

Energy Storage

Draft Emergency Response Plan

Updated June 10, 2022



This Draft Emergency Response Plan for energy storage facilities, presented by the American Clean Power Association (ACP), is the result of a collaborative member effort initially undertaken by the Energy Storage Association (ESA) in 2019 and continued following ESA's merger with ACP at the beginning of 2022. This document is intended to be adapted by users as needed to be appropriate to the conditions, environment, staffing, structure, technologies, and setup of a given site.

Legal disclaimer

This Draft Emergency Response Plan (ERP) is provided for information and guidance purposes only and establishes a suggested format to be considered in the preparation of an Emergency Response Plan. Sections of this draft ERP may not be applicable to every site, and the guidance offered should be modified to reflect specific conditions at your site. The American Clean Power Association assumes no responsibility or liability for the use of this draft. Site owners and operators are advised to consult with safety consultants and legal and insurance advisors concerning liability and other issues associated with the adoption and implementation of an Emergency Response Plan.

It is important to note that an ERP is a document that requires regular updates. Additionally, it should be flexible and easily understood, while supplying sufficient detail to enable personnel to implement necessary emergency procedures without question or delay in order to ensure continuity of operations.

Contents

1. Introduction	4
1.1 Purpose.....	4
1.2 Limitations.....	4
1.3 Facility Description	4
1.4 Plan Review and Revision.....	5
2. Emergency Response Management.....	5
2.1 Overall Organization.....	5
2.2 Roles and Responsibilities	5
2.3 Preparation and Planning for Emergencies	6
2.4 Communications.....	7
2.5 Operator Safety & Equipment.....	8
2.6 Safety Training	9
2.7 Warning Systems and Alarms	9
3. Emergency Response	10
3.1 Analyze, Plan, Implement, Evaluate	10
3.2 Evacuation Procedures	12
3.3 Post Emergency Reporting Procedures.....	13
4. Fire Incidents.....	13
4.1 Conditions Associated with Energy Storage Systems.....	14
4.2 Response to a Fire Incident.....	15
4.3 Site Maintenance and Housekeeping	18
5. Chemical Release	18
5.1 Hazardous Materials	18
5.2 Spill Response Procedures	18
5.3 Reporting Major Spills	19
6. Medical Emergency	20
6.1 Medical Emergency Response Procedures.....	20
6.2 Non-Emergency Safety Incident	21
7. Security Incidents	22
7.1 Bomb Threat	22
7.2 Chemical/Biological Agent Threat.....	23
7.3 Sabotage or Vandalism	23
7.4 Active Shooter.....	23

8. Environmental Hazards	24
8.1 Flooding and Flash Flood	24
8.2 Tornado.....	24
8.3 Lightning Storm	25
8.4 Winter Storm	25
8.5 Seismic Event	25
9. Cybersecurity	26
Acronyms	27
Appendices	28
Appendix 1: Map of Site	28
Appendix 2: Evacuation Map.....	29
Appendix 3: Referenced Titles and Roles	30
Appendix 4: Emergency Contacts	32
Appendix 5: Incident Report Form.....	34
Appendix 6: Bomb Threat Report.....	37
Appendix 7: Bomb Threat Checklist	39
Appendix 8: Chemical/Biological Agent Threat Report	40
Appendix 9: Chemical/Biological Agent Threat Checklist	42

1. Introduction

1.1 Purpose

The following emergency response procedures are provided so that all [Site Name] personnel understand the practices that are to be followed to be prepared for and to provide immediate and effective response to emergencies that might arise at the facility. Because the safety of employees is of primary concern, the [Site Name] Emergency Response Coordinator and each member of the [Site Name] staff are committed to providing a safe, healthy work environment and are responsible for ensuring implementation of these procedures.

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

1.2 Limitations

This plan does not imply, nor should readers infer, that its implementation will guarantee that 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 during specific events to implement operational procedures.

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 apply in their locality, even if those codes, standards, and requirements contradict this plan.

Successful implementation of this plan depends on 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.

1.3 Facility Description

[Site Name] is located in [City/County] at [Address]. The site is comprised of [type of storage system] in [number] of enclosures across [energy system site size] within a [overall site size]. The primary entrance is located at [location] with a secondary entrance at [location].

[Appendix 1](#) provides a map of the facility. Notification information for plant and external support organizations (police, fire department, medical facilities, etc.) that may be called to respond to emergency situations at [Site Name] is included in [Appendix 4](#). Support personnel are available on the site from [start time] to [end time]. The Site Manager or their delegated substitute is available via cellular phone in case of an emergency.

1.4 Plan Review and Revision

A review of this emergency response plan shall be conducted and documented at 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.

2. Emergency Response Management

2.1 Overall Organization

Overall responsibility for the Emergency Response Plan (ERP) lies with the [Site Name] 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.

2.2 Roles and Responsibilities

Specific management personnel will assume leadership roles for emergency responses. The Emergency Response Coordinator, Site Manager, and/or Lead Technicians will assist in the implementation of this plan by knowing and communicating evacuation routes to workers during emergency evacuation and reporting the status of the evacuation to the Fire Department. The Emergency Response Coordinator is responsible for seeing that this plan is implemented and will appoint an adequate number of personnel to enforce the plan, assure everyone is familiar with this plan and act as a liaison with the local Fire Department(s).

All facility personnel have a responsibility to immediately report emergency situations to the Lead Technician on duty or local emergency responder personnel when appropriate. There shall be no delay to report 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 [Site Name] Emergency Notification Telephone List (refer to [Appendix 4](#)). Where a Lead Technician is not assigned, facility personnel will refer to the Emergency Notification Telephone list to inform key personnel. Titles and roles are summarized in [Appendix 3](#).

The Emergency Response Coordinator (or designee) shall be responsible for initiating a 'phone tree' for informing relevant operations and administrative contacts in [Site Owner / Operator], including the Regional Manager to initiate corporate awareness and public communications activities in accordance with company structure and policies.

