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Attachment 21

Draft Emergency Response Plan

COFFMAN ENGINEERS

POTENTIA-VIRIDI BATTERY ENERGY STORAGE SYSTEM PROJECT

Emergency Response Plan (ERP)

COFFMAN PROJECT NO. 232059

DRAFT

January 17, 2025

EMERGENCY RESPONSE PLAN

FOR

LEVY ALAMEDA, LLC
POTENTIA-VIRIDI BATTERY ENERGY STORAGE SYSTEM PROJECT

Project Number: 232059

DRAFT

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This document is a draft template for what will be included with the final Emergency Response Plan. The design team and owner will be reaching out to the local Fire Department and Emergency Services organizations for input to capture their preferences and recommendations per SB38.

TABLE OF CONTENTS

1 QUICK REFERENCE GUIDE 3
2 INTRODUCTION 5
2.1 Purpose 5
2.2 Limitations 5
2.3 Facility Description 5
2.4 Plan Review and Revision 8
2.5 Applicable Codes and Standards 8
3 EMERGENCY RESPONSE MANAGEMENT 10
3.1 Overall Organization 10
3.2 Roles and Responsibilities 10
3.3 Emergency Contact Information 12
3.4 Pre-Planning 14
3.5 Emergency Routes & Procedures 15
3.6 Communications 16
3.7 Personal Protective Equipment 17
3.8 Emergency Response Operations 17
3.9 Post Emergency Fire Department Procedures 17
3.10 Post-Emergency Incident Reporting Procedures 17
4 FIRE OR THERMAL RUNAWAY INCIDENTS 18
4.1 Conditions Associated with Lithium-Ion Battery Storage 18
4.2 Transformer Fire 26
5 MEDICAL EMERGENCY 28
5.1 Medical Emergency Response Procedures 28
5.2 Non-Emergency Safety Procedures 29
6 SECURITY INCIDENTS 31
6.1 Bomb Threat 31
6.2 Chemical/Biological Agent Threat 32
6.3 Sabotage or Vandalism 32
6.4 Active Shooter 32
7 ENVIRONMENTAL HAZARDS 33
7.1 General Preparedness 33
7.2 Flooding and Flash Floods 33
7.3 High Winds 34

DRAFT

7.4 Earthquakes 34
7.5 Lightning 35
7.6 Wild Fires 36

APPENDICES

APPENDIX A - MAP OF SITE
APPENDIX B - EVACUATION MAP
APPENDIX C - INCIDENT REPORT FORM
APPENDIX D - BOMB THREAT REPORT
APPENDIX E - BOMB THREAT CHECKLIST
APPENDIX F - CHEMICAL/BIOLOGICAL AGENT THREAT REPORT
APPENDIX G - CHEMICAL/BIOLOGICAL AGENT THREAT CHECKLIST

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ABBREVIATIONS

AC	Alternating Current
AHJ	Authorities Having Jurisdiction
BESS	Battery Energy Storage System
BMS	Battery Management System
BOD	Basis of Design
BOP	Balance of Plant
CFC	California Fire Code
DC	Direct Current
EOP	Emergency Operation Plan
ERP	Emergency Response Plan
ESS	Energy Storage System
FACP	Fire Alarm Control Panel
FCC	Fire Command Center
ISO	Independent System Operator
kV	Kilovolt
kVA	Kilovolt-Amps
LOTO	Lock Out / Tag Out
MW	Megawatt
MWh	Megawatt-hour
MV	Medium Voltage
NEC	National Electric Code
NFPA	National Fire Protection Association
NTP	Notice to Proceed
OEM	Original Equipment Manufacturer
O&M	Operations & Maintenance
PCS	Power Conversion System
PG&E	Pacific Gas and Electric Company
PMO	Project Management Office
PPE	Personal Protective Equipment
QEW	Qualified Electrical Worker
ROC	Remote Operation Center
SCADA	Supervisory Control and Data Acquisition
SCC	Smart Control Cabinet
SDS	Safety Data Sheet
SOC	State of Charge
UPS	Uninterruptible Power Supply
VOCs	Volatile Organic Compounds

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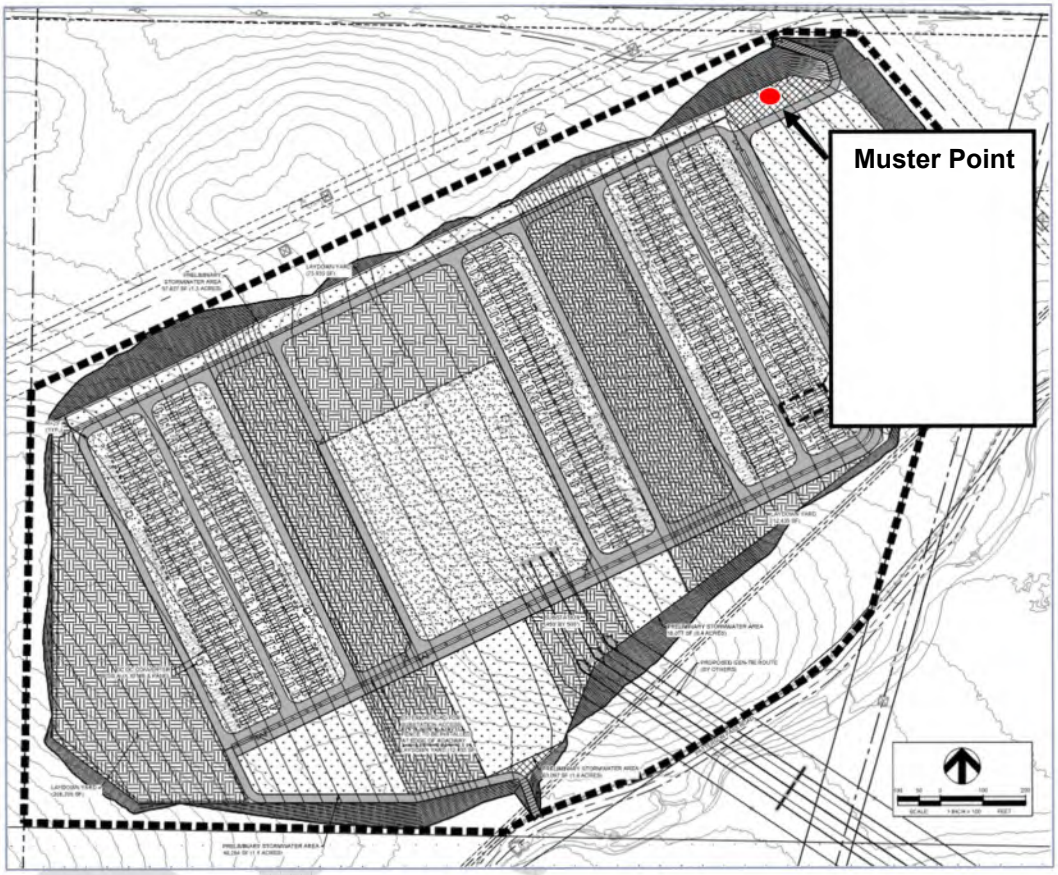
1 QUICK REFERENCE GUIDE

UNMANNED ESS FACILITY WITH REMOTE MONITORING

Muster Point



Key Site Information

- Address: Patterson Pass Rd, Tracy, CA
- Coordinates: 37°42'45.1"N 121°34'22.4"W
- Total Capacity: TBD
- Number of Enclosures: TBD
- Battery Chemistry: Lithium Iron Phosphate (LFP)

Emergency Contact Procedure

- For ANY emergency, call the Remote Operations Center (ROC) immediately
- ROC emergency number: XXX-XXX-XXXX
- ROC responsibilities:
  - Alert Pacific Gas and Electric Company (PG&E) if not already notified
  - Call emergency responders if necessary
  - Arrange for on-site personnel if needed
- Coordinate with BOP provider for emergency response

1. Staging and Approach

- Stage at least 75 ft away from battery enclosures (p. 19)
- Contact ROC for site entry consent and updates (p. 20)
- Enter through the east gate with Knox box access (p. 20)
- Locate the Fire Command Center (FCC) just inside the north entrance (p. 20) or alternate location inside southwest entrance.

2. Hazard Assessment

- Check FCC display for enclosure(s) in alarm (p. 20)
- Assume toxic and flammable gases are present (p. 20)
- Wear full PPE with SCBA and monitor for gases (p. 20)
- Maintain 75 ft distance if explosive conditions exist (p. 19)

3. Suppression Tactics

- Avoid direct suppression unless a life threat exists (p. 20)
- Use water spray on adjacent structures to prevent spread (p. 20)
- Apply water with a fog nozzle if deemed safe by the Incident Commander (p. 20)
- Note: Foams, dry chemicals, and CO_2 are not effective (p. 20-21)

4. Enclosure Assessment

- Monitor BMS and FACP for internal conditions (p. 24)
- Air monitor while approaching if approved by Incident Commander (p. 24)
- Stay 75 ft clear if BMS/FACP is down and there is no ventilation (p. 24)
- Possible explosive atmosphere even with ventilation (p. 24)
- Continue monitoring for 24-48 hours post-event (p. 24)

5. Post-Fire Procedures

- Monitor nearby enclosures with detectors and BMS (p. 25)
- Isolate unstable batteries until safe to decommission (p. 25)
- Maintain 75 ft exclusion zone after deflagration or fire event (p. 25)
- Watch for toxic/flammable gases, re-ignition, and debris (p. 25)

6. Clearance and Support

- Incident Commander determines when scene is safe (p. 16)
- Levy Alameda, LLC authorizes ESS enclosure access post-incident
- Conduct post-incident reporting (p. 16)

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2 INTRODUCTION

2.1 Purpose

This Emergency Response Plan (ERP) is provided by Coffman Engineers, Inc. (Coffman) for the Potentia-Viridi Battery Energy Storage System (BESS) project located in Alameda County, California. The following emergency response procedures are provided so that all fire service personnel understand the practices that are to be followed to prepare for and to provide immediate and effective responses to emergencies that may arise at the facility. The BESS conditions will be remotely monitored by Levy Alameda, LLC through the Battery Management System (BMS) and Supervisory Control and Data Acquisition (SCADA). Service technicians will be on site periodically to maintain the enclosures.

The life safety of personnel shall be the highest priority during any event.

This draft ERP is preliminary in nature and based on preliminary designs of the system at this time. It is currently unknown what type of ESS manufacturer will be used at this site. The fire safety features that have been outlined within this report are common, but not all manufacturers have the same approach, so reader discretion is advised. The ERP will be updated as the design and equipment specifications are developed.

2.2 Limitations

This plan does not imply, nor shall readers infer, that implementation of this plan will guarantee a perfect response will be practical or possible. No plan can shield individuals from all events.

Responders will attempt to coordinate the plan and response according to all applicable laws and standards.

Response to emergencies, events, or disasters shall only be undertaken to the level of the responders' training, Personal Protective Equipment (PPE), and resources available. There may be little to no warning to implement operational procedures during specific events.

