

Elkhorn Battery Energy Storage System (BESS) – Emergency Action Plan (EAP)

PG-7002M-01 Rev: 0.1

(Supersedes PG-7002P-01)



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Introduction

The Elkhorn Battery Energy Storage System (BESS), located in Moss Landing, California, is a critical infrastructure asset supporting grid reliability and renewable energy integration into the bulk electric system. This Emergency Action Plan (EAP) outlines coordinated procedures to ensure personnel safety, protect the environment and minimize impacts to the surrounding community in the event of an emergency at the facility.

The EAP outlines comprehensive response procedures for a wide range of potential hazards and establishes clear roles and responsibilities for onsite personnel, first responders, and emergency management agencies, along with detailed communication protocols to ensure swift and effective coordination during critical situations.

Preventative measures and training requirements are also detailed, ensuring readiness through regular drills, system monitoring and collaboration with local first responders and public safety officials. This plan reflects Pacific Gas and Electric Company's (PG&E) commitment to employee safety, operational excellence, regulatory compliance and stakeholder transparency.

By proactively identifying risks and establishing robust response strategies and protocols, this EAP serves as a vital component in safeguarding the facility, its personnel and the surrounding community.

Purpose

This EAP serves as a structured guide to identifying, responding to, mitigating and recovering from a variety of potential emergency situations that may arise at the Elkhorn BESS facility. This document is designed to protect the health and safety of onsite employees, first responders, the environment and surrounding community. The EAP procedures delineate clear roles and responsibilities and actions taken when certain conditions are met.

Disclaimer

This EAP does not imply, nor should readers infer, that its implementation will guarantee that a perfect response to an emergency at the Elkhorn BESS facility will be practical or possible. No emergency plan can shield individuals from the impact of an emergency.

PG&E employees and responders will attempt to coordinate the plan and response according to all applicable laws and standards. Actions taken during emergencies shall only be taken to the level of the responders' training and authority. There may be little to no warning during events to implement operational procedures.

Successful execution of emergency plans depends upon effective training and exercises, regular review, collaboration with responders and stakeholders and effective operational coordination and information sharing during an incident.

The public should also heed the advice and instructions disseminated by first responders and local officials and know where to obtain emergency information. Sources of information could come from, but are not limited to, Wireless Emergency Alerts, the Emergency Alert System, the media, and official government websites or social media accounts. In Monterey County, residents are encouraged to register their cell phone and email address with Alert Monterey County to receive critical incident notifications. The public can also visit readymontereycounty.org for preparedness, emergency and recovery information.

*Note: Double asterisks (**) following any text in this document identify that text as Regulatory Compliance Related and may not be modified or deleted before consulting with the Compliance Program Manager.*

Target Audiences

The target audiences for this EAP include:

Internal (PG&E)

- All Elkhorn BESS facility personnel
- Emergency Operations Center (EOC) personnel
- Operators
- PG&E first responders
- Incident Management Teams

External

- North County Fire Protection District
- Monterey County Sheriff's Office
- Monterey County Health Department
- Monterey County Department of Emergency Management
- Salinas Fire Department
- California Highway Patrol
- California Public Utilities Commission
- All other emergency response agencies

Background & History

PG&E’s Elkhorn Battery system, named for its physical location on the mouth of the Elkhorn Slough on Monterey Bay (7251 Highway 1, Moss Landing, CA 95039), was designed, constructed and is maintained by both PG&E and Tesla.

PG&E’s Elkhorn BESS was approved by the California Public Utilities Commission in November 2018 and the Monterey County Planning Commission in February 2020. Construction of the site began in July 2020, and the BESS was commissioned in April 2022.

The Elkhorn BESS consists of 256 Tesla Megapacks and has the capacity to store and dispatch up to 730 megawatt (MW) hours of energy to the electrical grid at a maximum rate of 182.5 MW for up to four hours during periods of high demand.

Normal working hours for Elkhorn BESS employees are [REDACTED]. The facility is monitored 24 hours a day, seven days a week, and regularly maintained to meet stringent operational and environmental standards. Additionally, PG&E’s [REDACTED] Operating Center and Tesla have remote monitoring capabilities.

Immediately adjacent to PG&E’s Elkhorn BESS is a separate BESS owned and operated by Vistra Corporation and is known as the Moss Landing BESS.



Emergency Preparedness

Battery Energy Storage Systems (BESS) present unique operational challenges and potential hazards, making rigorous training and preparedness essential for all personnel, including PG&E facility employees, contractors and external first responders. These systems can involve high-voltage equipment, thermal runaway risks and complex fire scenarios. Properly trained personnel are better equipped to recognize early warning signs of system failure, respond swiftly during emergencies and follow established safety protocols – ultimately protecting onsite personnel, property, responding agency personnel, the surrounding community and grid reliability.

Internal Readiness

All Elkhorn BESS employees supporting emergency response must complete baseline Incident Command System (ICS) and position-specific training (i.e. Incident Commander) as defined in the US Department of Homeland Security National Incident Management System (NIMS).

Elkhorn BESS employees and first responders must also familiarize themselves with the Elkhorn BESS Pre-Fire Plan (Appendix E). The Pre-Fire Plan contains information on firefighting techniques, hazardous materials and serves to assist local emergency responders with important safety and emergency response information tailored to the Elkhorn BESS facility. This document contains detailed facility maps and schematics identifying critical onsite equipment and facilities. [REDACTED]

Beyond immediate safety, regular training and exercises foster a culture of readiness. Preparedness includes regular drills, scenario-based training and updates on evolving regulations – ensuring employees and contractors remain confident, competent, and ready to respond to both routine operations and unexpected events. The Elkhorn BESS facility EAP and ongoing training and exercises further prepare Elkhorn BESS employees and stakeholders should an emergency occur.

Training

Training on an emergency plan is essential to ensure all personnel understand their roles and responsibilities when an emergency occurs. Training and exercises transform a written plan into a practiced and reflexive response – allowing facility personnel and stakeholder agencies to internalize their roles, improve coordination and gain confidence in their ability to act quickly and effectively.

All Elkhorn BESS personnel will adhere to the following training principles:

- Require all Elkhorn BESS employees and those employees who provide emergency response support to the Elkhorn BESS to read and understand this EAP
- Administer the EAP training when:
 - An employee is first hired
 - The employee’s responsibilities or designated actions under the plan change
 - Regulatory changes affect operational procedures
 - The plan is updated
- Ensure all contractors and visitors participate in the Pre-Job Brief and understand Elkhorn BESS emergency response procedures and potential hazards they may be exposed to
- The facility manager or designee will maintain training records that include training courses attended, trainer, and date of completion
- Training records must be maintained for the duration of an employee’s employment plus one additional year

PG&E First Responder Training

In addition to PG&E’s Company Emergency Response Plan (CERP) training requirements, all PG&E employee first responders receive training to the level which they may be assigned in an incident, according to Roles and Responsibilities (e.g. First Responder Awareness, Operations, and On-Scene Incident Commander).

PG&E first responders are individuals who are likely to witness or discover a hazard and who have been trained to initiate an emergency response sequence by notifying the proper authorities. PG&E first responders must have sufficient training and experience and demonstrate competence in key areas.

PG&E First Responder – Operations Level

PG&E first responders at the operations level respond to releases or potential releases of hazardous substances during the initial response to the site to protect nearby people, property, and the environment from the effects of a release. They are trained to respond in a defensive fashion without attempting to stop the release. Their objective is to contain the release from a safe distance, prevent it from spreading, and prevent exposures.

In addition to the training listed above, PG&E first responders at the operational level must receive at least eight hours of training or have sufficient experience in the following areas:

- Basic hazard and risk assessment techniques
- Selection and proper use of personal protective equipment
- Basic hazardous materials terminology
- Basic control, containment and/or confinement operations within the capabilities of available resources and personal protective equipment
- Implementation of basic decontamination procedures
- An understanding of relevant standard operating procedures and termination procedures

On-Scene Incident Commander

PG&E's on-scene incident commanders assume control of the incident and have additional training requirements. This role must receive at least 24 hours of training equal to the PG&E emergency responder operations level and demonstrate competency in the following areas:

- The ability to implement the employer's incident command system and emergency response plan
- An understanding of the hazards and risks associated with employees working in chemical personal protective clothing
- Knowledge of EAP implementation and notifications
- Decontamination procedures

The on-scene incident commanders must be trained in accordance with requirements of Title 8 California Code of Regulations, Section 5192 Hazardous Waste Operations and Emergency Response, Section (q), Emergency Response to Hazardous Substance Releases.** Annual refresher training is also required.

Exercises

In addition to training requirements, at least annually, all Elkhorn BESS personnel will perform an EAP drill. These drills can also include external first responders and supporting agencies. The format of exercises can vary from operational drills, tabletop exercises, functional exercises, or full-scale exercises. After exercises are conducted, an after-action review will be completed, and the plan can be updated as necessary.

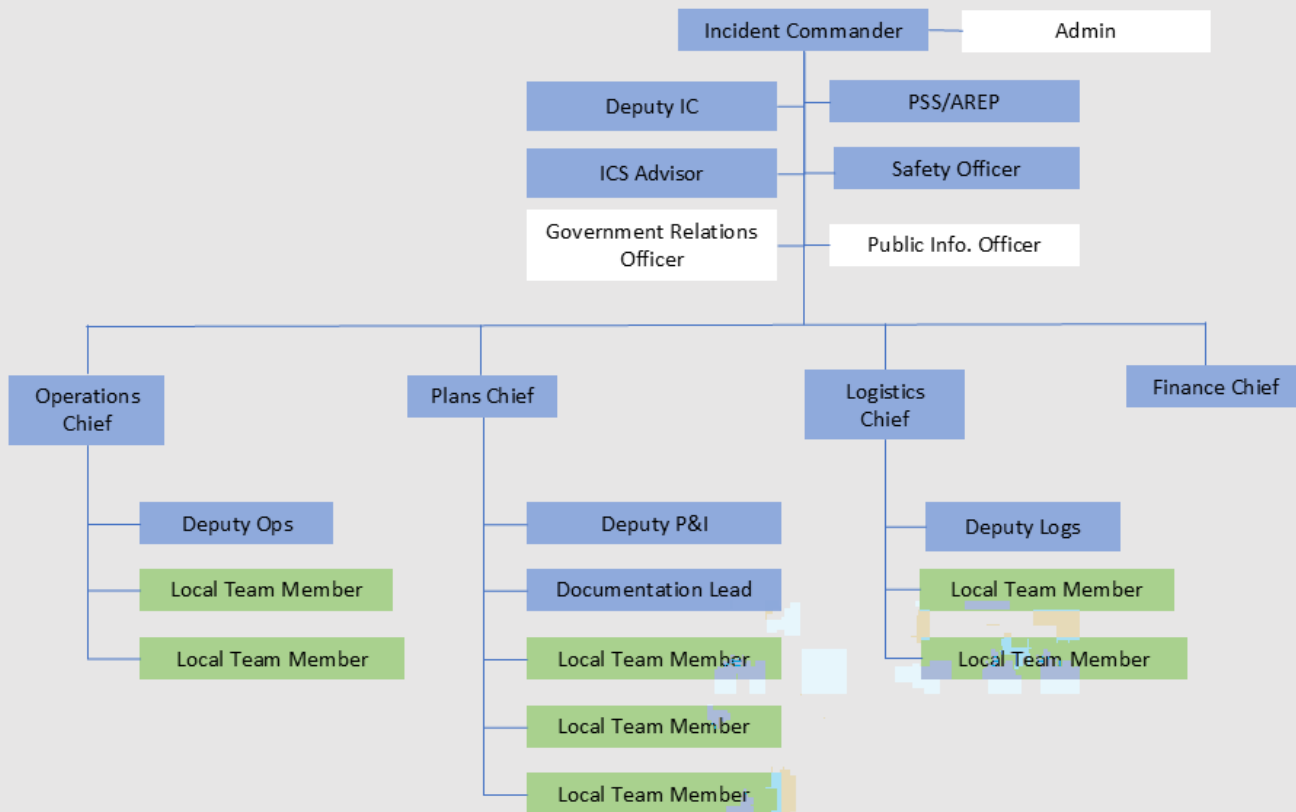
PG&E Response Structures

PG&E's Incident Management Teams (IMTs) are organized groups of trained personnel responsible for safe and effective management of major incidents when predefined activation criteria are met or anticipated to be met. They are trained to respond to all-hazards such as natural disasters, large-scale fires, hazardous material releases, and emergencies at PG&E facilities. The IMT provides structured leadership to ensure effective resource deployment, interagency coordination, and execution of response and recovery strategies. The IMT is structured in the Incident Command System (ICS), field-based when activated, and comprised of specialists in safety, operations, logistics and planning. The team works to protect lives, stabilize the situation, and support the PG&E recovery. Their actions follow established training and protocols and align with the overall emergency response framework.

PG&E has established pre-identified Power Generation IMTs to improve emergency preparedness, response, and recovery. The objective is to have highly trained and qualified IMTs available to support local areas when an incident exceeds or is anticipated to exceed the ability of local resources to respond effectively based on the scope, skill-level, or complexity of the incident.

The following is an example of an IMT organization chart. The structure is scalable depending on the support needs of an incident.

Power Generation IMT Team Organizational Chart



Legend

Pre-identified Team Member

Local team member
*Compositions will vary significantly across Power Generation dependent on the facility impacted

Optional team member
Request as needed

During large-scale emergencies or concurrent emergencies requiring additional resources and support, PG&E may activate and staff its Emergency Operations Center (EOC). Serving as the centralized hub for command and coordination, the EOC ensures effective collaboration among multiple PG&E IMTs and/or other front-line PG&E emergency centers. Structured under the Incident Command System (ICS), the EOC supports field operations by facilitating strategic decision-making, resource allocation and real-time information sharing.

The EOC Commander has the authority to activate the EOC. When the EOC is activated, the EOC Commander establishes priorities for the incident and supports emergency centers and field responders.

EOC personnel:

- Set system-level objectives and strategies
- Communicate the status of the emergency response to senior management and others involved
- Coordinate resources both internally and externally
- Compile and communicate system-wide status and damage information
- Approve all incident communications and coordinate with external agencies
- During significant emergency incidents, PG&E can activate additional emergency centers to support the primary EOC activities

PG&E's EOC structure is scalable depending on the support needs of the incident.

Interagency Coordination

If an incident at the Elkhorn BESS were to occur, interagency coordination will be vital to ensure information, resources and responsibilities are shared seamlessly across organizations. The Incident Command System (ICS) would be activated to provide external support and would be scalable depending on the nature and size of the incident. If the North County Fire Protection District or other responding fire agency arrives, they will assume the role of Incident Command (IC), as the designated Authority Having Jurisdiction (AHJ).

Should the North County Fire Protection District, as the AHJ, assume the role of Incident Command, PG&E staff will serve as a Subject Matter Expert (SME) liaison to the Incident Commander for the duration of the incident. It is essential that the IC has timely and accurate information about the status of the Elkhorn Facility as well as any anticipated threats and/or mitigation measures employed.

If a large-scale incident occurs affecting the surrounding community, numerous outside agencies could respond to the event and integrate into the response structure. The following agencies could include, but are not limited to:

- North County Fire Protection District
- Local Certified Unified Program Agency (CUPA), Monterey County Health Department
- Monterey County Sheriff's Office
- Monterey County Department of Emergency Management
- Monterey County Housing and Community Development Department
- Monterey Bay Air Resources District
- National Weather Service
- California Governor's Office of Emergency Services
- California Highway Patrol
- California Environmental Protection Agency
- Department of Toxic Substances Control
- Department of Fish and Wildlife
- Local School District Superintendents

- American Red Cross
- Society for the Prevention of Cruelty to Animals
- US Environmental Protection Agency
- US Coast Guard

The County of Monterey may activate its Emergency Operations Center (EOC) to help streamline coordination. In the event of an EOC activation, PG&E will offer a liaison (Public Safety Specialist), either in person or virtually, to facilitate information sharing and situational awareness. PG&E may also deploy an Incident Management Team (IMT) to the Elkhorn BESS facility to bolster response efforts or activate a company-run EOC for additional support. Staffing levels for the IMT or EOC are scalable depending on the nature of the emergency. PG&E personnel will follow California's Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS) in all large-scale responses. The SEMS/NIMS frameworks facilitate consistent coordination between responders at all levels of government, the private sector, and non-governmental organizations.

Emergency Information Coordination

Effective public communication is essential during emergencies to ensure the safety and well-being of affected communities. Timely, accurate and accessible information must be provided across a range of channels to guide public response, reduce panic, and promote informed decision-making. This includes updates on hazards, protective actions, evacuation routes, shelter availability, and recovery resources. All communications from PG&E will be coordinated through PG&E's Public Safety Specialist and/or designated Public Information Officer (PIO), who will collaborate with the AHJ Incident Commander and partner agencies to maintain message consistency and credibility.

The AHJ Incident Command may determine its own spokesperson and could order the creation of a Joint Information System (JIS) and/or physical Joint Information Center (JIC) at an EOC or other facility. A PG&E Public Safety Specialist, PIO and/or Government Relations Officer will be available to integrate into the JIS/JIC structure. Large events involving multiple jurisdictions and agencies would involve multiple PIOs that would need to participate in the JIS/JIC structure to ensure a unified message across multiple channels.

Depending on the scale of an incident at the Elkhorn facility, to ensure broad outreach, information could be distributed by multiple agencies via multiple platforms, including official websites, social media accounts, emergency alert systems, press briefings, and community networks. Messaging should be adapted to reach diverse audiences, including individuals with access and functional needs, limited English proficiency, and those without reliable digital access. Working with the JIS/JIC to provide timely, accurate information and countering misinformation, will be prioritized to maintain public trust and operational integrity throughout the emergency lifecycle.

Emergency Action Plan Overview

This section provides an overview of the Elkhorn BESS EAP including immediate requirements, points of contact, and follow-up actions that should be taken by Elkhorn BESS personnel in the event of an emergency including, but not limited to:

- Thermal overtemperature or thermal event active
- Fire (electrical fires and battery fires)
- Accidents involving serious injury or death
- Uncontrolled hazardous materials spill/release with potential offsite impact
- Earthquake
- Physical threat (active shooter or intruder)
- Bomb threat
- Emergency facility shutdown
- Severe weather
- Tsunami alert
- Station power loss

EAP Triggers and Symptoms

The EAP will be initiated if ANY of the following seven situations occur:

1. Alarms are set off
2. Any degree or amount of fire or smoke is seen
3. Injuries or illness displayed by, but not limited to, the following in facility personnel:
 - Bleeding
 - Fainting
 - Vomiting
 - Lack of consciousness
 - Bodily pain
 - Difficulty breathing
4. Any uncontrolled hazardous materials spill/release with potential offsite impact
5. Any shaking or movement of facility
6. Extreme weather creating unsafe working conditions
7. Any announced security threat, whether implied or actual

**PG&E Employees refer to Appendix D: Section 1 for additional information*

Internal and External Response

Emergencies at the Elkhorn BESS facility will fall into two response categories:

- Internal – Those that can be managed by PG&E personnel alone and do not require notification of external emergency response agencies (other than medical or other life-threatening incidents).
- External – Those requiring notification of external emergency response agencies.

Internal - Emergency Response

Most minor incidents at the Elkhorn BESS can be handled by onsite personnel and internal resources. For medical emergencies, fires, or other potential life-threatening incidents, onsite personnel will first call 911.

Personnel First Response

If any of the following incidents occur, call 911:

- Fire
- Personal injury or illness
- Uncontrolled hazardous material spill
- Security threat
- Damaging or destructive events

Personnel Secondary Response

If it is safe to do so, and appropriate Personal Protective Equipment (PPE) is available, then qualified personnel should follow the steps listed below, as applicable to the incident occurring.

- Qualified personnel apply first aid as needed
- Block, isolate, or otherwise stop any fuel source from exposure to fire
- Block, isolate or otherwise secure source of chemical release
- Secure damaged or unsafe area
- Use appropriate fire extinguisher on any applicable fire

**PG&E Employees refer to Appendix D: Section 2 for additional information*

External – Emergency Response

Larger incidents (such as thermal runaway) that may pose a threat to offsite communities require a more robust response by external agencies. If external emergency response is required beyond immediate medical or life-threatening circumstances, the [REDACTED] Operating Center ([REDACTED]) will call emergency services (refer to Appendix C for contact number) to notify regional dispatch of the emergency.

A trained and qualified PG&E employee such as the Moss Landing Supervisor or operator will conduct an initial incident size-up and determine if Incident Command should be established. If the determination is made to set up Incident Command, the Moss Landing Supervisor or operator shall assume the role of Incident Commander.

Once the North County Fire Protection District (NCFPD), or other responding fire agency, arrives, they will assume the role of Fire Incident Command (IC), as the designated Authority Having Jurisdiction (AHJ).

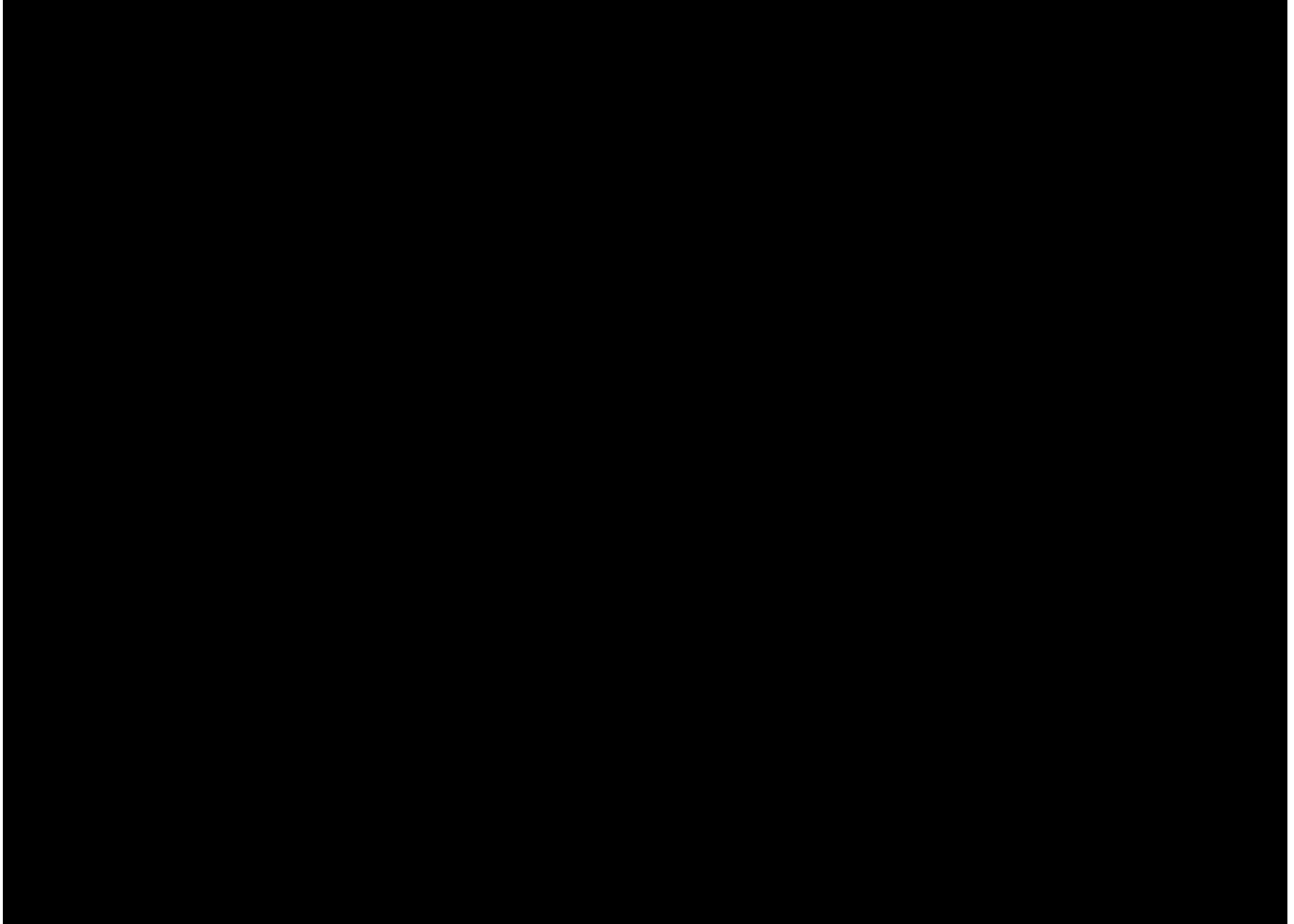
**PG&E Employees refer to Appendix D: Section 2 for additional information*

PG&E Elkhorn responders and external first responders are familiar with the following features at the Elkhorn BESS:

Site Evacuation

There could be potential emergencies that require the evacuation of parts or all of the Elkhorn BESS facility including the adjacent Moss Landing substation. The PG&E Initial Response Incident Commander is responsible for accountability of personnel in the area. In case of evacuation, Corporate Security must be contacted (refer to Appendix C for contact number) to obtain the list of those who are badged into the site. If safe to do so, all onsite PG&E employees [REDACTED]

If there is a smoke plume, it is important for all employees to note wind direction (there are three windsocks onsite) and adjust their evacuation route to limit exposure to hazardous fumes.



Notifications

Activation of the Elkhorn BESS EAP will initiate a series of internal and/or external notifications. These notifications will alert responders of an active incident at the Elkhorn BESS and launch a level of response appropriate to the nature and extent of the emergency.

There are initial hazard-specific notification flowcharts in Appendix D. If conditions warrant and the EAP is activated, [REDACTED] will make notifications according to incident type.

[REDACTED]

The following is an example of required notifications during an EAP activation for a thermal runaway incident.

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Hazard-Specific Response Procedures

The Elkhorn BESS EAP was designed to address the highest likelihood of natural and human-caused threats to the facility. Geographic location and onsite infrastructure were considered when developing response procedures for specific hazard types. Appendix D – EAP Hazard-Specific Procedure Steps, is designed as a step-by-step checklist of actions that should be undertaken by PG&E employees should certain emergencies occur. During emergency incidents, PG&E employees will refer to the appropriate section in Appendix D.

Thermal Overtemperature or Thermal Event Active	Appendix D: Section 3
Fire (Fuel or Electrical).....	Appendix D: Section 4
Personal Injury or Illness	Appendix D: Section 5
Uncontrolled Hazardous Materials Spill/Release	Appendix D: Section 6
Earthquake	Appendix D: Section 7
Severe Weather.....	Appendix D: Section 8
Security Threat.....	Appendix D: Section 9
Physical Threat (Active Shooter or Intruder).....	Appendix D: Section 10
Planned Evacuation Due to External Hazards (Fire, Etc.).....	Appendix D: Section 11
Tsunami Alert.....	Appendix D: Section 12
Station Power Loss	Appendix D: Section 13

Recovery

Site Cleanup and Debris Removal

Should a damaging fire occur at the Elkhorn BESS facility, site cleanup and debris removal must be conducted with extreme caution due to potential hazards such as residual electrical charge, hazardous chemical residues and compromised structural components. PG&E will deploy their emergency response hazardous waste/materials cleanup contractor to the facility or incident command post. Prior to initiating cleanup, any remaining energy sources must be isolated, and an analysis of air quality and site contamination will be conducted to ensure the facility is safe for personnel.

Once hazards are mitigated, debris removal will follow a structured process that includes an analysis of the extent of site contamination, laboratory analysis of debris/water/other contaminated media, a waste profile, debris shipping stream and a disposal schedule. The BESS Operations and Performance Manager is responsible for coordinating with teams to manage the site, complete root cause analysis, and disposition of materials. All materials will be documented, categorized and transported for proper disposal or recycling. Coordination with environmental authorities including the Monterey County Health Department, California Environmental Protection Agency, U.S. Environmental Protection Agency and waste management contractors will ensure compliance with reporting requirements and ecological safeguards.

Environmental Monitoring and Mitigation

PG&E is continuously monitoring for chlorine (CL₂), carbon monoxide (CO), hydrogen sulfide (H₂S), hydrogen cyanide (HCN), hydrogen fluoride (HF), particulate matter (PM), and total volatile organic compounds (VOCs) around the Elkhorn BESS facility using a variety of instruments. Should any readings exceed safe levels, PG&E will notify the PG&E Industrial Hygienist and (if warranted) coordinate with the Monterey County Health Department/Environmental Health Bureau to determine if any protective actions should be taken. Continuous air monitoring and information sharing with local officials is a key capability that will help guide local decision makers from immediate response through the recovery phase.

During incidents, PG&E Environmental Management will also test water and soil for the

presence of any toxic substances. Water and soil testing plans will be produced to mitigate any contaminated water or soil. Stormwater best management practices (BMPs) will be initiated to prevent any hazardous runoff from the site. PG&E will maintain transparency and comply with environmental regulations and work cooperatively with local, state, and federal agencies assigned to cleanup efforts.

Ongoing Communication During Recovery Phase

Following an emergency at the Elkhorn facility, providing public information after the response phase needs to continue well into the recovery phase. Site cleanup and debris removal could take weeks or months. The public will likely have questions and concerns about potential risks to public health and the environment, debris removal practices, road closures, cleanup timeline and status of the facility. Local agencies may have deactivated the formal JIS/JIC structure. However, PG&E PIOs and/or Government Relations Officers will continue to provide regular status updates to stakeholders and the public during the recovery phase.

EAP Maintenance

The Elkhorn facility EAP will be reviewed annually and updated as applicable. Should changes in policies, procedures, or regulations occur prior to the scheduled update cycle, the EAP will be updated accordingly. Changes can also be made if corrective actions are discovered following an exercise or real-world event.

Implementation Responsibilities

- **Manager** is responsible for approving, issuing, revising and implementing this EAP.
- **Renewables Supervisor** is responsible for communicating this EAP to the target audience.

Compliance Requirement / Regulatory Commitment

This plan meets the provisions of Title 8 CCR Section 3220, Emergency Action Plan.

Records and Information Management

PG&E Data, Information, and Records are company assets that must be traceable, verifiable, accurate, and complete and can be retrieved upon request. Functional Areas are responsible for complying with the Information & Records Governance Policy, Standards, and the Information and Records Retention Schedule. [REDACTED]

Reference Documents

Developmental References

- NA

Supplemental References

- [REDACTED]
- [REDACTED]
- [REDACTED]

- Cal OES, California Hazardous Materials Spill / Release Notification Guidance, dated February 2014
- [REDACTED]
- FIREScope – Field Operations Guide ICS 420-1, Incident Command Publication, 2022 Edition
- [REDACTED]
- [REDACTED]
- [REDACTED]
- Title 8 California Code of Regulations (CCR), Section 5192, Hazardous Waste Operations and Emergency Response (HAZWOPER), State OSHA**
- 29 CFR, 1910.120, Hazardous Waste Operations and Emergency Response (HAZWOPER), Federal OSHA**
- [REDACTED]
- [REDACTED]

Document Recission

This document supersedes PG-7002P-01, “Elkhorn Batter Energy Storage System (BESS) – Emergency Action Plan (EAP).”

Document Approver

- [REDACTED]

Document Owner

- [REDACTED]

Document Contacts

[Current Power Generation Guidance Documents Approver, Owner, and Contact List](#)

- [REDACTED]
- [REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]

Revision Notes

Where?	What Changed?
Revision 0 (01/02/2026)	
NA	This is a new manual that supersedes PG-7002P-01.
Revision 0.1 (02/23/2026)	
Contact List/Notification Flowcharts	PG&E staff contacts updated.

Glossary

AHJ - Authority Having Jurisdiction

BESS - Battery Energy Storage System

CERP - Company Emergency Response Plan

CL2 - Chlorine

CO - Carbon monoxide

CUPA - Certified Unified Program Agency

EAP - Emergency Action Plan

EOC - Emergency Operations Center

HCN - Hydrogen cyanide

HF - Hydrogen fluoride

H₂S - Hydrogen sulfide

ICS - Incident Command System

IMT - Incident Management Team(s)

JIC - Joint Information Center

JIS - Joint Information System

MW - Megawatt

NIMS - National Incident Management System

PPE - Personal Protective Equipment

PG&E - Pacific Gas and Electric Company

PIO - Public Information Officer

PM - Particulate matter

SCBA - Self-Contained Breathing Apparatus

SEMS - Standardized Emergency Management System

VOCs - Volatile organic compounds

List of Appendices

Appendix A – Roles and Responsibilities

Appendix B – Incident Command Assembly Point and Other Equipment

Appendix C – Emergency Contact List

Appendix D – EAP Hazard-Specific Procedure Steps

Appendix E – Elkhorn BESS Pre-Fire Plan

Appendix A – Roles and Responsibilities

- A. PG&E first responders are responsible for:
 - 1. Addressing alarms and equipment are primarily Solar Technicians.
 - 2. Assuming the role of PG&E Initial Response Incident Commander (IC) and performing the following:
 - a. IDENTIFY incident (e.g., what is involved).
 - b. CONTACT 911 for any medical or life safety emergency.
 - c. PERFORM accountability of personnel in area and Direct to safe location.
 - d. [REDACTED]
 - i. [REDACTED] V).
 - e. CONTROL site access and DO NOT ALLOW coworkers to reenter.
 - f. [REDACTED]
 - g. MEET first responder Authority Having Jurisdiction (AHJ) on site to provide status of incident, copy of EAP, and provide technical subject matter support until relieved.
 - 3. Additional duties include:
 - a. DON the PG&E Incident Command Vest (located in main entrance Pre-Fire Plan box).
 - b. ASSIGN a Safety Officer (required per Title 8, Section 5192).
 - c. The Safety Officer may be the Initial Response IC.
 - d. IMPLEMENT the [REDACTED] 01 Elkhorn Battery Energy Storage (BESS)-
 - i. Emergency Action Plan (EAP).
 - e. COMMUNICATE with the [REDACTED]
 - f. INITIATE Activity Log (ICS Form 214), or equivalent documentation.
 - g. TRANSITION from the Initial Response IC role to a Technical Advisor to the AHJ.

Appendix A – Roles and Responsibilities

B. North County Fire Protection District (NCFPD) is the Authority Having Jurisdiction (AHJ) over Moss Landing area and designated as the primary responding agency to the Elkhorn BESS. If NCFPD is otherwise committed, this role may be filled by another responding fire agency.

1. NCFPD will typically serve as the Fire IC, responsible for the overall incident management, supported by PG&E SMEs and others (e.g., law enforcement, County Environmental Health, etc.), under a Unified Command.

C. PG&E Initial Response Incident Commander

NOTE

In the absence of a supervisor, the most qualified Operator or Solar Technician will act as Initial Response Incident Commander until the arrival of the AHJ.