A subject matter expert (SME) shall be contactable at all times by telephone. This person and a designated secondary SME contact should be readily available to first responders in the case of emergency situations. The SME shall be versed in the battery's failure modes and hazards. A working knowledge of incident command systems will allow the SME to integrate into the emergency response operations when needed. If this is not practical, a toll-free phone number should be available such that first responders may call at any time, and be given operational data on the system, including its current state of health, system alarm notifications, and advice on how to proceed during an emergency event.

2.3 Preparation and Planning for Emergencies

2.3.1 Pre-planning for emergencies is a crucial element of this plan. The following steps have been taken in planning for emergency situations at the site:

- Fire department and other first responders have received a copy of this plan and have participated in an on-site familiarization meeting.
- All emergency responder access points to the facility shall be identified.
- An emergency response information notice board shall be maintained at [location readily visible and accessible to all personnel, identified in Appendix 1] 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 are established and posted on the emergency information notice board.
- Evacuation route diagrams have been documented and posted on the emergency information notice board.
- Logs of on-site personnel for tracking headcounts during emergencies shall be maintained.
- All buildings and property surrounded by fencing will be marked by signage that identifies specific hazards (such as the NFPA diamond, and all applicable Danger, Caution, Warning signal words).
- Site personnel receive instruction to keep exits from the site or O&M Building clear and to maintain ready access to fire extinguishers by not blocking them with furniture, or any other means.
- Safe approach distances are established for equipment's different failure modes, personnel are trained in these distances, and such information is communicated in writing to first responders during drills and other emergency response informational meetings.

- Safety Data Sheets (SDS) provided by manufacturers shall, where relevant, be provided to first responders. In some cases, manufacturers or suppliers will provide Material Safety Data Sheets (MSDS) instead of SDS where relevant.

2.3.2 Emergency Routes

A [Site Name] evacuation sheet shall be posted and orally communicated to site personnel. These procedures shall be discussed at periodic safety meetings in addition to being covered during new employee orientation. Personnel are to know at least two exits whenever possible and be familiar with the evacuation routes posted in the location indicated on the site map (Appendix 1).

Depending upon the degree of emergency, weather and/or site conditions, roadways as designated on the site map ([Appendix 1](#)) will be used for routes of evacuation. In the event of an evacuation, all personnel will meet at the designated muster point for further information. If the primary muster point is inaccessible or hazardous, personnel shall gather at the secondary muster point and inform the emergency coordinator (if not present) by radio or telephone. The emergency response coordinator shall inform personnel of a diversion to the secondary muster point by such means as are available, to include radio or loud hailer. If personnel are unable to make it to the designated muster points, they should seek shelter wherever possible and contact their supervisor for further instructions. Accountability of personnel shall be of the utmost importance and be conducted in a timely manner. Responder access points shall be kept unobstructed at all times so first responders will not be hindered in their operations when responding to emergencies within the site.

2.4 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 for 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 company network.
- Emergency transmissions should 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 located at [location] and identified in [Appendix 1](#).
- All hand-held radios/phones should be recharged daily with back-up 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.

2.5 Operator Safety & Equipment

2.5.1 General recommendations for operator safety

- Inspect equipment daily for unsafe conditions.
- Keep hands away from exposed electrical connections.
- Keep hands away from hot surfaces.
- Observe all high voltage warnings.
- Any outstanding observations shall be reported to their supervisor immediately and documented.

2.5.2 Personal Protective Equipment

The operation or maintenance of specific equipment may have different safety requirements. There are different levels of PPE that must be checked and maintained. All personnel who wear levels of protection above and beyond their normal everyday attire must be trained in that PPE. All training of PPE shall be conducted by a competent person and documented. Some PPE have a SCAM (selection, care and maintenance) document that will instruct the end user on the limitations of the PPE and the proper maintenance of the PPE. Always be aware of individual equipment operational requirements and hazards as well as out of service dates. For example,

- Safety glasses with side shields (no dark glasses are permitted except those approved for welding or cutting)
- Face shields for cutting & grinding
- Approved safety toe shoes
- Approved hearing protection
- Approved hardhat
- Approved gloves
- Long sleeve shirt
- Long pants

All PPE is required to be worn at all times for the working being conducted. Any PPE that is compromised or no longer considered viable for protection shall be discarded and replaced. Any PPE that comes in contact with hazardous material shall be properly decontaminated and inspected for functionality before being returned to service.

2.6 Safety Training

2.6.1 General training requirements

Initial training for all site personnel with respect to the contents of this ERP shall be undertaken upon the start of employment or substantial changes in duties. Refresher training of the ERP to site personnel shall be conducted at least annually. Documentation of ERP training is to be maintained in site files.

A variety of emergency response drills (such as fire, tornado, bomb threat, etc. as relevant to the site) are to be held by [site owner/operator] at minimum on a quarterly basis and shall be documented. At least on an annual basis, the [locality] Fire Department and other emergency response personnel shall be requested to participate and assist with critique of evacuation drills. Table-top exercises are encouraged to familiarize relevant response personnel with procedures for different types of emergencies that could be encountered at the site.

The site Emergency Response Coordinator and Lead Technicians are trained in their specific duties upon being assigned these roles or beginning their employment. All building occupants have been instructed in actions to take in case of an emergency through their copies of procedures and training, as needed.

Operator personnel should receive supplier / manufacturer approved training on the specific characteristics of the energy storage system. Applicable common standards (e.g. on electrical safety) should be taken into account.

All personnel who wear levels of protection above and beyond their normal everyday attire must be trained in that PPE. All training of PPE shall be conducted by a competent person and documented.

All hazardous materials incident emergency responders and workers at hazardous materials facilities, transport companies, waste treatment facilities, storage facilities and disposal facilities will be provided training which meets federal and state standards. Such training will be commensurate with their employer's or organization's plan and policies.

Initial and refresher training regarding warning systems and alarms shall be conducted at least annually. Documentation of training is to be maintained in site files.