The success or failure of all emergency plans depends upon effective training, continual (e.g., annual) review of this response plan, and execution of the response. Sites and operators shall comply with applicable codes, standards, and other requirements as appropriate locally, even if those codes, standards, and requirements contradict this plan.

Successful implementation of this plan depends on the timely identification of capabilities, available resources at the time of the incident, and a thorough information exchange between responding organizations and the facility or transporter.

2.3 Facility Description

The Potentia-Viridi BESS project is located in Alameda County off Patterson Pass Rd with coordinates 37°42'45.1"N 121°34'22.4"W. The project is outside of Tracy, CA city limits. The site utilizes enclosures containing lithium-ion batteries, within approximately 13.3 acres. The primary entrance is located on the north side of the property and accessed from Patterson Pass Rd. A second entrance is located on the south west side of the property and is also accessed from Patterson Pass Rd.

The project will utilize Lithium Iron Phosphate ESS outdoor-rated battery storage enclosures. The enclosures may be equipped with an NFPA 69 gas-ventilation system and/or NFPA 68 deflagration panels as well as an internal fire alarm system that is monitored by a site Fire Command Center (FCC) depending on the technology selected. The FCC is located within the site entrance and displays which enclosure is in alarm for the first responders to gather information from a safe location away from the battery enclosures. See figure 4.1.6 for an example FCC display.

There is also an on-site project substation, and associated on-site support facilities, including inverters, collection lines, fencing, access roads, SCADA, and other ancillary equipment. The project will connect to the Pacific Gas and Electric Company (PG&E) owned substation that is located in the adjacent lot east of the Potentia-Viridi BESS site.

The typical arrangement per power block is two BESS enclosures (each with their own Power Conversion Systems (PCSs) in a compartment below the battery modules) connected to a single medium voltage (MV) transformer skid. MV skids for the site are connected to the on-site substation as shown in Figure 1.3.1. Below.

Below is a vicinity map (Figure 2.3.1) and a simplified map of the facility (Figure 2.3.2). Contact information for the site owner (Levy Alameda, LLC) and external support organizations (police, fire department, medical facilities, etc.) that may be called to respond to emergencies at Potentia-Viridi BESS is included in Section 3.3 of this ERP.

Figure 2.3.1 - Potentia-Viridi BESS Vicinity Map (North ↑)

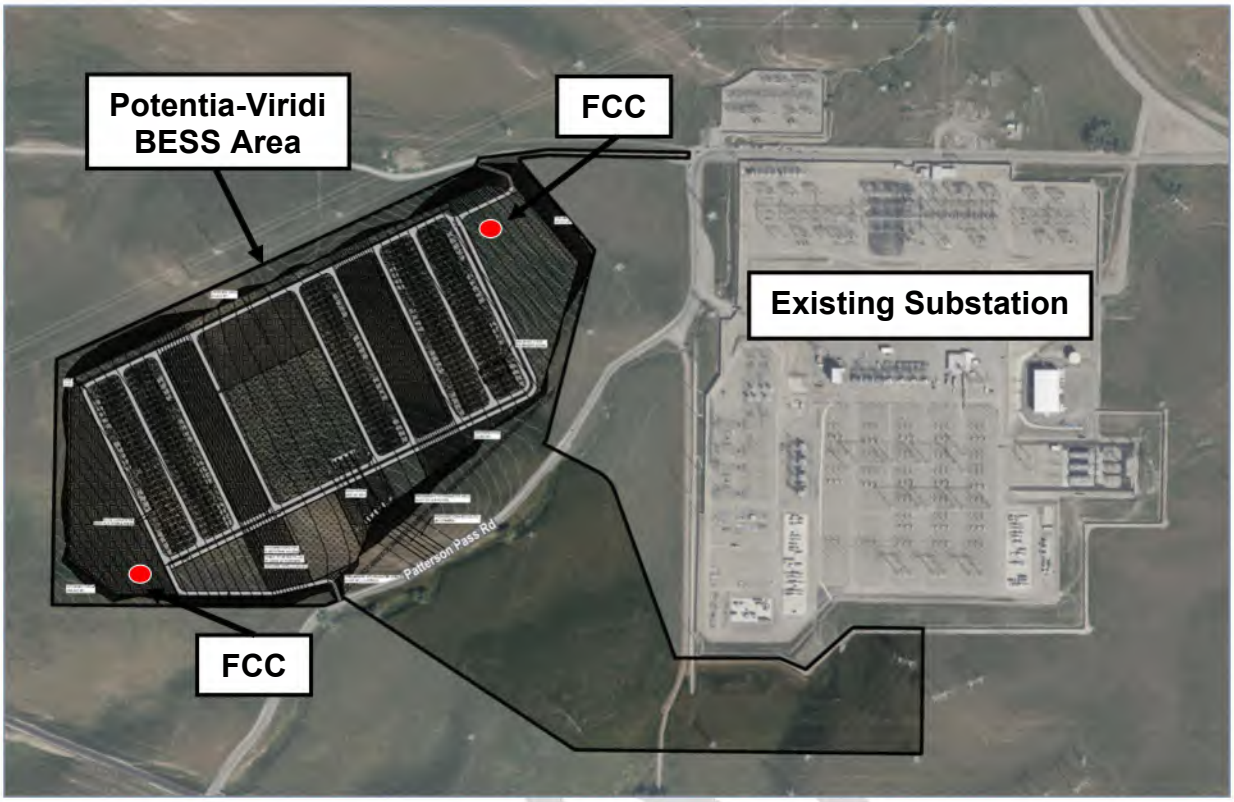

Figure 2.3.2 - Potentia-Viridi BESS Project Site Layout. (North ↑)

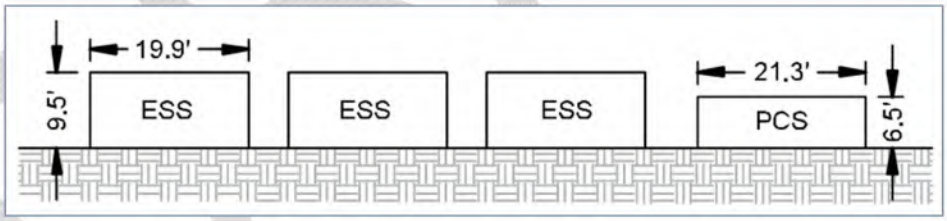

Figure 2.3.3 – Indicative Potentia-Viridi BESS Elevation. The ESS layout will be updated as the design is advanced.

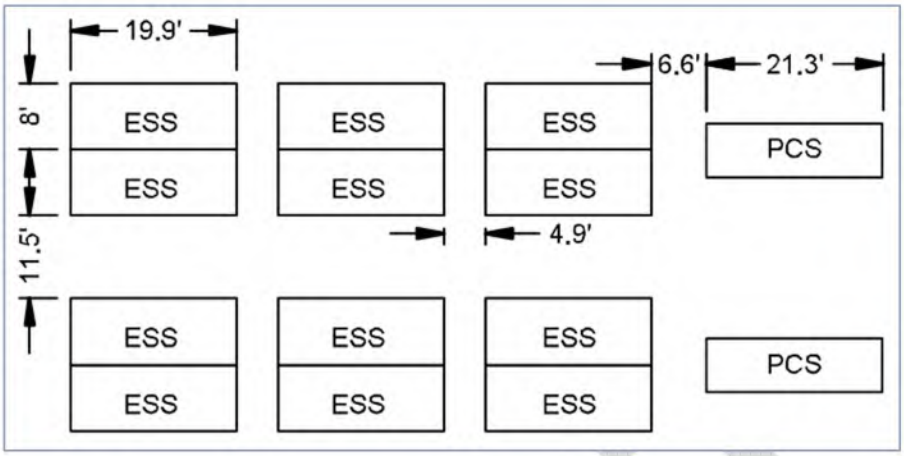

Figure 2.3.4 – Indicative Potentia-Viridi BESS Plan View. The ESS layout will be updated as the design is advanced.

2.4 Plan Review and Revision

A review of this ERP shall be conducted and documented at a minimum on an annual basis. The plan shall also be reviewed and amended whenever there is a change in facility design, construction, operation, or maintenance that affects emergency response planning. When outside resources are changed or modified, the plan shall be reviewed and updated to reflect the changes that may affect this plan. This would include, but not be limited to, updating emergency contact information within section 3.3.

2.5 Applicable Codes and Standards

The codes of record for the fire alarm design include:

- CFC, International Fire Code (2022 Edition), as adopted with amendments
- California Code of Regulations Title 14 Natural Resources, Division 1.5 Department of Forestry and Fire Protection, Chapter 7 Fire Protection.
- NFPA 72, National Fire Alarm and Signaling Code (2022 Edition)
- NFPA 70, National Electric Code (NEC) (2020 Edition)
- NFPA 1142, Standard on Water Supplies for Suburban and Rural Firefighting (2017 Edition)

Additional standards not adopted by the CFC, but used for guidance include:

- NFPA 855, Standard for the Installation of Stationary Energy Storage Systems (2023 Edition)
- UL 9540, Standard for Energy Storage Systems and Equipment (2019 Edition)
- UL 9540A, Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems (2019 Edition)

The project owner shall review and update this document on a regular basis based off newly adopted codes, standards, Authorities Having Jurisdiction (AHJ) requirements, and manufacturer recommendations as applicable.

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3 EMERGENCY RESPONSE MANAGEMENT

3.1 Overall Organization

Overall responsibility for this ERP lies with the Potentia-Viridi BESS Site Emergency Response Coordinator. The Emergency Response Coordinator, or their designee, is responsible for program implementation, including designating evacuation routes and employee assembly points, coordinating severe weather activities, communicating emergency response procedures to site personnel, contracting with emergency response organizations, and contractor coordination.

3.2 Roles and Responsibilities

Specific management personnel will assume leadership roles for emergency responses. Note that some of these responsibilities may be combined within the duties of single individuals. The following roles and responsibilities are defined herein and are referenced throughout the ERP.

All facility personnel have a responsibility to immediately report emergencies to the Lead Technician on duty or local emergency responder personnel when appropriate. There shall be no delay in reporting emergency events that require the local emergency responders. The Lead Technician will then notify the Emergency Response Coordinator and other key personnel of the situation using the Potentia-Viridi BESS emergency notification telephone list below.

Company Regional Manager: A Company Regional Manager is an individual not directly responsible for the day-to-day operation of the site, nor for the immediate response during or immediately after an emergency, but who does bear responsibility for post-event assessment and broader planning, recovery, and learning from experience. The Regional Manager will typically be responsible for ensuring incident records are maintained. Such a manager shall ensure that O&M Managers are providing safety training and that a safety-based culture is part of core operations across sites.

Emergency Response Contractor: An Emergency Response Contractor is an outside organization or individual who is contracted to undertake certain aspects of emergency response but is not otherwise responsible for the strategic coordination of response, nor is it part of the typical operation of a site. Care shall be taken that such contractors understand the broader picture of site safety and are aware of more comprehensive emergency response protocols (such as, but not limited to, the breadth of topics covered in this plan).