1. This role should remain with the first arriving onsite Solar Technician and should only be handed off to the Renewables Supervisor, or the AHJ upon their arrival.
2. First Solar Technician can reassign the role to another Solar Technician, as needed.
3. Operator & Substation Maintenance Supervisor should be notified of any change in the Initial Response Incident Commander.
4. PG&E Initial Response Incident Commander is responsible for:
 - a. Assuming the role of “initial” PG&E Incident Response Commander (IC) and performing the following:
 - 1) IDENTIFY incident (e.g., what is involved).
 - 2) CONTACT 911 and/or [REDACTED]
 - 3) PERFORM accountability of personnel in area and DIRECT to safe location.
 - 4) ISOLATE energy if possible [REDACTED]

Appendix A – Roles and Responsibilities

- 5) MEET first responder Authority Having Jurisdiction (AHJ) on site to provide status of incident, copy of EAP, and provide technical subject matter support until relieved.

b. Additional duties include:

- 1) DON the PG&E Incident Command Vest [REDACTED]
- 2) ASSIGN a Safety Officer (required per Title 8, Section 5192).
 - The Safety Officer may be the Initial Response IC.
- 3) IMPLEMENT the PG-7002M-01 Elkhorn Battery Energy Storage (BESS)– Emergency Action Plan (EAP).
- 4) COMMUNICATE with the [REDACTED]
- 5) INITIATE Activity Log (ICS Form 214), or equivalent documentation.
- 6) TRANSITION from the Initial IC role to a Technical Advisor to the AHJ.
- 7) PROVIDE Technical Support to the AHJ IC by providing guidance on electrical hazards and sharing deenergizing activities.
- 8) COMMUNICATE externally and COORDINATE PG&E resources on site. This task will eventually reside with the Substation Maintenance Supervisor when they arrive on site.

D. [REDACTED] Operations Center ([REDACTED]) is responsible for:

[REDACTED]

1. Operating and monitoring BESS facility.
2. Supporting the PG&E Incident Commander as needed during an emergency event.
3. Contacting PG&E first responders.

Appendix A – Roles and Responsibilities

4. Contacting Renewables Supervisor.
 5. [REDACTED] response.
 6. [REDACTED]
 7. [REDACTED]
 8. [REDACTED]
- D. Substation Maintenance Supervisor is responsible for:
1. Dispatching Substation Resources including electricians.
 2. Informing region Superintendent of event and heading to project site.
- E. [REDACTED] is responsible for:
1. Contacting Monterey County Emergency Communications Department.
 2. Contacting the Public Safety Specialist (PSS).
 3. Contacting the Environmental Field Specialist (EFS) or the Environmental Emergency Hotline.
 4. Contacting Corporate Security.
 5. Contacting PG&E Media Relations and PG&E Government Relations.
 6. Contacting Emergency Preparedness and Response (EP&R).
- F. [REDACTED] is responsible for:
1. Logging outage in OMS
 2. Informing CAISO Control Center directly (see CAISO tariff 9.3.10.3.1).
- G. BESS Operations & Performance Manager is responsible for:
1. During an event, BESS Operations & Performance Manager will only need to be notified of the event.
 2. Post emergency, this role will work to coordinate with the various teams to manage the site, complete root cause analysis, and disposition of materials.
- H. Grid Control Center (GCC) / Distribution Control Center (DCC) is responsible for:

Appendix A – Roles and Responsibilities

1. In cases where sites have equipment managed by another Control Center, that Control Center will be informed of the situation.
 2. In some cases, such as with the Elkhorn BESS, this notice is necessary due to the presence of personnel in the substation.
- I. Environmental Management is responsible for:
1. Environmental support during an emergency event.
 2. Performing Agency Notifications, including:
 - i. The Local Certified Unified Program Agency (CUPA), Monterey County Health Department (refer to Appendix C for contact number).
 - ii. The California Governor’s Office of Emergency Services, California State Warning Center (refer to Appendix C for contact number).
 3. Advise this notification is for a potential hazardous materials release, both on the ground and airborne.

Coordinating / performing environmental media sampling, including pond water sampling post fire event and soil sampling, if necessary to ensure site does not require soil excavation post fire event.

NOTE

Emergency Preparedness and Response (EP&R) is available 24/7 via the [REDACTED] ([REDACTED]) to support a response.

- J. Emergency Preparedness and Response (EP&R) is responsible for:
1. Providing Public Safety Specialists (PSS) to the incident to serve as Agency Representative.
 2. Providing IC Advisors to serve as ICS Technical Specialists advising the IC.
- K. Incident Command
1. [REDACTED]
[REDACTED]

Appendix B – Incident Command, Assembly Point, and Other Equipment

2. [REDACTED]

Note: The Incident Command Center Building may be better served as a Technical Reference location vs. ICP, as determined by the Incident Commander.

- a. It may be necessary to relocate to another location due to plume migration making the Incident Command Center Building uninhabitable.
- b. Or, operationally, the number of individuals managing the event may exceed the capacity of the small Incident Command Center Building.

3. [REDACTED]

4. [REDACTED]

5. [REDACTED]

6. [REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]

B. Emergency Equipment Containers

1. Fire Fighting Equipment

Appendix B – Incident Command, Assembly Point, and Other Equipment

- a. [Redacted]
- b. [Redacted]
- c. [Redacted]

2. Spill Kits

- a. Two total Spill Kits are available, one in each Emergency Equipment Container.

Appendix C – Emergency Contact List

*Update annually or as needed

Agency	Phone Number
Emergency (police, fire, and ambulance)	911 or [REDACTED]
CHEMTREC (Chemical emergency information)	1-800-262-8200
Fire Department - North County Fire Protection District	831-424-1851
Hospital - Natividad Medical Center	831-755-4111 1441 Constitution Blvd, Salinas, CA 93906
Poison Control Center (Medical Emergency)	1-800-222-1222
Emergency Spill Response and Cleanup (Biohazard, Oil or Chemical Spill)	
24 Hour Hazmat Notification - California Office of Emergency Services (OES) State Warning Center	1-800-852-7550 or 916-845-8911
Monterey County Health Department, Local Certified Unified Program Agency (CUPA)	831-755-4511
California Department of Toxic Substance Control (DTSC) (Hazardous waste tank system or secondary containment releases)	1-800-698-6942
Central Valley Regional Water Quality Control Board / Sacramento Office	1-916-464-3291
Safetec (SDS) – HSI Platform	24-Hour Phone: 1-800-704-9215 or HSI Platform (osmanager4.com)
Salinas Urgent Care	831-755-7880 558 Abbott St, Salinas, CA 93901
State Water Board / Stormwater Desk	1-866-565-3107

Appendix C, Emergency Contact List



Appendix D – EAP Hazard-Specific Procedure Steps

NOTE

PG&E Elkhorn responders use this document as a checklist to initiate EAP according to incident type.

This Appendix is designed to serve as a checklist type document guiding PG&E personnel through actions to be taken during specific incidents. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] This information will be relayed internally and/or externally if outside agency response is required.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Appendix D – EAP Hazard-Specific Procedure Steps

1 Emergency Action Plan (EAP) Triggers and Symptoms

Emergency incidents at the Elkhorn BESS facility will vary in size, scale and consequence. Regardless of hazard type, if any of the following events or symptoms occur – initiate the EAP.

1. Setting off alarms.
 2. Any degree or amount of fire or smoke.
 3. Personal injuries or illness as displayed by, but not limited to, the following:
 - Bleeding
 - Fainting
 - Vomiting
 - Lack of consciousness
 - Bodily pain
 - Difficulty breathing
 4. Any uncontrolled hazardous materials spill/release with potential offsite impact
 5. Any shaking or movement of the facility.
 6. Extreme weather is creating unsafe working conditions.
- Any announced security threat, whether implied OR actual.

NOTE

[Redacted content]

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Appendix D – EAP Hazard-Specific Procedure Steps

2 General Emergency Response Information

NOTE

Emergencies fall into two categories in terms of response:

- Those not requiring notification of an external emergency response agencies and can be managed by PG&E personnel.
- Those requiring notification of external emergency response agencies.

Internal Emergency Response

For many minor events, an external emergency response may not be necessary. If safe to do so, trained and qualified PG&E personnel can respond and mitigate minor events. These personnel can adhere to the following guidelines and PG&E protocol:

For small oil/chemical spills or use of fire suppression water limited to the work site:

- Contact Environmental Field Specialist or Environmental Hotline for assistance (refer to Appendix C).
- Ensure all materials used to contain a spill are classified and managed properly for disposal.
- Follow [REDACTED] Agency Notification Procedure for Release of Hazardous Substances.
- Contact the Elkhorn Supervisor, Substation Manager, or Senior Manager as appropriate.

For minor injuries, small fires, or minor facility damage trained and qualified PG&E personnel with appropriate Personal Protective Equipment (PPE) may perform the following:

- Apply first aid as needed.
- Block, isolate, or stop any fuel source from exposure to fire.
- Block, isolate, or secure source of chemical release.
- Use appropriate fire extinguisher on any applicable fire.
- Secure damaged or unsafe areas.

Appendix D – EAP Hazard-Specific Procedure Steps

External Emergency Response

For events that cannot be managed internally and require external emergency response, onsite personnel [REDACTED] will follow the appropriate hazard-specific notification flow chart and accompanying scripts.

NOTE

Once North County Fire Protection District (NCFPD), or other responding fire agency, arrives, they will assume the role of Fire Incident Command (IC), as the designated Authority Having Jurisdiction (AHJ).

IF first arriving PG&E employee is trained and qualified, they will assume the role of IC and ensure a smooth transition to the AHJ.

For extended events that require Incident Command, North County Fire Protection District will likely be designated as the Authority Having Jurisdiction (AHJ). PG&E personnel may serve as the initial Incident Commander (IC) until transition to the AHJ.

For emergencies requiring incident command, the first trained and qualified PG&E employee will assume role of initial Incident Commander (Elkhorn Supervisor, Substation Supervisor, Solar Technician, etc.). The PG&E initial IC will adhere to the following guidelines and procedures:

- Ensure proper notifications have been made.
- [REDACTED]
- [REDACTED]
- [REDACTED]
- Perform accountability of personnel in the area and direct to assembly point or other safe location. Do not allow personnel to re-enter.
- Isolate energy if possible ([REDACTED])
- Meet responding AHJ and provide incident status update, copy of EAP, and Pre-Fire Plan, and transition IC role.
- Establish role of Incident Command Technical Advisor until relieved.

Appendix D – EAP Hazard-Specific Procedure Steps

Emergency Outage

If an outage is experienced or required, [REDACTED] will adhere to the following guidelines:

- Document event in Operator’s Log of Outage (ODMS) and include:
 - Who was contacted
 - Time of call
 - Nature of emergency
 - Any instructions given by alerted agency
- For market participating resources, [REDACTED] notify Real Time (RT) Desk of outage.
- RT Desk enter outage into ODMS and notify CAISO Control Center
- [REDACTED] notify South Coast Grid Control Center

NOTE

CAISO Tariff Section 9.3.10.3.1(b) requires notification within 30 minutes of Operator awareness of outage.

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Appendix D – EAP Hazard-Specific Procedure Steps

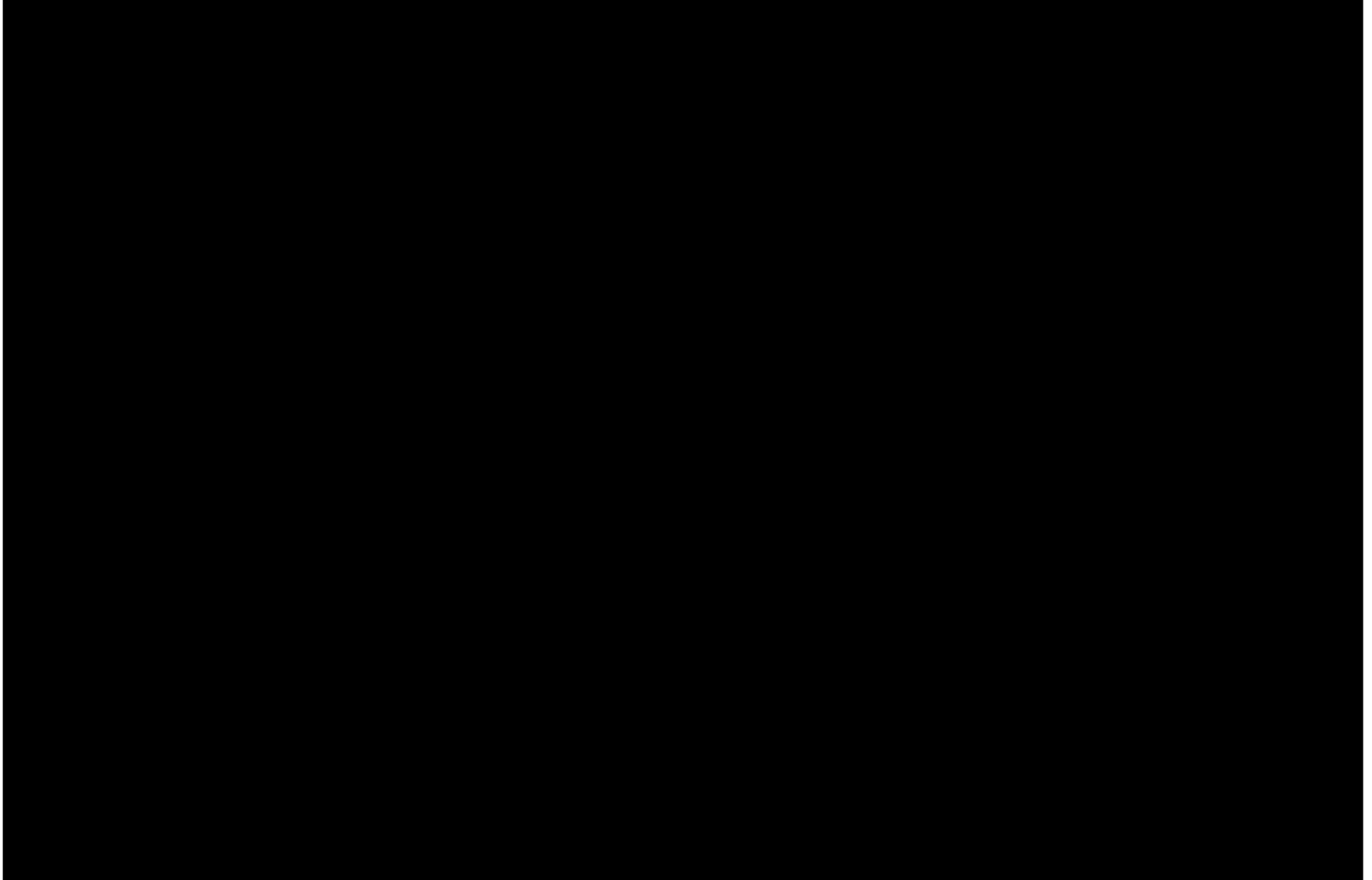
3 Thermal Overtemperature or Thermal Event Active



Appendix D – EAP Hazard-Specific Procedure Steps



Appendix D – EAP Hazard-Specific Procedure Steps

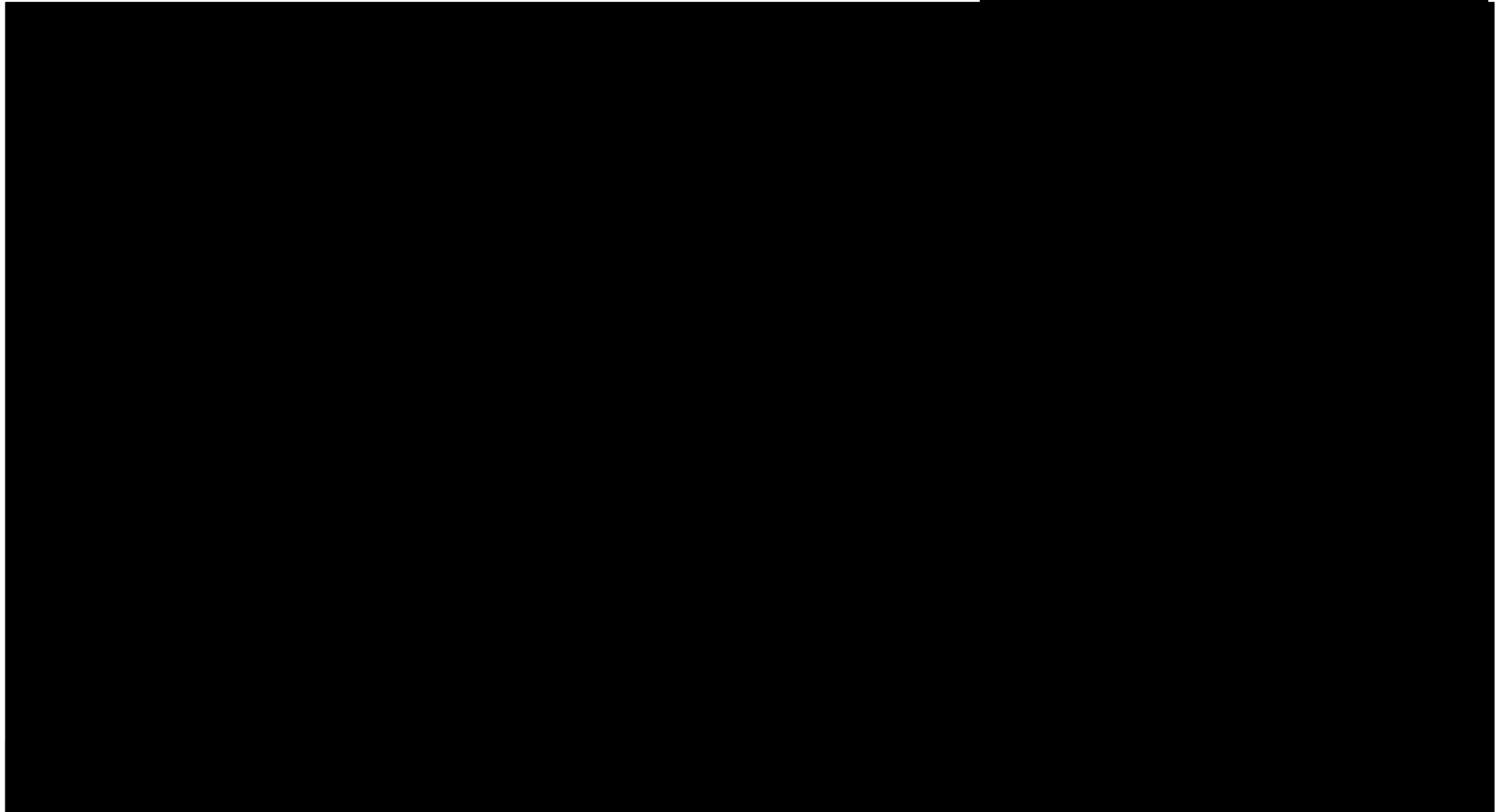


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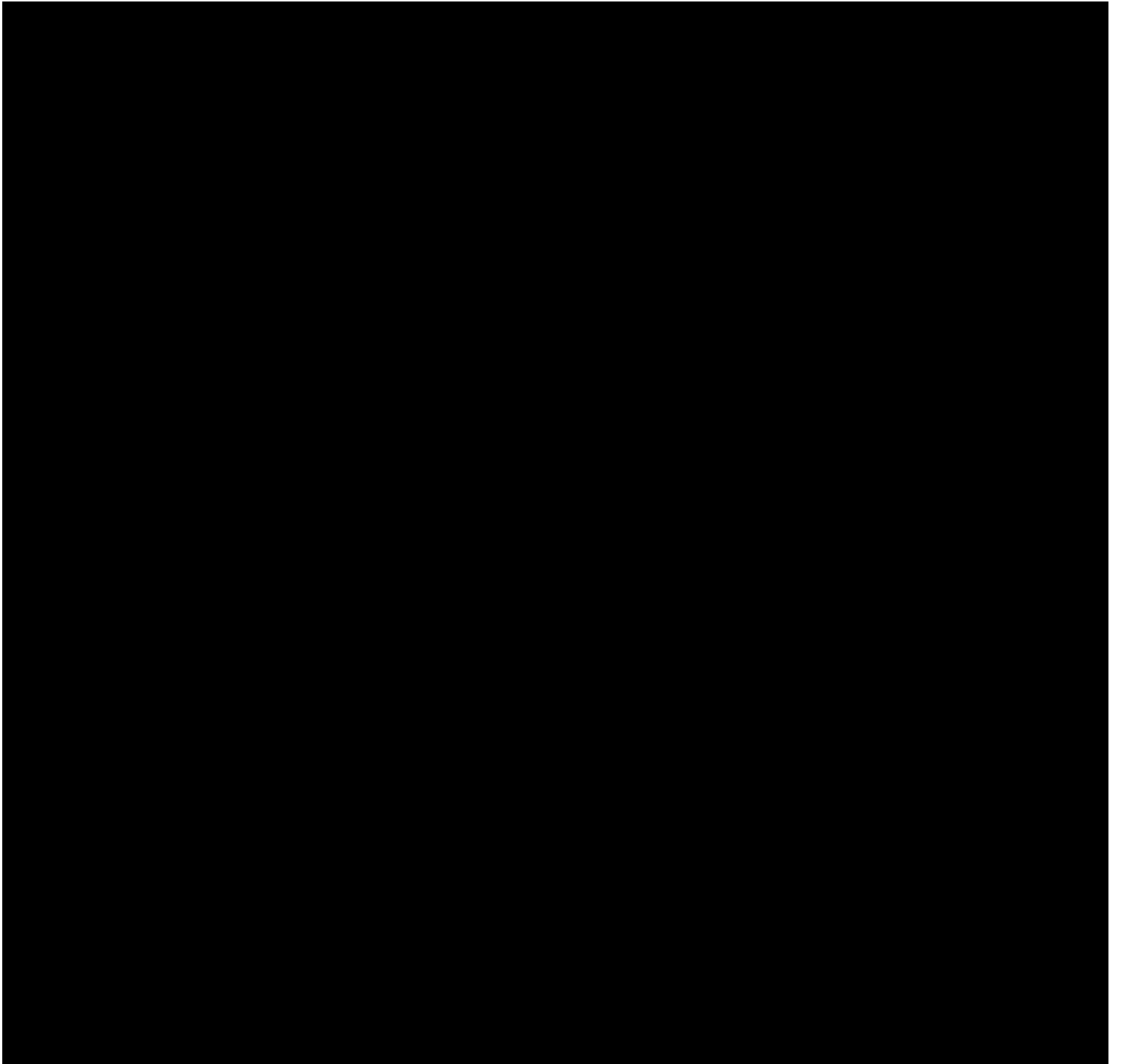


Pacific Gas & Electric Company

Initial Notification Flowchart: **Thermal Runaway**



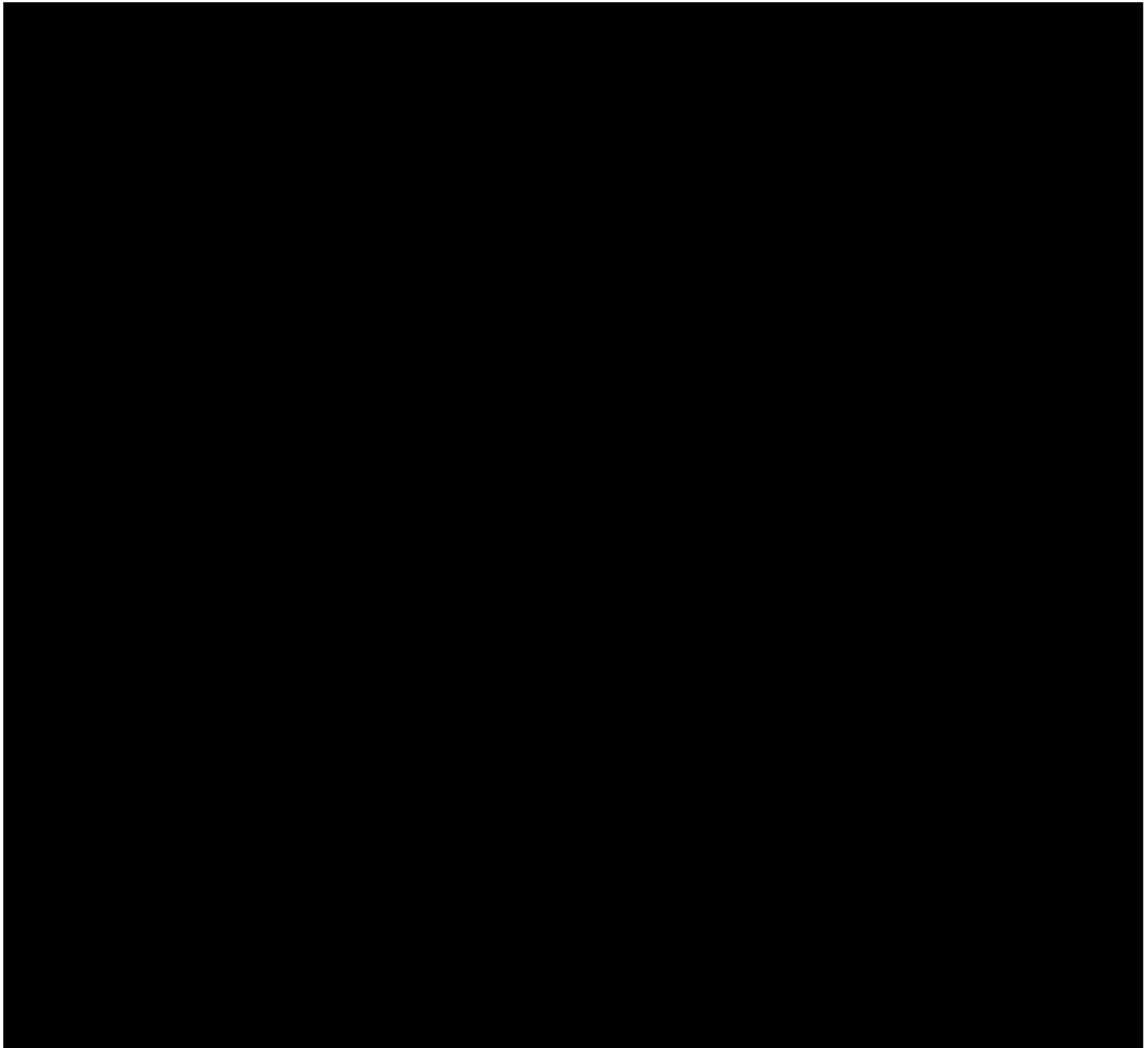
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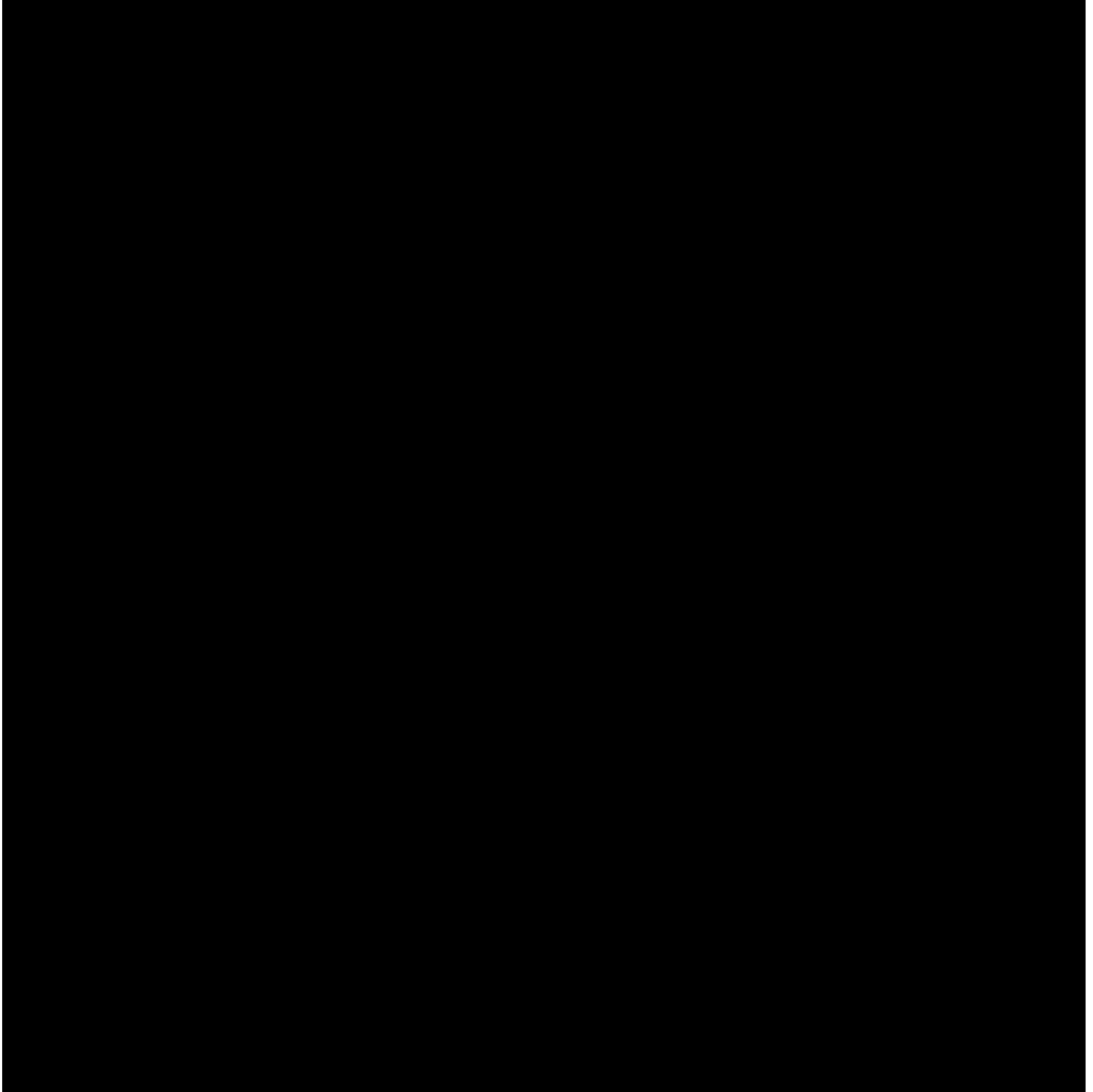
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Appendix D – EAP Hazard-Specific Procedure Steps

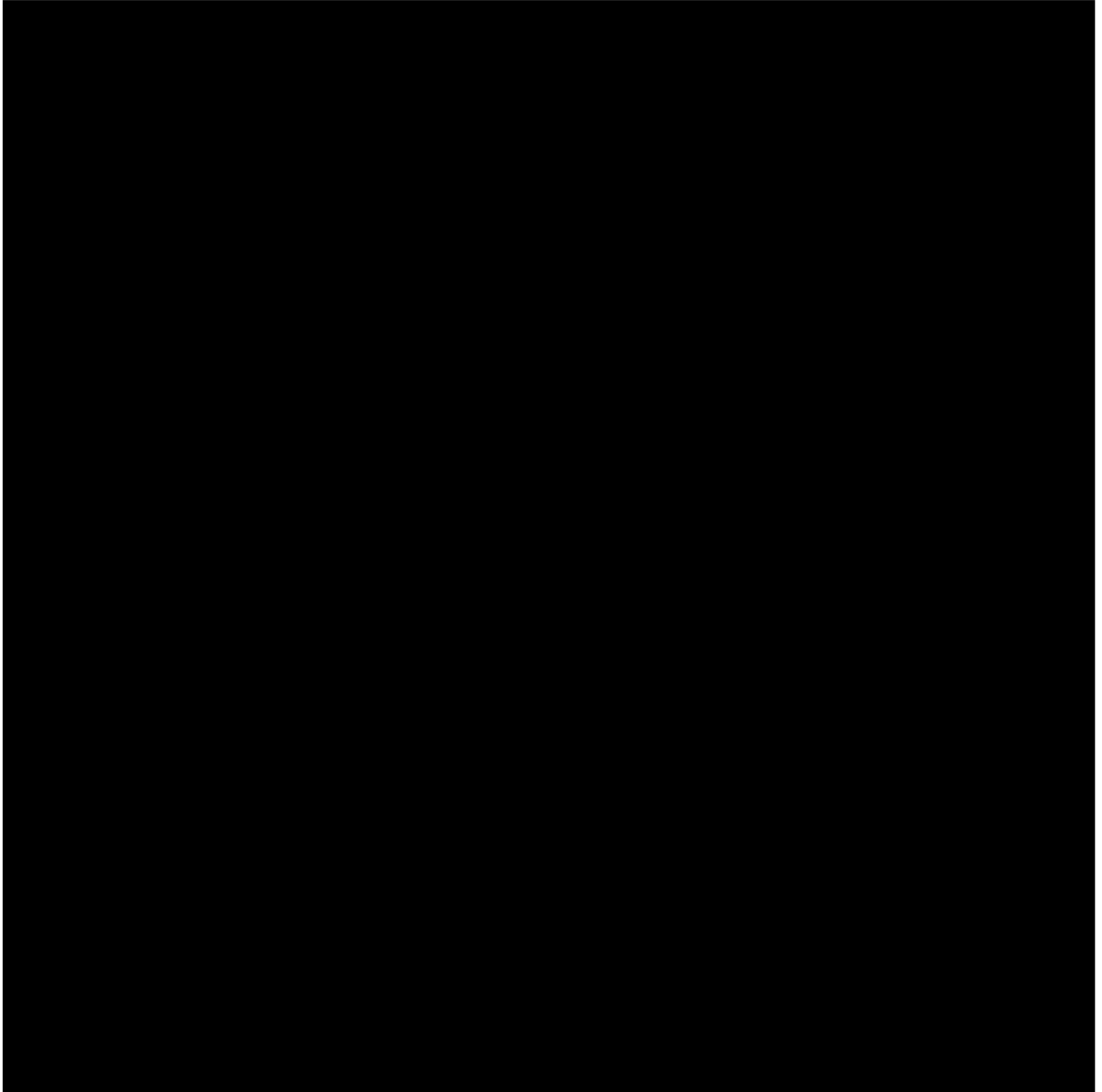
4 Fire (Fuel or Electrical)