2.7 Warning Systems and Alarms

Audible and visual (e.g., flashing lights) alarm systems should be established that reflect specific on-site hazard analyses. Personnel should be trained on the significance of different alarms and the corresponding actions as outlined elsewhere in this Plan. Descriptions of each alarm and corresponding actions should be clearly posted on an emergency information notice board (location marked on map in [Appendix 1](#)).

Warning systems and alarms should be tested at least every six months or more frequently per manufacturer specifications or code requirements. Tests shall be documented. All site personnel, as well as those offsite who are likely to hear or see an alarm, should be made aware of tests so as not to cause undue concern.

3. Emergency Response

3.1 Analyze, Plan, Implement, Evaluate

The phases of emergency response may be categorized under the 'APIE' scheme for handling an emergency: Analyze, Plan, Implement, Evaluate.

- **Analyze:** Analyzing the response is the phase in which the notification takes place to emergency responders.
- **Plan:** Planning the response is the phase in which the proper resources and equipment are called to the emergency scene and a plan is developed to mitigate the emergency.
- **Implement:** Once a plan is developed and the proper resources and equipment are there, then the Emergency Response Coordinator will make the determination to implement the plan.
- **Evaluate:** Once the plan is implemented, it shall be evaluated for safety and effectiveness. If the plan is not safe or effective, then the process should start over again with **Analyze, Plan, Implement, and Evaluate.**

Only personnel who are properly trained in accordance with 29 CFR Part 1910.120(q)(6) may respond to hazardous chemical releases.

No employee is required or permitted to place himself or herself in harm's way in order to facilitate extinguishment, evacuation, or rescue. All rescue operations will be performed by trained professionals upon their arrival. Rescue operations will only be conducted after a risk-reward analysis is done and proper PPE is used to protect against any adverse hazards that may be encountered.

Incidents where local fire department personnel are involved will be managed under a system established by the fire department, called 'Incident Command System.' This establishes a primary incident commander and a liaison to or for the Emergency Response Coordinator.

3.1.1 Analyze

Without entering an immediate hazard area, the employee who first discovers an emergency should identify the following:

- Is there a fire, spill, explosion, or other incident happening?
- Does medical assistance appear to be needed?
- Who/what is at risk: people, the environment, or property?
- What are the weather and terrain conditions and risks?

The employee will also isolate the area to keep people away from the scene until trained responders arrive, as long as it is safe to do so. An employee who has not received training in emergency response should take no actions beyond notification, isolation of the area, and personal safety precautions. Any efforts made to rescue persons, protect property, or protect the environment must be weighed against the possibility of becoming part of the problem. Attempts to rescue others shall only be attempted with proper PPE, proper training, and in a manner that does not create significant risk to rescuer or others. Persons at the scene must not contact spilled material or inhale fumes, smoke, or vapors.

3.1.2 Plan

After all life hazards are no longer a threat, a plan of operation shall be devised for remediation of the event. The plan shall be communicated to all responders and safety of all responders shall be paramount. A staging area, if needed, shall be identified for extra personnel and equipment that may be needed to accomplish the plan's objectives. All responders that will enter the hot zone (affected area) must be made aware of any decontaminated area upon their exit of the hot zone. Trained responders will be called to the scene by the O&M Manager and/or Lead Technicians to begin the process of hazard assessment and to establish objectives and priorities. The hot zone shall be identified, and all non-essential personnel shall not be permitted to enter this area without proper training and permission of the Emergency Response Coordinator.

3.1.3 Implement

The initial response phase starts with notification, which activates the emergency response system. Anyone who observes or receives information regarding an emergency at [Site Name] should immediately notify available personnel using the [Site Name] radio network or their issued cell phones. The Emergency Response Coordinator and/or Lead Technician will then ensure 911 is notified. At [Site Name], employees are notified of emergencies by cell phone/radio and word of mouth from the Emergency Response Coordinator and/or Lead Technicians. [Appendix 4](#) provides a list of emergency notification information for [Site Name] personnel.

If an event has the potential to impact the local community, [Site Name] will contact local fire/police to make community notifications. The contact list in [Appendix 2](#) also provides notification information for the Company Public Affairs team who will provide guidance for instances involving media. The Emergency Response Coordinator and/or Lead Technicians will coordinate any media efforts through the [Site Name] Asset Manager and Company Legal Department.

The incident command post will be set up in a location free of contaminants and located upwind uphill and upstream. The Emergency Response Coordinator or designee shall remain at the incident command post to serve as a liaison to the Incident Commander designated by emergency responders. Trained responders may enter a 'hot zone' only when wearing appropriate protective equipment. Personnel entering the hot zone shall be briefed on the plan before entering. All communication devices shall be tested prior to entry into the hot zone. A

decontamination corridor shall be established prior to entry into the hot zone. There shall be accountability taken of all personnel entering and leaving the hot zone. A back up team that has the same PPE shall be at the ready in the event of the entry team needs quick assistance. A decontamination team shall be ready to for after exiting the location (warm zone). There shall be a doffing station that is set up immediately at the end of the decontamination section that will allow the responders a safe place to remove their PPE. Only trained responders are authorized to risk exposure to chemicals for purposes of containing or stopping the material release.

The Emergency Response Coordinator or a designee will be responsible for notifying the appropriate regulatory agencies and, if necessary, the Emergency Response Contractor or mutual aid groups. [Appendix 2](#) includes a list of emergency contacts and agencies that may be notified in the event of an emergency. The incident will be documented and kept on file.

3.1.4 Evaluate

During the implementation phase of the emergency, response, action and progress shall be analyzed by the Emergency Response Coordinator constantly. If the plan seems to be ineffective or unsafe the responders shall be removed from the hot zone and the plan shall be revised. The new plan shall be implemented, and that revised plan shall be analyzed for safety effectiveness again.

3.2 Evacuation Procedures

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 1](#). If employees are unable to make it to the muster area, they should divert to the secondary muster area and immediately contact their supervisor for further instructions.