Emergency Response Coordinator: The Emergency Response Coordinator takes control of the emergency and any resources necessary until the emergency has been eliminated and the essential cleanup and restoration operations are complete. This person shall lead the incident reporting. The Emergency Response Coordinator is typically the O&M Manager; in her/his absence, the Lead Technician or other designated person shall assume this role. All personnel on-site shall know who the Emergency Response Coordinator on duty is during their time on site. Remote operators shall likewise know who the Emergency Response Coordinator is for any given shift.

The Emergency Coordinator or a designee will be responsible for notifying the appropriate regulatory agencies and, if necessary, the Emergency Response Contractor or mutual aid groups. A list of emergency contacts and agencies that may be notified in the event of an emergency is provided in this ERP. The incident will be documented and kept on file.

The Emergency Response Coordinator is also responsible for seeing that this plan is implemented and will appoint an adequate number of personnel to enforce the plan, ensure everyone is familiar with this plan, and act as a liaison with the local Fire Department(s).

The Emergency Response Coordinator will direct the following activities during an emergency:

1. Oversee the safety of all personnel.
2. Evaluate if operations in the affected area shall be shut down.
3. Take precautions to prevent or limit the spread of fire or explosions.
4. Isolate the affected area and provide directions for radio announcements.
5. Determine the source/cause of the emergency and evaluate the primary and secondary hazards to allow a full-scale, safe response.
6. Ensure that appropriate internal and external notifications are made.
7. Coordinate outside assistance from public or private organizations.
8. Implement other appropriate response provisions as necessary.
9. Determine evacuation routes for workers during an emergency.

The Emergency Response Coordinator shall be accredited in accordance with NFPA 70/70E and the National Electric Safety Code (NESC). If they are not, someone who is (e.g., the O&M Manager) must be present in emergencies to interface with electrical equipment above 50 volts.

Incident Commander: The Incident Commander is the on-scene ranking officer representing the agency with incident jurisdiction. The Incident Commander authorizes incident objectives and strategies that collectively delineate a course of action. The Fire Department designates an Incident Commander as the primary incident manager; it shall not be used by civilian organizations that are operating at an incident with emergency responders.

O&M Manager: The Operations and Maintenance (O&M) Manager is the individual responsible for the normal operation and upkeep of the energy storage system on a day-to-day basis. This includes standard operating conditions and routine scheduled or responsive maintenance activities.

Lead Technician: A Lead Technician is an on- or off-site individual responsible for the operation of a site from a performance and technical perspective. Such responsibilities may lie with the O&M Manager or with a remote operator.

Site Manager: A Site Manager supervises the personnel for a site. The Site Manager is ultimately responsible for the implementation of the company's written procedures and practices.

Subject Matter Expert (SME): An individual and designated secondary contact with detailed working knowledge of the energy storage system and incident command systems. The Subject Matter Expert (SME) shall have ready access to information on the state of the system, status and meaning of alarms, etc. The SME's contact information must be available to the Emergency Response Coordinator and first responders, as well as others, via information on the emergency information notice board.

3.3 Emergency Contact Information

Contact	Address	Telephone Number
Emergency Fire/Sheriff/Ambulance	n/a	911
Castle Rock (Tracy) Fire Station (Closest)	16502 W Schulte Rd, Tracy, CA 95377	(209) 831-6700
Mountain House Fire Station No.1	911 Tradition St, Mountain House, CA 95391	(209) 407-2990
Sutter Tracy Community Hospital	1420 N Tracy Blvd, Tracy, CA 95376	(209) 835-1500

Levy Alameda, LLC Emergency Call Center	Telephone Number
Remote Operation Center	(XXX) XXX-XXXX
Emergency Point of Contact (TBD)	(XXX) XXX-XXXX

ESS (OEM) Call Center	Telephone Number
Service Call Center (general inquiries)	(XXX) XXX-XXXX
ESS (OEM) Emergency Contacts	**Telephone Number**
TBD (Director, Projects and Services)	(XXX) XXX-XXXX
TBD (Director of Field Service)	(XXX) XXX-XXXX
TBD (Field Service)	(XXX) XXX-XXXX
TBD (Field Service Manager)	(XXX) XXX-XXXX
TBD (Field Service Supervisor)	(XXX) XXX-XXXX

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Emergency Services & Contractors	Telephone Number
EMERGENCY RESPONSE CONTRACTOR **Hazmat, Inc.** 24-Hour Emergency Response	 (855) 242-9628
AGENCY NOTIFICATIONS National Response Center (24-hour) U.S. EPA, Region 9 California Emergency Hazardous Material Reporting	 (800) 424-8802 (415) 947-8000 (916) 845-8798
ADDITIONAL ASSISTANCE State Poison and Drug Center U.S. Pipeline & Hazardous Material Safety Administration helpline Pacific Gas and Electric Company – (Altamont Pass Wind Farm Substation) ESS (BESS OEM)	 (800) 222-1222 1-800-467-4922 (XXX) XXX-XXXX (XXX)-XXX-XXXX

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3.4 Pre-Planning

Pre-planning for emergencies is a crucial element of this plan. The project owner shall schedule recurring annual on-site familiarization meetings to review this document with the Fire Department and other first responders. The following steps shall be taken in planning for emergencies at the site:

- The fire department and other first responders must receive a copy of this plan and participate in an on-site familiarization meeting.
- Site signage in accordance with CFC § 1207.4.8 shall be posted on-site including:
  - "Battery Energy Storage System" or equivalent
  - Identification of the BESS technology present
  - "Energized Electrical Circuits"
  - Current contact information, including phone number, for personnel authorized to service the equipment and for fire mitigation personnel (See section 3.3 for contact information)
- Protection of nearby receptors is of utmost priority. These include residential areas to the west and southwest, a hospital to the south, and schools/colleges to the southwest, south, and southeast. Fire departments and other first responders should consider additional notification to these receptors as they deem appropriate.
- All emergency responder access points to the facility shall be identified.
- An emergency response information notice board must be maintained at a location readily visible and accessible to all personnel, identified in Appendix A, and contain key contacts for emergencies, a list of personnel certified in First Aid/CPR, and other notices as outlined in this document or as deemed appropriate by the Emergency Response Coordinator. Provision shall be made for non-English speaking workers on site.
- All road exits shall be established and posted on the emergency information notice board.
- Evacuation route diagrams must be documented and posted on the emergency information notice board.
- Logs of on-site personnel for tracking headcounts during emergencies shall be maintained.
- All enclosures and property surrounded by fencing must be marked by signage that identifies specific hazards where required by code.
- Site personnel must receive instruction to keep exits from the site clear.
- Safe approach distances must be established for equipment's different failure modes, personnel must be trained in these distances, and such information must be communicated in writing to first responders during drills and other emergency response informational meetings. A safe distance of 75 feet from an enclosure is required wherever explosive conditions may be present, as further discussed in section 4.1.6 below.
- Safety Data Sheets (SDS) provided by manufacturers shall, where relevant, be provided

to first responders.

- Audible and visual (e.g., flashing lights) alarm systems shall be established that reflect specific on-site hazard analyses. Personnel shall be trained on the significance of different alarms and the corresponding actions. Descriptions of each alarm and corresponding actions shall be clearly posted on an emergency information notice board (location marked on the map in Appendix A).
- Complete periodic on-site training programs to identify emergency risks and protocols to follow in an emergency event.

3.5 Emergency Routes & Procedures

A Potentia-Viridi BESS site evacuation sheet shall be posted, and employees shall be trained to know the exit location and be familiar with the evacuation routes posted in the area indicated on the site map (Appendix B).

Depending upon the degree of emergency, weather, and site conditions, roadways, as designated on the site map (Appendix B), will be used for routes of evacuation.

In the event of an evacuation, all personnel will meet at the designated muster point, as shown in Appendix B, for further information. If the primary muster point is inaccessible or hazardous, personnel shall establish a secondary muster point and announce its location via radios and telephones as available and inform the emergency coordinator (if not present) by radio or phone.

When notified to evacuate, site personnel shall do so in a calm and orderly fashion, keeping the following instructions in mind:

- Walk, don't run. Help others who need assistance as long as doing so does not put you at greater risk.
- Stay upwind, upstream, and uphill whenever possible.
- Watch for other traffic and equipment on access roads and roadways.
- Be aware of ice/snow and loose gravel conditions.
- Drive safely.

Site personnel shall go to the primary designated muster area as identified in Appendix B. If employees are unable to make it to the muster point, a secondary muster point must be established, and that fact must be announced via radios and telephones as available. Employees shall then immediately contact their supervisor for further instructions. During evacuation, the Emergency Response Coordinator and Lead Technicians shall ensure that every person on his/her crew has been notified and that evacuation routes are clear. Any person with a disability (mobility, hearing, sight, etc.) who requires assistance to evacuate is responsible for pre-arranging with someone in their immediate work area to assist them in the event of an emergency. Anyone knowing of a person with a disability or injury who was not able to evacuate will report this fact immediately to their supervisor. This information shall be communicated to emergency responders immediately upon their arrival if the disabled person has not been evacuated.

Once an evacuation is complete, the Emergency Response Coordinator or Lead Technician shall account for all personnel. This accountability information shall be communicated to the emergency responders immediately upon their arrival. When a person is unaccounted for, the following information shall be communicated to the emergency responders:

- Name of the individual
- Disabled or not disabled
- Work location
- Last known location

Responder access points shall be kept unobstructed so first responders will be able to continue their operations when responding to emergencies within the site.

The fire department shall decide if receptors outside of the site should be evacuated. If an evacuation is determined necessary, the fire department shall perform the following:

1. Signal evacuation via fire apparatus air horn.
2. If available, use a loudspeaker/megaphone to communicate evacuation instructions audibly.
3. Direct traffic with physical signaling in coordination with the police department or other first responders.
4. Depending on the severity of the event, send evacuation instructions via emergency mass notification systems.
5. Communicate when it is safe to return via loudspeaker/megaphone, mass notification programs, or online if applicable.

3.6 Communications

Timely and efficient communications are essential to deal with an emergency response situation. The Emergency Response Coordinator is the central point of contact for all involved in an emergency response, including first responders and Subject Matter Experts (SMEs). The following processes shall be observed during emergency communications:

- Employees using radios/phones shall yield to individuals who are the most directly involved in an emergency response activity, i.e., emergency response takes priority over all other communication on the company network.
- Emergency transmissions shall be clearly announced using signal words such as ‘urgent’ or ‘mayday.’ These signal words give priority to the radio transmitter to proceed with their message.
- If emergency radio/phone communications are interrupted or unclear, employees shall proceed to the muster point identified in Appendix B.
- All hand-held radios/phones shall be recharged daily with backup batteries ready for use.
- Radios shall be inspected daily for functionality, and a radio check shall be transmitted to confirm that both the transmission and receiving functions work. If a radio is not working properly, then the employee shall notify the lead technician and make arrangements for some other form of communication while working. Radios that are not working properly

shall be placed out of service and labeled appropriately so they will not be used by another employee.

- Provision shall be made for non-English speaking workers on site.