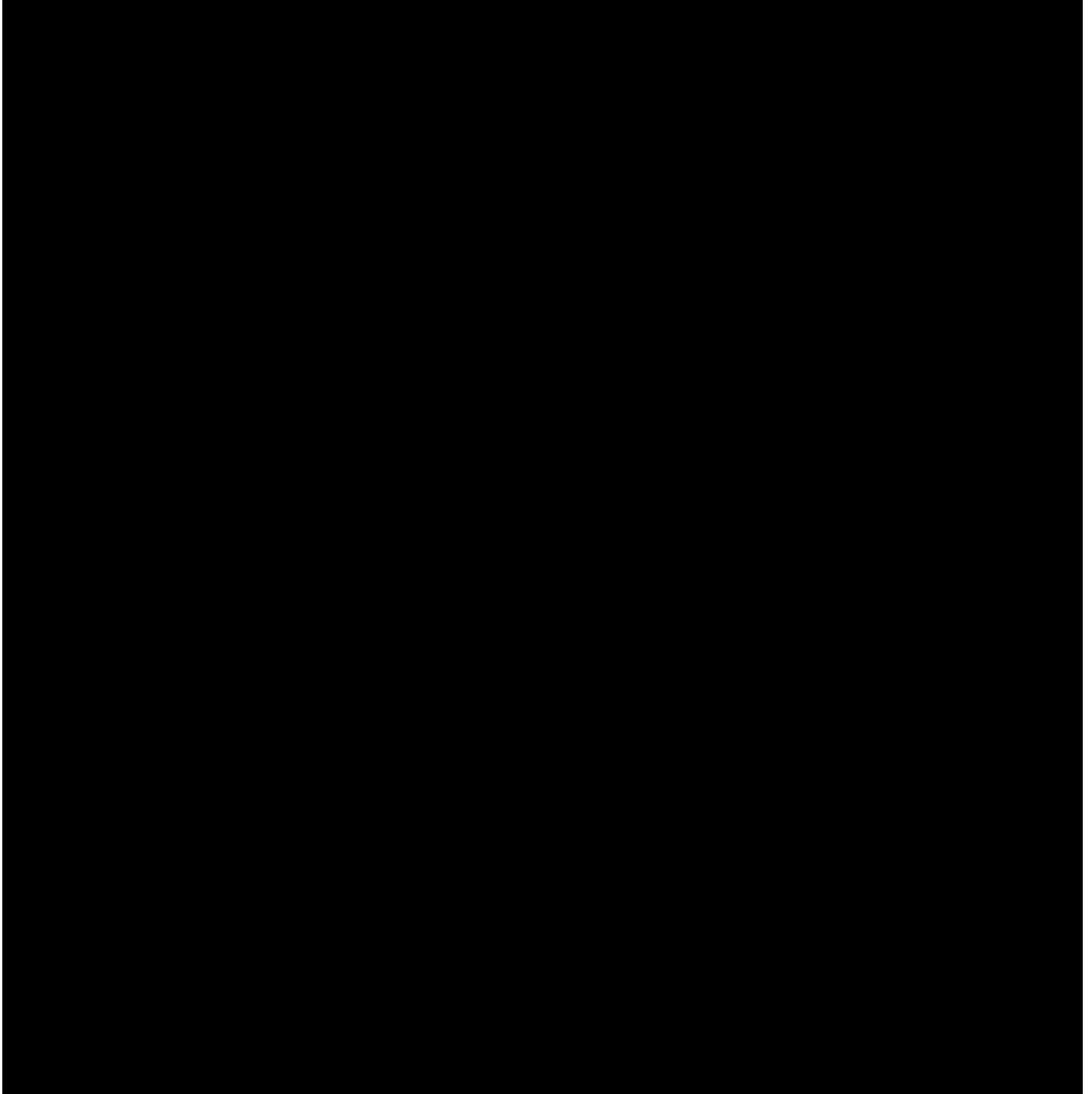
Appendix D – EAP Hazard-Specific Procedure Step



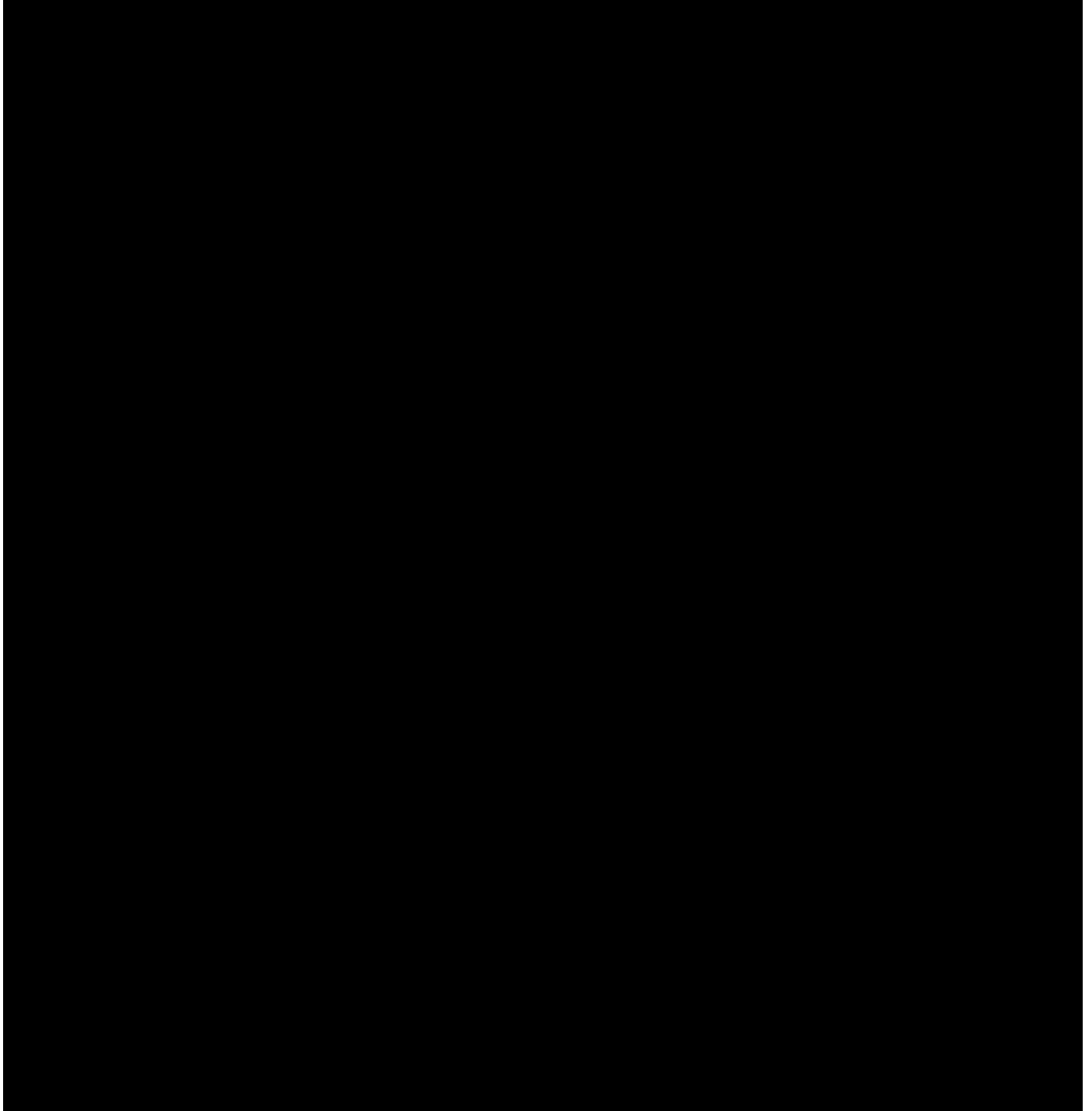
Appendix D – EAP Hazard-Specific Procedure Steps



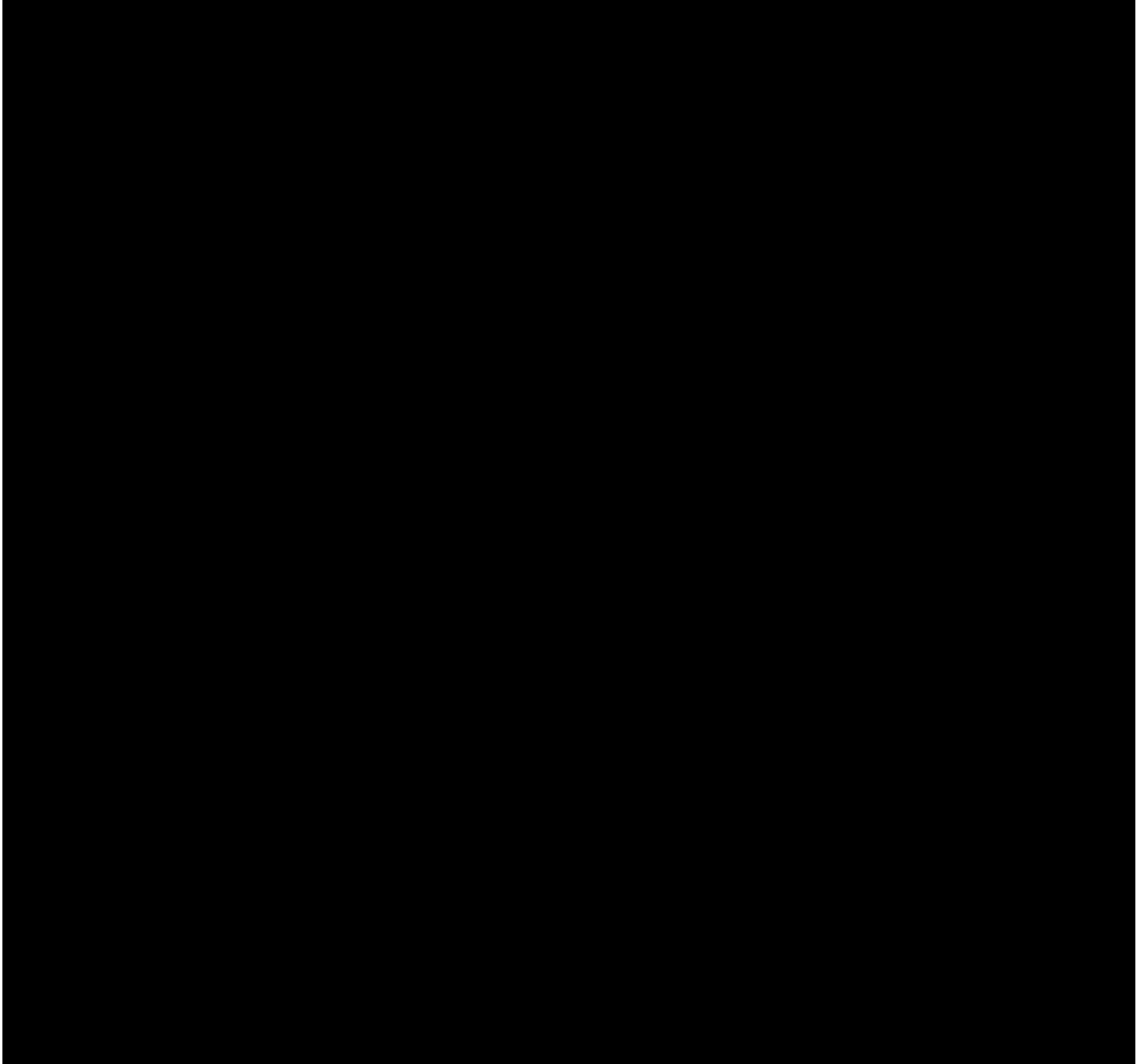
Appendix D – EAP Hazard-Specific Procedure Steps



Appendix D – EAP Hazard-Specific Procedure Steps



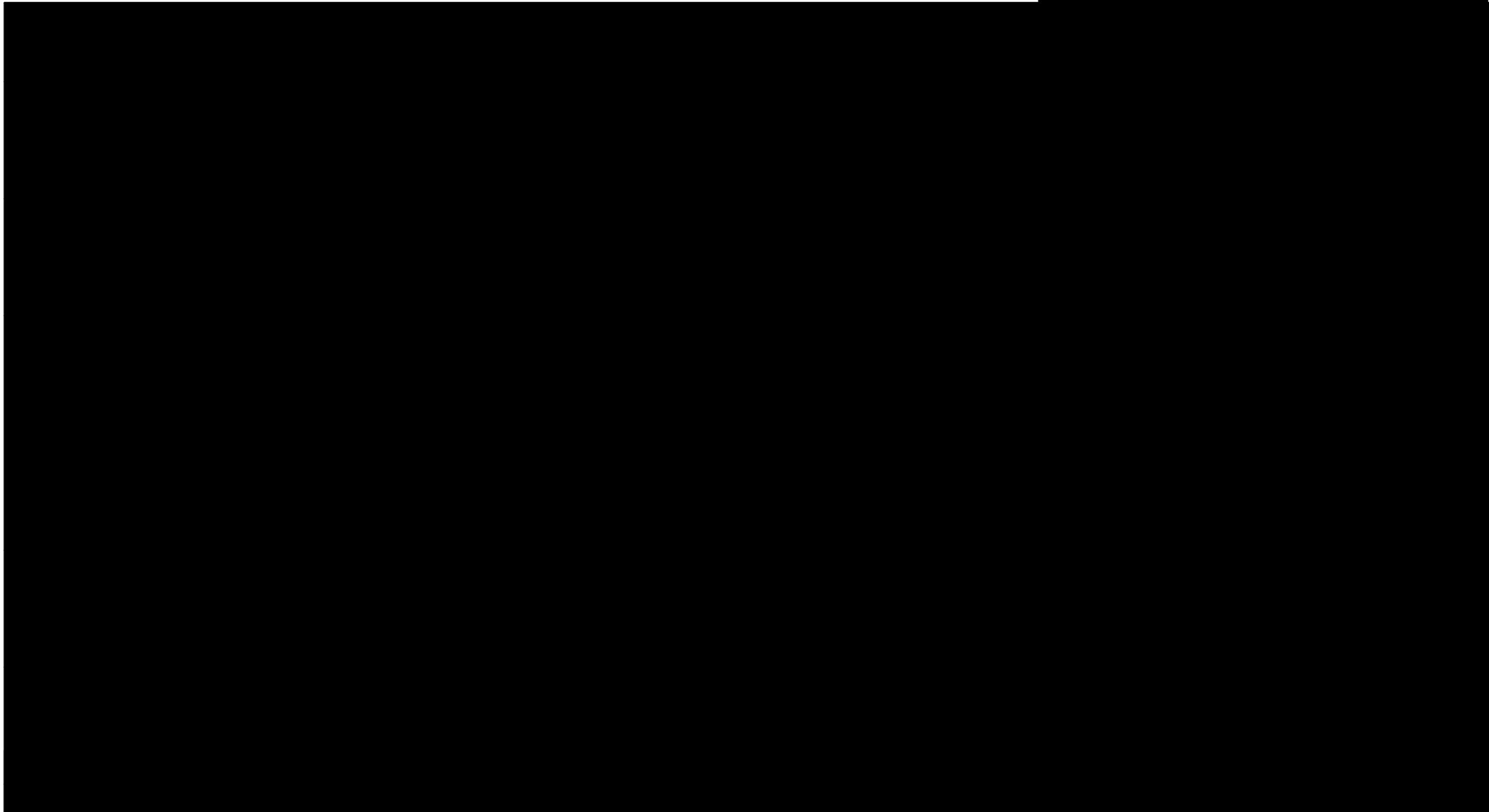
Appendix D – EAP Hazard-Specific Procedure Steps



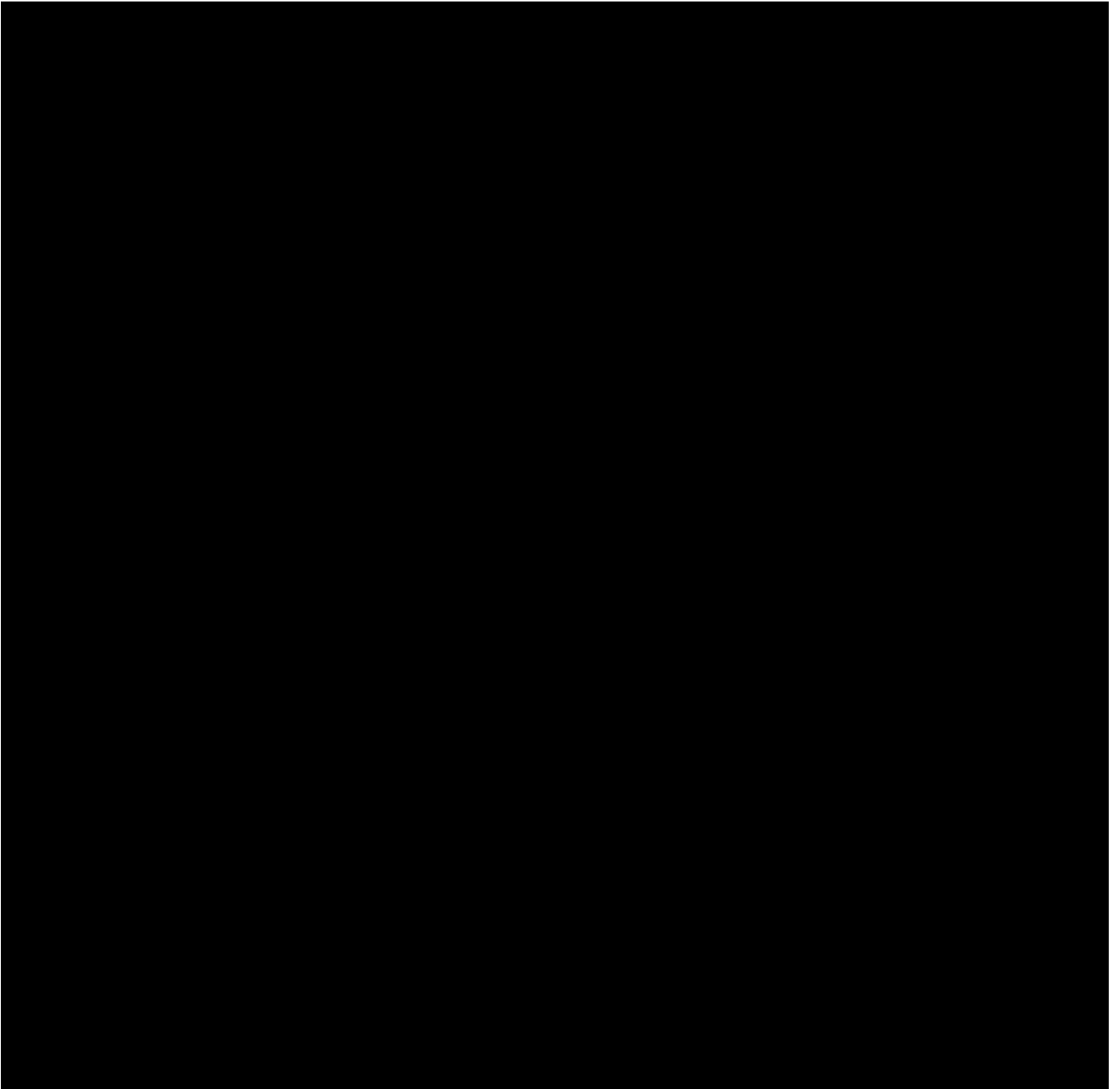


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Initial Notification Flowchart: **Fire (Fuel or Electrical)**



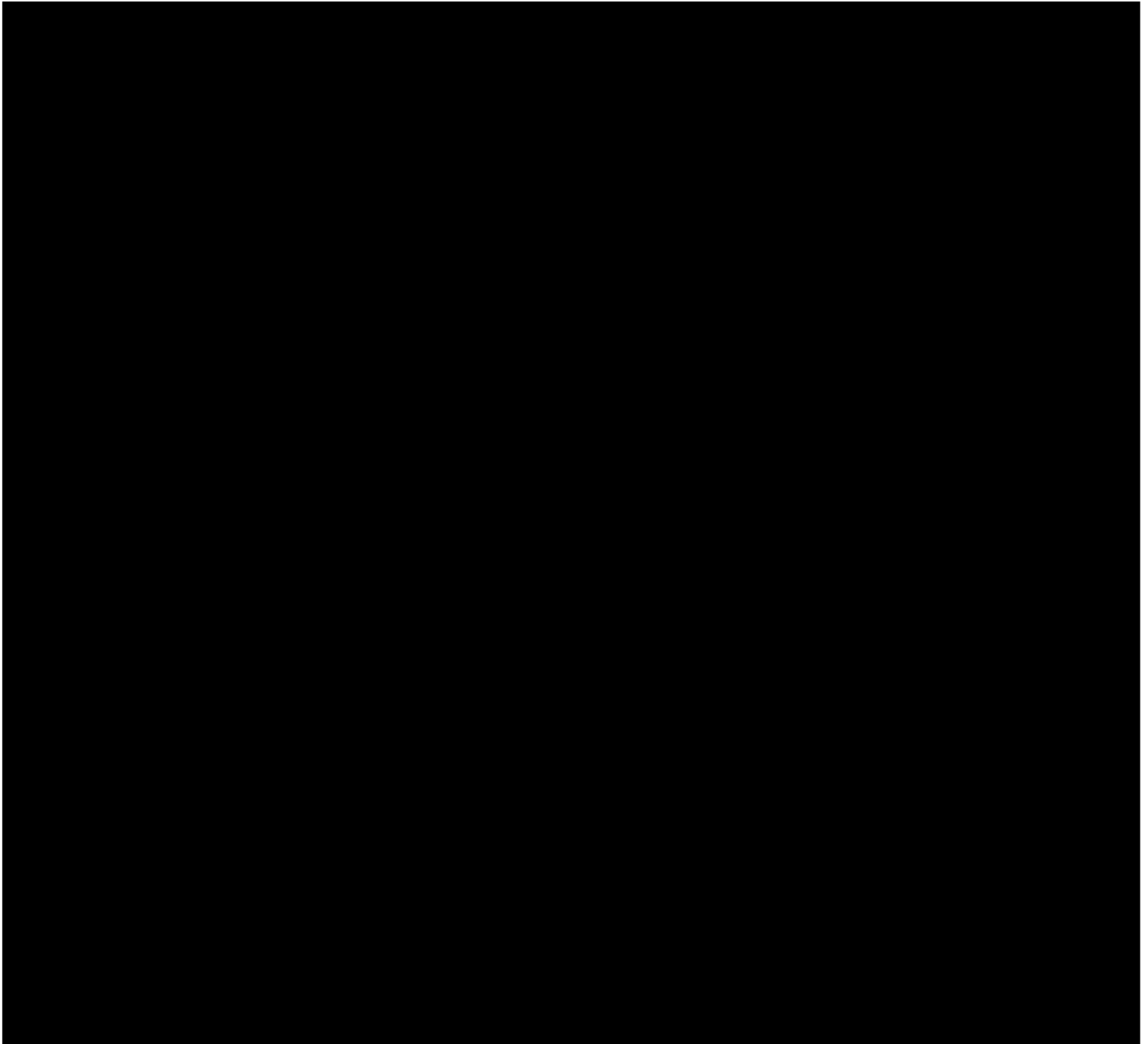
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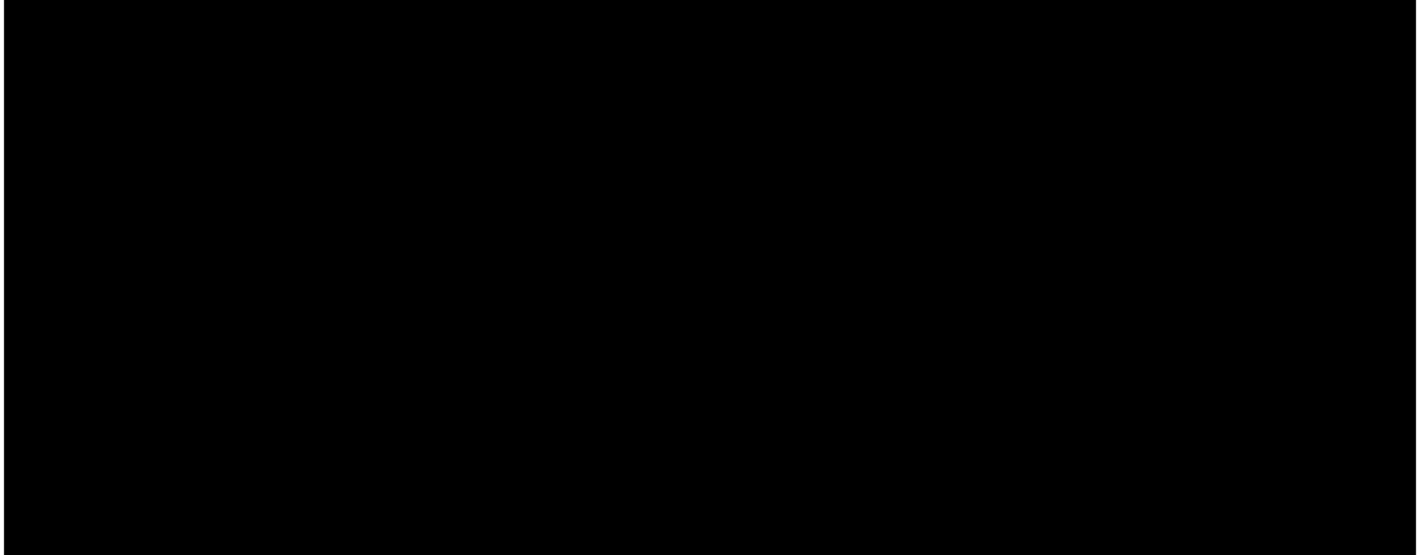
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Appendix D – EAP Hazard-Specific Procedure Steps

5 Personal Injury or Illness



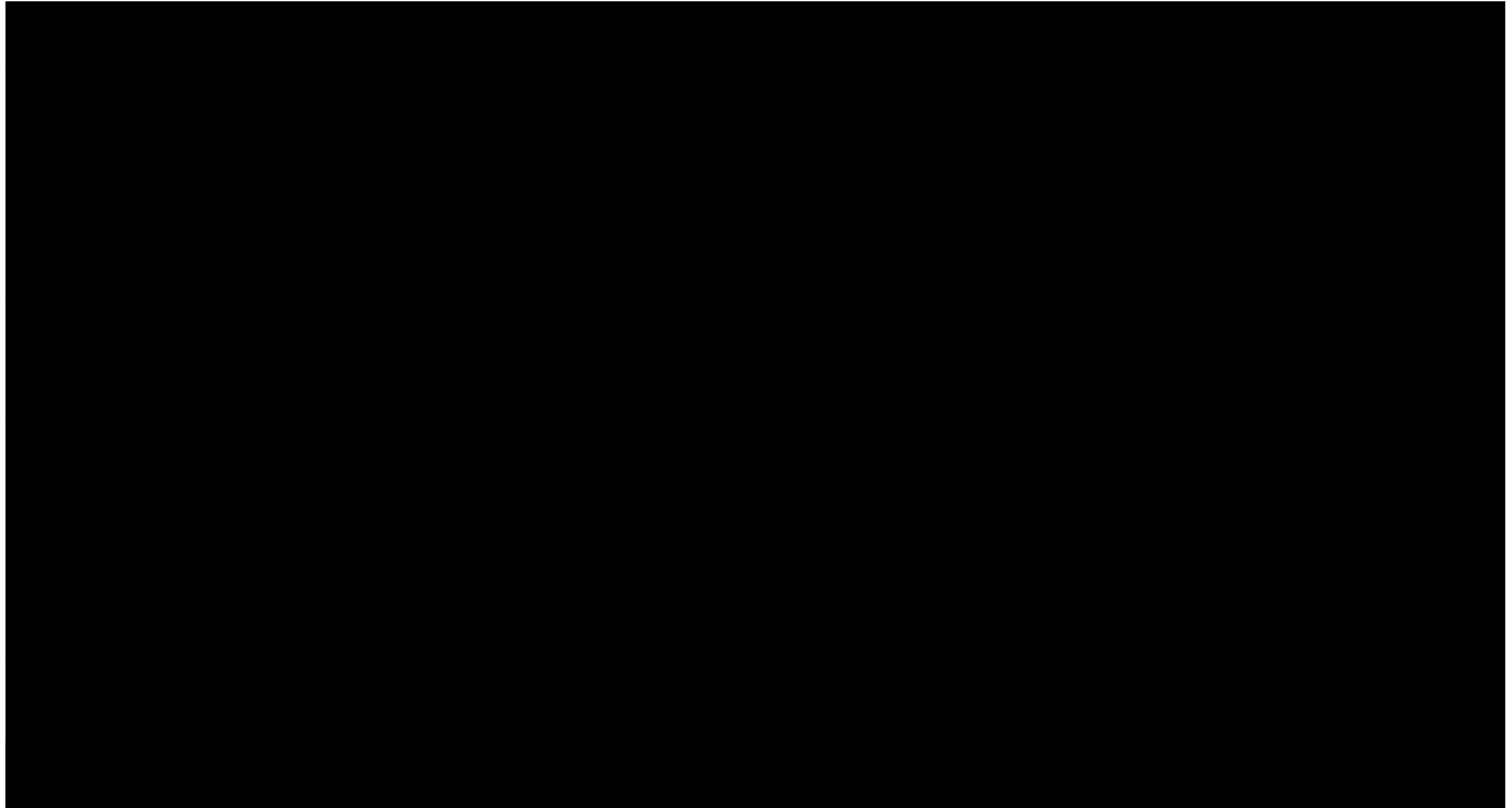
Appendix D – EAP Hazard-Specific Procedure Steps