During evacuation, the Emergency Response Coordinator and/or Lead Technicians should 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 should 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

3.3 Post Emergency Reporting Procedures

Following any emergency described in this plan, and in compliance with facility permits and other County and/or State requirements, an incident report will 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 determined include:

- Causes of the incident.
- Effectiveness of the emergency response plan.
- Need for amendments to the response plan.
- Need for additional training programs.

The fire department will make the final determination regarding when the scene is safe to release the site to staff. In some circumstances the scene may need to be safeguarded for investigators to examine the event failures. If the event was caused by a criminal act, the O&M manager shall be guided by law enforcement for direction.

If the facility is not able to reopen due to the event, the O&M Manager will make a determination regarding continuity of operations for the facility in consultation with the Company Regional Manager.

4. Fire Incidents

All personnel working at [Site Name] are to be trained and should know how to prevent and respond to a fire emergency. All on-site personnel shall:

- Complete an on-site training program identifying the fire risks at [Site Name].
- Understand the protocol and follow emergency procedures should an event occur.
- Review and report potential fire hazards to the Emergency Response Coordinator.

No employee is required or permitted to place himself or herself in harm's way in order to facilitate extinguishment, evacuation, or rescue. All rescue operations will be performed by trained professionals upon their arrival.

4.1 Conditions Associated with Energy Storage Systems

4.1.1 Unique Challenges

Energy storage systems present a unique challenge for fire fighters. Unlike a typical electrical or gas utility, an energy storage system does not have a single point of disconnect. Whereas there are disconnects that will de-energize select parts of the system, batteries will remain energized.

The following hazards may be encountered when fighting fires in energy storage systems:

- Shock or arcing hazard due to the presence of water during suppression activities.
- Related electrical enclosures may not resist water intrusion from the high-pressure stream of a fire hose.
- Batteries damaged in the fire may not resist water intrusion.
- Damaged conductors may not resist water intrusion.
- Shock hazard due to direct contact with energized components.
- No means of complete electrical disconnect.
- Chemical spills.
- Toxic gases.
- Thermal runaway and explosions.

4.1.2 Fire and Water

Due to the hazards described above, care and consideration should be applied when considering fire suppression by means of water inundation within energy storage systems. But because water as an extinguishing agent is commonplace, the appropriate use of water should be assessed, *i.e.* whether water reacts with the chemistries present or whether it is not an appropriate extinguisher class. The local fire department should be informed of appropriate fire suppression methods for the energy storage system type as identified by the equipment manufacturer.

If unconventional fire extinguishers are required, local first responders should be alerted and trained on their use, including a familiarization drill. The appropriate and most suitable extinguisher should be recommended based on the specific needs of the site in accordance with guidance from the manufacture. This may include water in some cases, and in all scenarios its use should not be discouraged.

All fire extinguishing equipment, whether automatic or manual, shall be regularly inspected for functionality as per manufacturers' guidance.

4.2 Response to a Fire Incident

In the event of an incipient stage (beginning, small) fire, employees should notify adjacent individuals of this situation and exit the area. Only employees trained in the use of fire extinguishers or other manual fire suppression systems should attempt to use an extinguisher or system. Employees are not expected or authorized to respond to fires beyond the incipient stage (*i.e.*, fires that are beyond the beginning stage and which cannot be extinguished using a hand-held, portable fire extinguisher). The fire department should be immediately notified by dialing 911 when any type of unintended fire has taken place. Site management shall also be immediately notified of any emergency.

4.2.1 Fire External to Battery Container or Enclosure

- Call 911 and report the following:
 - Site name: [Site Name]
 - The address of the main entrance: [Address] or nearest site access point
 - Injuries, if any, and need for ambulance
- Make sure the immediate area of the fire is clear of personnel.
- 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, a communication shall be made through out the facility in attempt to locate the person(s) missing. If the person(s) is equipped with a facility radio then an emergency transmission shall be communicated in attempt to locate the person(s).
- Contact the O&M Manager (if present) and Emergency Response Coordinator (if not the O&M Manager) immediately.
- Remove any obstructions (vehicles, material, etc.) that might impede response to the scene.
- Station available personnel at road intersections to stop traffic flow into the fire scene.
- Evacuate the energy storage system area immediately if the fire warning alarm sounds or fire warning lights illuminate.
- Proceed to the designated muster point for head count.
 - If onsite, the designated Emergency Response Coordinator will do a head count and relay any information/instructions.
- If you encounter heavy smoke, stay low and breathe through a handkerchief or other fabric; move away from the area.
- Assist anyone having trouble leaving the area so long as doing so does not put the assistor at additional risk.
- Attempt to extinguish the fire ONLY if you have had the appropriate training and proper firefighting agent for the type of fire. Refer to the specific safety data sheet.
- Do not leave the designated muster point until advised to do so. If risk (e.g. smoke) requires evacuation of the muster point, the secondary muster point (designated on the map in [Appendix 1](#)) will be used and that fact announced via radio and alarms as available.

- The Emergency Response Coordinator will issue an ‘all clear’ only when the fire department informs them that it is safe to do so.
- The energy storage system is not to be accessed until the O&M Manager or designated Emergency Response Coordinator gives authorization.

4.2.2 Fire Internal to Battery Container

- Call 911 and report the following:
 - Site name: [Site Name]
 - The address of the main entrance: [Address] or nearest site access point
 - Injuries, if any, and need for ambulance
- Make sure the immediate area of the fire is clear of personnel.
- Account for all employees, contractors, and visitors who were working in the area of the fire. If any personnel are unaccounted for from the immediate fire area, a communication shall be made through out the facility in attempt to locate the person(s) missing. If the person(s) is equipped with a facility radio then an emergency transmission shall be communicated in attempt to locate the person(s).
- Contact the O&M Manager (if present) and Emergency Response Coordinator (if not the O&M Manager) immediately.
- Contact the Operations Center and Manager (if present).
- Evacuate the area immediately if the fire warning alarm sounds or fire warning lights illuminate.
- Remove any obstructions (vehicles, material, etc.) that might impede response to the scene.
- Proceed to the designated muster point for head count.
- If onsite, the designated Emergency Response Coordinator will do a head count and relay any information/instructions.
- If you encounter heavy smoke, stay low and breathe through a handkerchief or other fabric.
- If there is a second means of egress that is clear of smoke, that egress path will be used and a radio transmission or other type of communication shall be made stating that the clear egress point for other personnel to use for escape is the second means of egress.
- Assist anyone having trouble leaving the area so long as doing so does not put the assistor at additional risk.
- The fire suppression system is designed to work in a contained environment. **DO NOT** open the doors until it has been determined that the agent has been fully released and a pre-determined amount of time has passed to ensure no hazards are present, and with approval of emergency personnel and Subject Matter Expert.
- **DO NOT** put anyone in harm’s way to save the battery equipment in the container.
- Once the Fire Department arrives, provide them with the following -
 - All applicable SDS documents
 - Assistance isolating equipment electrically
 - This emergency response plan