3.7 Personal Protective Equipment

Full firefighter protective gear shall be worn in any response to a fire or explosion event or if there is any indication that a fire or thermal runaway may be present. This shall include proper use of Self-Contained Breathing Apparatus (SCBA). If no fire or explosion risk is present, protective clothing to protect against arc flash and shock shall be worn. Jewelry such as necklaces shall be removed to avoid contact with any electrical hazard.

3.8 Emergency Response Operations

Any firefighting or rescue operations shall be performed by trained professionals upon their arrival. An Incident Commander shall be identified, and they will coordinate smoke and fire boundaries as well as Hot, Warm, and Cold zones for the scene as required. No employee is required or permitted to place themself in harm's way in order to facilitate extinguishment, evacuation, or rescue.

3.9 Post Emergency Fire Department Procedures

The Incident Commander, in consultation with the O&M Manager, SME, and fire department, shall make the final determination regarding when the scene is safe for release. The Incident Commander shall decide when it is appropriate to remove the fire and smoke scene boundaries and safety zones. In some circumstances, the scene may need to be safeguarded for investigators to examine the event's failures. If the event was caused by a criminal act, the O&M manager should be guided by law enforcement for direction.

In the event of damage to one or multiple batteries, proper disposal of the battery or batteries and remediation of the affected area shall be done in accordance with the most current Decommissioning Manual under the oversight of the Fire Department Health Hazmat Division.

3.10 Post-Emergency Incident Reporting Procedures

Following any emergency described in this plan and in compliance with facility permits and other County and State requirements, an incident report must be prepared by the Emergency Response Coordinator and transmitted to the appropriate individuals and agencies after review by the Company Regional Manager.

The Emergency Response Coordinator shall compile all documentation and perform a post-emergency investigation. Immediate performance of this activity will aid in determining the exact circumstances and cause of the incident. Issues to be resolved include: 1) Causes of the incident, 2) Effectiveness of the emergency response plan, 3) Need for amendments to the response plan.

4 FIRE OR THERMAL RUNAWAY INCIDENTS

4.1 Conditions Associated with Lithium-Ion Battery Storage

Electrical, vehicle, or other fires not directly involving Lithium-ion batteries shall be managed and controlled using typical firefighting and response efforts. In addition, efforts shall be made to limit fire and heat impacts to the adjacent battery storage enclosures.

Lithium-ion battery storage systems present a unique challenge for firefighters.

A battery energy storage system does not have a single point of disconnect. Disconnects will de-energize select parts of the system; however, batteries will remain energized. Stranded electrical energy in fire-damaged storage batteries and other BESS has the potential for reignition long after initial extinguishment. The proper response to electrochemical BESS thermal runaway is automated within the enclosure, but additional site actions may be required for control or for other fires and may include the following procedures and steps:

- System isolation and shutdown
- Hazard confinement
- Fire suppression
- Ventilation

The following hazards may be encountered when fighting fires in lithium-ion battery energy storage systems:

- Electrical enclosures and batteries may not allow water intrusion from the high-pressure stream of a fire hose.
- Shock hazard due to direct contact with energized components.
- Toxic gases
- Thermal runaway
- Explosion hazard

While the site fire alarm system utilizes a monitoring station that will alert the fire department in case of emergency, the exact conditions of each monitoring point on the fire alarm system will only be viewable at the Fire Command Center (FCC) located near the north entrance to the battery energy storage facility. This will allow the responding fire department to know which enclosure (s) is/are in alarm.

4.1.1 Thermal Runaway

Fires in electrochemical BESS are often a result of a process called thermal runaway, which results in a dynamic temperature increase. Initial signs of thermal runaway include pressure increase at the cell level, temperature increase, and off-gassing. As the process continues, additional signs might include vent gas ignition, exploding cells, projectile release, heat propagation, and flame propagation. As the failure cascades, responders shall also be prepared for toxic and potentially explosive gas release. Responders shall treat them as highly dangerous and use their entire suite of PPE and breathing apparatus when responding.

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Thermal runaway can be detected by monitoring temperature and gas levels in and around a battery. The Battery Management System (BMS) monitors battery cell temperature, voltage, current, and dry contact switching value in real time but is external to the fire alarm system. Sensors within the battery enclosures monitor the batteries for high temperatures, smoke, and for toxic and flammable off-gassing. The activation of the gas, smoke, or heat sensors indicates the high probability of a thermal runaway. It sends an alarm signal to the associated FACP and subsequently to the site FCC and the remote monitoring center. Each FACP has a display that will show alarms from its local ESS group. The FCC display will show alarms from the entire site.

Rescue personnel shall keep their distance unless actively rescuing a person if batteries are in a thermal runaway condition.

The BESS enclosures are under the control of a site Energy Management System (EMS) or Local Plant Controller (LPC), which in turn communicates with an off-site fleet controller, SCADA operations center, or other third-party dispatch and monitoring entity. The BESS enclosure alarms will be forwarded to the remote operations, and remote operations or staff personnel on the site can shut down the BESS enclosure(s) remotely if determined necessary. Note that a system shutdown will not de-energize the battery bank or guarantee that a fault or thermal runaway event has been stopped. Responders and staff shall not approach the BESS enclosure or attempt to open the BESS enclosure until deemed safe to do so by the O&M Manager, Emergency Response Coordinator, and Subject Matter Expert.

4.1.2 Non-Firefighter Response to Fire Event

In the event of a pre-alarm incipient stage (beginning, small) fire where audible and visual alarms may not be activated, if employees are present they shall notify adjacent individuals of this situation and exit the area. Signs of a fire may include:

- Acrid burning smell – sweets smells (e.g., Juicyfruit) or solvent smells (e.g., nail polish have been commonly reported
- Excessively hot access door handles or outer surfaces
- Unusual sounds indicating electrical arcing or combusting materials – (e.g., hissing and popping)
- Smoke emanating from the battery enclosure
- Other abnormal events

In the event of a more significant fire that has triggered audible or visual fire alarms, if employees are present they shall still notify adjacent individuals of this situation and exit the area.

Contractors, maintenance staff, or visitors shall immediately exit the area upon notification of an emergency condition and proceed to the designated muster point, shown in Appendix B. Only employees trained in the use of fire extinguishers or other manual fire suppression systems shall attempt to use them. Employees are not expected or authorized to respond to fires beyond the incipient stage. The fire department shall be immediately notified by dialing 911 when any unintended fire has taken place. Site management shall also be immediately notified of any emergency.

For a fire, uncontrolled heating, or off-gassing event occurring related to a Battery Enclosure:

1. Evacuate the BESS area immediately if the fire warning alarm sounds or fire warning lights illuminate.
2. Call 911
    a. Site Name: Potentia-Viridi BESS
    b. Address: Patterson Pass Rd, Tracy, CA
    c. Coordinates: 37°42'45.1"N 121°34'22.4"W
3. Make sure the immediate area of the fire is clear of personnel.
4. Account for all employees, contractors, and visitors who were working in the immediate area of the fire. If any personnel are unaccounted for from the immediate fire area, issue a communication throughout the facility to attempt to locate the person(s) missing.
5. Contact the O&M Manager and Emergency Response Coordinator immediately.
6. Remove obstructions that might impede response to the scene.
7. CalFire Station available personnel at road intersections to stop traffic flow into the fire scene.
8. Proceed to the designated muster point for a headcount. If on-site, the Emergency Response Coordinator will do the headcount and relay information/instructions.
9. If encountering heavy smoke, stay low and breathe through a handkerchief or other fabric. Move away from the area.
10. Assist anyone needing help leaving the area so long as doing so does not put the assistor at additional risk.
11. Do not leave the designated muster point until advised to do so. If risk requires evacuation of the muster point, a secondary muster point must be established, and that fact must be announced via radios and alarms as available. The secondary muster point shall be outside the property boundary and at least 75 feet away from ESS enclosures.
12. The Emergency Response Coordinator will issue an “all clear” only when the fire department informs them that it is safe to do so.
13. The BESS is not to be accessed until the O&M Manager or designated Emergency Response Coordinator gives authorization.

On-site personnel witnessing an emergency shall not assume that automated alarms have reached the Local Plant Controller or Emergency Management System or that such alarms have been passed on to remote operations. Such personnel, in addition to other critical stakeholders described herein, are advised to call 911 and contact remote operations directly.

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4.1.3 Firefighter Response to Fire Event

Considerations for firefighter response:

1. Address: Patterson Pass Rd, Tracy, CA
2. Coordinates: 37°42'45.1"N 121°34'22.4"W
3. The recommended staging location is at least 75 feet away from a battery enclosure.
    - The fire department shall signal for personnel within businesses and parking areas between the BESS site and the staging location to evacuate
4. Make operator contact for consent to enter the site and update information regarding the current situation. If the operator gives permission to enter the site, enter the site using either site entrance gate depending on the event location and proceed to FCC directly behind it. This entrance gate is directly ahead when approaching from the site access road. See Appendix A for site map. Once onsite, follow BESS firefighting training procedures. The operator may remotely stop the ESS if necessary.
5. CalFire break away locks on farmer lock configuration are located at the site entrance.
6. Information on which enclosure(s) is/are in alarm may be found on either Fire Command Center (FCC) located just within the site's two entrances to the left as you enter. See Figure 4.1.6 in section 4.1.6 for the FCC display screen.
7. Toxic and flammable gases may be present but will not be reported by the FCC. Assume they are present. Wear PPE, including a self-contained breathing apparatus, and monitor the site for toxic and flammable gases.
8. Follow section 4.1.4 for Recommended Suppression.
9. Inform the Emergency Response Coordinator when it is safe for them to issue an "all clear."
10. The BESS is not to be accessed until the O&M Manager or designated Emergency Response Coordinator gives authorization. Note that portable gas detectors have been found to not accurately read Li-ion thermal runaway released gases due to the various products in the gas mixture.

4.1.4 Recommended Suppression

Be aware of the status of safety systems in place, including gas detection and ventilation systems. These systems are designed to mitigate risks, but their activation may indicate the presence of significant hazards.

In the absence of a justified reason to enter the site (i.e., entrapment of personnel), emergency first responders are advised not to take direct action to suppress the fire. If deemed appropriate and safe to do so by the Incident Commander, water can be applied to adjacent ESS enclosures and other adjacent structures to prevent fire spread. The fire department’s response strategy should be based on pre-incident planning and training specific to ESS incidents. Two fire water tanks are provided on site for emergency use purposes. Firewater may also be brought to the site via tankers. It is recommended that firefighters use a fog nozzle if applying fire water onto the ESS enclosures to lessen the impact of the water spray and decrease the possibility of water entering a damaged enclosure.

Water spray has been deemed safe as an agent for use on high-voltage systems. The possibility of current leakage back to the nozzle, and ultimately the firefighter, is insignificant based on testing data published in the Fire Protection Research Foundation report "Best Practices for Emergency Response to Incidents Involving Electric Vehicles Battery Hazards: A Report on Full-Scale Testing Results." Some bullet points from the report have been noted below:

- Firefighting foams are not considered to be effective for these chemistries (lithium-ion batteries) because they lack the ability to cool sufficiently and can conduct electricity.
- Fire-fighting dry chemical powders will not cool the thermal runaway event/battery components.
- Carbon dioxide and inert gas-suppressing agents will also eliminate visible flame but will likely not provide sufficient cooling to interrupt the thermal runaway process.