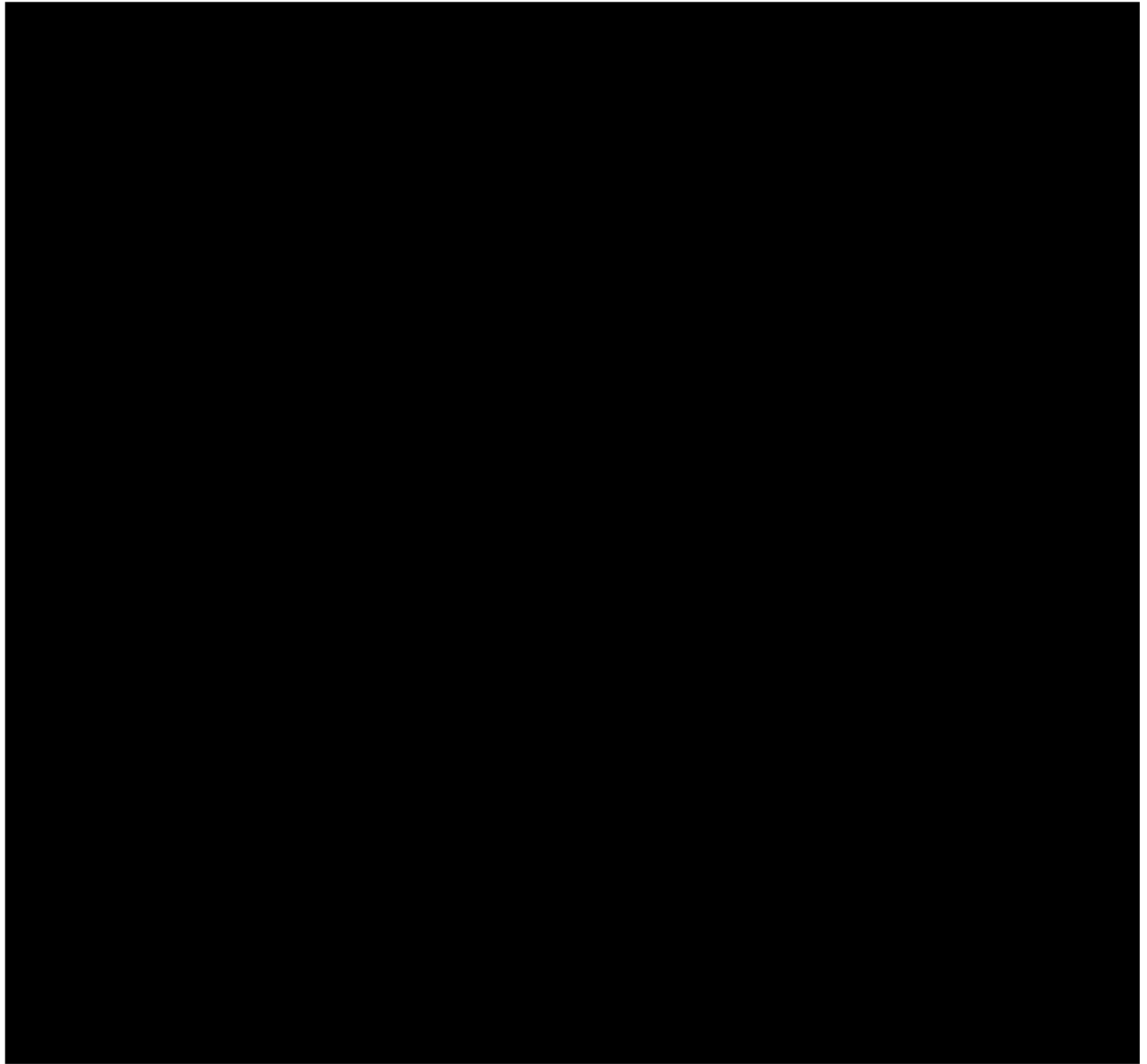


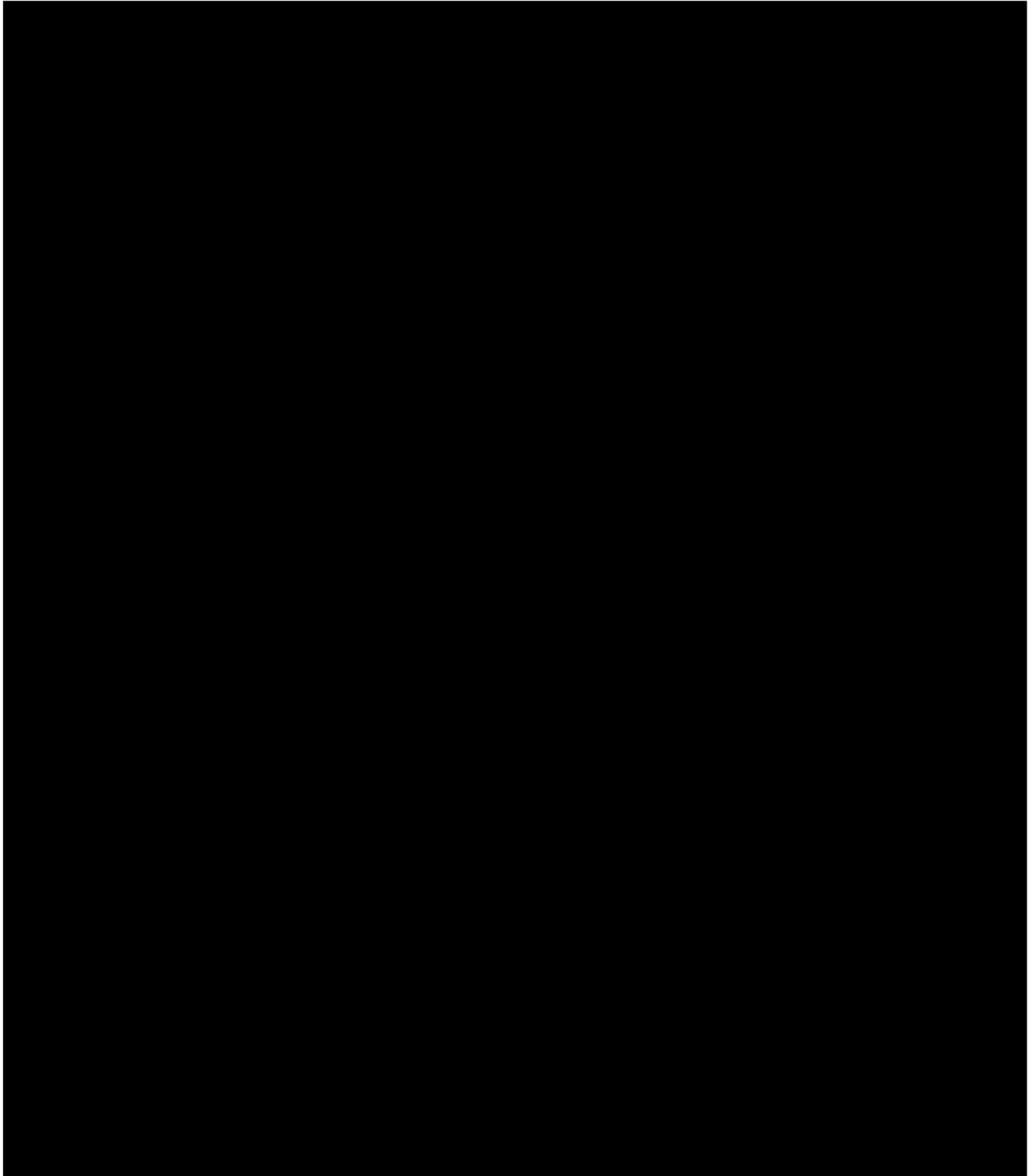
Pacific Gas & Electric Company

Initial Notification Flowchart: **Personal Injury or Illness**



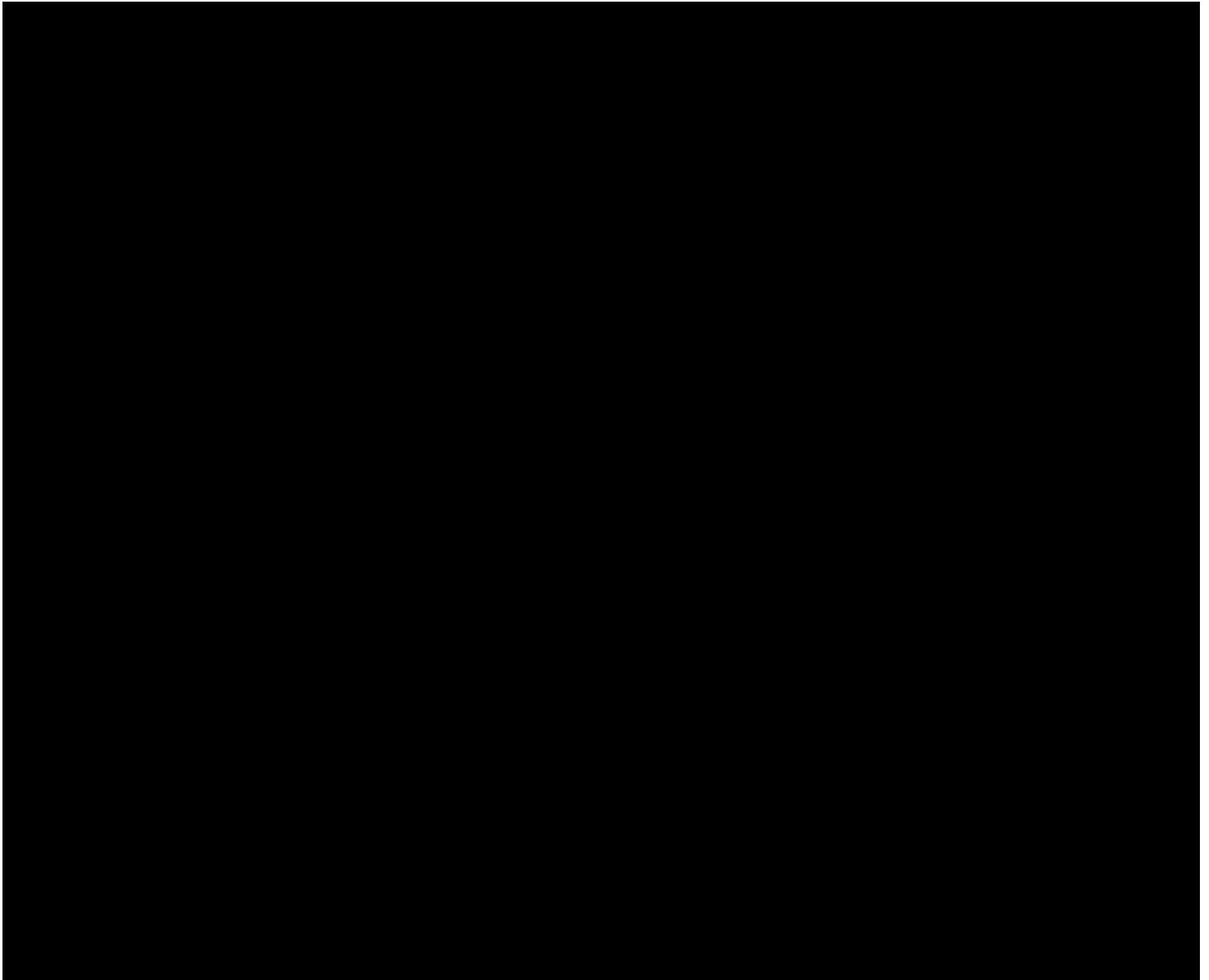
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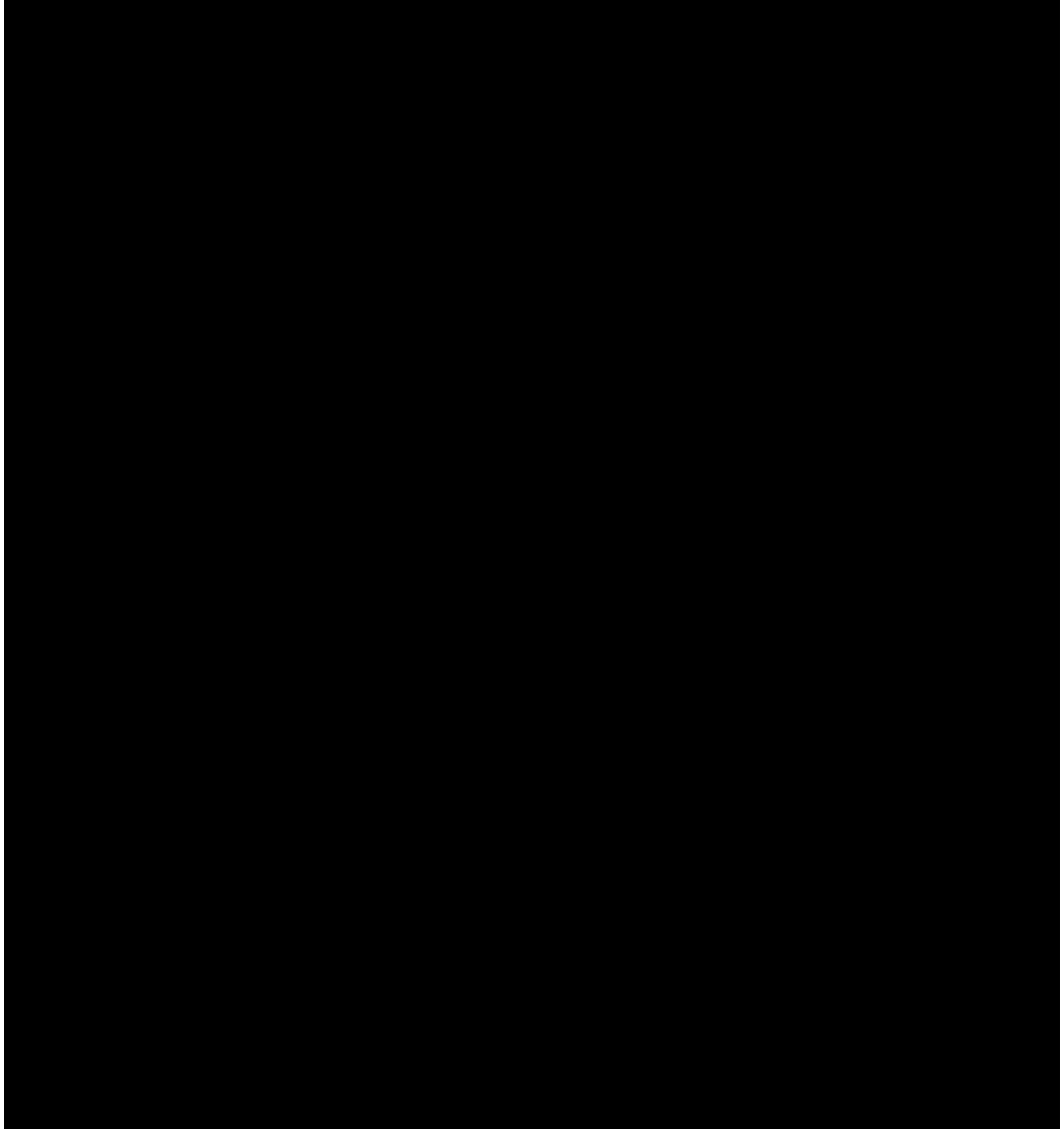


Appendix D – EAP Hazard-Specific Procedure Steps

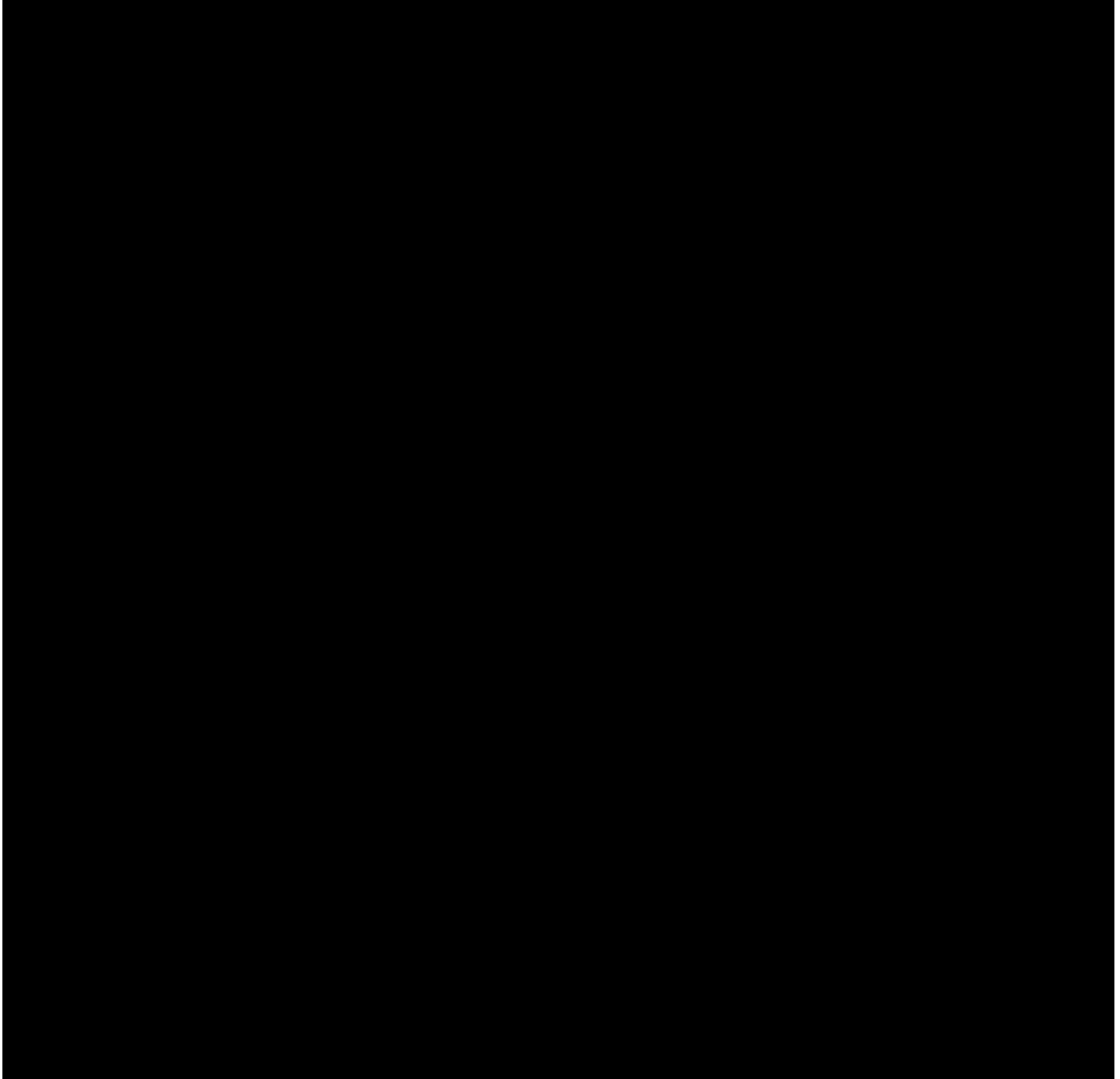
6 Uncontrolled Hazardous Materials Spill/Release with Potential Offsite Impact



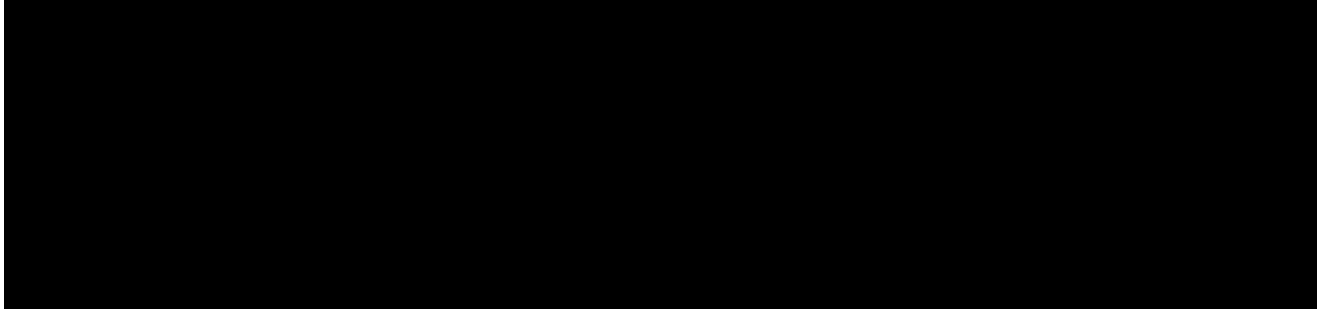
Appendix D – EAP Hazard-Specific Procedure Steps



Appendix D – EAP Hazard-Specific Procedure Steps



Appendix D – EAP Hazard-Specific Procedure Steps



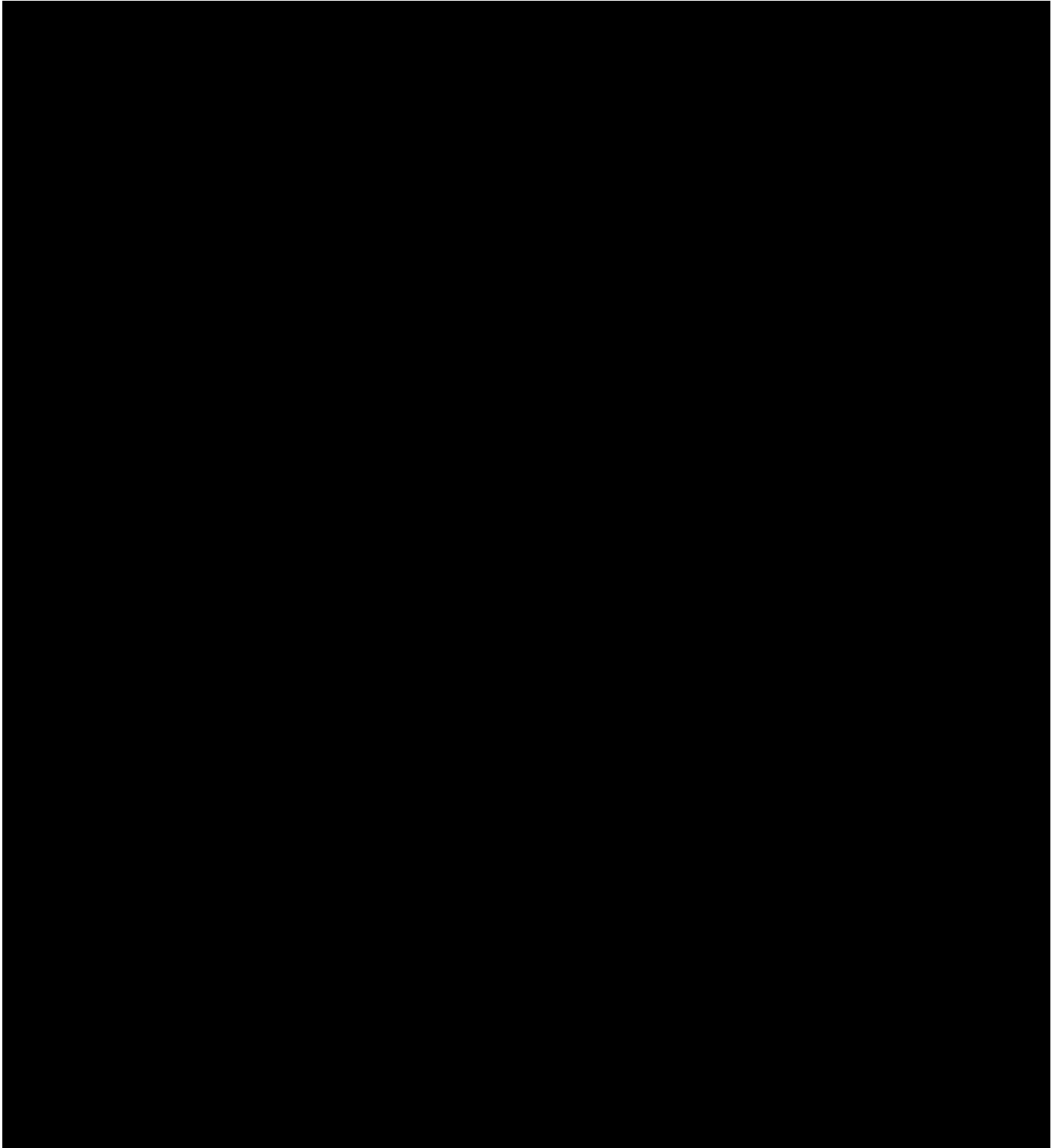


Pacific Gas & Electric Company

Initial Notification Flowchart: **Uncontrolled Hazardous
Materials Spill/Release with
Potential Offsite Impact**



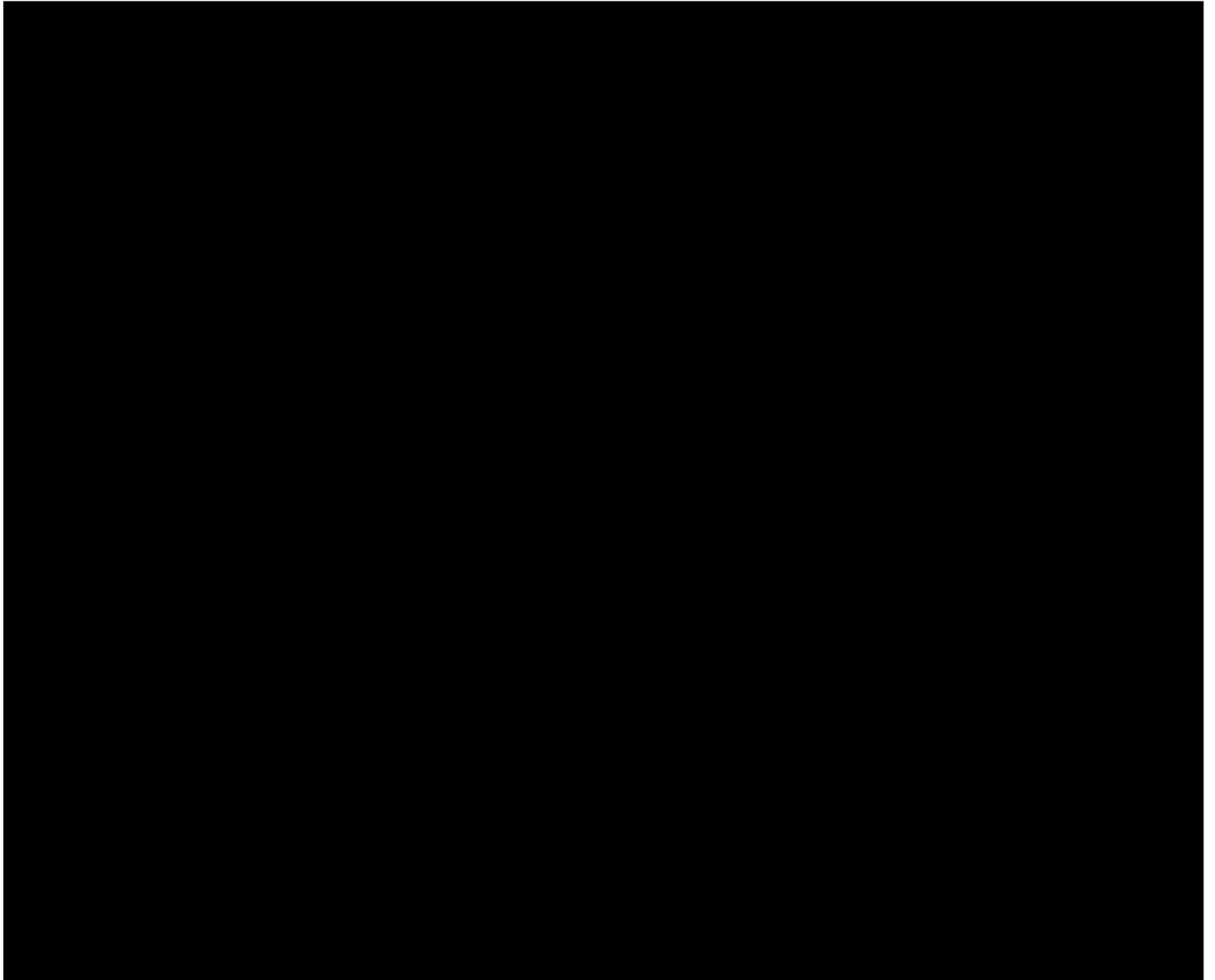
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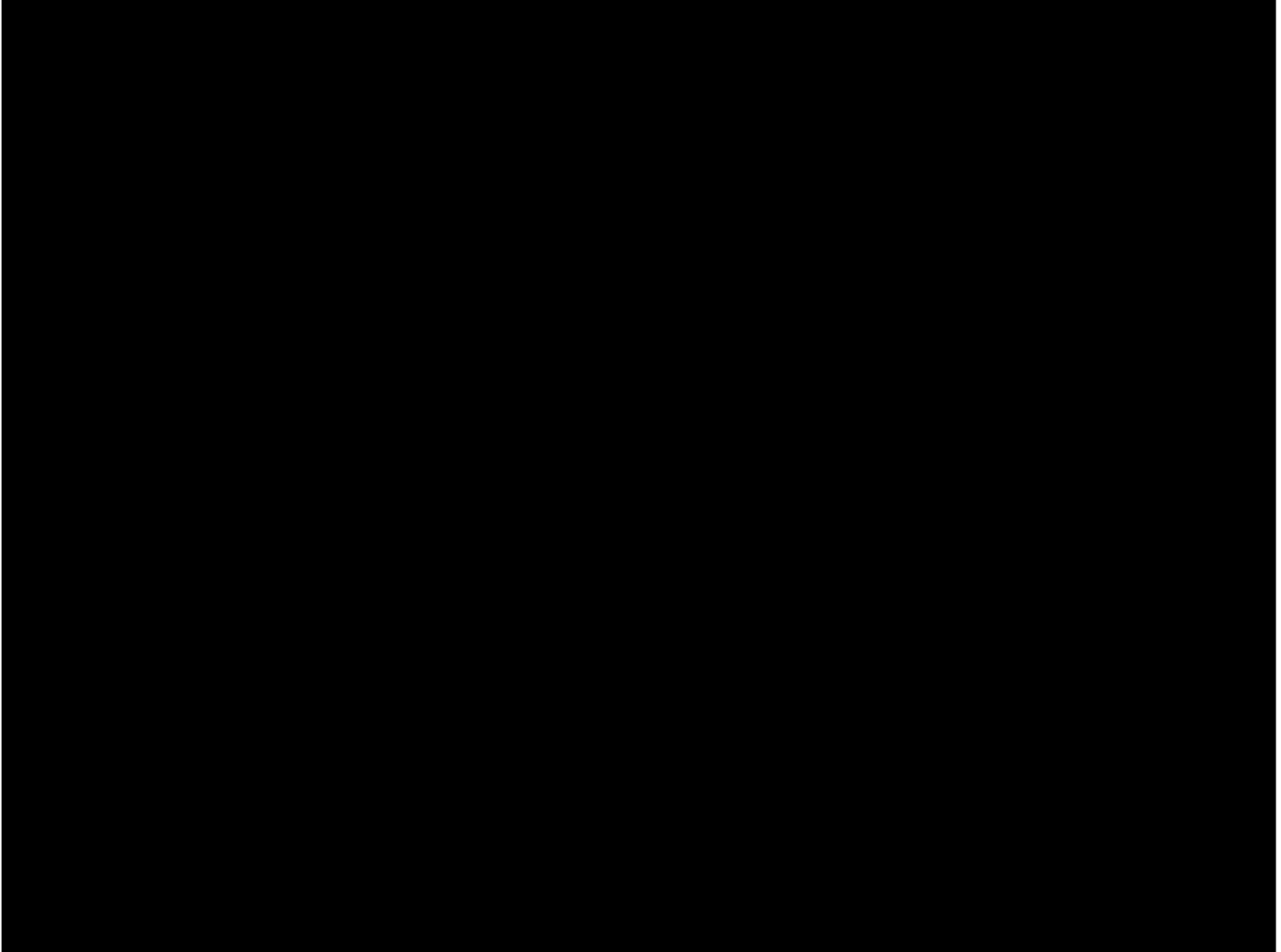
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Appendix D – EAP Hazard-Specific Procedure Steps

7 Earthquake



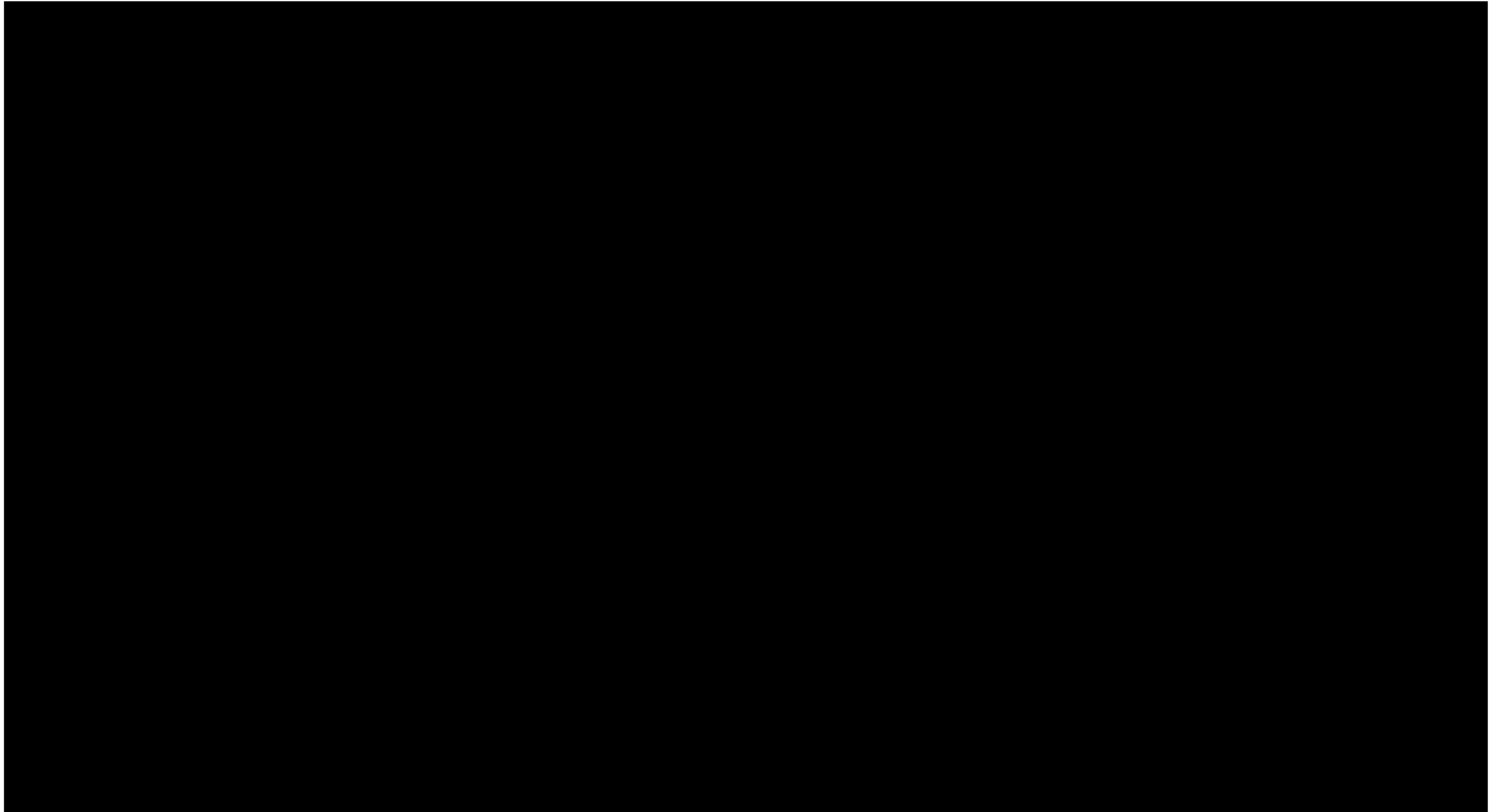
Appendix D – EAP Hazard-Specific Procedure Steps





Pacific Gas & Electric Company

Initial Notification Flowchart: **Earthquake: Minor Shaking (No Damage Observed)**

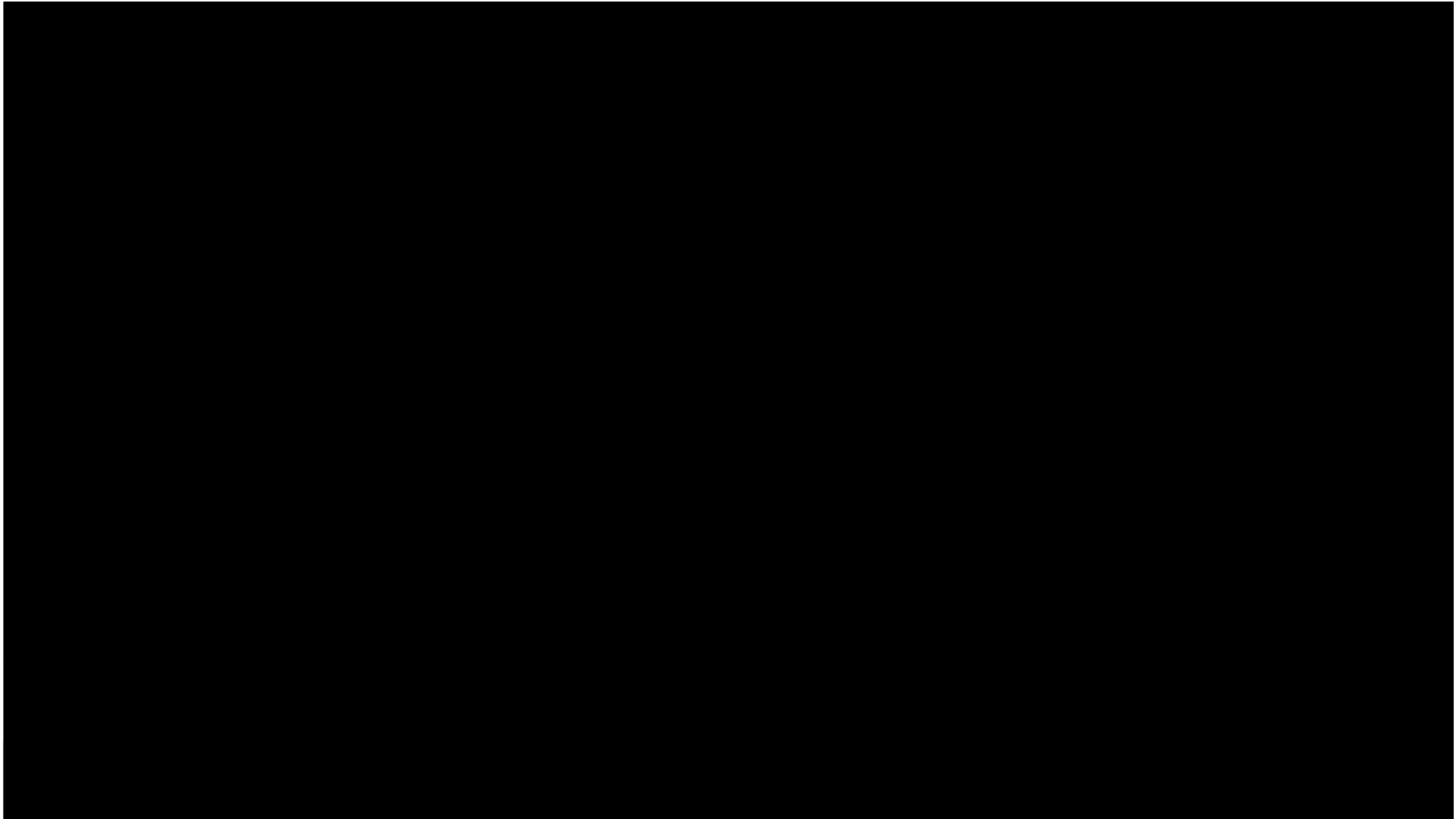


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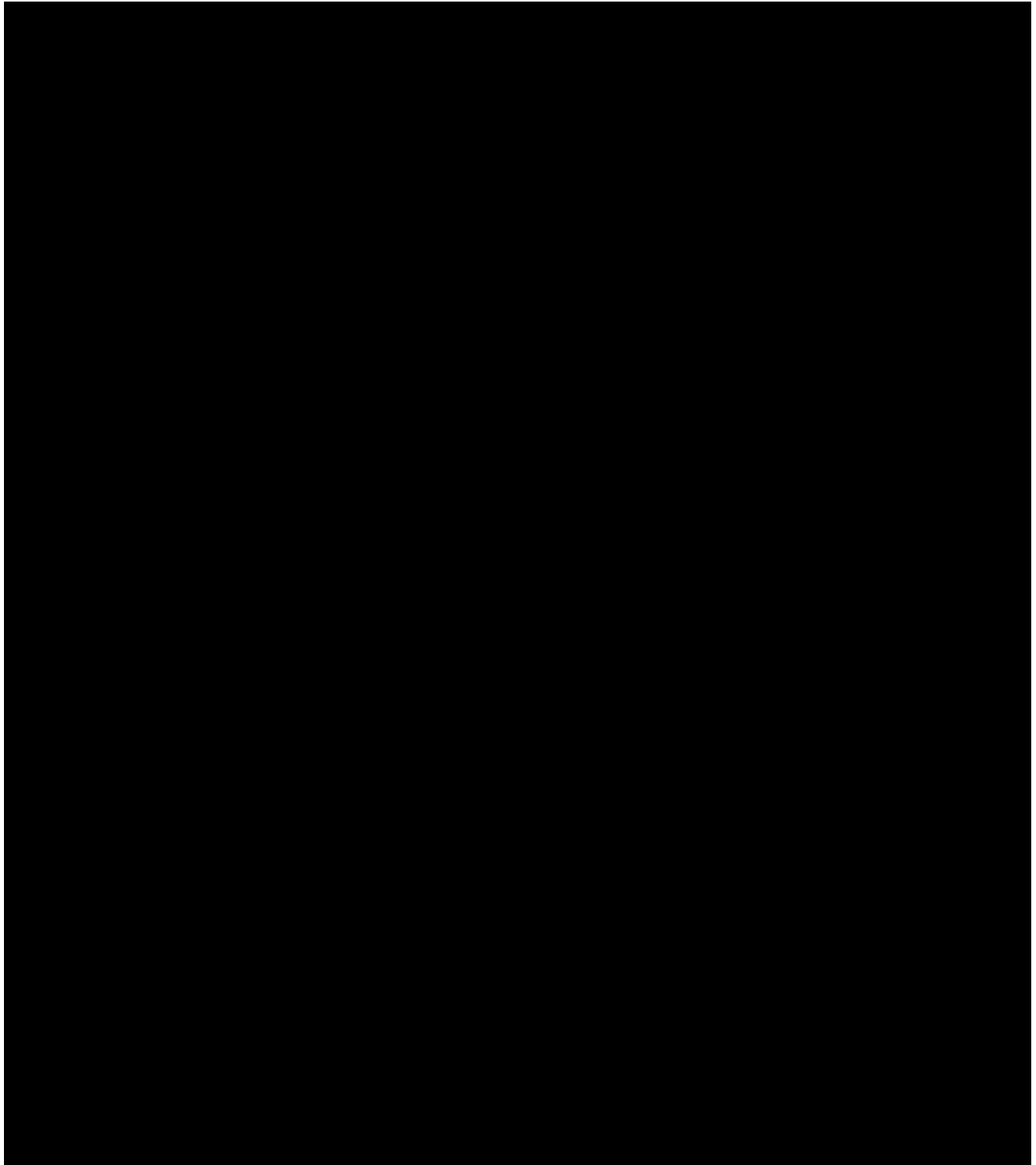