- A liaison to remain with the fire department Incident Commander as needed
- Do not leave the designated muster point until advised to do so. If risk (e.g. smoke) requires evacuation of the muster point, the secondary muster point (designated on the map in [Appendix 1](#)) will be used and that fact announced via radio and alarms as available.
- The O&M manager and/or Emergency Response Coordinator (if not the O&M manager) will issue an 'all clear' only when the fire department informs them that it is safe to do so and the site (or portions of it) can be reoccupied or normal working conditions can be resumed again.
- The energy storage system is not to be accessed until the O&M Manager or designated Emergency Response Coordinator and the emergency responders give authorization.

In the event of a fire incident, the designated operations personnel responsible for the safe shutdown of the plant will open switchgear to ensure the grid side of the plant is de-energized and isolate the batteries as best able to (i.e. verify the AC and DC breakers are open in the inverter). The Fire Department needs to understand that some of the equipment (batteries) will remain energized no matter what actions are taken, and the recommended option is containment. Batteries remain energized even if all the contactors, breakers, and switches have been opened.

4.2.3 After a Fire

Hazards after a fire should be identified at the time of installation such that recommendations for personal protective equipment (PPE) are available for clean-up crews and hazardous materials (HAZMAT) teams. This may include respirators to protect personnel from toxic gas that continues to be generated from hot cells. Firewater retention and cleanup measures may be required by local regulations. Once first responders have turned the site back to **[The Company]**, the Subject Matter Expert, in coordination with the Emergency Response Coordinator, shall direct on-site personnel on procedures for securing the site for safety and pending any investigation.

In addition to the gas generation risk, cells that remain hot also pose a delayed ignition risk, whereby heat in the cell may transfer to undamaged adjacent cells or remaining active material and reignite the fire. As such, fire-damaged equipment must remain monitored for **[a period identified in consultation with equipment manufacturer and SME]**.

Care should be taken to ensure that damaged batteries containing energy have been safely de-energized in accordance with disposal procedures, if possible, before handling and disposal. If unable to completely de-energize batteries involved in a fire, care should be taken with handling or dismantling battery systems involved in fires as they may still contain hazardous energy levels.

4.3 Site Maintenance and Housekeeping

- Fire extinguishers shall be inspected monthly as per NFPA 10.
- Fire extinguishers shall not be obstructed and should be in conspicuous locations with appropriate signage as per NFPA 10.
- Combustible material shall not be stored in mechanical rooms, electrical equipment rooms, or energy storage system enclosures.
- Outside dumpsters shall be kept at least five (5) feet away from combustible materials and the lids should be kept closed.
- Materials or equipment storage is not allowed in electrical equipment rooms, or near electrical panels.
- Electrical panel openings must be covered.
- Power strips must be plugged directly into an outlet and not daisy-chained and should be for temporary use only.
- Extension cords and flexible cords should not be substituted for permanent ones.

5. Chemical Release

5.1 Hazardous Materials

An inventory of hazardous materials shall be maintained in the [onsite location] and provided in advance to first responders, including fire and ambulance services. Materials typically on site include:

- [List of hazardous materials]

In the event of a breach of energy storage system containment, hazardous materials that may be released include:

- [List of hazardous materials]

Only personnel who are properly trained in accordance with 29 CFR Part 1910.120(q)(6) may respond to hazardous chemical releases.

5.2 Spill Response Procedures

An emergency spill kit is maintained in the [location], identified on the map in [Appendix 1](#). This kit includes, at a minimum:

- Absorbent socks, pads, or pillows
- Disposal bags and ties
- Safety glasses
- Rubber gloves
- Appropriate neutralization medium for liquid present
- Hazardous labels

- Bag of Life-Dri absorbent or equivalent
- Shovel
- Broom

A formal notification process shall be initiated when a hazardous material spill or potential spill is first observed. Immediate actions are necessary. The first individual who discovers a spill (spill observer) will be responsible for initiating notification and response procedures. Only employees that are properly trained in accordance with 29 CFR Part 1910.120(q)(6) may respond to hazardous chemical releases. [Site Owner] is responsible for providing spill recognition and response training for personnel. At least one trained employee shall be on duty at all times.

The first person to witness the spill shall follow these procedures:

1. Make an assessment of the incident as observed.
2. If the incident can be safely controlled, take steps to do so (e.g., turn off source of spill).
3. Notify the Emergency Response Coordinator and provide as much information as possible.

The Emergency Response Coordinator shall follow these procedures in the event of a spill:

1. Notify Supervisors.
2. Make sure all personnel are removed from the spill area.
3. Take immediate actions to minimize any threat to public safety (verify the spill area has been cordoned off).
4. Secure the source of the spill, if safely possible to do so.
5. Maintain close observation of the spill.

Cleanup may range from very simple removal of minor spills, to installation of skimmers around large spills or between sensitive areas and spills for longer, prolonged cleanups. Cleanups shall be conducted as per [OSHA regulations \(part 1910\)](#). Cleanups can be on pavement or on soil surfaces. On-site personnel shall be trained in the proper use of the cleanup materials. The Emergency Response Contractor or other contracted – and appropriately certified – waste management company may provide cleanup and remediation services. It is strongly recommended that all contractors determine a disposal site in advance of a spill incident.