In accordance with section 2.4 of this document, this section shall be reviewed annually and updated appropriately as fire protection technology changes.

4.1.5 ESS Enclosure Fire Protection System Summary

Please note that the fire safety features that have been outlined within this report are common, but not all manufacturers have the same approach, so reader discretion is advised. The ERP will be updated as the design and equipment specifications are developed.

The battery storage containers located at the Potentia-Viridi BESS site **may** have the following characteristics depending on the manufacturer:

- Gas detection and ventilation system
- Smoke and heat detectors
- Explosion deflagration panels
- Passive safety design includes thermal management via the liquid cooling system and aerogel separators between battery cells to help mitigate severity of thermal events.

The battery storage containers located at the Potentia-Viridi BESS site **will not** have the following characteristics:

- Dry chemical fire suppression
- Clean agent (Novec 1230 or FM-200) fire suppression
- Water-based fire suppression

Battery storage enclosures located at the Potentia-Viridi BESS site may be provided with the following fire protection systems:

1. Internal smoke or external fire detection, whose status is visible at the FCC. The FCC display screen example is shown in Figure 4.1.6.
2. The gas, smoke, and heat detection systems are monitored by their respective FACP, which has an uninterruptible power supply (UPS) that provides backup power for 24 hours of standby plus 2 hours of alarm.

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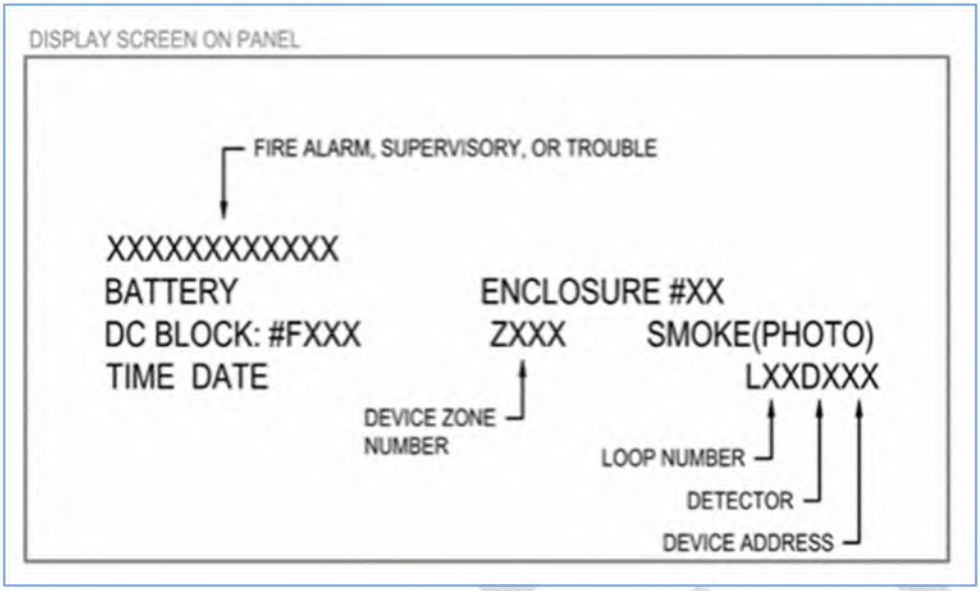

Figure 4.1.6 - Address naming scheme example (Notifier 3030 panel.)

4.1.6 Explosion Control

The Lithium-ion batteries may release detectable levels of flammable gases such as hydrogen (H_2) and other hydrocarbons in the event of fire or high temperatures. In the event that flammable gases are detected personnel should consideration the following:

1. A minimum of 75 feet shall be maintained between individuals and the incident enclosure whenever explosive conditions may be present. Staging of personnel and equipment shall be on the angles of the enclosure to stay out of the blast pressure wave as much as possible, as well as the blast radius of any doors or other potential projectiles.

2. Only attempt to extinguish the fire if the imminent threat to life safety exists. Lithium-ion batteries may off-gas when heated or when subjected to electrical or physical damage. These gases can accumulate inside the enclosure at levels well above the Lower Flammable Limit (LFL). Extreme caution shall be taken prior to any attempts to open any compartments or access panels on the system, as the introduction of fresh air may bring atmospheric conditions back into the explosion range and result in an explosion if a fire or another ignition source is present.

3. Gas monitoring must be continuously conducted at all times, and gas meters shall be affixed to all responders to warn them of potential atmospheric risks. If possible, gas readings from inside the enclosure shall be attempted to be gathered from an exterior point prior to any entry.

4.1.7 Toxic Gas Release

The Lithium-Ion batteries may release detectable levels of toxic gases, including carbon monoxide (CO), Carbon dioxide (CO_2), Methane, Acetylene, Ethylene, Ethane, and Benzene in

the event of fire or high temperatures, which may pose a chemical asphyxiation and poisoning hazard. The presence of these gases will be monitored with a Li-ion Tamer lithium-ion off-gas detection system. Upon activation of the gas detection system within the enclosure, a gas detection alarm will be transmitted to the site FCC, the EMS, and the Local Plant Controller, and the exhaust ventilation system for the ESS enclosure will be activated to exhaust flammable and toxic gases out of the enclosure. The exhaust ventilation will continue within the enclosure until manually reset. See section 4.1.7 for further information on explosion prevention gas ventilation.

1. Personnel shall remain clear of the enclosure at a distance of 75 feet.

2. No entry shall be permitted during an off-gassing event unless there is an imminent threat to life safety at which only properly trained and equipped personnel may approach or enter.

3. Entry shall be with full firefighter protective gear, including a self-contained breathing apparatus (SCBA). The entry in this situation shall be at the sole discretion of the Incident Commander.

Chemicals released from the batteries during a fire or explosion will be in a gaseous form and primarily pose an explosion hazard. However, as water is used in extinguishing flames, these gases can become acids, which may cause skin irritation.

A mixed solution of coolant and water is also circulating within each ESS's liquid cooling system and could leak in an emergency. Coolant is flammable under certain circumstances and poses a health risk in sufficient quantities.

4.1.8 Assessing when it is safe to approach or open the enclosure.

Batteries remain energized even if all the contacts, breakers, and switches have been opened. Toxic or flammable gas may be present inside the enclosure. Visual observation of the exterior may not provide any information on the conditions within. The Incident Commander, with support from First Responders and Operations Manager, shall remotely monitor data and information from the battery management system (BMS) and the Fire Alarm Panel to assess the conditions internal to the enclosure.

If the BMS and fire alarm panel are reporting, the following information shall be available depending on the technology selected:

1. Alarm status of smoke detectors and heat detectors
2. Flammable gas alarm
3. BMS can provide internal temperature and location information if thermal runaway has occurred, as well as elevated temperature information for cells that may be at risk of entering thermal runaway. UL9540A unit-level testing shows temperatures near 200˚C present a high risk of thermal runaway.

If the Incident Commander authorizes approaching the enclosures, it is recommended that the approaching first responders air monitor while approaching the enclosures. First responders shall be cognizant of the hazards posed by potential deflagration, thermal radiation from an active fire, and toxic gas dispersion from off-gassing batteries when approaching battery enclosures.

If the conditions inside the enclosure have caused the fire alarm panel and the BMS to cease reporting and the exhaust ventilation system is not functioning and ventilating the enclosure, then extreme caution shall be utilized, including maintaining a safe distance of 75 feet and **NOT** opening the enclosure. It is recommended that first responders stay clear of the enclosure and allow the enclosure to burn itself out.

Even if the exhaust ventilation system can be seen to be operational and exhausting gases from the enclosure, there is a possibility of a localized explosive atmosphere within the enclosure. Do **NOT** approach or attempt to open the enclosure until it is determined safe to do so by the Incident Commander. Note that multi-failure events, such as physical damage to multiple cells as a result of an active shooter, could create a higher possibility of an explosive atmosphere within an enclosure but are not considered within this document.

Defensive firefighting is recommended only to prevent the spread to nearby enclosures or equipment if the Incident Commander determines this is a possibility. It may take more than 24 hours for the cells in an enclosure to cool to the point where additional thermal runaway is unlikely. Monitoring for the presence of smoke (which precedes or coincides with thermal runaway) and remote monitoring of the exterior temperature of the enclosure may provide information about the risk of fire or explosion. Maintaining a safe distance, air monitoring, and a fire watch for 48 hours after temperatures drop and no smoke has been observed may be required to ensure it is safe to approach or open the enclosure.

4.1.9 After a Fire

Hazards after a fire may include gas generation risk (toxic gas emissions), delayed ignition risk (thermal runaway), and stranded energy within battery cells.

The battery enclosures near the fire shall be monitored after the fire via the smoke/heat/gas detectors and BMS to ensure they are in a stable condition before they are brought back into normal operation by the plant controller. This may take up to 48 hours and is the reason for the fire watch as described in section 4.1.9 but is ultimately decided by the Incident Commander based upon BMS readings and field monitoring readings. Any unstable/damaged batteries shall be electrically isolated and monitored via the BMS until the Incident Commander deems it is safe for them to be decommissioned in accordance with the most current Decommissioning Plan and the ESS Emergency Response Guide.

4.1.10 After a Deflagration

A deflagration event on-site can impact safety equipment and render it incapacitated, which may cause further hazards. However, the deflagration events mentioned in this document pose minimal risk to facilities immediately adjacent to the site due to their distances. First responders and personnel on site should remain aware of the 75 feet exclusion zone distance after a deflagration in the case of a new hazard. Hazards after deflagration may include gas generation risk (toxic gas emissions), delayed ignition risk (thermal runaway), hazardous/sharp debris on the project site, damaged electrical equipment, and stranded energy within battery cells.

4.2 Transformer Fire

There are two key types of transformers on the site: the ESS MV skids and the substation transformers. These fires are considered a Class B/C fire. High level characteristics of this equipment are as follows:

ESS MV Skid Transformer

- 34.5 kV
- Oil filled (environmental friendly and degradable)
- No secondary containment due to type of oil

Substation Transformer

- 69 kV
- Oil filled
- Secondary containment provided

The three basic rules for high-voltage equipment are as follows:

1. Don't Climb: All exposed electrical conductors are overhead (poles/wires connecting to substation) and safely out of reach for fire service members operating at ground level operations.
2. Don't Cut/Break Locks: Locks exist for your safety. They secure doors that provide a barrier between you and energized conductors.
3. No Tools: Response operations at these facilities do not require the use of traditional tools used in the fire services such as forcible entry, hooks, and saws. These tools are electrical conductors that may allow fire service members to breach normally secured areas. These tools should remain on the apparatus.