Pacific Gas & Electric Company

Initial Notification Flowchart: **Earthquake: Strong Shaking (Damage Observed)**



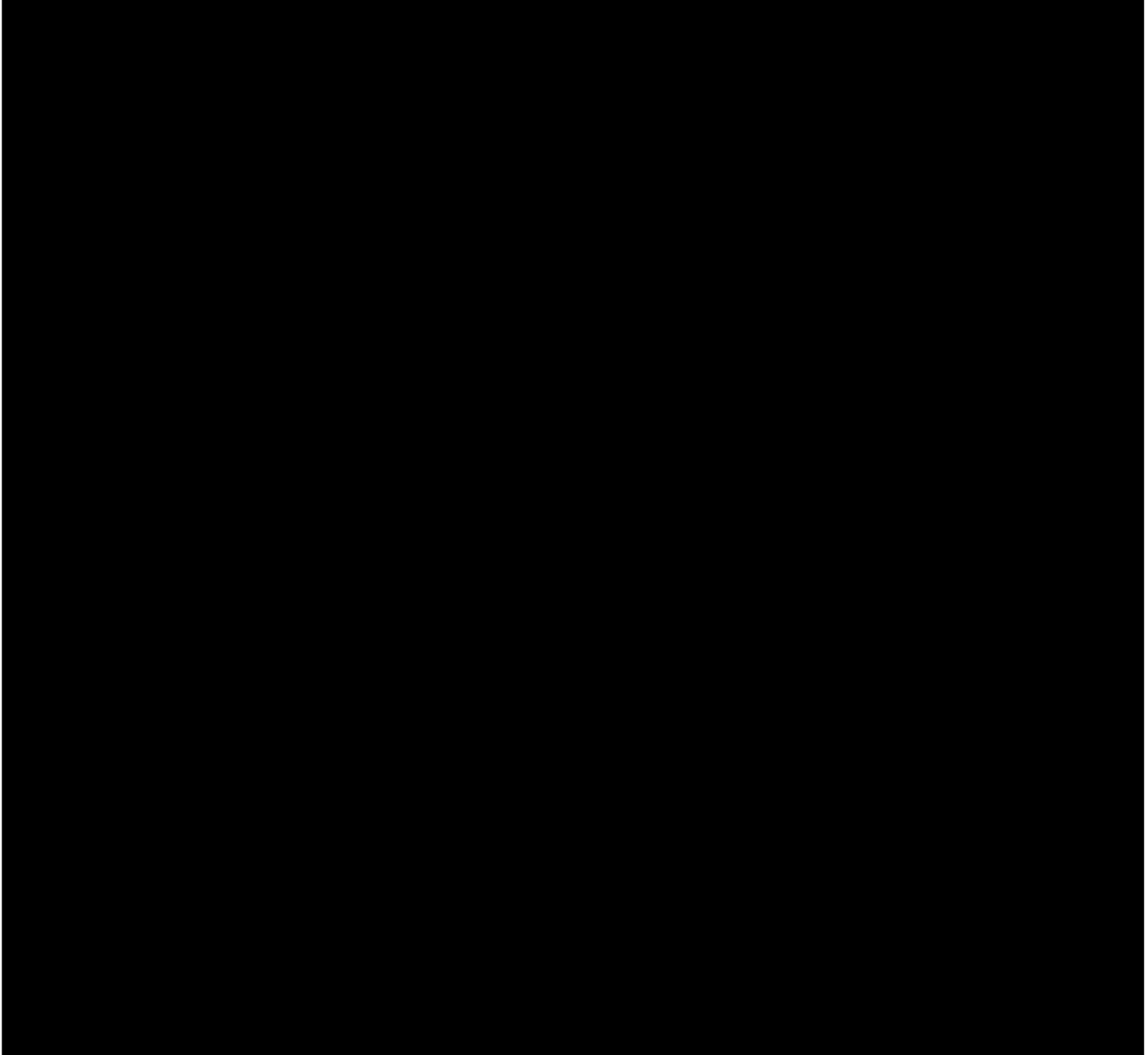
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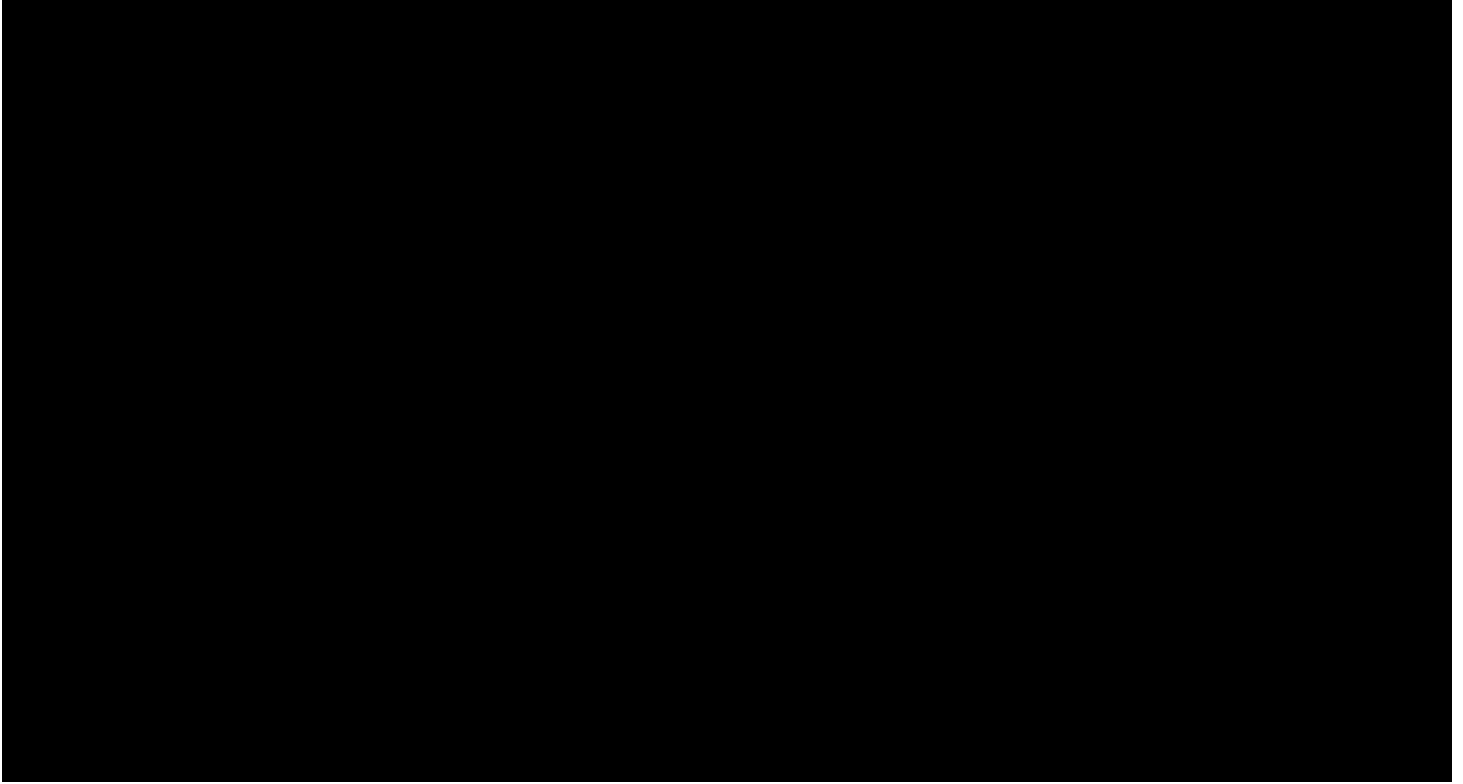
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Appendix D – EAP Hazard-Specific Procedure Steps

8 Severe Weather



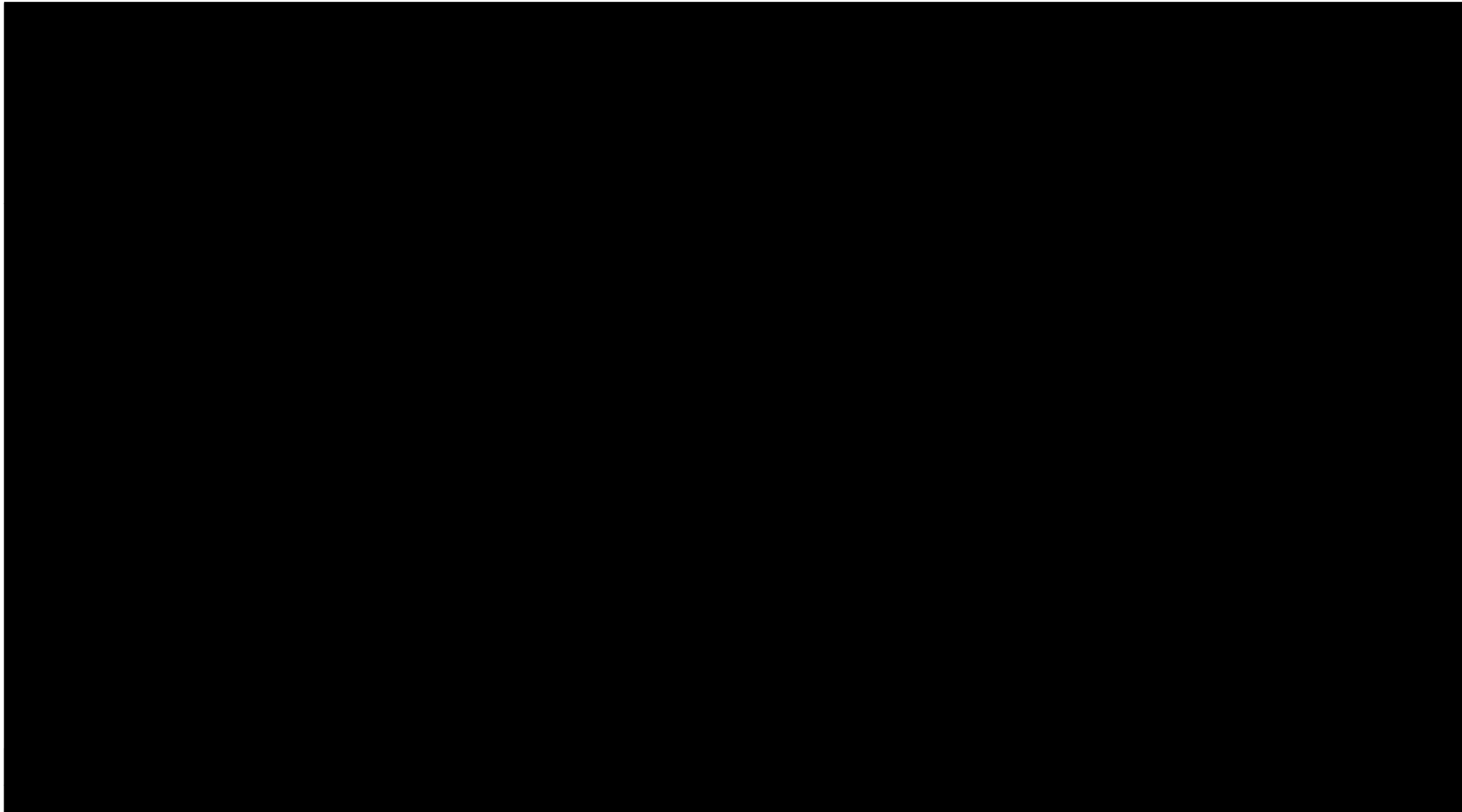
Appendix D – EAP Hazard-Specific Procedure Steps



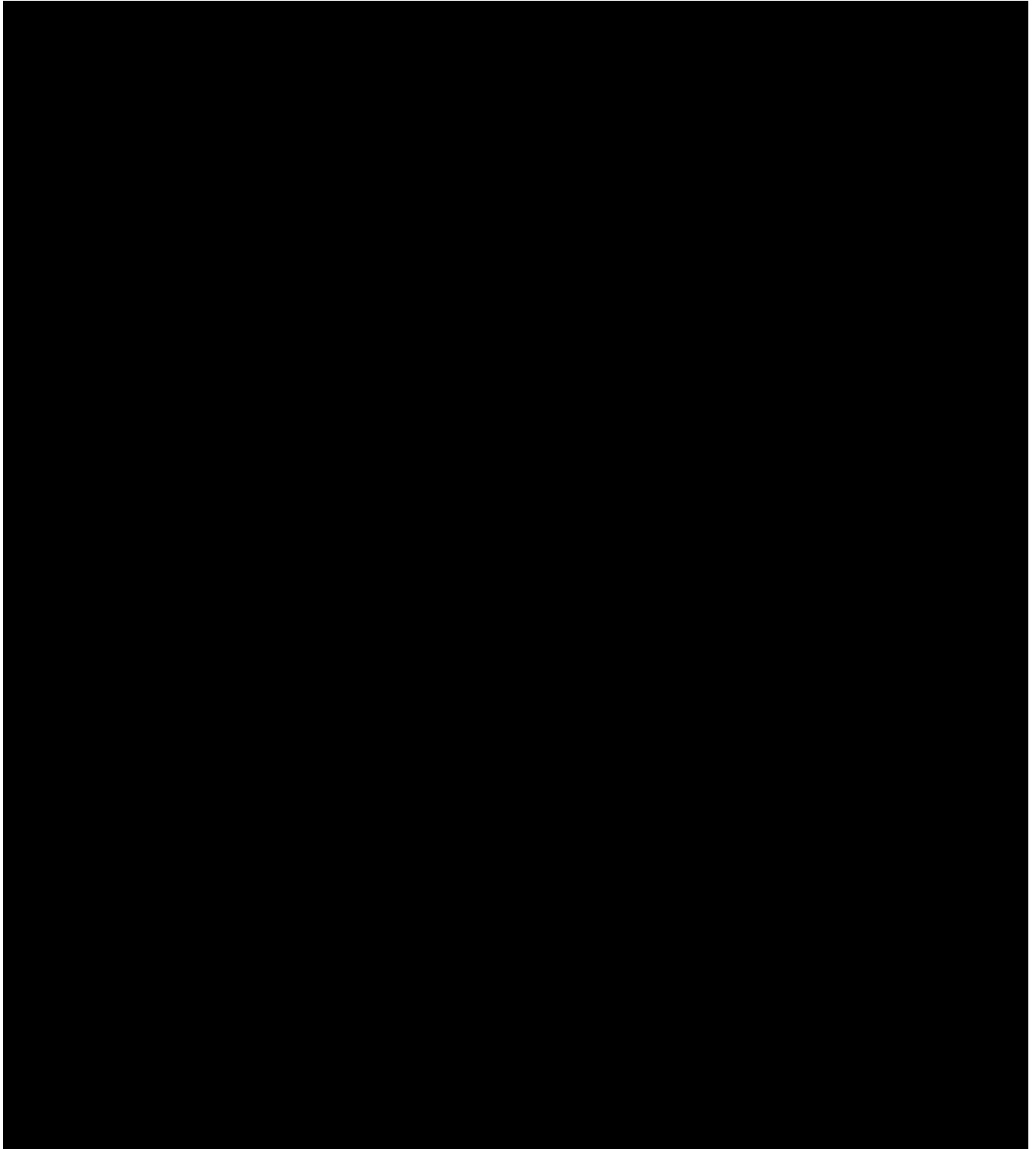


Pacific Gas & Electric Company

Initial Notification Flowchart: **Severe Weather**



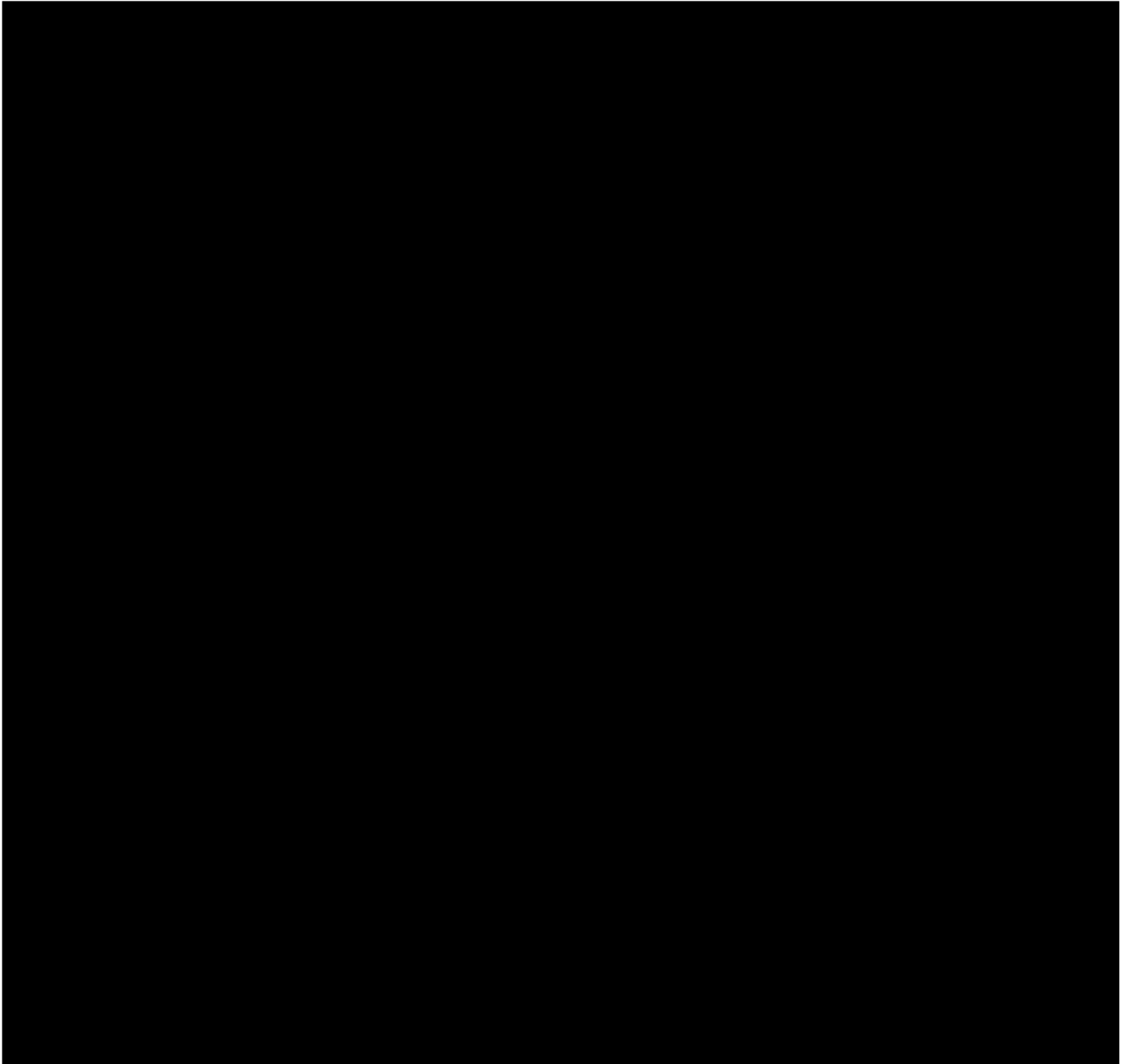
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Appendix D – EAP Hazard-Specific Procedure Steps

9 Security Threat



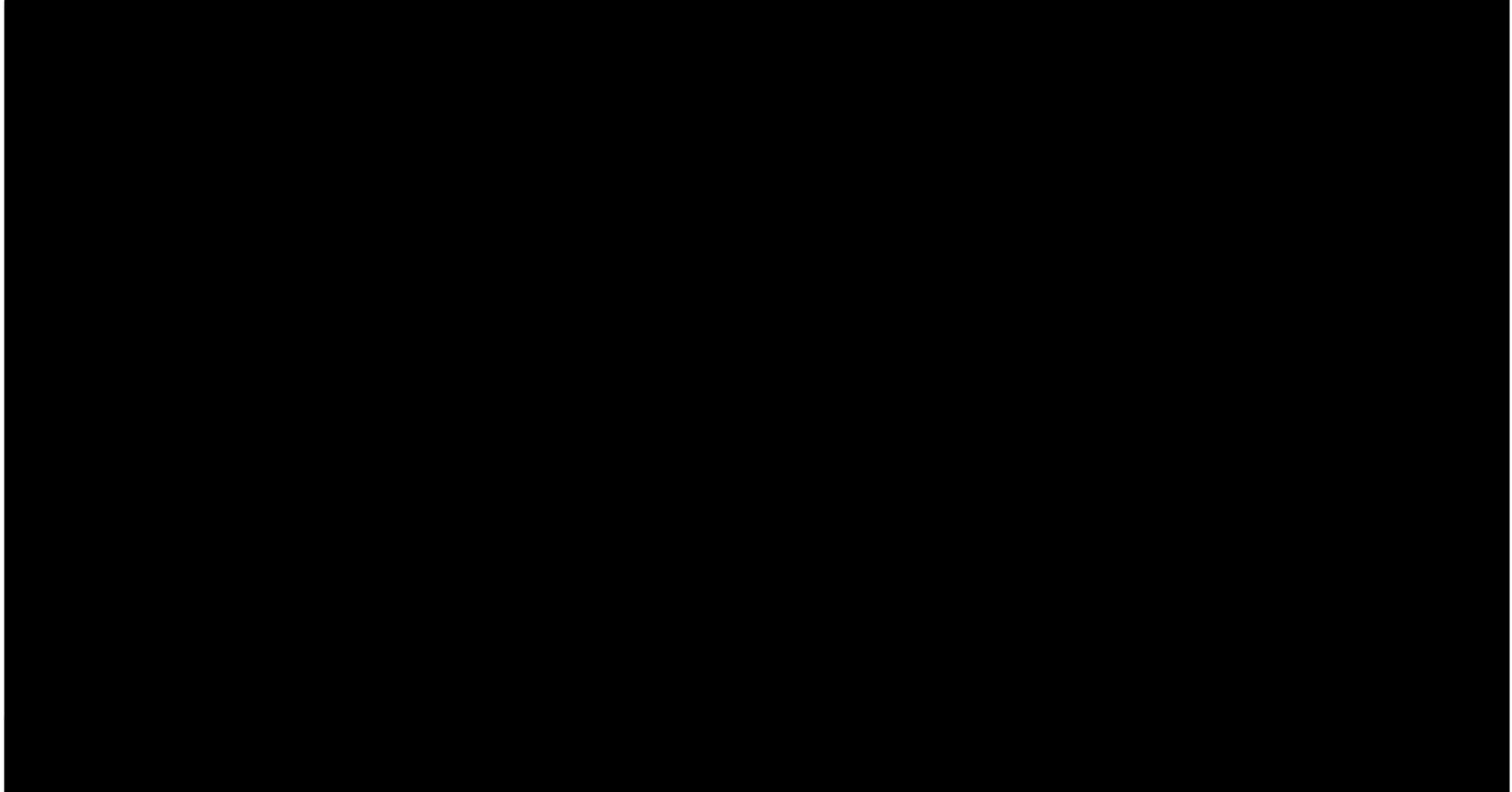
Appendix D – EAP Hazard-Specific Procedure Steps



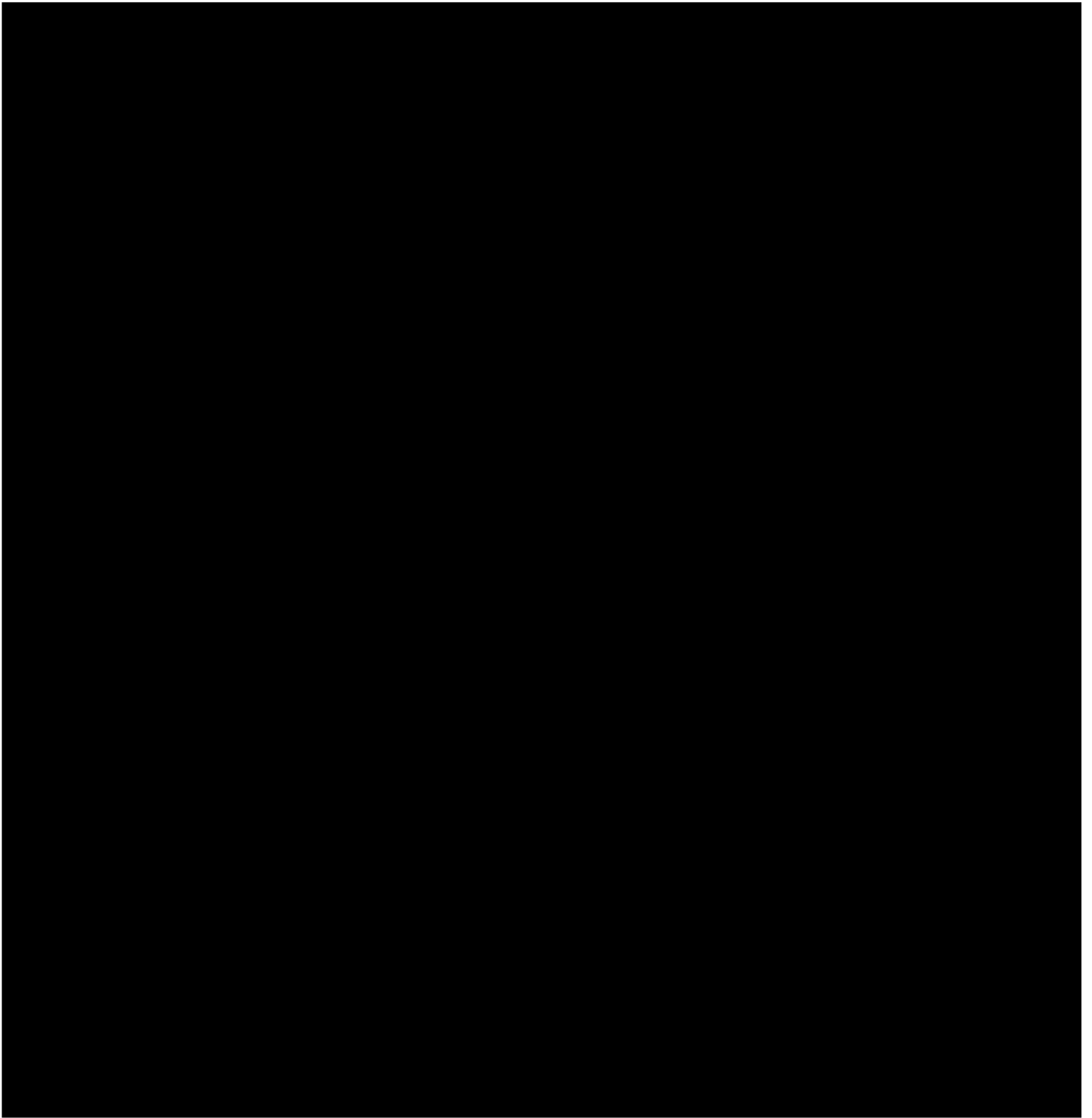


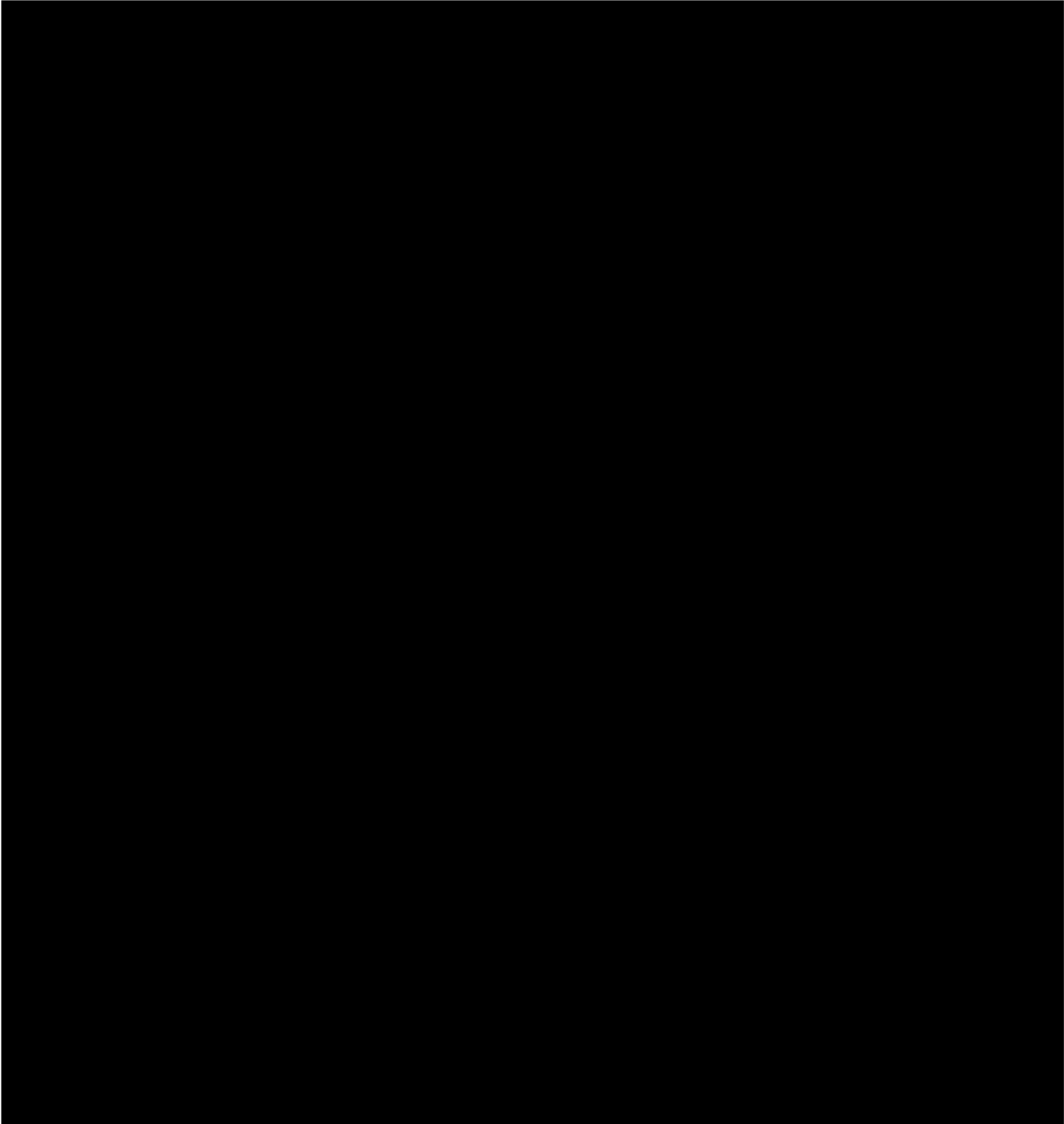
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Initial Notification Flowchart: **Security Threat**



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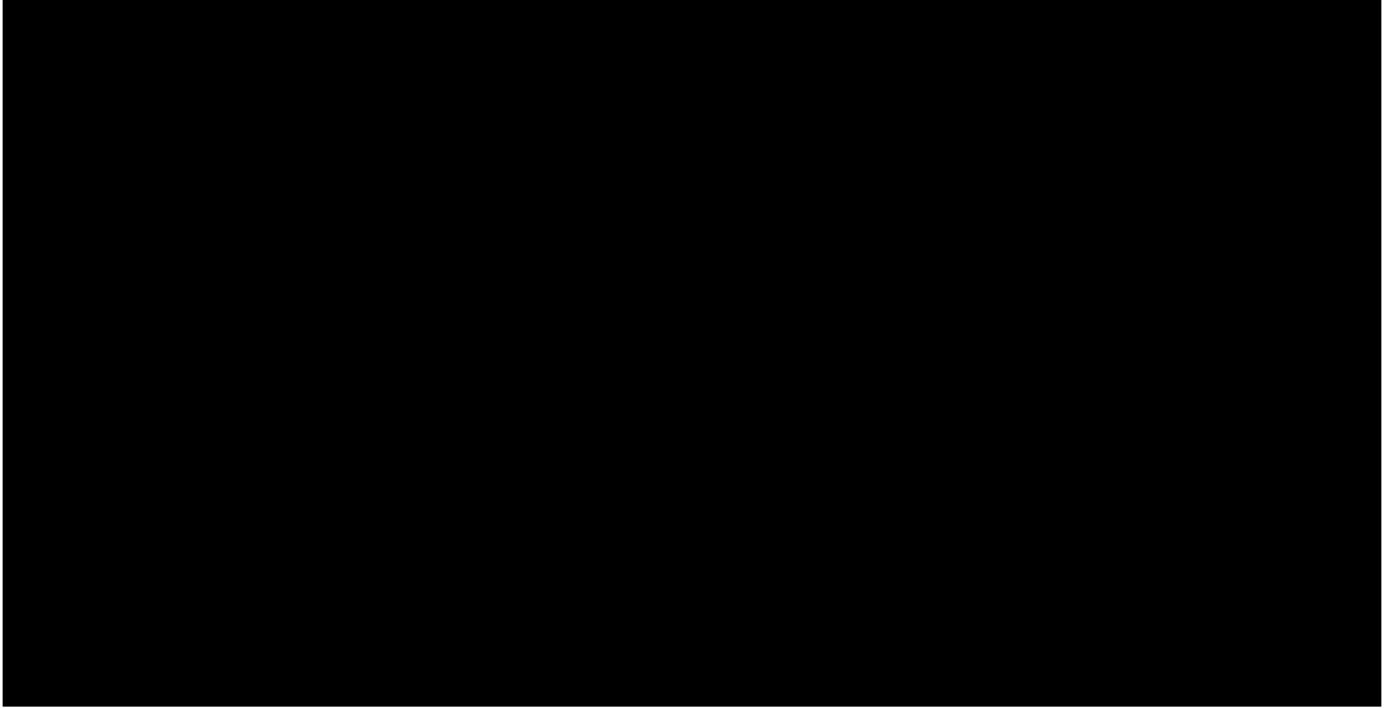