5.3 Reporting Major Spills

After initial spill response has begun, notification and reporting to agency personnel shall occur. [state-specific response requirements go here, referencing relevant document(s) which may be included in an appendix] The following procedures should be followed when reporting major spills:

- Never include information that has not been verified.

- Never speculate as to the cause of the incident or make any acknowledgment of liability.
- Do not delay reporting because of incomplete information.
- Notify persons/agencies and document notification and the content of the message.
- For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110, 119, and 302, the Emergency Response Coordinator shall notify the National Response Center at (800) 424-8802.

Other agencies which may need to be consulted include, but are not limited to, the [County/City] fire department, [County/City] Public Works Department, state police, [Locality] Police Department, State Department of Toxic Substances, OSHA, [State Environmental Quality Authority], and (if relevant) [State Water Authority].

6. Medical Emergency

6.1 Medical Emergency Response Procedures

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 “[Company, Site Name].” A second notification will be made to the O&M Building, to inform others of the situation.

[Site Name] employees certified in first aid/cardiopulmonary resuscitation (CPR) may administer aid if they have completed training. Regularly-present 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 1](#).

All employees shall designate a personal emergency contact, which shall be kept on file.

6.1.1 Serious Injury

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/or Safety Managers.
3. Provide name, exact location, number of injured persons, and brief description of incident.
4. On-site personnel shall meet EMS responders at site entrance and direct them to location of 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 incident and keep on file.

6.1.2 Attending an Incident

When attending an incident, the following procedures apply:

1. Clear a path to the injured person for Operations and/or Safety Managers and assign personnel to assist with signaling EMS responders to the location of the incident.
2. Identify location of Project Site entrance nearest to the incident and notify EMS responders.
3. Operations and/or Safety Managers shall meet EMS responders at site entrance.
4. Direct and accompany EMS responders to location of incident.
5. Follow all directions of EMS responders.
6. Contact management personnel and/or subcontractors.
7. Document incident and keep on file.

6.1.3 Medical Facilities

The nearest medical facility to the project site is:

[Hospital Address]

Directions from site entrance:

[Turn-by-turn directions, and link to online map directions]

6.2 Non-Emergency Safety Incident

6.2.1 Notification of Minor Incidents

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/or 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.

6.2.2 Heat 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 Manger 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.

7. Security Incidents

7.1 Bomb Threat

7.1.1 The purpose of this plan is to give direction to all site personnel in the event [Site Name] is a target of an actual or threatened bomb assault/attack.

Anyone receiving a bomb threat shall:

- Treat the caller with courtesy and respect. Complete the Bomb Threat Report ([Appendix 6](#)). Use this sheet as a reference while talking with the caller making the threat.
- Attempt to obtain as much information as possible. See the “Bomb Threat Checklist” ([Appendix 7](#)).
- Immediately notify the [Site Name] 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:

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

7.1.2 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 ensure that the “All Clear” message is communicated once the threat has passed or is no longer present.

7.2 Chemical/Biological Agent Threat

The procedures described previously for a bomb threat should be used for a chemical or biological agent threat. Refer to [Appendix 8](#) for a copy of the phone report when receiving such a threat and [Appendix 9](#) for a checklist.

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

7.3 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 should be considered and/or implemented:

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

7.4 Active Shooter

In an active shooter situation, employees should:

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. When encountering responding police, remain calm and follow any and all instructions from the officers. Officers may shout commands and push individuals to the ground for his/her safety as well as their own. When law enforcement personnel arrive at the scene, personnel should be aware of the following:
 - Follow all official instructions from 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 as advised by the officers; and
 - Provide all relevant information to police.

8. Environmental Hazards

8.1 Flooding and Flash Flood

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 rainfall. These floods often become raging torrents of water which rip through riverbeds or 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 or no advance 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:

- 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.
- Do not drive through flooded areas. Even if it looks shallow enough to cross.
- Do not cross flowing streams on foot where water is above your ankles.
- Be especially cautious at night. It is harder to recognize water danger then.
- Do not attempt to outrace a flood on foot. If you see or hear it coming, move to higher ground immediately.
- Be familiar with the land features where you work. It may be in a low area, near a drainage ditch, or small stream.
- Stay tuned to weather forecasts and updates for the latest statements, watches, and warnings concerning heavy rain and flash flooding in the Project Area.
- Waiting 15 to 30 minutes, or until high water recedes, is a simple safety measure.

8.2 Tornado

Upon the issuance of a tornado warning, O&M personnel will evacuate the site and report to the pre-designated shelter area, to be determined prior to O&M personnel arrival. In the event O&M personnel are outside and unable to evacuate to the shelter, the following procedures will be followed:

- Lie flat in a nearby ditch or depression, covering the head with the hands. Be aware of the potential for flooding.
- O&M personnel are safest in a low, flat location and will be instructed to not get under an overpass or bridge.
- O&M personnel will be instructed to never try to outrun a tornado in congested areas in a vehicle. It is safest to leave the vehicle for safe shelter.
- O&M Personnel are instructed to beware of flying debris.

Following tornado or high wind events, the site facility will be evaluated by O&M personnel for damage. All repairs will be performed under standard operational procedures.

8.3 Lightning Storm

In the event a lightning storm is within 10 – 30 miles and approaching the Site, the following procedures shall apply.

- Notify Operations and/or Safety Manager, and all on-site employees.
- Stop work safely and head to staging and laydown yards in vehicles.
- Remain at staging and laydown yards, get update on weather conditions.
- If storm/lightning is still approaching the Project Site, get in and stay in company or personal vehicles that have rubber tires only.
- If safe enough to do so, take cover in on-site designated shelters.
- Once storm passes, remain in cars/trucks for at least 30 minutes depending on passing storm severity, and wait for an “OK” from the O&M Manager or Emergency Response Coordinator in charge of monitoring the storm.

