are installed at a variety of locations and heights throughout the battery module bays to ensure the flammable gases released during thermal runaway quickly meet an ignition source.

The overpressure vents are installed in the roof of the sealed battery bay's IP enclosure. Overpressure vents are designed to relieve the pressure inside the enclosure before the enclosure fails. They are passive vents that open at an internal cabinet pressure of 12 kPa. Once opened, the overpressure vents permit gases, products of combustion, and flames to safely exhaust through the roof of the Supplier 1 during a thermal event. The release of the overpressure vents does not create a projectile hazard since they are installed in between the battery module bays and thermal roof and are not exposed to the environment.

Supplier 2

Supplier 2 includes an active ventilation system (NFPA 69 compliant) to mitigate the risk of an uncontrolled deflagration. The system includes two internal gas detectors in each battery cabinet for activation of the ventilation system. This will prevent the lower flammable limit (LFL) from going over 25% LFL. The ventilation system is powered via a built in UPS with 24 hrs backup for fire alarms and 2 hrs of active ventilation operation.

Supplier 3

Supplier 3 includes an active ventilation system (NFPA 69 compliant) to mitigate the risk of an uncontrolled deflagration. The system includes two internal gas detectors (one traditional combustible gas and one Li-ion Tamer Gen 3.0) in each battery cabinet for activation of the ventilation system. This will prevent the lower flammable limit (LFL) from going over 25% LFL. The exhaust fans are separate from the normal HVAC cooling ventilation system for the enclosures. The ventilation system is powered via a built in UPS with 24 hrs backup for gas detection and 2 hrs of active ventilation operation.

3.1.3 Data Request REV 1 DR WS-3

REV 1 DR WS-2. ***Please provide the battery manufacturer if one has been selected. Furthermore, please provide documentation of UL 9540A testing for the selected battery manufacturer.***

Response: Please see the attached UL 9540 A report for each potential BESS vendor in Confidential Attachment 1..

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Confidential Attachment 1

UL 9540A Reports