Appendix D – EAP Hazard-Specific Procedure Steps

10 Physical Threat (Active Shooter or Intruder)



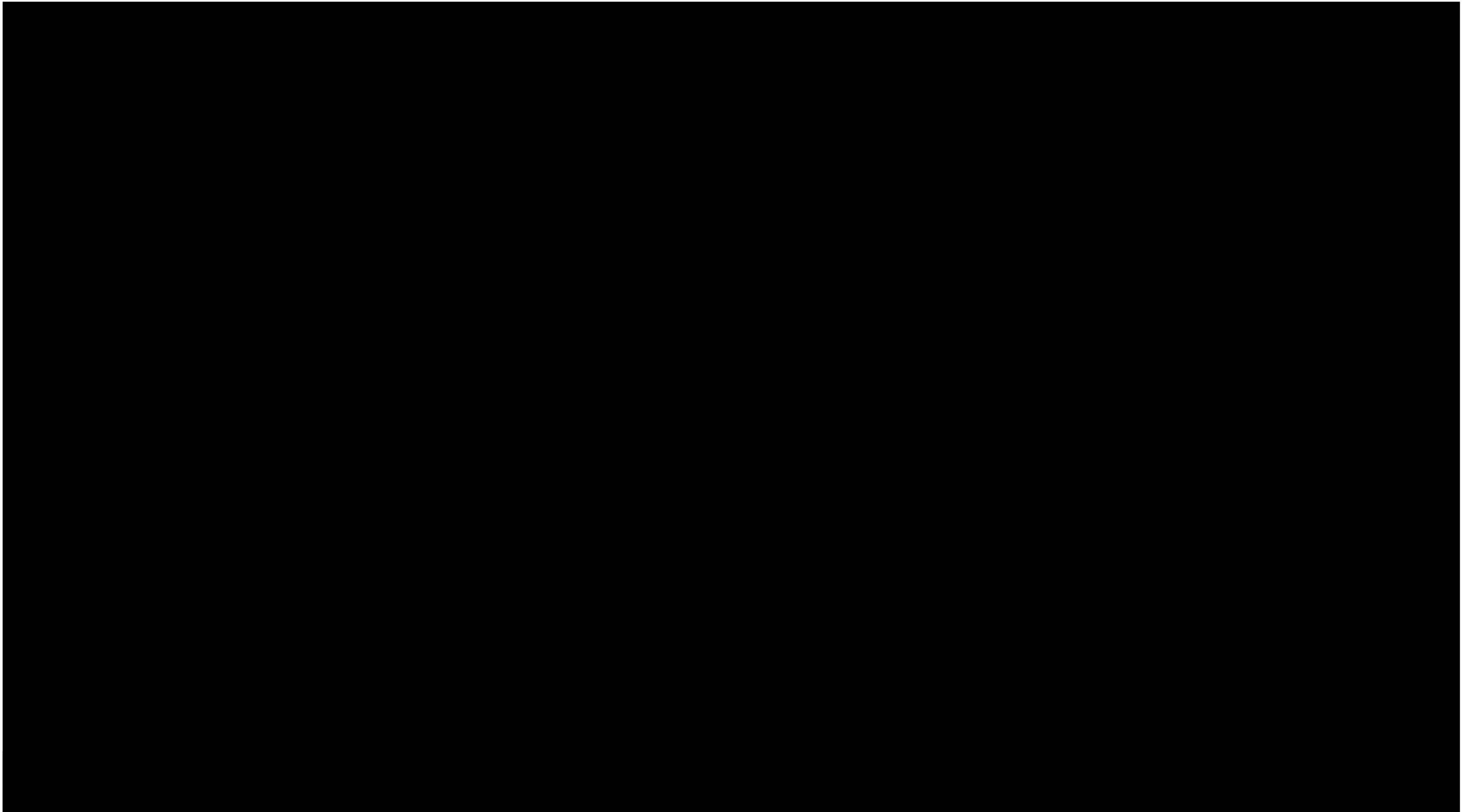
Appendix D – EAP Hazard-Specific Procedure Steps



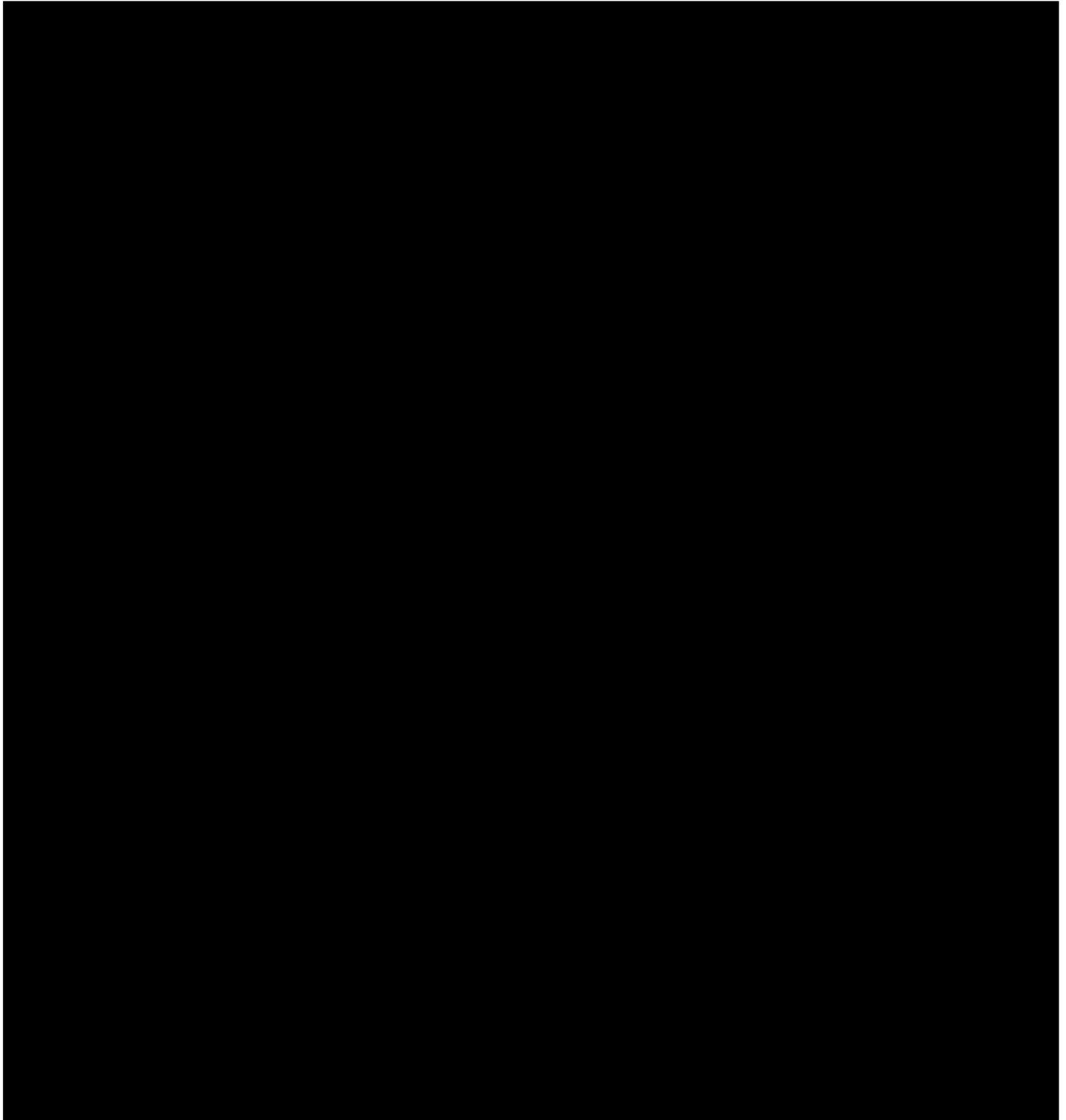


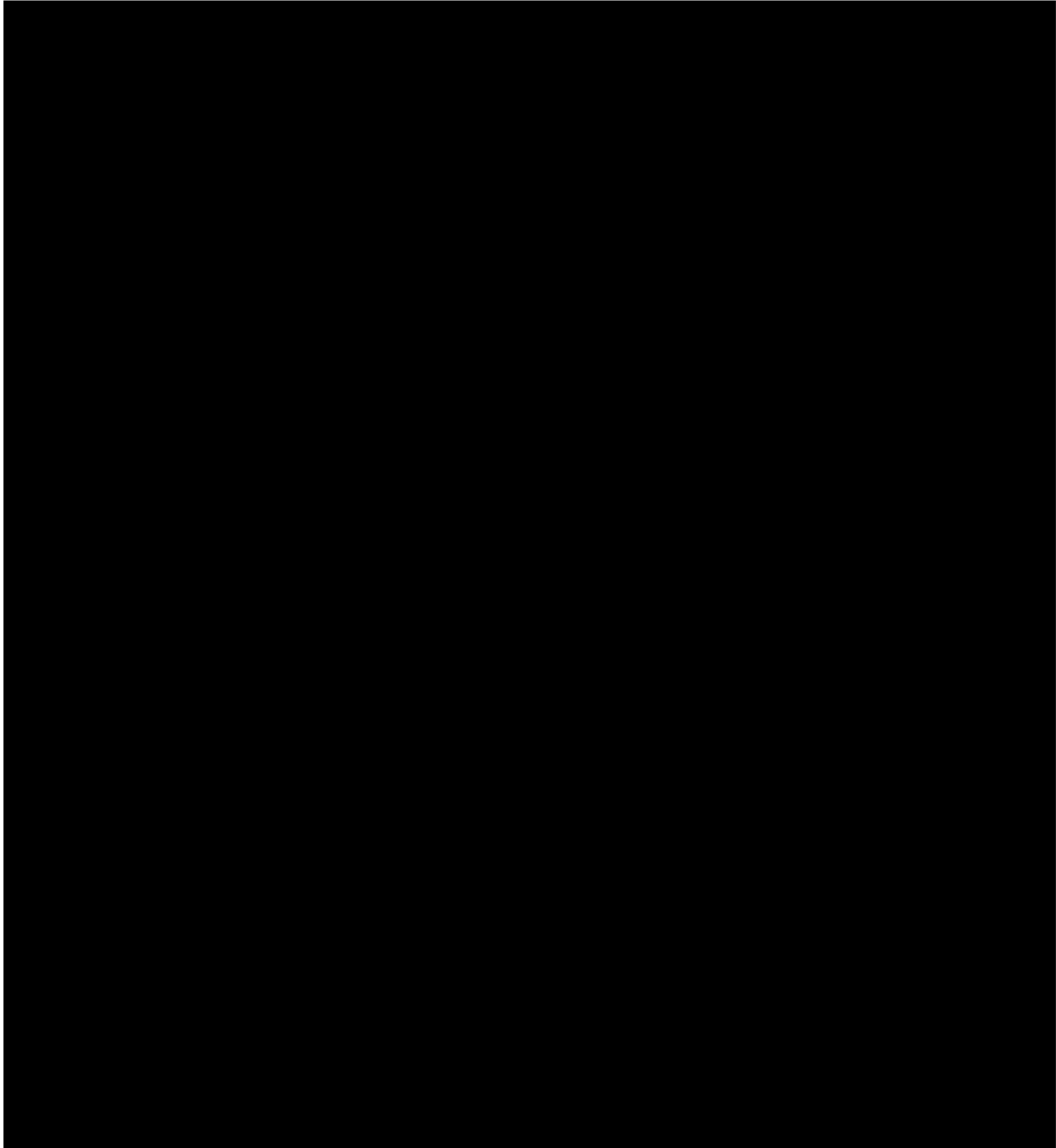
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Initial Notification Flowchart: **Physical Threat (Active Shooter or Intruder)**



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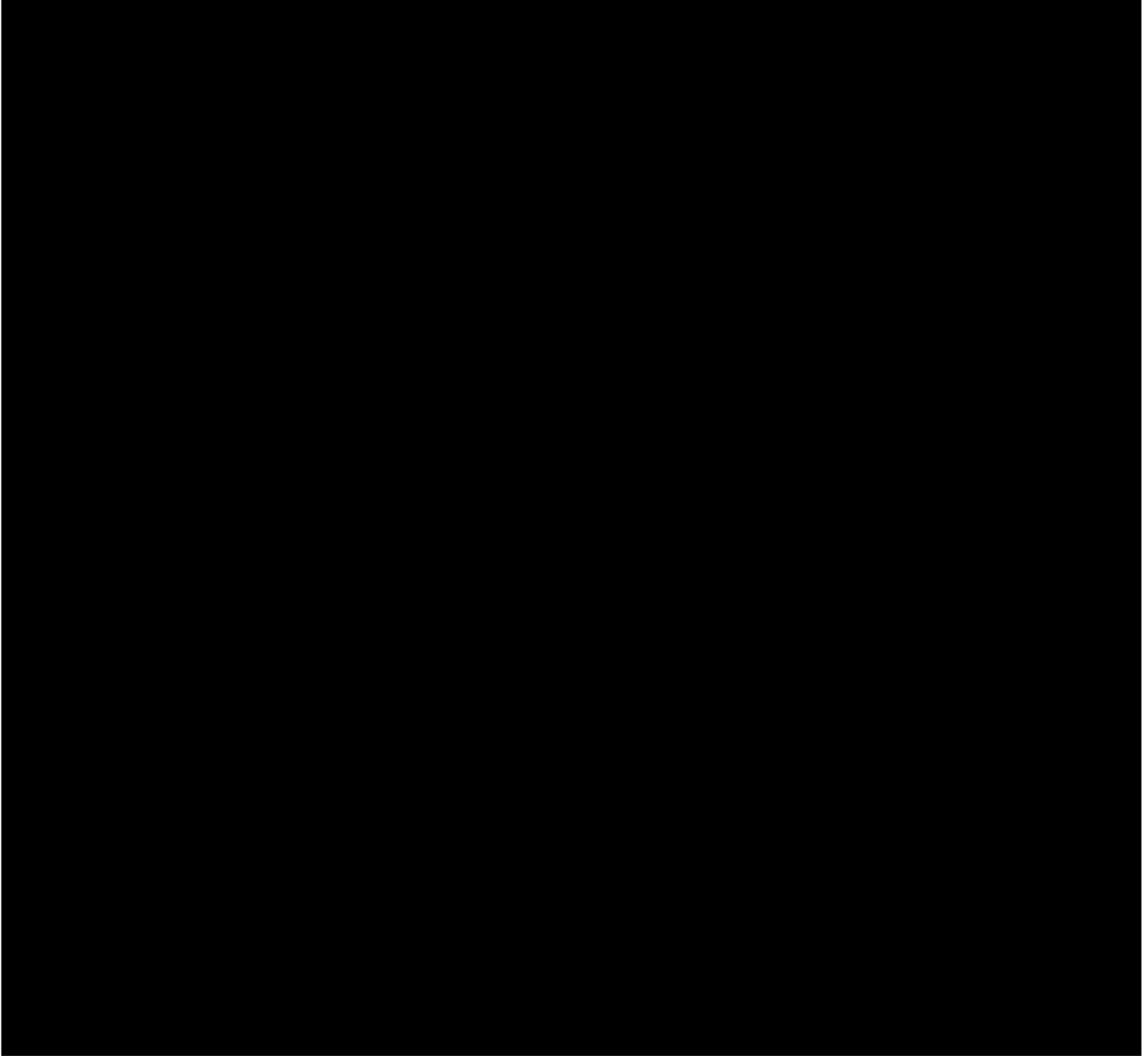




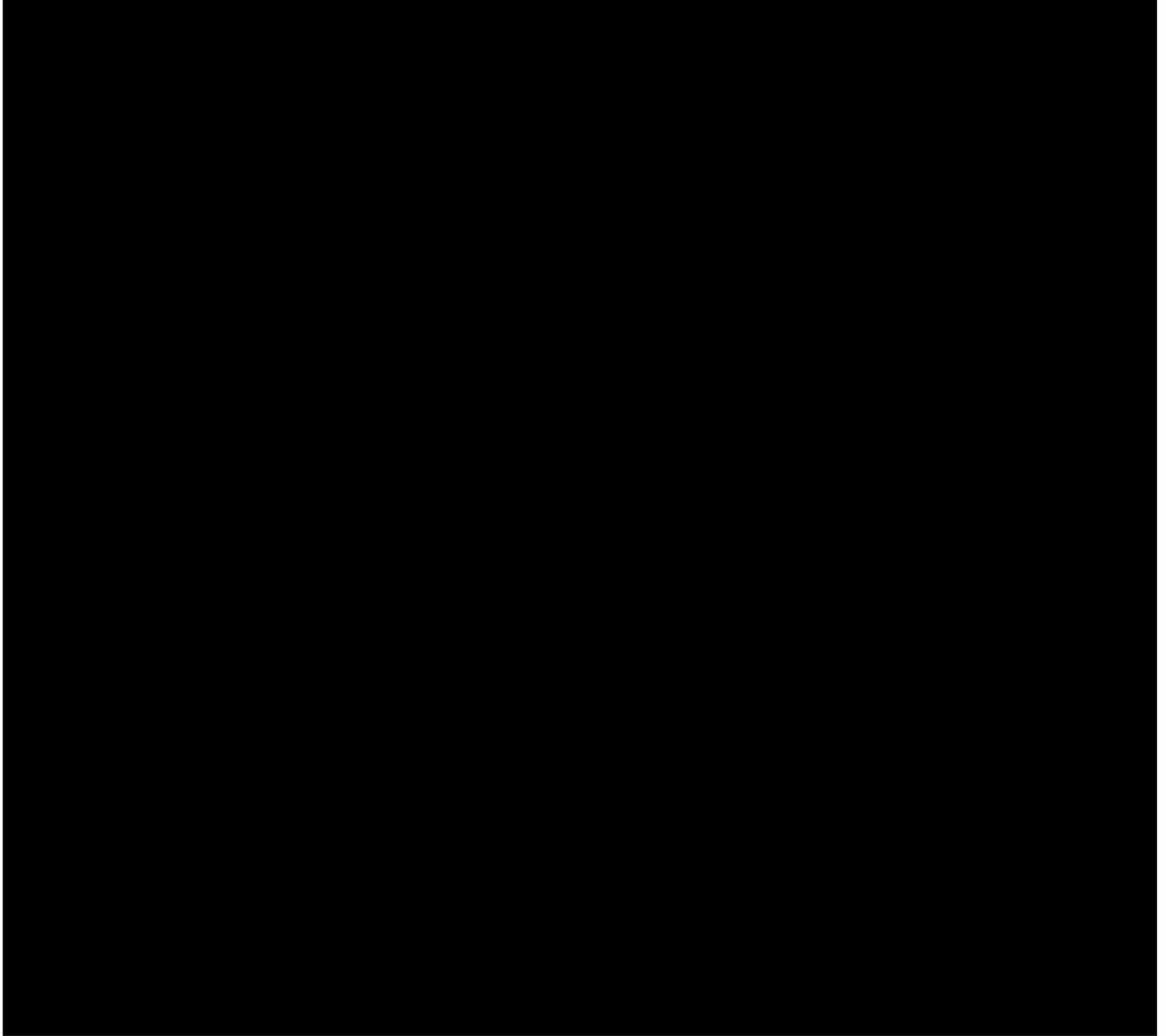
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Appendix D – EAP Hazard-Specific Procedure Steps

11 Planned Evacuation Due to External Hazards (Fire, Flood, etc.)



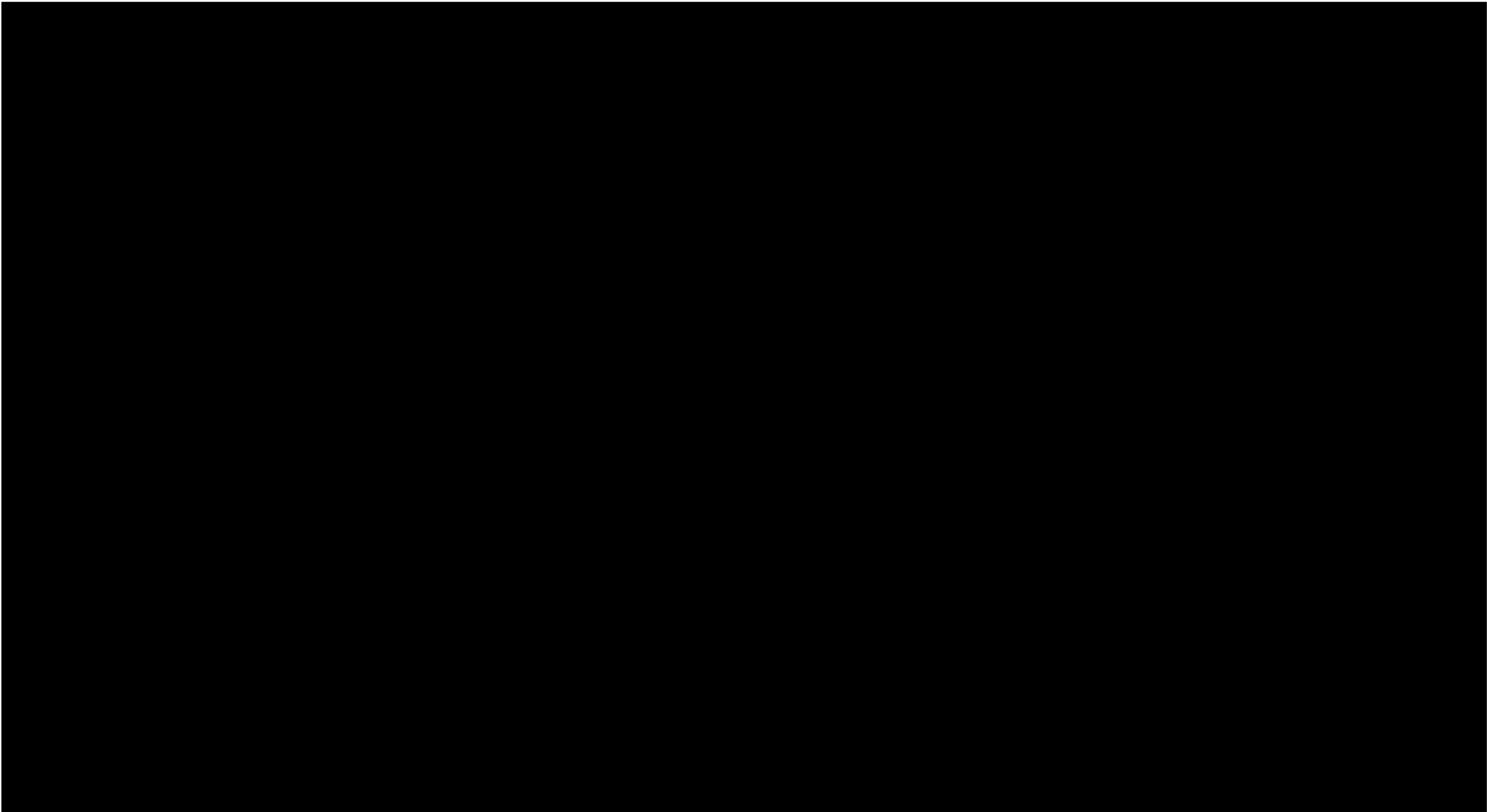
Appendix D – EAP Hazard-Specific Procedure Steps



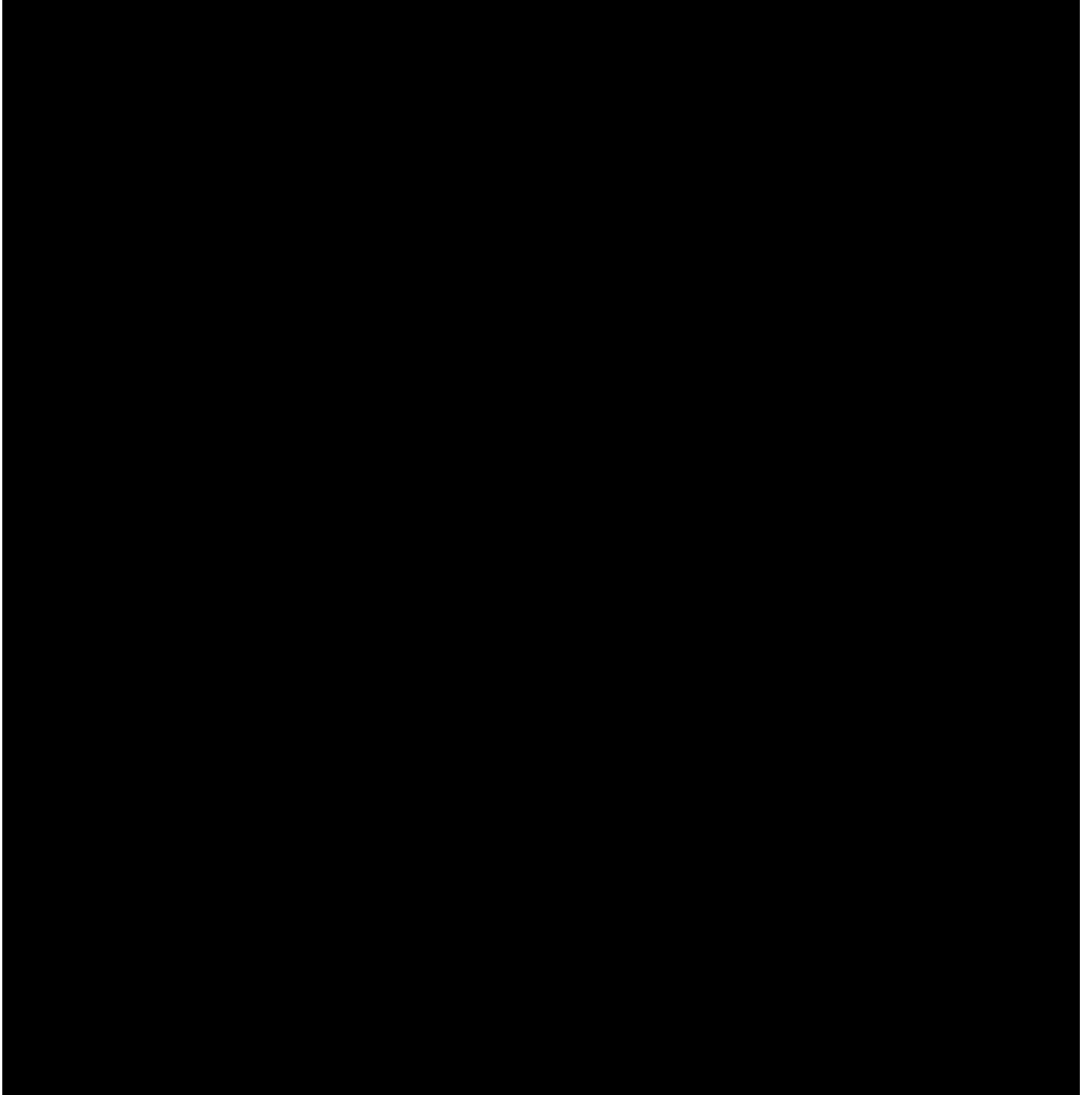


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Initial Notification Flowchart: **Planned Evacuation Due to External Hazards (Fire, Flood, etc.)**



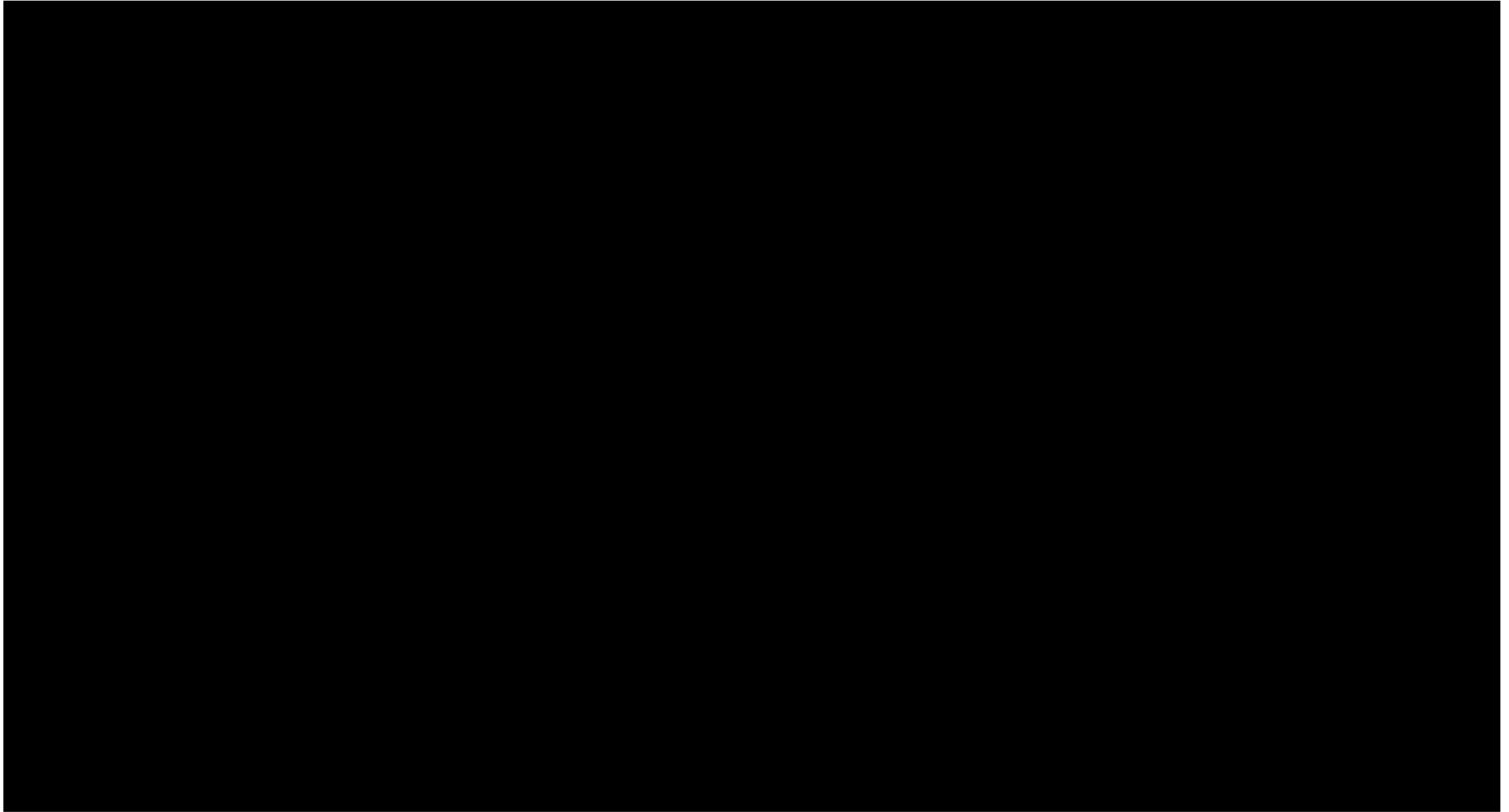
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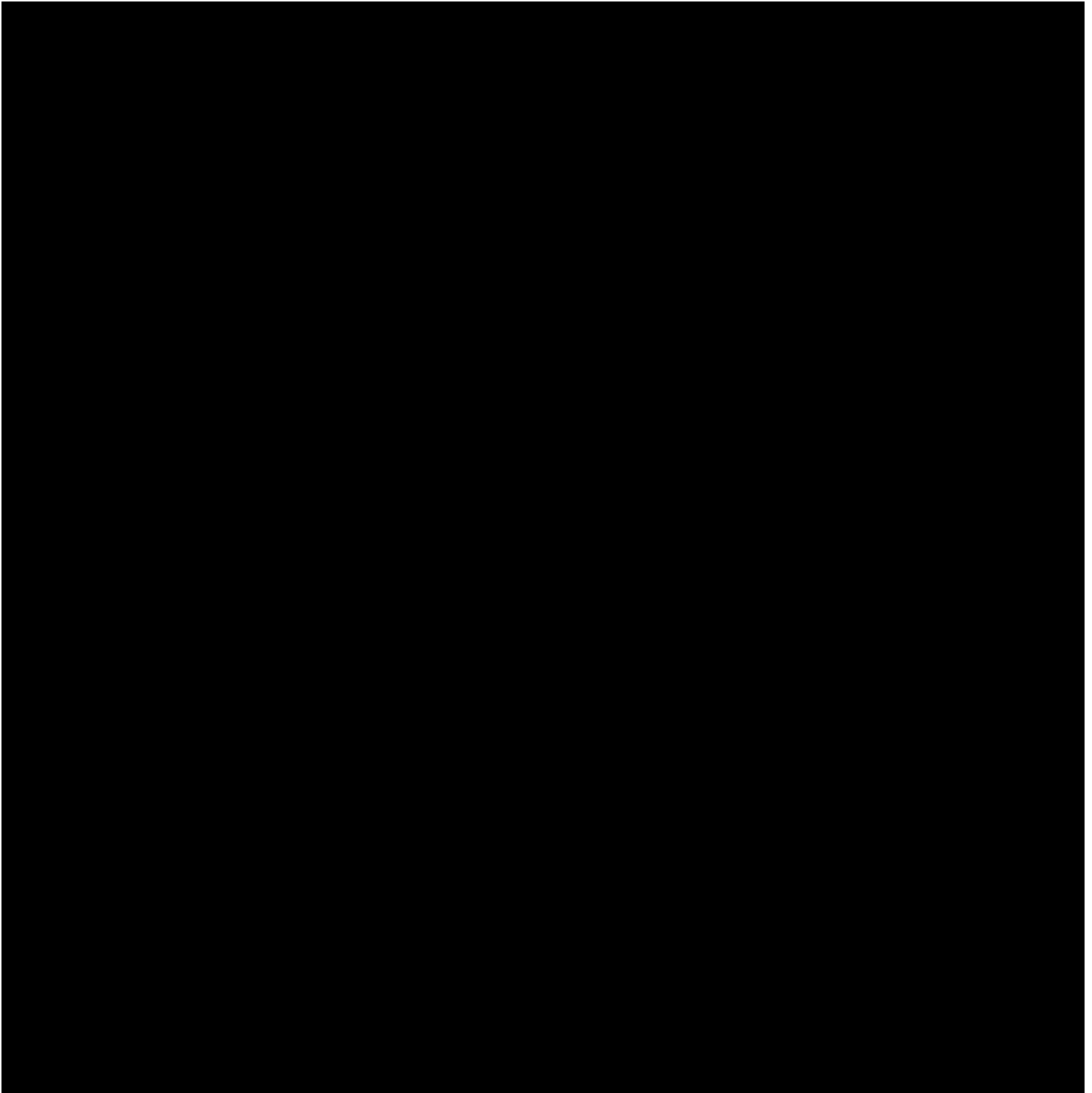