Considerations for First Responders

- Safety - Check in with the distribution dispatcher and verify if it is safe to enter.
- Work with the dispatcher to de-energize the station
  - Dispatcher normally provides verbal switching order for isolation of substation
  - Feeder breakers are opened (Distribution crews work to pickup load in field)
  - Line switches and opened to isolate the substation from high side transmission line
- Other departments are contacted in parallel for support required

Considerations for Firefighters

- Once station is isolated (All energized sources are opened on high and low side), Firefighters are allowed to work on taking out the fire
- For a class B fire the application of CO_2, Purple-K, or ABC Dry Chemical is appropriate.
- Firefighters use Foam (if available) for oil-based fires on non-energized equipment. Foam should not be used on electrical only fires due to the increased conductivity of the foam with electricity.

- The transformer has no value after a fire event and there is no concern for preservation of the transformer during a fire.
- Substation employee scans the equipment (transformer, breaker, etc.) to make sure there is no increase in temperature.
  Once the fire is extinguished, one station truck is to remain on standby for a few hours.

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5 MEDICAL EMERGENCY

5.1 Medical Emergency Response Procedures

While medical emergencies may not be directly related to an ESS event, the potential hazards if ESS necessitates specific precautions. All medical response procedures should be carried out with full awareness of the status of the ESS safety systems.

If an employee is injured, or an accident has occurred on-site and first aid is not enough treatment for the emergency, 911 must be called. The call to 911 can be made by phone by any available site personnel. The caller must state to the dispatch that they are at the Potentia-Viridi Battery Energy Storage facility. A second notification will be made to the O&M Building to inform others of the situation.

Employees with first aid/CPR training are identified on the emergency information notice board, and employees shall be aware of who on staff is so certified. At all times when the site is staffed, at least one first-aid-certified member of staff shall be present. The location of first aid kits and automated external defibrillators (AEDs), if present, shall be identified by appropriate signage and indicated on the map in Appendix A. All employees shall designate a personal emergency contact, which shall be kept on file.

The following procedures apply for serious medical injuries such as loss of consciousness, heart attack, bone fractures, neck trauma, or severe burns.

1. If life-threatening, call 911.
2. Notify Operations and Safety Managers.
3. Provide name, exact location, number of injured persons, and a brief description of the incident.
4. On-site personnel shall meet EMS responders at the site entrance and direct them to the location of the incident.
5. Do not leave or move the injured unless directed to by Safety Managers or EMS responders.
6. Administer first aid if necessary.
7. The site manager shall inform the employee’s personal emergency contact.
8. Document incidents and keep them on file.

Note that emergency response procedures are ultimately the responsibility of the Incident Commander.

5.1.1 Attending an Incident

When attending an incident, the following procedures apply:

1. Clear a path to the injured person for Operations and Safety Managers and assign personnel to assist with signaling EMS responders to the location of the incident.
2. Identify the location of the Project Site entrance nearest to the incident and notify EMS responders.

3. Operations and Safety Managers shall meet EMS responders at the site entrance.
4. Direct and accompany EMS responders to the location of the incident.
5. Follow all directions of EMS responders.
6. Contact management personnel and subcontractors.
7. Document incidents and keep them on file.

5.1.2 Medical Facilities

The nearest medical facility and emergency room to the project site is Sutter Tracy Community Hospital at 1420 N Tracy Blvd, Tracy, CA 95376. Directions from the site entrance:

1. Turn right onto Patterson Pass Rd and continue international Pkwy/Mountain House Pkwy in San Joaquin County
    - 4 minutes (2.4 miles)

2. Drive from W Schulte Rd and I-205BUS/Eleventh St to Tracy then turn left
    - 14 minutes (7.0 miles)

3. Destination will be on the right
    - 1 minute (0.3 miles)

5.2 Non-Emergency Safety Procedures

5.2.1 Notification of Minor Incident

In the event a safety incident occurs where emergency response is not required (first aid treatment, near miss, etc.), work is to be stopped immediately and reported to the Emergency Response Coordinator and Lead Technician. Risk will be reassessed, adequate controls implemented, and the situation made safe before resuming the task. The event will be documented and kept on file.

5.2.2 Health Illness

When the temperature exceeds 95 degrees Fahrenheit (35 degrees Celsius) or is expected to be so during the course of a shift or work project, the O&M Manager will hold short staff meetings to review the weather report; reinforce heat illness prevention with all workers; and provide reminders to drink water frequently, to be on the lookout for signs and symptoms of heat illness, and inform them that shade can be made available upon request.

Employees shall have free access to potable drinking water provided and located as close as practicable to the areas where employees are working. Where drinking water is not plumbed or otherwise continuously supplied, it shall be provided in sufficient quantity at the beginning of the work shift to provide one quart per employee per hour for drinking for the entire shift. Employers may begin the shift with smaller quantities of water if they have effective procedures for replenishment during the shift as needed to allow employees to drink one quart or more per hour. The frequent drinking of water shall be encouraged.

Heat-Related Illness	Signs	Actions
Heat Stroke	• High body temperature (103˚F or higher) • Hot, red, dry, or damp skin • Fast, strong pulse • Headache • Dizziness • Nausea • Confusion • Losing consciousness (passing out)	• **Call 911 right away. Heat stroke is a medical emergency** • Move the person to a cooler place • Help lower the person's temperature with cool clothes or a cool bath • Do not give the person anything to drink
Heat Exhaustion	• Heavy sweating • Cold, pale, and clammy skin • Fast, weak pulse • Nausea or vomiting • Muscle cramps • Tiredness or weakness • Dizziness • Headache • Fainting (passing out)	• Move to a cool place • Loosen your clothes • Put cool, wet clothes on your body or take a cool bath • Sip water **Get medical help right away if:** • You are throwing up • Your symptoms get worse • Your symptoms last longer than 1 hour
Heat Cramps	• Heavy sweating during intense exercise • Muscle pain or spasms	• Stop physical activity and move to a cool place • Drink water or a sports drink • Wait for cramps to go away before you do any more physical activity **Get medical help right away if:** • Cramps last longer than 1 hour • You're on a low-sodium diet • You have heart problems
Sunburn	• Painful, red, and warm skin • Blisters on the skin	• Stay out of the sun until your sunburn heals • Put cool clothes on sunburned areas or take a cool bath • Put moisturizing lotion on sunburned areas • Do not break blisters
Heat Rash	• Red clusters of small blisters that look like pimples on the skin (usually on the neck, chest, groin, or in elbow creases)	• Stay in a cool, dry place • Keep the rash dry • Use powder (like baby powder) to soothe the rash

Further information on heat illness prevention and procedures can be found in Mortenson's Zero Injury Program Training Manual section 25B Industrial Hygiene: Thermal Stress, Revision No. 3.

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6 SECURITY INCIDENTS

Security incidents at an ESS facility can potentially compromise the safety systems and lead to hazardous conditions. In line with CFC Section 1207.4.9, the ESS installation is equipped with security measures to prevent unauthorized access. Any security breach should be treated as a potential safety risk to the ESS.

6.1 Bomb Threat

6.1.1 Response Plan

The purpose of this plan is to give direction to all site personnel in the event the Potentia-Viridi BESS site is a target of an actual or threatened bomb assault/attack.

Anyone receiving a bomb threat shall:

1. Treat the caller with courtesy and respect. Complete the Bomb Threat Report (Appendix D). Use this sheet as a reference while talking with the caller making the threat.
2. Attempt to obtain as much information as possible. See the “Bomb Threat Checklist” (Appendix E).
3. Immediately notify the Potentia-Viridi BESS site Emergency Coordinator by phone. Stop all radio transmissions from this point on until cleared by the Emergency Coordinator or other competent authority. Radio transmissions can activate electronic detonating or timing devices.

The Emergency Response Coordinator will immediately notify 911. The Emergency Response Coordinator shall:

1. Evaluate the threat and determine the appropriate course of action to take.
2. Notify law enforcement and ambulance.
3. Evacuate the facility as necessary.
4. Coordinate evacuation of any part of the surrounding community with local authorities as needed.
5. Coordinate the search of the site with the proper authorities.

6.1.2 Suspicious Items

If any suspicious item(s) are found, they are not to be touched. Barrier tape will be used to mark the area where the suspicious item(s) are by extending a continuous line of tape beginning immediately in front of the suspicious item(s) and extending to just outside the room exit. This will help guide local authorities to the suspicious item.

The Emergency Response Coordinator will be responsible for communicating the "All Clear" message once the threat has passed or is no longer present.

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6.2 Chemical/Biological Agent Threat

The procedures described previously for a bomb threat shall be used for a chemical or biological agent threat.

Any person who is exhibiting signs and symptoms from a chemical or biological agent shall be isolated from other workers and be prepared for transport by EMS.

6.3 Sabotage or Vandalism

Anyone detecting any act or threat of any act of sabotage or vandalism will immediately notify the Emergency Response Coordinator. The Emergency Response Coordinator will evaluate the situation and decide what actions to take. The following options shall be considered and implemented:

1. Notification of 911.
2. Corrective action as required, providing that no person will risk injury.
3. Evacuation of the facility.

6.4 Active Shooter

In an active shooter situation, employees shall:

1. Quickly determine what actions to take to protect life: options include run, hide, and fight (described in the DHS' Ready.gov site). Use best judgment based on the specific circumstances of the incident. Getting away from the shooter(s) is the top priority. Call 911 when in a safe location and warn/prevent individuals from entering an area where an active shooter may be if possible.
2. Remain aware of the gas generation, fire, and explosion hazards, as described in section 4 of this document that could result from damage to the battery systems. Use your best judgment to stay away from damaged batteries while getting away from the shooter(s). When in a safe location, call the Levy Alameda, LLC Emergency Call Center numbers from section 3.3 to request a remote shutdown of the Potentia-Viridi BESS site due to the possibility of physical damage to the batteries from an active shooter.
3. When encountering responding police, remain calm and follow all instructions from the officers. Officers may shout commands and push individuals to the ground for their safety as well as their own. When law enforcement personnel arrive at the scene, personnel shall be aware of the following:
    - Follow all official instructions from the police
    - Remain calm, think, and resist the urge to panic
    - Immediately raise hands and spread fingers
    - Keep hands visible at all times
    - Put down any items
    - Avoid making sudden or quick movements toward officers
    - Do not point, scream, or yell
    - Do not ask for help from the officers when evacuating
    - Proceed in the direction advised by the officers
    - Provide all relevant information to police

7 ENVIRONMENTAL HAZARDS

An evaluation of Project related environmental impacts determined that no significant impacts would occur as part of project implementation either on or off site. Mitigation would be implemented as required to ensure the protection of the environment. Please refer to the environmental analysis within sections 3.1 through 3.17 of the Opt-In Application.

7.1 General Preparedness

- Conduct annual reviews of these procedures and update them as necessary.
- Regularly check the flood protection system construction status.
- Ensure all equipment meets or exceeds local seismic and wind load requirements.
- Maintain and test the site's lightning protection and grounding systems regularly.
- Conduct drills for each type of environmental hazard annually.
- Train staff on the importance of remote diagnostics and the potential dangers of compromised ESS enclosures.
- Emphasize that batteries always contain potential electrical energy, even when offline or damaged.
- Post escape routes and conduct safety meetings on preparedness for all hazards.