8.4 Winter Storm

Before winter approaches, the facility will ensure adequate supplies, including:

- Rock salt or similar products to melt ice on walkways.
- Sand to improve traction.
- Snow shovels and other snow removal equipment.
- As needed, service agreement(s) with snow removal vendors.

When winter weather threats exist, the facility will monitor local news channels for critical information from the National Weather Service (NWS). Be alert to changing weather conditions. Winter storm watches, warnings, and advisories are issued by local National Weather Service Forecast offices.

Depending on the severity of the winter storm, the Facility Manager (or designee) will give direction to personnel regarding site staffing/closure.

8.5 Seismic Event

Earthquakes may strike with little to no advance warning. As such, when an earthquake does occur, it is important to stay as safe as possible. Be aware that some earthquakes are actually fore-shocks and a larger earthquake may subsequently occur. Also, be aware that many earthquakes are accompanied by aftershocks after the main event has occurred. If an earthquake occurs minimize your movements to a few steps to a nearby safe place and if you are indoors stay there until the shaking has stopped and you are sure exiting is safe.

The following actions should be followed for personnel indoors:

- Drop to the ground and take cover by getting under a sturdy piece of furniture and hold on until the shaking stops. If there isn't a desk or sturdy piece of furniture near you, cover your face and head with your arms and crouch in an inside corner of the building.
- Stay away from glass, windows, outside doors and walls, and anything that could fall such as lighting fixtures or furniture.
- Use a doorway for shelter only if it is in close proximity to you and if you know it is a strongly supported load-bearing doorway.
- Stay inside until the shaking stops and it is safe to go outside.

The following actions should be followed for personnel outdoors:

- If you are already outdoors stay there.
- Move away from buildings, structures, light poles, and utility wires.

Once in the open stay there until the shaking stops to prevent being hit by falling debris.

Following seismic events, the site facility will be evaluated by O&M personnel for damage. All repairs will be performed under standard operational procedures.

9. Cybersecurity

Cyber security testing should be an integral part of the energy storage system lifecycle; systems should be secure by design. Once in operation, ensure continuous secure operation by monitoring, risk assessment and patching.

A process should be created and put in place to ensure continuous hardening of the energy storage system. The principle of hardening is making sure that the attack surface to site and equipment is limited by:

- Only necessary network service ports should be open, others should be closed.
- Only necessary software should be installed on the device, other software should be removed.
- Development environments and source code should not be installed on production devices.
- Remote access protocols that use plain text communication should not be used.
- Software that stores passwords unencrypted should not be used.

Acronyms

AC	Alternating Current
AED	Automated External Defibrillator
CAMEO	Computer-Aided Management of Emergency Operations
CHEMTREC	Chemical Shipping Regulation & Incident Support
CFR	Code of Federal Regulations
CPR	Cardiopulmonary Resuscitation
DC	Direct Current
DHS	Department of Homeland Security
EMS	Emergency Medical Services
ERP	Emergency Response Plan
FDC	Fire Department Connection
HAZMAT	Hazardous Materials
ICS	Incident Command System
MSDS	Material Safety Data Sheets
NESC	National Electric Safety Code
NFPA	National Fire Protection Association
NRC	National Response Center (U.S. EPA)
NWS	National Weather Service
OSHA	Occupational Safety and Health Administration
O&M	Operations and Maintenance
PPE	Personal Protective Equipment
SDS	Safety Data Sheets
SERC	State Emergency Response Commission
SME	Subject Matter Expert

Appendices

Appendix 1: Map of Site

[To include site boundaries, primary and secondary (etc.) entrances, emergency information notice board, emergency stop switch, first aid kit location(s), AED location(s), fire department connections, emergency spill kit location, etc.]

Appendix 2: Evacuation Map

[To include primary and alternate evacuation routes, exits, primary muster point, and secondary muster point]

Appendix 3: Referenced Titles and Roles

Note that some of these responsibilities may be combined within the duties of single individuals.

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 would typically bear the responsibility for ensuring incident records are maintained. Such a manager should also ensure a safety-based culture pervades across sites and ensure that O&M Managers are ensuring that training for safety is at the core of operations.

Emergency Response Contractor: An Emergency Response Contractor is an outside organization or individual who is contracted to undertake certain aspects of emergency response (e.g. spill management) but is not otherwise responsible for the strategic coordination of a response, nor is part of typical operation of a site. Care should be taken to ensure such contractors understand the broader picture of site safety and are aware of broader 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 necessary cleanup and/or restoration 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. [Appendix 2](#) includes a list of emergency contacts and agencies that may be notified in the event of an emergency. The incident will be documented and kept on file.

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

- Ensure the safety of all personnel.
- Evaluate if operations in the affected area should be shut down.
- Take precautions to prevent or limit the spread of fire or explosions.
- Isolate affected area and provide direction for radio announcements.
- Determine the source/cause of the emergency and evaluate the primary and secondary hazards to allow a full-scale, safe response.
- Ensure that appropriate internal and external notifications are made.
- Coordinate outside assistance from public or private organizations.
- Implement other appropriate response provisions as necessary.

The Emergency Response Coordinator should be accredited in accordance with NFPA 70/70E and the National Electric Safety Code (NESC). If s/he is 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 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.¹ The Fire Department designates an Incident Commander as the primary incident manager; it should not be used by civilian organizations that are operating at an incident with emergency responders.

O&M Manager: The Operations and Maintenance 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 Manger or with a remote operator.

Site Manager: A Site Manager supervises the personnel for a site. The Site Manager is ultimately responsible for 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 SME should have ready access to information on 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.