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Appendix D – EAP Hazard-Specific Procedure Steps

12 Tsunami Alert

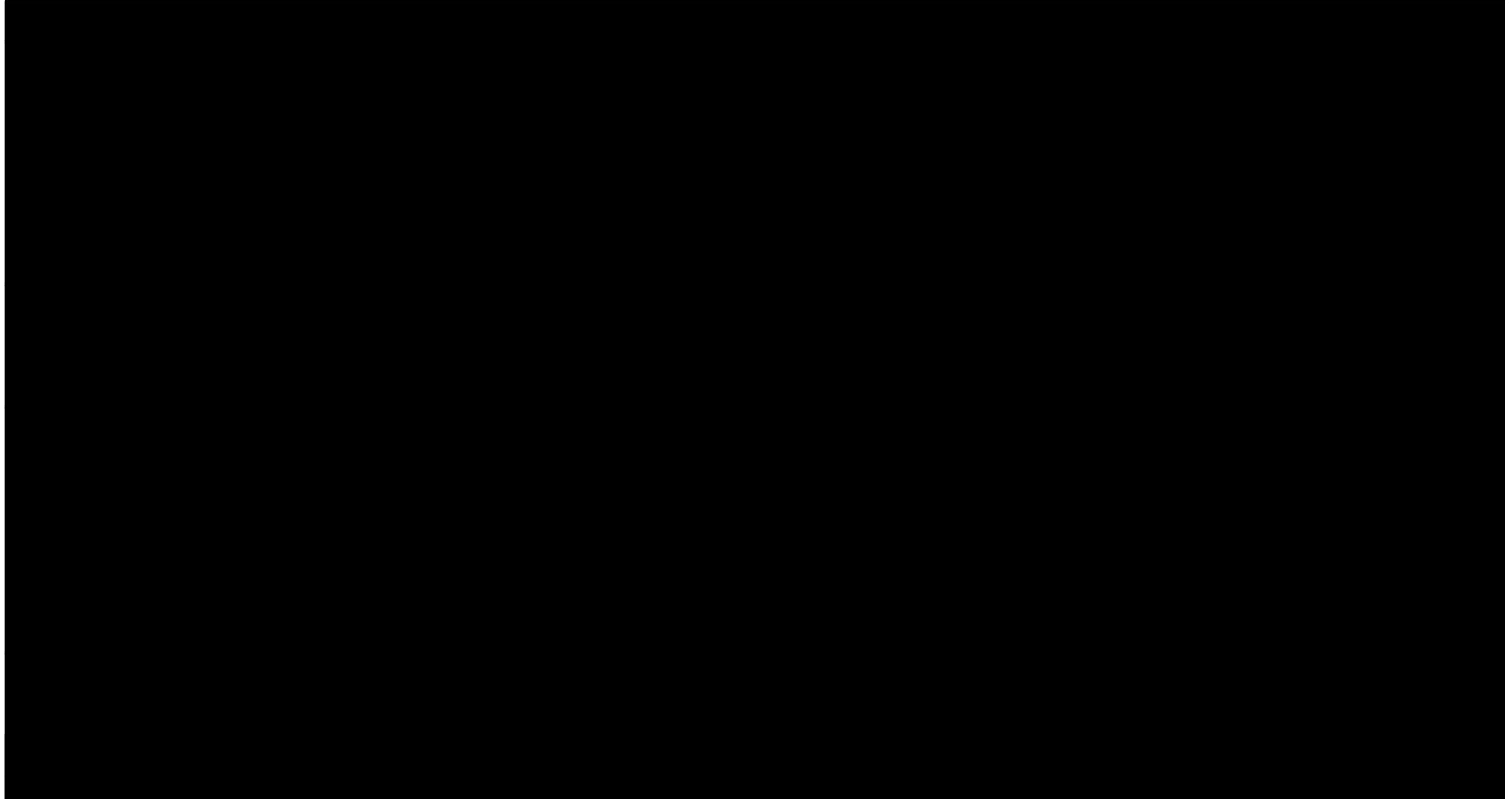




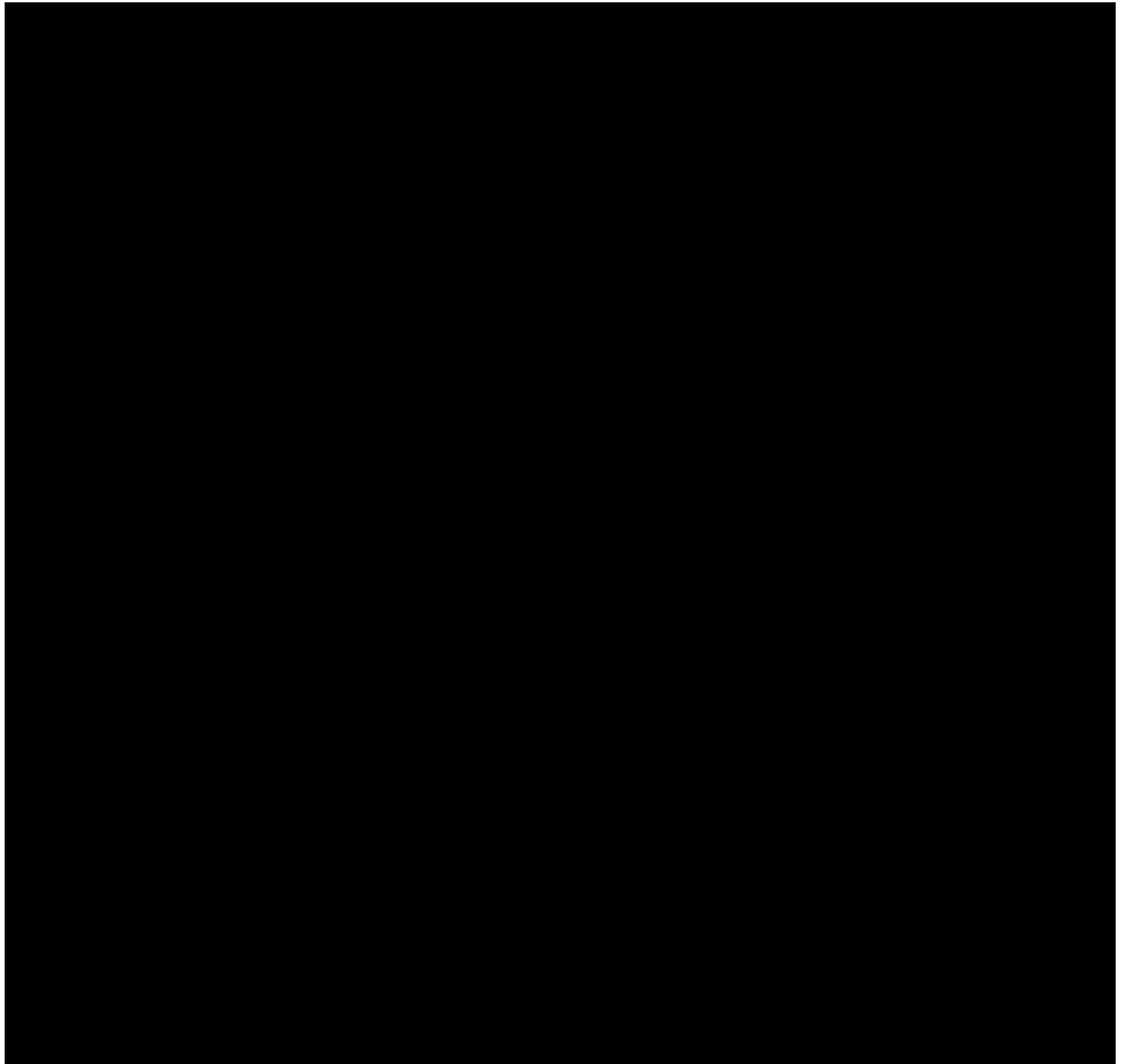


Pacific Gas & Electric Company

Initial Notification Flowchart: **Tsunami Alert**



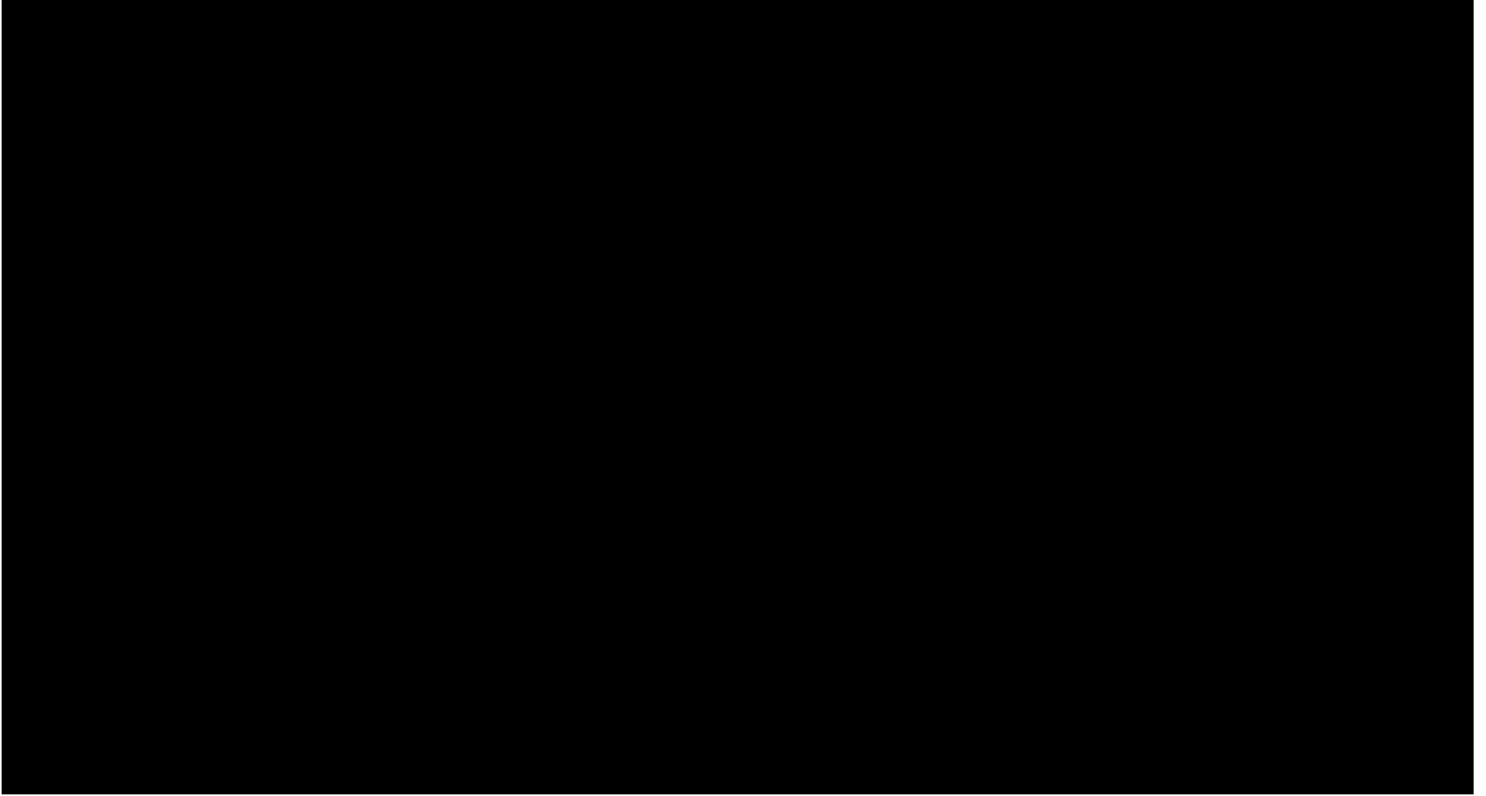
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Appendix D – EAP Hazard-Specific Procedure Steps

13 Station Power Loss

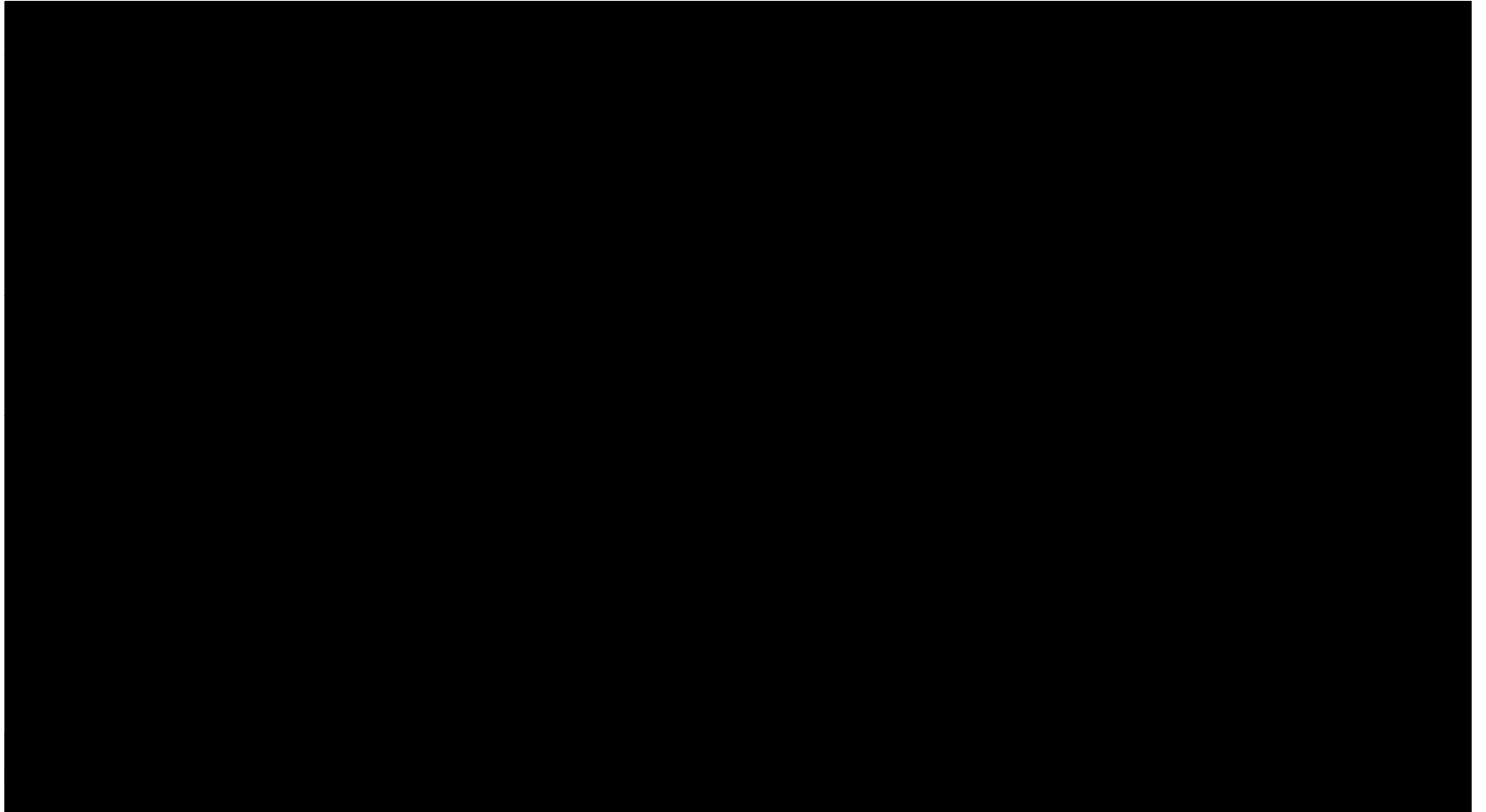


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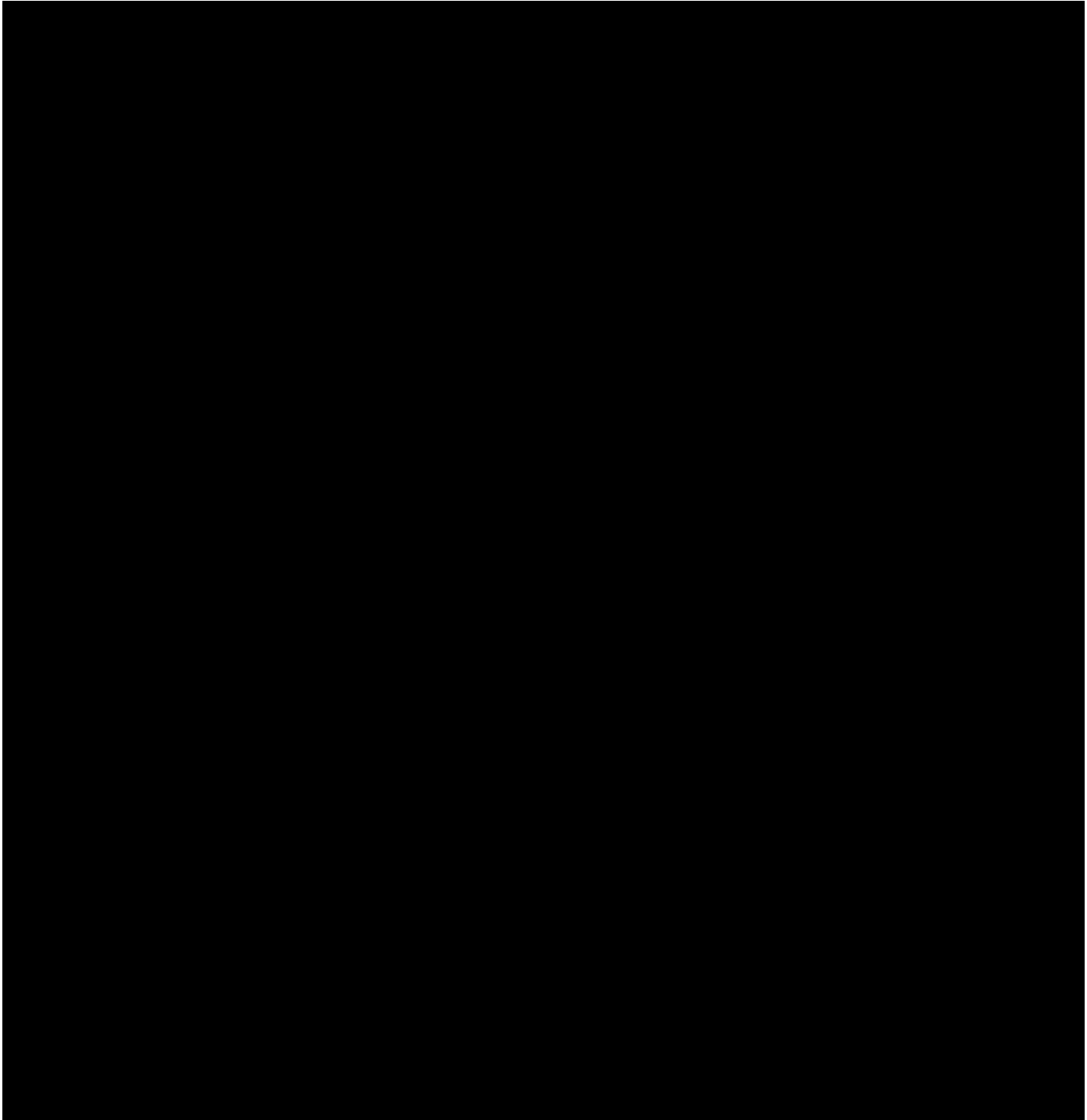


Pacific Gas & Electric Company

Initial Notification Flowchart: **Station Power Loss**



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Appendix E – PRE-FIRE PLAN

Pacific Gas and Electric Company (PG&E)

PRE-FIRE PLAN

7251 Hwy 1, Moss Landing, CA 95039

Access via 36.801556, -121.772371; 383 Dolan Rd (marked as MLPP Gate 1 or 2)


There are two physical copies stored on site (Front gate & BESS Incident Command Center Building). The document will be reviewed annually to incorporate any necessary changes.



Approved by:

This plan has been developed to assist the local emergency responders with important safety and emergency response information concerning the Elkhorn Energy Storage facility. This document is to be used in conjunction with the Substation Pre-Fire Plan.

This document and supporting drawings should be consulted prior to any fire service personnel entering the site.

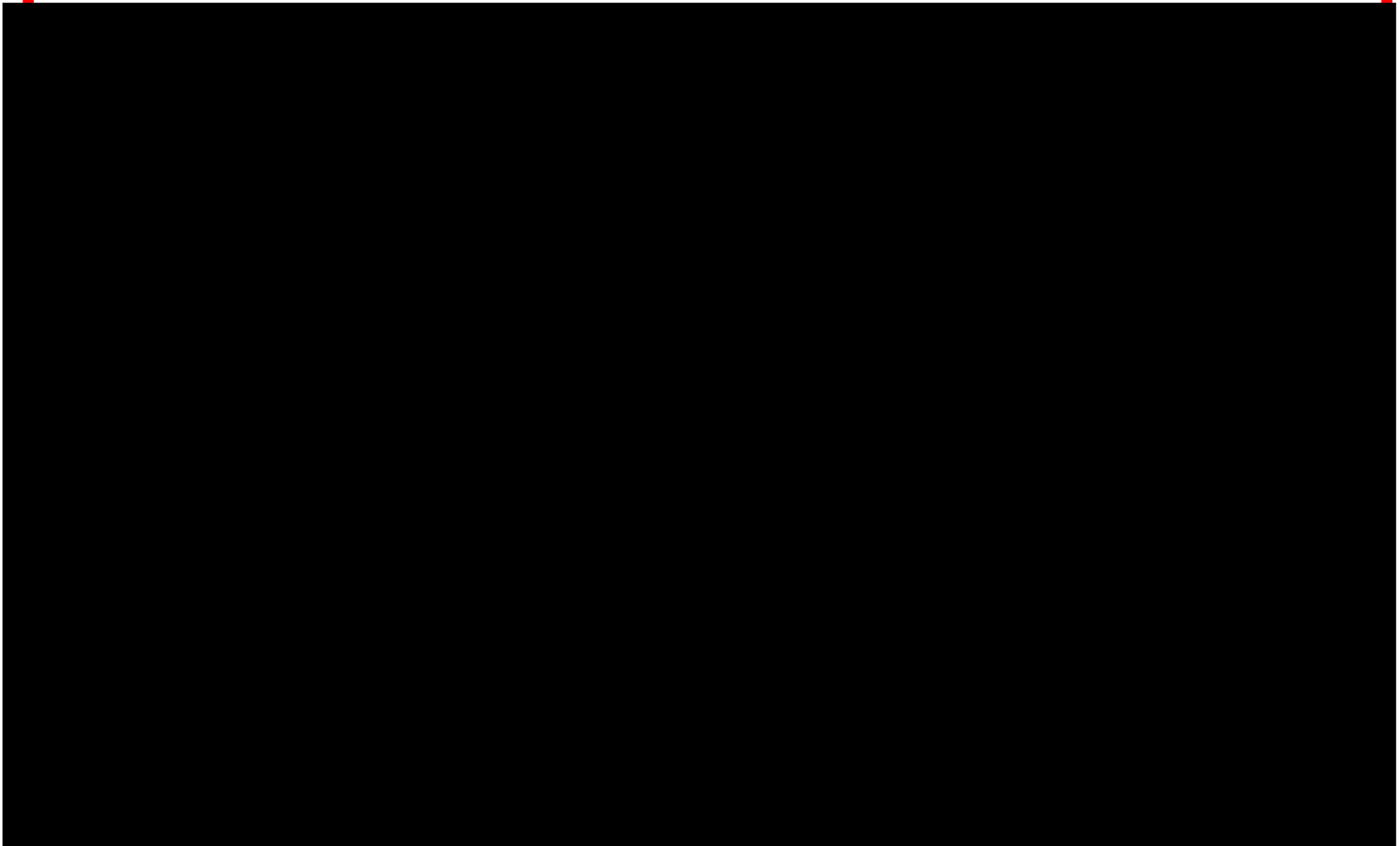

Director, Fossil & Renewables, O&M

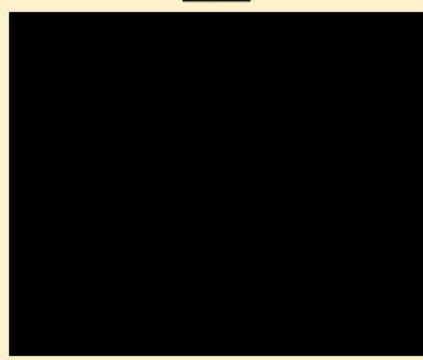
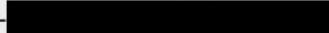


Safety Program Manager, Principal

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Site Map



Warnings/Cautions	Hazard Identification	Fire Fighting Guidance		
<p>WARNING: CONSIDER all equipment ENERGIZED until CONFIRMED – DE-ENERGIZED and GROUNDED by QUALIFIED PG&E personnel. Adjacent electrical equipment not involved in a fire may still be energized during an event.</p> <p>WARNING: Batteries cannot be entirely de-energized and may contain charge after site is de-energized or equipment is damaged.</p> <p>Firefighter Personal Protective Equipment (PPE): If fire/smoke/gas or unknown conditions are present, firefighters should wear Self-Contained Breathing Apparatus (SCBA) and fire protective turnout gear.</p> <p>WARNING: Do not come into contact with venting gas or smoke without appropriate PPE. Venting electrolyte can be extremely hot (>600°C).</p> <p>WARNING: Do not open any doors, cut into, or touch the damaged unit unless PG&E personnel advise that it is safe to do so.</p> <p>CAUTION: A battery fire may continue for several hours and may result in multiple re-ignition events. It may take 24 hours or longer for the battery pack to cool. Water on burning unit will only delay full burn and not suppress it.</p>	<p>Megapack: Mechanical Damage – See section 6.1, page 8</p> <p>Megapack: Fire – See sections 6.2 & 6.7, pages 8 & 9 Lithium-Ion batteries are housed inside the Megapack unit.</p> <p>Megapack: Venting Electrolyte – See section 6.7, page 9 Appears as white smoke from top of megapack. Venting gases may irritate the eyes, skin, and throat. Cell vent gases are typically hot; upon exit from a cell, vent gas temperatures can exceed 600°C (1,110°F). Contact with hot gases can cause thermal burns. Venting electrolyte is flammable and may ignite on contact with a competent ignition source such as an open flame, spark, or a sufficiently heated surface.</p> <p>Megapack: Leaking Electrolyte – See section 6.6, page 9 Leaked electrolyte is colorless and characterized by a sweet odor. Leaked electrolyte solution is flammable and corrosive / irritating to the eyes and skin. If an odor is obvious, evacuate or clear the surrounding area.</p> <p>Any released electrolyte liquid is likely to evaporate rapidly, leaving a white salt residue.</p> <p>If a liquid is observed that is suspected to be electrolyte, ventilate the area and avoid contact with the liquid until a positive identification can be made.</p> <p>Evaporated electrolyte gas is flammable and will contain alkyl-carbonate compounds.</p> <p>Megapack: Leaking Coolant – See section 6.4, page 9 Fluid is blue in color and does not emit a strong odor. No immediate contact hazard. See Safety Data Sheet (SDS) for additional guidance.</p> <p>Transformer: Mechanical Damage – See section 5.4, page 8</p> <p>Transformer: Fire – See section 5.2 or 5.3, page 8</p>	<p>Megapack Fire Contact Tesla Energy Technical Support: North America Hotline (24/7) 1-830-681-6060 Employ a defensive firefighting strategy only. No water on burning Megapack. Allow the affected unit to consume itself as designed. Applying water to the burning unit will only slow its eventual combustion. Firefighters should wear SCBA and structural firefighting turnouts when in close proximity to burning Megapack(s), or within plume travel path. At the discretion of the Incident Commander (IC), apply water to neighboring exposures: Primary focus for water application: Radiant heat or fire impacting nearby transformers, buildings, and/or foliage. Note: For adjacent Megapacks, water may not provide significant cooling or protective benefit. (See Sec 6.2 for additional guidance) Use a wide-fog stream, at lowest volume possible, to achieve desired cooling.</p> <p>Transformer Fire No water unless Incident Commander (IC) deems desired.</p> <p>Switchgear Enclosure Fire No water inside enclosures at any time. Exterior cooling should use fog pattern only, if advised by IC. Sealed Lead Acid battery room in Switchgear Building 1 Switchgear enclosures have NOVEC 1230 fire suppression in all rooms. Do not open any doors to enclosures without full PPE and SCBA gear.</p>	<p>Access</p> 	<p>Equipment on Site (see Map 1, page 3)</p> <p>Two (2) Hydrants 500 GPM max each at NE & SE of battery field.</p> <p>Two (2) storage containers, located in the NE and SE of the battery field. Each equipped with one (1) portable monitor cart, equipped with a fog nozzle (rated 170 gpm @ 100 psi), and 800' of 2 1/2" hose. No key required.</p> <p>Site Drainage see Section 8.8, page 20</p> <p>Pond 4 – </p> <p>Pond 3 – </p>

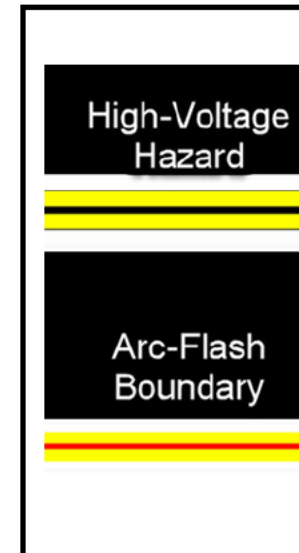
Fire Fighter Quick Reference Guide

BATTERY ENERGY STORAGE SYSTEMS (BESS) EMERGENCIES

QUICK REFERENCE GUIDE

Upon Arrival

1. **IDENTIFY** PG&E substation qualified escort to enter the substation.
2. **LOCATE** the PG&E Incident Commander, hazards, location of scene, this Pre-Fire Plan, and SDS documentation.
3. **PROCEED** with the escort to BESS Incident Command Center Building inside the substation.
4. **COORDINATE** with PG&E Incident Commander to determine location of involved equipment and action plan.
5. **WATCHOUT** for high voltage & other hazards that may develop. Remain on roadways wherever possible.



IDENTIFY, LOCATE, PROCEED & COORDINATE

WATCH OUT

Warning and Cautions

CONSIDER all equipment ENERGIZED until CONFIRMED – DE-ENERGIZED and GROUNDED by QUALIFIED PG&E personnel. Adjacent electrical equipment not involved in a fire may still be energized during an event.

- In all cases, determine de-energization requirements and status with PG&E Incident Commander (IC). Coordinate response activities.
- Evacuate the area of all non-emergency personnel.
- Be prepared to assist with any injuries or personnel who remain at assembly point, aid in evacuation if necessary.
- If not already done, contact Tesla Energy Technical Support for assistance:
 - North America Hotline [REDACTED]
- Safety Data Sheets (SDS) can provide important information regarding battery chemistry. Obtain Tesla Megapack SDS from IC Building.
- Some exposed electrical components, wires, and batteries present potential shock hazards even if the equipment is de-energized.
- Do not open any doors, cut into, or touch the damaged equipment unless PG&E personnel advise that it is safe to do so.
- A battery fire may continue for several hours and may result in multiple re-ignition events. It may take 24 hours or longer for the battery pack to cool. Water on burning unit will only delay full burn and not suppress it. After initial burn, coordinate with PG&E Incident Commander on determining fire watch strategy.

At the IC Building:

- Confirm the location and extent of the fire [REDACTED]
- Monitor the battery module temperature of the Megapacks in close proximity to the burning Megapack:
 - Log the temperature. Recheck every 10 minutes. Consult Tesla if temperature increases more than 5 degrees Celsius (9 degrees F).
- Establish a water source.
- Collect and deploy un-manned nozzle monitors as needed, per direction of the IC.
- Fog pattern to be used defensively to cool exposures, not directly on burning unit.
- Allow the affected unit(s) to consume itself over a period of hours.
- At the discretion of the IC, apply water to neighboring exposures:
 - **Primary focus for water application:** Radiant heat or fire impacting nearby transformers, buildings, and/or foliage.
 - **Note:** for adjacent Megapacks, water may not provide significant cooling or protective benefit. (See Section 6.2 for additional guidance).
- Continue to monitor visual and thermal data until fire subsides.
- After fire subsides, monitor for visible flames until PG&E determines fire watch strategy.

WARNING: There may be periods of up to [REDACTED] at a time during which the thermal runaway propagates from battery modules to battery modules within the single Megapack. During such time, the battery may not generate visible signs of thermal event although the event can still be active and the battery can flare up.

BATTERY ENERGY STORAGE SYSTEMS (BESS) EMERGENCIES

QUICK REFERENCE GUIDE

Fires			Spills
Battery/Transformer	Switchgear Enclosures	Other	Electrolyte / Refrigerant Coolant / Oil
<ul style="list-style-type: none"> • Confirm appropriate de-energization • Collect and deploy un-manned nozzle monitors as needed. • Fog pattern may be used defensively to cool exposures, not directly on burning unit. • After fire subsides, monitor for re-ignition until PG&E determines fire watch strategy. 	<ul style="list-style-type: none"> • Ensure no personnel still inside enclosure • Confirm appropriate de-energization. • No water on or in switchgear enclosures. Allow to burn out. • Switchgear enclosures are protected by [REDACTED] fire suppression system. 	<ul style="list-style-type: none"> • Vehicle fires can be handled normally while keeping in mind neighboring equipment (Check for downed wires) • Review nearby equipment with PG&E Incident Commander and determine de-energization required • Outbuildings should be reviewed with [REDACTED] IC for hazards. 	<ul style="list-style-type: none"> • Identify spill. • Spill may not be visible if batteries are mounted inside a cabinet • Check Safety Data Sheet (SDS) for specific hazards and mitigation information • Wearing PPE with a Self-Contained Breathing Apparatus (SCBA), contain the spill (ensure compatibility with spilled product) • Neutralize & absorb corrosive liquids (only by qualified personnel) • Decontaminate PPE • Turn over incident to a qualified, responsible party for additional monitoring

General Substation Hazards

Cable Insulation Burn Characteristics

Cable insulation should be treated as a deep-seated fire. Water should only be applied when the circuit has been certified de-energized and grounded by PG&E.