Batteries contain potential energy even when offline, disconnected, or damaged. Always consult with the ROC before approaching potentially compromised equipment.

7.2 Flooding and Flash Floods

Flash flooding is a result of heavy localized rainfall, such as that from slow-moving, intense thunderstorms. Flash floods often result from small creeks and streams overflowing during heavy rain. These floods often become raging torrents of water that rip through riverbeds and canyons, sweeping everything with them. Flash flooding can occur within 30 minutes to six hours of a heavy rain event. In hilly terrain, flash floods can strike with little to no advanced warning. Distant rain may be channeled into gullies and ravines, causing flash flooding in minutes. In the event of a flash flood, the following procedures shall apply:

1. During Periods of Thunderstorms:
    - Always remain alert to heavy rains in your immediate area or upstream from your location. It does not have to be raining at your location for flash flooding to occur.
    - Avoid all topographic depressions that may act as a channel or receptacle for flood water.
    - If you are in a vehicle and are positioned in a dry stream or riverbed, move the vehicle to high ground or abandon the vehicle and seek high ground. If you are already in the stream of water, stay with the vehicle and get on top of the roof.
    - Wait for the flood waters to subside before moving from the area.
    - Be aware of possible lightning.
2. Once the Flashflood has Stopped:
    - Report to the management of the designated area.
    - Attend to any injured, but do not move them unless they are in an unsafe area. Moving them may cause further injury.
    - Management will contact those who are outside by radio.
    - Call 911 to report any injuries, fires, or to receive any other emergency aid.
    - The designated on-site Incident Commander will contact those who are outside

by radio or phone.

3. After all are Accounted For:
    - Management will evaluate the extent of the damage and decide whether or not to evacuate the site.
    - Check water and electrical lines, buildings, transformers, containers, inverters, etc. for damage.
    - Do not approach downed power lines. Call Pacific Gas and Electric Company (PG&E) to notify.
    - The Incident Commander will contact senior management and provide a status report.

7.3 High Winds

Upon the issuance of high wind warnings:

- Take cover in a safe location. Lie down alongside walls.
- If inside, stay inside. If outside, find a secure object that you can attach yourself to. Seek cover alongside building foundations or in trenches. Cover your head and face with your arms, and keep your legs tightly together.
- Remain in place until the high winds subside to a safe speed. Move only when it is safe to do so. Call for help if you cannot move,
- Report to management or muster area for roll call.
- If any person is missing, a search will be made to determine their location and condition only if it is safe to do so.
- Attend to any injuries, but do not move unless they are in an unsafe area.
- Call 911 for emergency assistance.

7.4 Earthquakes

Earthquakes may strike with little to no warning. Earthquakes may result in a lack of basic necessities and loss of life, road and bridge damage, and collapse of buildings or destabilization of the base of buildings. Be aware that some earthquakes may be foreshocks and precursors to a more significant subsequent earthquake. Many earthquakes are also accompanied by aftershocks after the main event has occurred.

1. Earthquake Preparedness:
    - All employees must be trained in the earthquake procedure and evacuation plan.
    - The escape routes must be posted.
    - Safety meetings and drills on earthquake preparedness must be held at least annually.
2. At the Onset of an Earthquake:
    - Drop to the ground, cover your head, and hold on to a sturdy object if available.
    - If outside, quickly find an area clear of possible falling objects.
    - Remain in a safe area until all movement has stopped.
3. When the Earthquake has stopped:
    - Report to the safest, closest designated area
    - Attend to any injured persons. Only move them if they are in an unsafe area.

Moving them may cause further injury.
- The designated on-site Incident Commander will contact those who are outside by radio or phone.
- Be aware that there may be aftershocks that may be large enough to do additional damage to structures that were weakened during the original quake.

4. After all are Accounted For:
    - Management will evaluate the extent of the damage and decide whether or not to evacuate the site.
    - Check water and electrical lines, buildings, transformers, containers, inverters, etc. for damage.
    - Do not approach downed power lines. Call Pacific Gas and Electric Company (PG&E) to notify.
    - Visually inspect battery equipment and fire alarm equipment for damage.
    - Call the monitoring station and ensure all readings are normal.
    - The Incident Commander will contact senior management and provide a status report.

7.5 Lightning

In the event of an approaching lightning storm within 30 miles of the site, the following procedures will apply.

1. Notify the O&M Manager and all on-site employees.
2. Stop work safely and head to staging and laydown yards in vehicles.
3. Remain at staging and laydown yards and get updates on weather conditions.

At the Onset of Lightning:

1. If you are inside, stay inside. Avoid contact with any conductive objects. Stay clear of electrical power sources. Stay off of landlines.
2. If you are outside, get inside a vehicle if available. If no shelter is available, get on the ground.
3. If you are caught in an open area, act quickly to find adequate shelter. The most important action is to remove yourself from danger. Crouching or getting low to the ground can reduce your chances of being struck but does not remove you from danger.
4. If you are caught outside with no safe shelter nearby, the following actions may reduce your risk:
    - Immediately get off elevated areas such as hills, mountain ridges, or peaks.
    - Never lie flat on the ground. Crouch down in a ball-like position with your head tucked and hands over your ears so that you are down low with minimal contact with the ground.
    - Never shelter under an isolated tree.
    - Never use a cliff or rocky overhang for shelter.
    - Immediately get out of and away from any body of water.
    - Stay away from objects that conduct electricity (barbed wire fences, power lines, etc.)

7.6 Wild Fires

An external fire will have limited risk of causing any fires within the fence line as there is no vegetation and the surfaces are all gravel / dirt, and the access roads may be impervious. As discussed with Cal Fire, a vegetation management plan will be provided for the site to identify management procedures. However, there is potential that excessive smoke could activate the enclosure internal smoke detection system. Responding personnel are recommended to review the internal heat, gas, and voltage readings if a smoke alarm occurs during poor air quality conditions.

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APPENDICES

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Appendix A

MAP OF SITE

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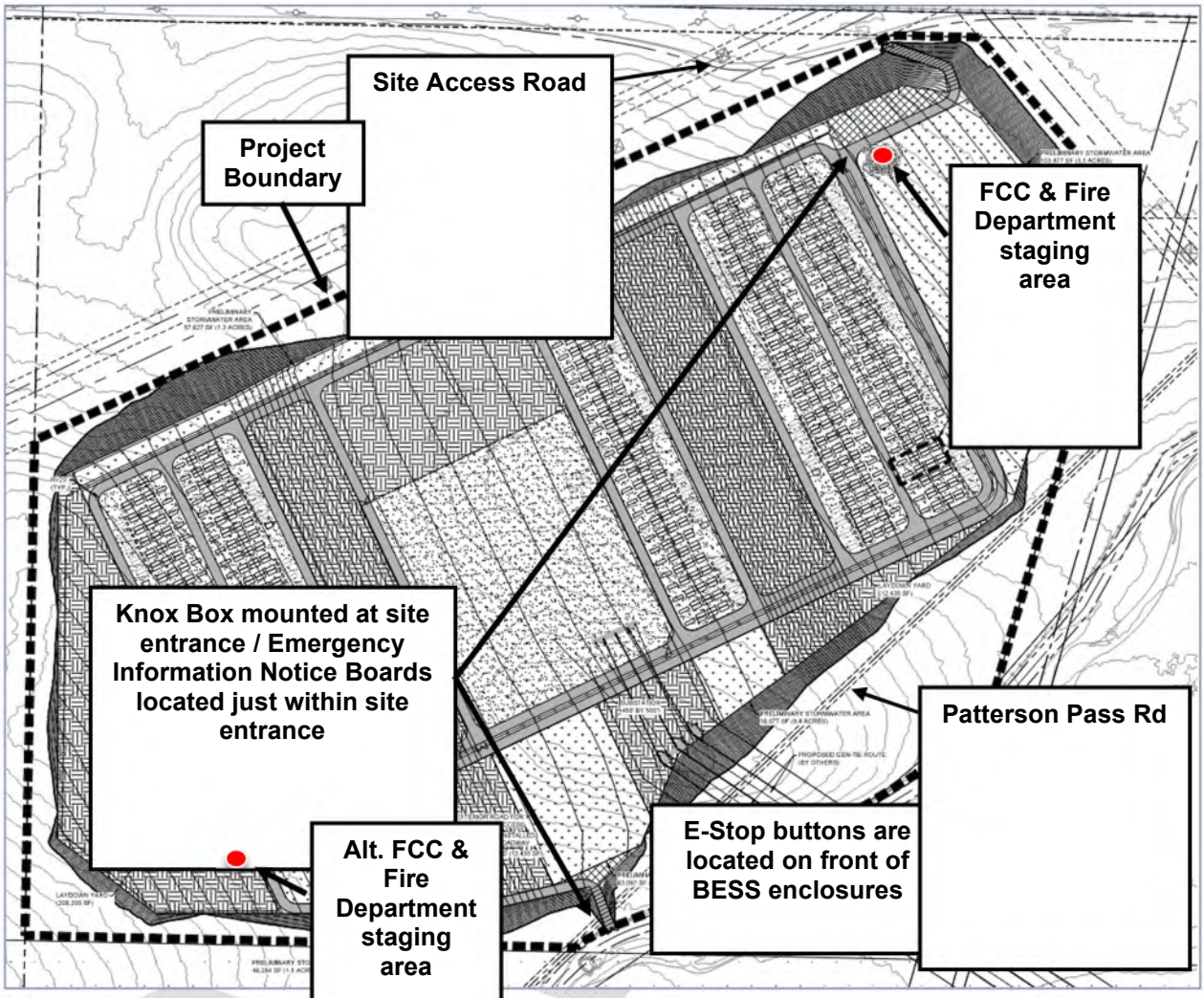

Figure A - Potentia-Viridi BESS Site Map (North ↑)