¹ Federal Highway Administration. *Glossary*. https://ops.fhwa.dot.gov/publications/ics_guide/glossary.htm

Appendix 4: Emergency Contacts

TITLE	INDIVIDUAL	TELEPHONE NUMBER
O&M Manager / Emergency Coordinator	Name	999-999-9999 - Office 999-999-9999 - Cell
Subject Matter Expert	Name	999-999-9999 – Cell
Secondary SME Contact	Name	999-999-9999 – Cell
Manufacturer Safety Representative	Name	999-999-9999 - Cell
Lead Technician	Name	999-999-9999 - Cell
Alternate Emergency Contact	Name	999-999-9999 - Cell
Company Regional Manager	Name	999-999-9999 - Office 999-991-9999 - Cell
Company Asset Manager	Name	999-999-9999 - Office
Company Control Center	Operator On Duty	999-999-9999

Emergency Services & Contactors	Telephone Number
<p><u>OFFSITE EMERGENCY ASSISTANCE</u></p> <p>Fire/Police/Ambulance</p> <p>State Police</p> <p>Hospital: ([Hospital name])</p> <p>[Hospital address]</p>	<p>911</p> <p>911</p> <p>999-999-9999</p>
<p><u>EMERGENCY SPILL RESPONSE CONTRACTOR</u></p> <p>[Contractor Company]</p>	<p>999-999-9999</p>
<p><u>AGENCY NOTIFICATIONS</u></p> <p>NRC (24-hour) (Report Oil Spills)</p> <p>State Department of Public Health and Environment</p>	<p>800-424-8802</p> <p>999-999-9999</p>
<p><u>ADDITIONAL ASSISTANCE</u></p> <p>Police Department (non-emergency)</p> <p>State Poison and Drug Center</p> <p>U.S. Pipeline & Hazardous Material Safety Administration help line</p>	<p>999-999-9999</p> <p>800-999-9999</p> <p>1-800-467-4922 infocntr@dot.gov</p>
<p><u>EQUIPMENT ASSISTANCE</u></p> <p>[Equipment manufacturer point of contact]</p>	<p>999-999-9999</p>

Appendix 5: Incident Report Form

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: _____



- 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 6: Bomb Threat Report

* * * 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	
<u>IDENTITY:</u>	<ul style="list-style-type: none"> <li style="margin-right: 20px;">• male <li style="margin-right: 20px;">• female <li style="margin-right: 20px;">• adult • juvenile (age? _____)
<u>VOICE:</u>	<ul style="list-style-type: none"> <li style="margin-right: 20px;">• loud <li style="margin-right: 20px;">• high-pitched <li style="margin-right: 20px;">• deep <li style="margin-right: 20px;">• raspy <li style="margin-right: 20px;">• pleasant <li style="margin-right: 20px;">• disguised <li style="margin-right: 20px;">• broken Other: _____
<u>ACCENT:</u>	<ul style="list-style-type: none"> <li style="margin-right: 20px;">• local <li style="margin-right: 20px;">• not local <li style="margin-right: 20px;">• foreign • regional _____
<u>RACE:</u>	<ul style="list-style-type: none"> <li style="margin-right: 20px;">• Caucasian <li style="margin-right: 20px;">• Black <li style="margin-right: 20px;">• Hispanic • Asian Other: _____
<u>SPEECH:</u>	<ul style="list-style-type: none"> <li style="margin-right: 20px;">• educated <li style="margin-right: 20px;">• average <li style="margin-right: 20px;">• illiterate • obscene Other: _____
<u>MANNER:</u>	<ul style="list-style-type: none"> <li style="margin-right: 20px;">• calm <li style="margin-right: 20px;">• angry <li style="margin-right: 20px;">• rational <li style="margin-right: 20px;">• irrational <li style="margin-right: 20px;">• coherent <li style="margin-right: 20px;">• incoherent <li style="margin-right: 20px;">• deliberate <li style="margin-right: 20px;">• self-righteous <li style="margin-right: 20px;">• 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: ___

Appendix 7: Bomb Threat Checklist

Mail Threat:
<p>_____ 1. Handle documents as little as possible to preserve fingerprints.</p> <p>_____ 2. Hand deliver immediately to O&M Manager.</p>
Phone Threat:
<p>_____ 1. Complete Bomb Threat Form.</p> <p>_____ 2. Deliver completed form to O&M Manager.</p> <p>_____ 3. Notify Supervisor immediately.</p>
O&M Manager:
<p>_____ 1. Gather all information regarding threat.</p> <p>_____ 2. Decide upon course of action.</p> <p>_____ 3. Coordinate searches with proper authorities.</p>
Suspicious Objects:
<p>_____ 1. DO NOT TOUCH OR ATTEMPT TO MOVE!</p> <p>_____ 2. Notify Police—911.</p>
Evacuation:
<p>_____ 1. Announce over public address system, give location where to assemble. Do not use the radio.</p> <p>_____ 2. Enlist volunteers to remain and shut down site.</p>
Re-entry:
<p>_____ 1. Determined based on:</p> <p style="padding-left: 40px;">_____ a. "All-clear" given by bomb disposal unit.</p> <p style="padding-left: 40px;">_____ b. O&M Manager's judgment that danger is passed.</p> <p>_____ 2. Full report prepared.</p>

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: ___

Appendix 9: Chemical/Biological Agent Threat Checklist

Mail Threat:
<p>_____ 1. Handle documents as little as possible to preserve fingerprints.</p> <p>_____ 2. Hand-deliver immediately to O&M Manager.</p>
Telephone Threat:
<p>_____ 1. Complete the Chemical/Biological Threat Report form.</p> <p>_____ 2. Deliver completed form to O&M Manager immediately.</p>
O&M Manager:
<p>_____ 1. Gather all information regarding threat.</p> <p>_____ 2. Decide upon course of action.</p>
Searches:
<p>_____ 1. Comprehensive—To be conducted by trained law enforcement personnel only.</p>
Suspicious Objects:
<p>_____ 1. Do not touch or attempt to move.</p> <p>_____ 2. Notify police.</p>
Evacuation:
<p>_____ 1. Make a site-wide announcement and give location where to assemble.</p> <p>_____ 2. Enlist volunteers to remain and shut down site.</p>
Re-entry:
<p>_____ 1. Determined based on:</p> <p>_____ a. “All-Clear” given by competent authority.</p> <p>_____ b. O&M Manager’s judgment that danger has passed.</p> <p>_____ 2. Full report prepared.</p>