Appendix B
EVACUATION MAP

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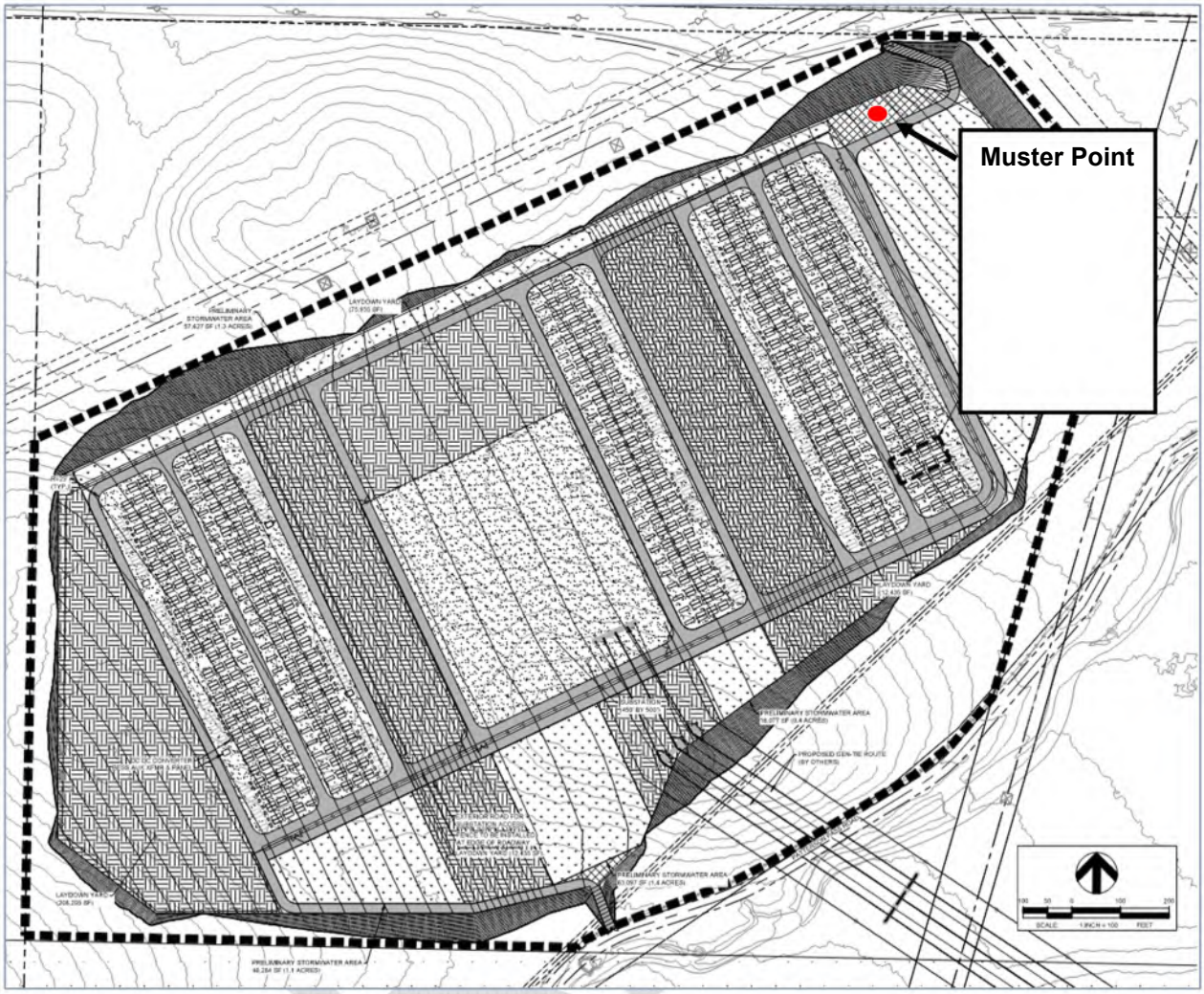

Figure B – Evacuation/Muster point location. (North ↑)

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Appendix C
INCIDENT REPORT FORM

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HAZARDOUS MATERIALS INCIDENT REPORT

INITIAL CONTACT INFORMATION

(Check one): _____ REPORTED/ACTUAL INCIDENT __ DRILL/EXERCISE

1. Date/Time of Notification: _____ Report received by: _____
2. Reported by (name & phone number or radio call signs): _____
   _____
3. Company/agency and position (if applicable): _____
4. Incident address/descriptive location: _____
   _____
   _____
5. Agencies at the scene: _____
   _____
6. Known damage/casualties (do not provide names over unsecured communications): _____
   _____
   _____

CHEMICAL INFORMATION

7. Nature of emergency: (check all that apply)
   ___ Leak ___ Explosion ___ Spill ___ Fire ___ Derailment ___ Other
   Description: _____
   _____
   _____
   _____
8. Name of material(s) released/placard number(s): _____
9. Release of materials:
   _____ Has ended _____ Is continuing. Estimated release rate & duration: _____
10. Estimated amount of material which has been released: _____
11. Estimated amount of material which may be released: _____

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12. Media into which the release occurred: _____ air _____ ground _____ water
13. Plume characteristics:
    a. Direction (Compass direction of plume):_____ c. Color: _____
    b. Height of plume: _____ d. Odor:_____
14. Characteristics of material (color, smell, liquid, gaseous, solid, etc) _____
15. Present status of material (solid, liquid, and gas):_____
16. Apparently responsible party or parties: _____

Note: THIS INCIDENT REPORT IS ONLY AN EXAMPLE. IT CONTAINS SOME OF THE INFORMATION REQUIRED TO REPORT AN INCIDENT TO THE SERC. Go to www.ecy.wa.gov/epcra to obtain a reporting form for businesses to submit to the SERC. This form can be used at an incident, if applicable.

ENVIRONMENTAL CONDITIONS

17. Current weather conditions at incident site:
    Wind From:_____ Wind Speed (mph):_____Temperature (F): _____
    Humidity (%): _____Precipitation: _____Visibility: _____
18. Forecast:_____
19. Terrain conditions:_____

HAZARD INFORMATION

(From ERP, MSDS, CHEMTREC, or facility)

20. Potential hazards:_____
21. Potential health effects:_____
22. Safety recommendations:_____
23. Recommended evacuation distance: _____

IMPACT DATA

24. Estimated areas/ populations at risk:_____

25. Special facilities at risk: _____

_____

26. Other facilities with HAZMAT in area of incident: _____

_____

PROTECTIVE ACTION DECISIONS

27. Tools used for formulating protective actions

_____ a. Recommendations by facility operator/responsible party

_____ b. *Emergency Response Plan*

_____ c. Material Safety Data Sheet

_____ d. Recommendations by CHEMTREC

_____ e. Results of incident modeling (CAMEO or similar software)

_____ f. Other: _____

28. Protective action recommendations:

____ Evacuation ____Shelter-In-Place ____Combination ____No Action

____ Other _____

Time Actions Implemented

_____

_____

_____

29. Evacuation Routes Recommended: _____

_____

EXTERNAL NOTIFICATIONS

30. Notification made to:

_____ National Response Center (Federal Spill Reporting) 1-800-424-8802

_____ CHEMTREC (Hazardous Materials Information) 1-800-424-9300

_____ State Emergency Response Commission

_____ SERC written follow-up forms

31. Other Information: _____

_____

Source: Washington State Emergency Response Commission. Local Emergency Planning Committee (LEPC) Hazardous Materials Emergency Response Plan TEMPLATE. September 2011. http://www.ecy.wa.gov/epcra

Appendix D
BOMB THREAT REPORT

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* * * KEEP CALLER ON THE LINE AS LONG AS POSSIBLE! * * *

Exact words of caller:

_____

_____

Questions to ask the caller:

1. When is the bomb going to explode? _____
2. Where is the bomb right now? _____
3. What kind of bomb is it? _____
4. What does the bomb look like? _____
5. Why did you set the bomb? _____
6. Where are you calling from? _____
7. What is your name? _____

Try to determine the following

IDENTITY: • male • female • adult • juvenile (age? _____)

VOICE: • loud • high-pitched • deep • raspy • pleasant

• disguised • broken Other: _____

ACCENT: • local • not local • foreign • regional _____

RACE: • Caucasian • Black • Hispanic • Asian

Other: _____

SPEECH: • educated • average • illiterate • obscene

Other: _____

MANNER: • calm • angry • rational • irrational • coherent

• incoherent • deliberate • self-righteous • laughing • intoxicated

BACKGROUND NOISES:

- office machines
- factory machines
- bedlam
- trains
- quiet
- voices
- mixed sounds
- airplanes
- music
- traffic
- party

Other: _____

If the voice is familiar to you, who did it sound like? _____

Additional Information: _____

_____

Date____/____/____ Time: _____:_____ a.m./p.m. Received by: __

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Appendix E
BOMB THREAT CHECKLIST

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Mail Threat:

_____1. Handle documents as little as possible to preserve fingerprints.

_____2. Hand deliver immediately to O&M Manager.

Phone Threat:

_____1. Complete Bomb Threat Form.

_____2. Deliver completed form to O&M Manager.

_____3. Notify Supervisor immediately.

O&M Manager:

_____1. Gather all information regarding threat.

_____2. Decide upon course of action.

_____3. Coordinate searches with proper authorities.

Suspicious Objects:

_____1. DO NOT TOUCH OR ATTEMPT TO MOVE!

_____2. Notify Police—911.

Evacuation:

_____1. Announce over public address system, give location where to assemble. Do not use the radio.

_____2. Enlist volunteers to remain and shut down site.

Re-entry:

_____1. Determined based on:

_____a. "All-clear" given by bomb disposal unit.

_____b. O&M Manager's judgment that danger is passed.

_____2. Full report prepared.

Appendix F

CHEMICAL/BIOLOGICAL AGENT THREAT REPORT

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KEEP CALLER ON THE LINE AS LONG AS POSSIBLE

Exact words of caller:

_____

_____

Questions to ask the caller:

1. What chemical or biological agent is it? _____
2. When is the agent going to be released? _____
   (date) (time)
3. Where is it right now? _____
   (Building) (Floor) (Room)
4. Who put it there? _____
5. What does it look like? _____
6. What will cause it to spread? _____
7. What will trigger it? _____
8. Where did you get the agent? _____
9. Why are you doing this? _____
10. What is your name? _____
11. What is your telephone number and address? _____

Try to determine the following

IDENTITY: • male • female • adult • juvenile (age? _____)

VOICE: • loud • high-pitched • deep • raspy • pleasant

• disguised • broken Other: _____

ACCENT: • local • not local • foreign • regional: _____

RACE: • Caucasian • Black • Hispanic • Asian

Other: _____

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SPEECH: • educated • average • illiterate • obscene

Other: _____

MANNER: • calm • angry • rational • irrational • coherent

• incoherent • deliberate • self-righteous • laughing • intoxicated

BACKGROUND NOISES:

• office machines • factory machines • bedlam • trains • quiet

• voices • mixed sounds • airplanes • music • traffic

• party Other: _____

If the voice is familiar to you, who did it sound like? _____

Additional Information: _____

_____

Date____/____/_____ Time: _____:_____ a.m./p.m. Received by: __

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Appendix G

CHEMICAL/BIOLOGICAL AGENT THREAT CHECKLIST

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Mail Threat:

_____ 1. Handle documents as little as possible to preserve fingerprints.

_____ 2. Hand-deliver immediately to O&M Manager.

Telephone Threat:

_____ 1. Complete the Chemical/Biological Threat Report form.

_____ 2. Deliver completed form to O&M Manager immediately.

O&M Manager:

_____ 1. Gather all information regarding threat.

_____ 2. Decide upon course of action.

Searches:

_____ 1. Comprehensive—To be conducted by trained law enforcement personnel only.

Suspicious Objects:

_____ 1. Do not touch or attempt to move.

_____ 2. Notify police.

Evacuation:

_____ 1. Make a site-wide announcement and give location where to assemble.

_____ 2. Enlist volunteers to remain and shut down site.

Re-entry:

_____ 1. Determined based on:

_____ a. "All-Clear" given by competent authority.

_____ b. O&M Manager's judgment that danger has passed.

_____ 2. Full report prepared.