Combustible cable insulation will produce dense, black smoke. **WEAR SCBA.**

Water Suppression Electrical Hazard

The recommended minimum distances for the use of water fog/spray under normal circumstances should be maintained at 33 ft. (10 m.). Water must never be discharged in the form of a straight stream. Fog or water spray at minimum of 30 ° setting with a minimum pressure of 100 psi at the nozzle

Note: Absolute limits of approach in relation to fire-fighting operations and the use fog spray on energized equipment under direction of the onsite qualified PG&E personnel are:

Line-Line Voltage Minimum Distance

- 0 - 750 Volts 5 Feet (1.5 meters)
- 751 - 15000 Volts 10 Feet (3.0 meters)
- 15000 - 230000 Volts 15 Feet (4.6 meters)
- 230000 - 500000 Volts 25 Feet (8 meters)

DC POWER – Station Batteries and Protective Relaying

The station contains [REDACTED] circuits. Although specific [REDACTED] equipment and circuits may be de-energized, [REDACTED] power can still be present and represents a significant electrical shock hazard. Care should be used when working with any equipment within the station. All components must be considered ENERGIZED unless it has been DE-ENERGIZED AND GROUNDED.

Explosion Potential

Megapacks are designed to burn without risk of explosion and to contain and direct smoke/flame through vents at the top of each bay so long as the doors remain closed and the exterior shell is not compromised. As result, the explosion potential is considered very low.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Oil Hazard

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Envirotemp FR3 Fluid

FR3 Fluid is a bio-based natural ester dielectric coolant as an alternative to mineral oil. [REDACTED]

[REDACTED]

Mineral Oil

Combustible insulating oil is used in some transformers, circuit breakers, and capacitors. [REDACTED]

[REDACTED]

FR3 Fluid Filled Equipment Fire

[REDACTED]

Medium Voltage Transformer Fire

[REDACTED]

Station Service Transformer Fire

[REDACTED]

Mineral Oil Filled Equipment Fire

[REDACTED]

Power Transformer Fire

[REDACTED]

Instrument Transformer Fire

[REDACTED]

Transformer Mechanical Damage

[REDACTED]

Switchgear Enclosures/Buildings

[REDACTED]

Battery Related Hazards

Mechanical Damage

[REDACTED]

Megapack Fire & Smoke/Gas Hazards

Based on guidance contained in the "Tesla Battery Emergency Response Guide, [REDACTED]," Smoke or suspicious odor emanating from a Tesla Energy product can be an indication of an abnormal and hazardous condition. Battery thermal runaway fires are preceded by a period of smoke.

Unless advised by Tesla, no water is necessary to contain a Megapack fire. Tesla's recommendation is to fight a Megapack fire defensively. The fire crew should establish a water supply and position hose lines as necessary while maintaining a safe distance and allowing the battery to burn itself out. Applying water directly on the burning unit will only delay the burn and not suppress it. A battery fire may continue for several hours and may result in multiple instances of visible fire. It may take 24 hours or longer for the battery pack to cool.

A Megapack that is venting gases means that internal safety controls have failed to stop a thermal event and the battery is going into thermal runaway. [REDACTED]

A Megapack that is burning is designed to fully consume itself without causing adjacent Megapacks to increase in temperature from radiant heat exposure.

- Previous incidents and testing have demonstrated that adjacent Megapacks have not increased in temperature due to radiant heat exposure.
- Megapack battery cells and modules have significant thermal mass and therefore are resistant to radiant heat causing increases in temperature. Water applied to the exterior will have limited cooling effect for the batteries on the interior of the enclosure due to this thermal mass and the construction of the enclosure.
- Even if batteries should begin to increase in temperature in adjacent MPs, exterior water application is most likely not going to prevent a thermal runaway incident.

During open flaming of a Megapack, continue to monitor the internal temperatures of adjacent exposed Megapacks [REDACTED]

At the discretion of the Incident Commander, fire crews should utilize a fog pattern to protect neighboring exposures or to control the path of smoke.

Primary focus for water application: Radiant heat or fire impacting nearby transformers, buildings, and/or foliage.

Note: For adjacent Megapacks, water may not provide significant cooling or protective benefit. (See Sec 6.2 for additional guidance)

[REDACTED] a defensive spray while maintain a safe distance from a fire.

WARNING: AVOID DIRECT CONTACT WITH SMOKE. FULL SCBA GEAR REQUIRED FOR WORK IN PROXIMITY TO BURNING UNITS AND SMOKE.

Based on UL 9540A Full Scale Fire Testing, flames are expected to eventually come from all vents and may emanate from the front door frames. Depending on wind direction/strength, flames may extend 8-10 feet in front of the megapack.

Predominant wind direction for the Elkhorn site location is from the West however a weather station is present on site and can provide real time wind and other meteorological data. The data will be available through the Emergency Battery Information Display at the Incident Command location.

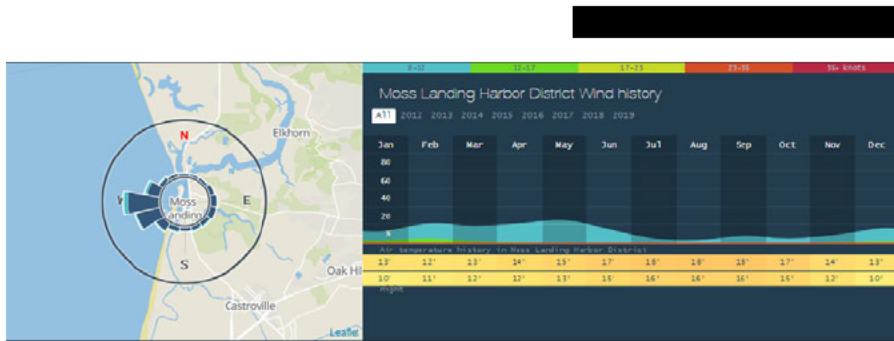


Figure 2: Historical Wind Direction & Speed (Source: <https://windy.app/forecast2/spot/1874455/Moss+Landing+Harbor+District/statistics>)

Megapack Shock Hazards

[REDACTED]

[Redacted]

[Redacted]

Leaked Coolant

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Leaked Electrolyte

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Vented Electrolyte

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Detection, Suppression, Equipment, Remote Monitoring Systems

Detection

Each Megapack provides temperature data to the remote monitoring centers where alarms are raised for any high temperature events.

[Redacted]

Suppression

No automatic suppression systems are present in the battery field.

All rooms of the Switchgear Enclosures are equipped with [Redacted] suppression.

Hydrants and Firefighting Equipment

[Redacted]

Remote Monitoring Centers

PG&E [Redacted] Operation Center [Redacted] can provide additional situational awareness about data that may be available from the site. [Redacted] will communicate with the PG&E Incident Commander any information that is necessary for response.

Emergency Battery Information Display

[Redacted] This display provides battery site data including temperature, energization status, site camera, and other data that can support response activities.

De-energization Scheme Summary

[Redacted]

However, batteries still will contain whatever charge they had when disconnected.

[Redacted]

[Redacted]

[Redacted]

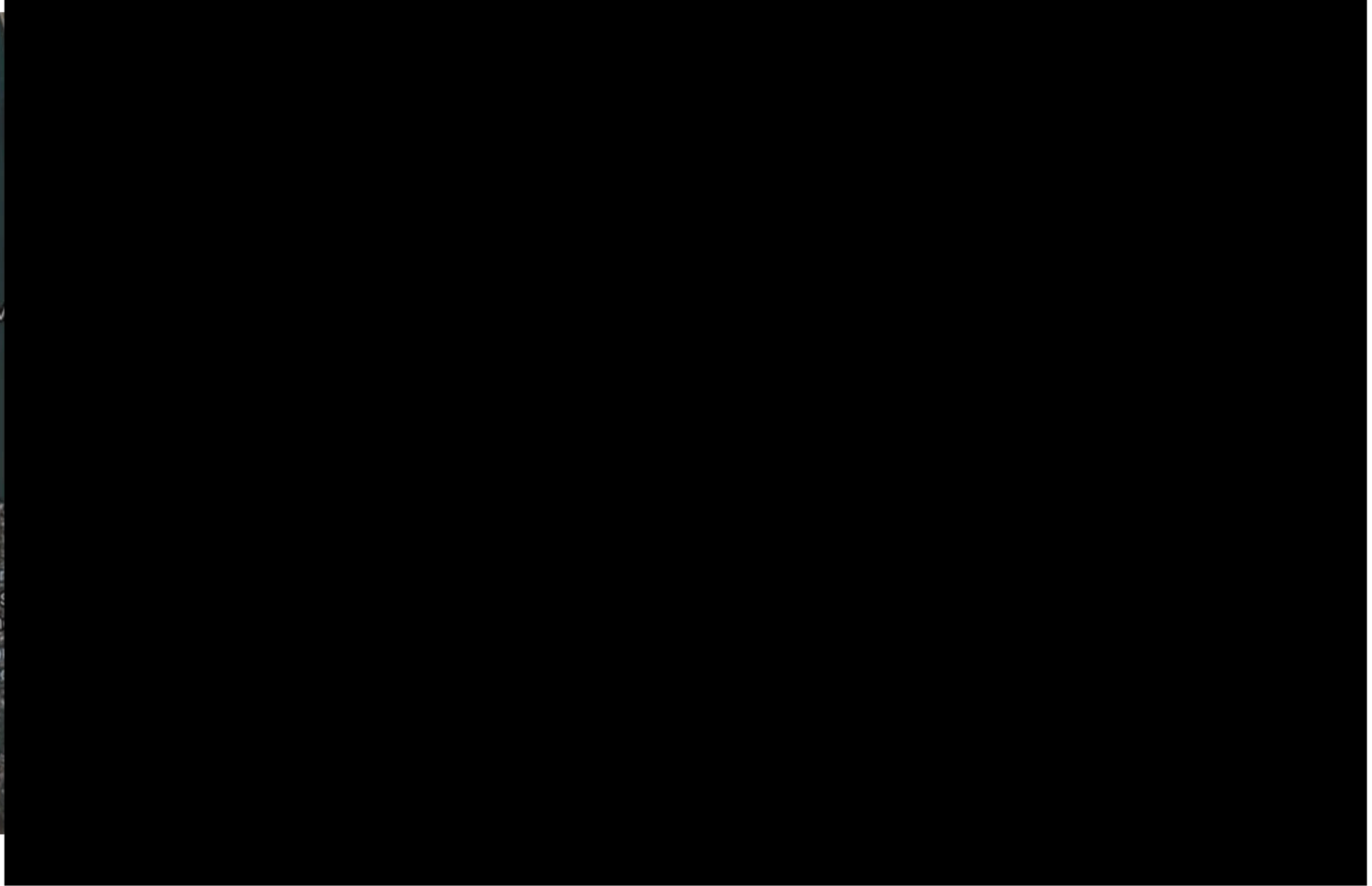
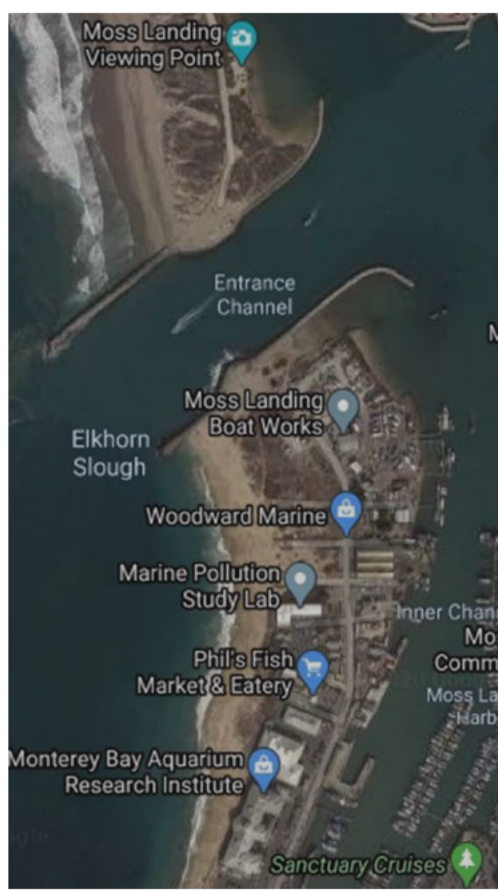
Battery Emergency Stop Button

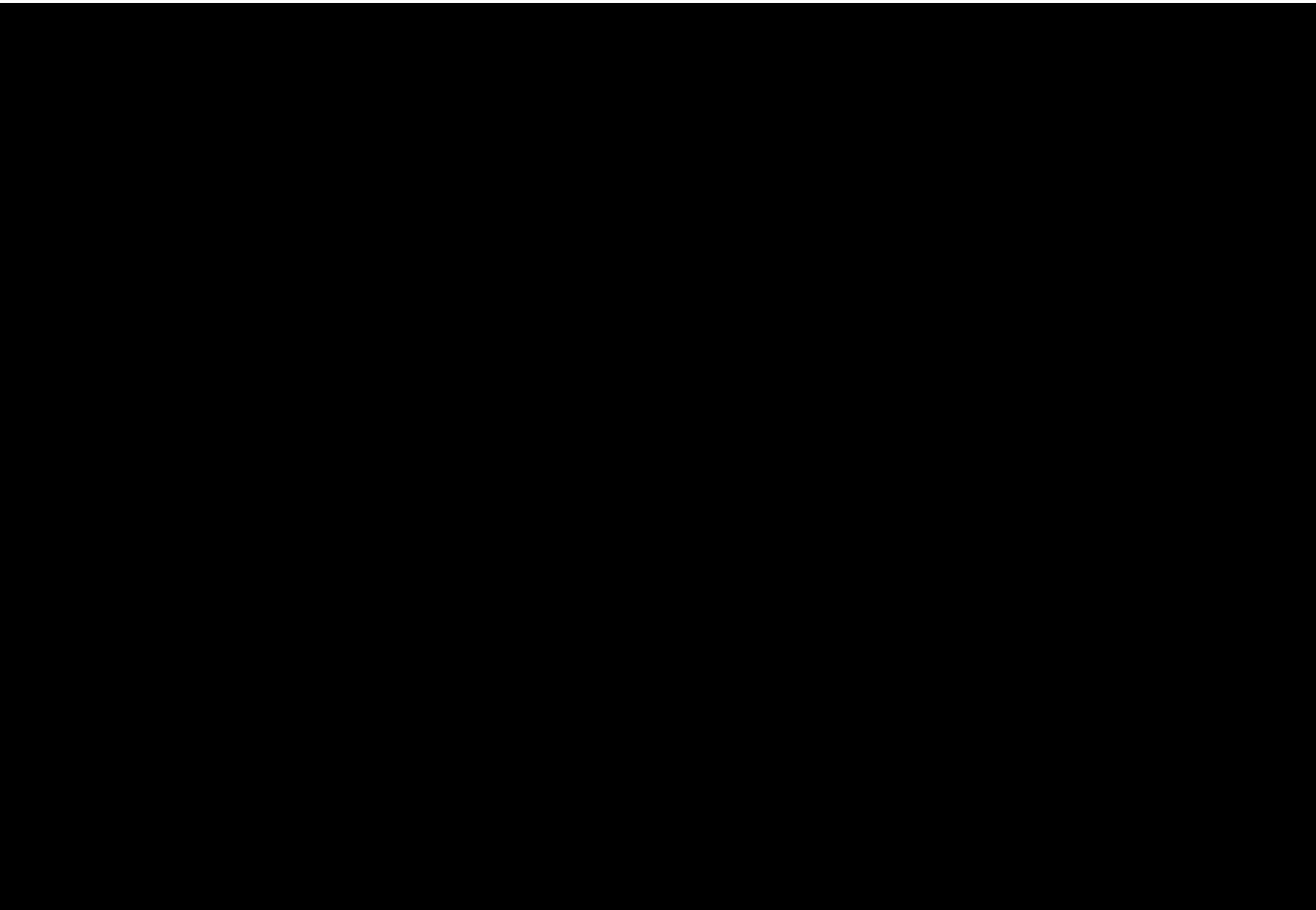
[Redacted]

[Redacted]

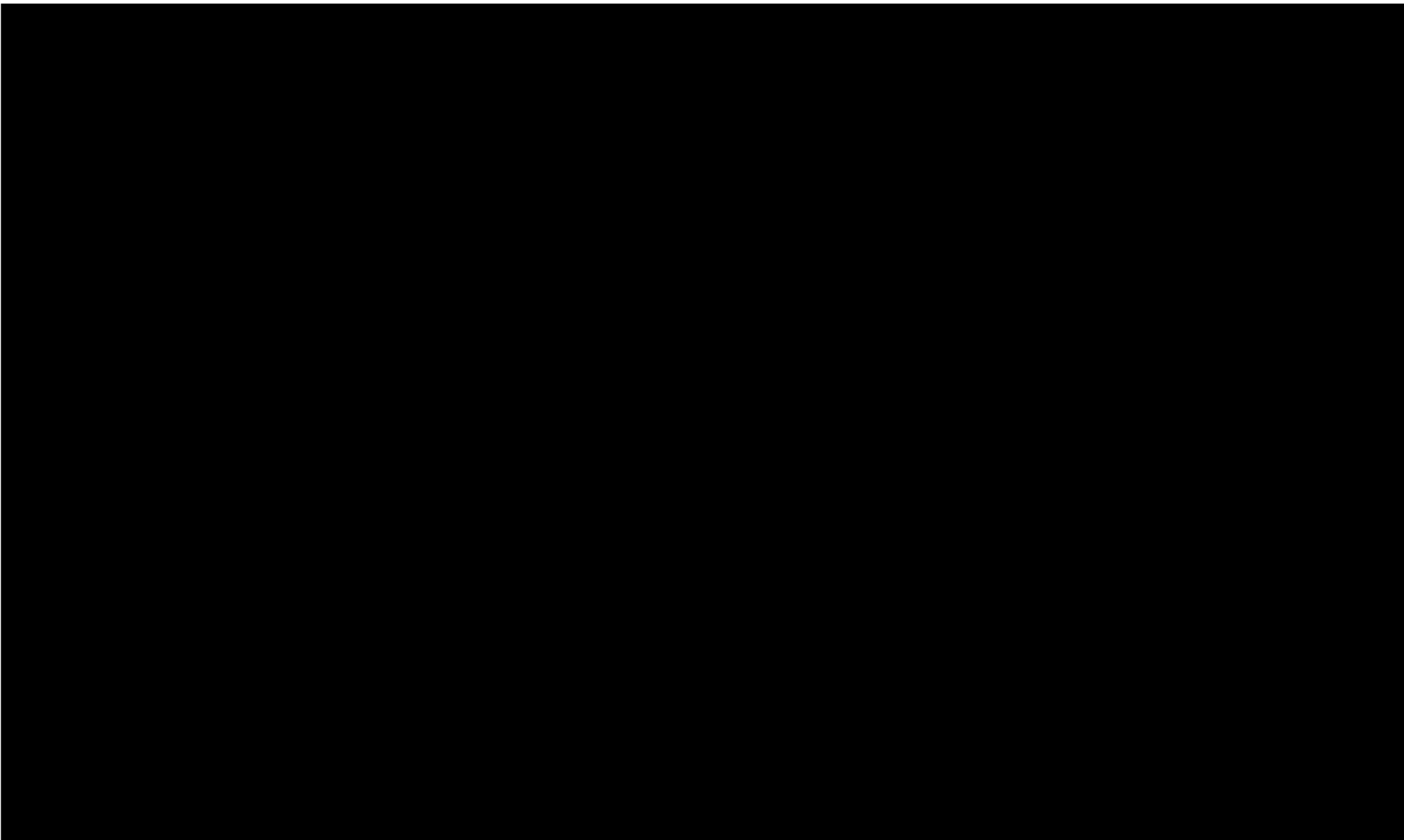
Appendix 1: Site Maps, Drawings, & Figures

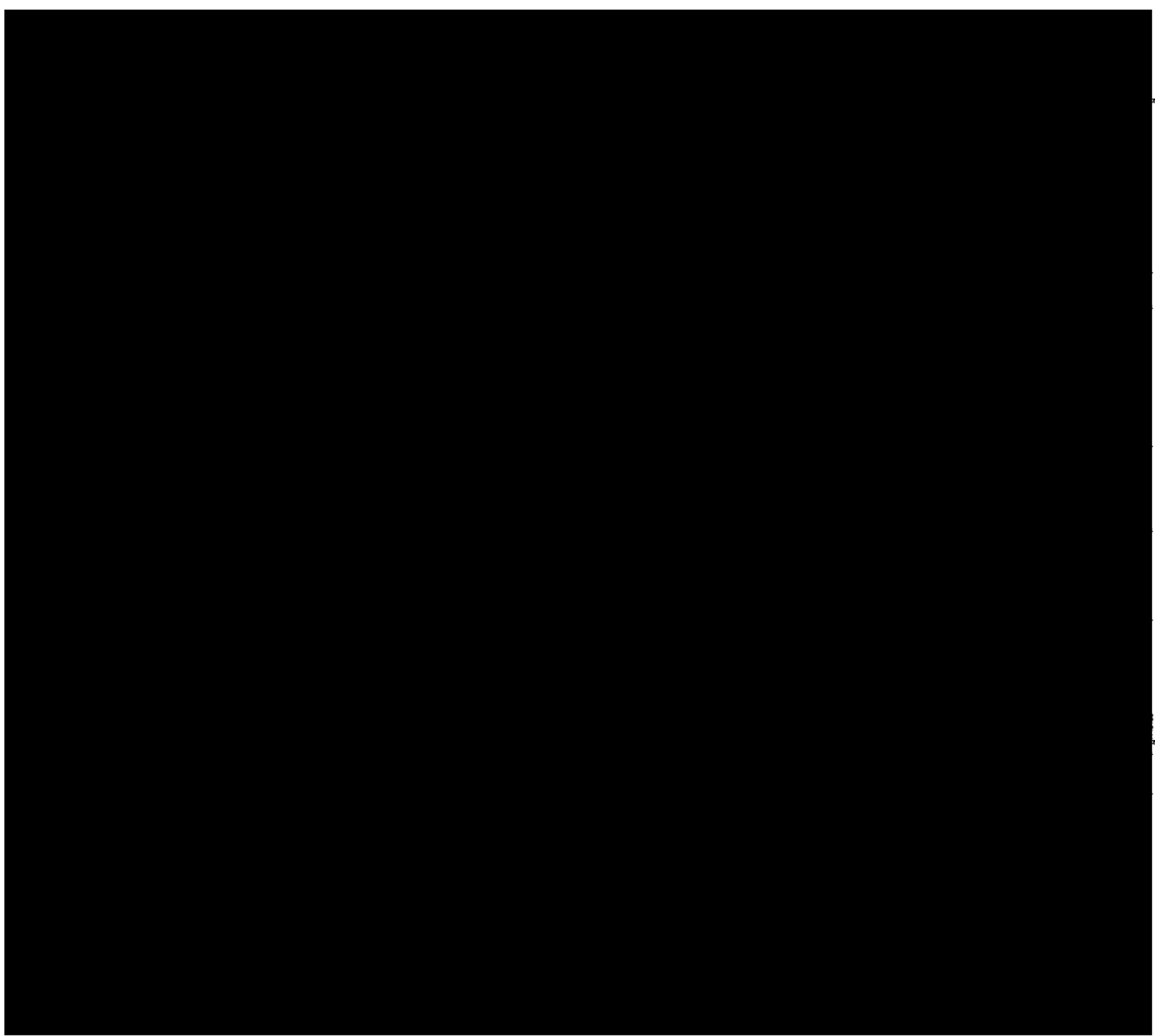
Satellite

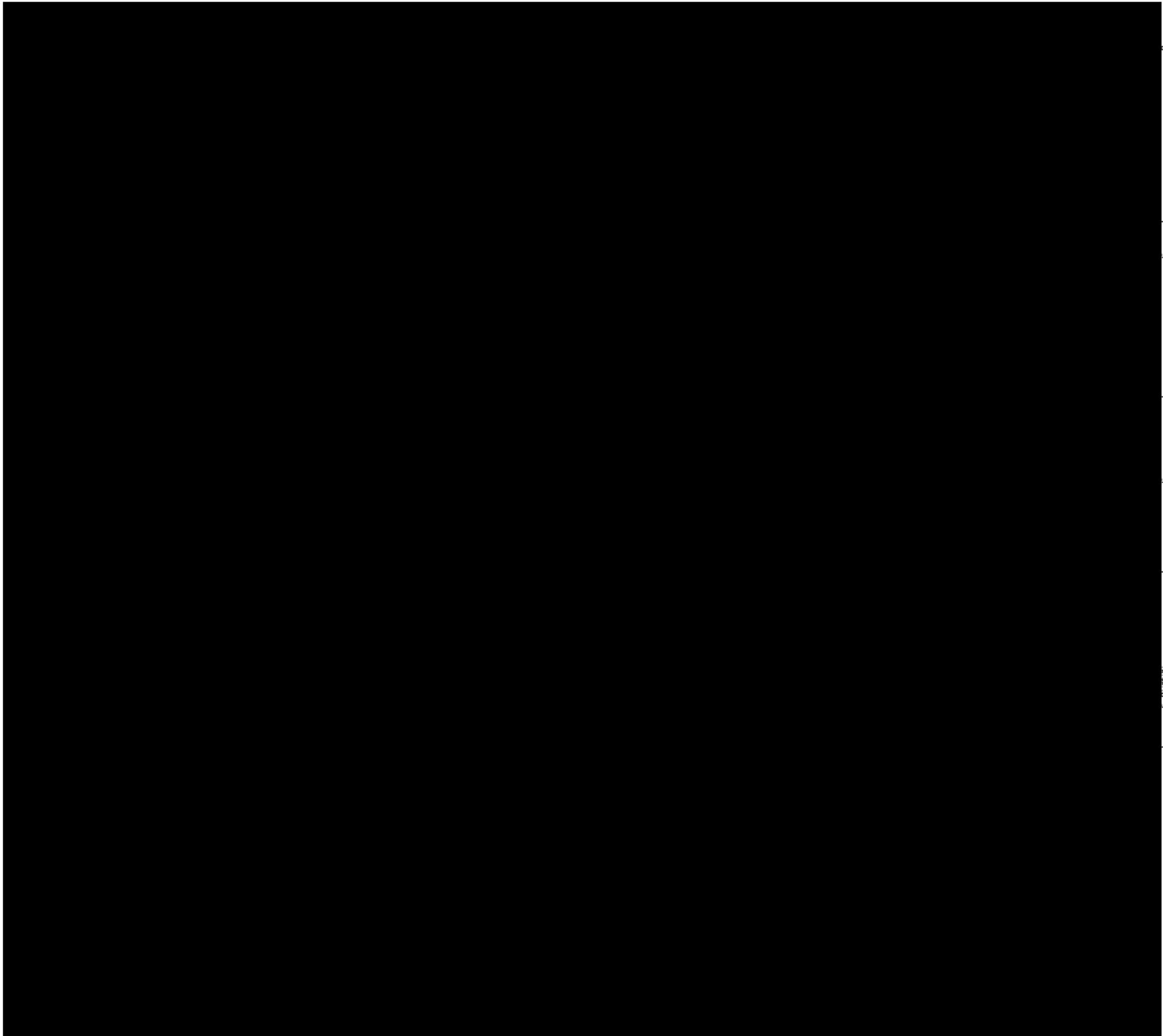




Example Flame Detector Coverage Drawing



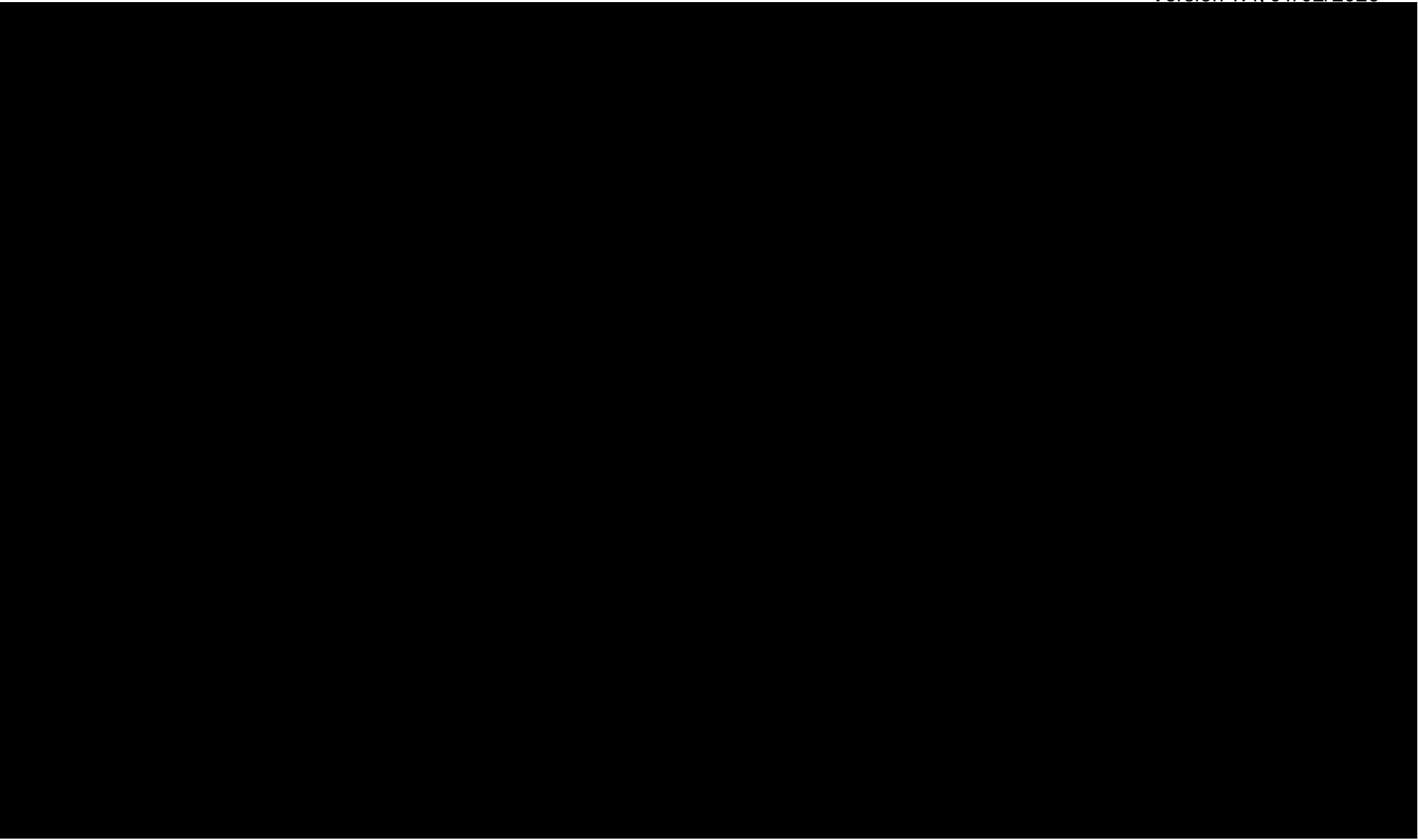




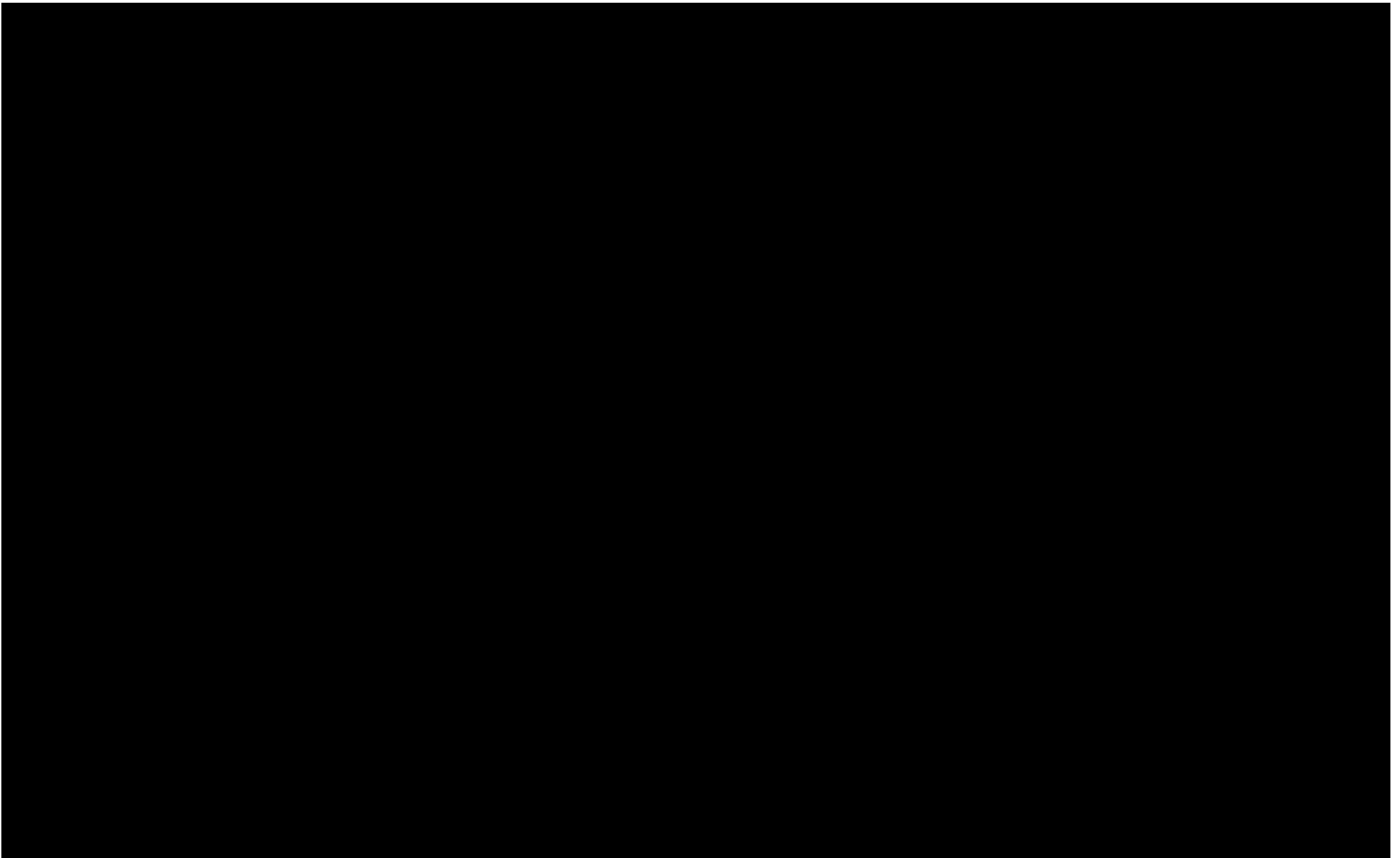
Enclosure Floor Plans



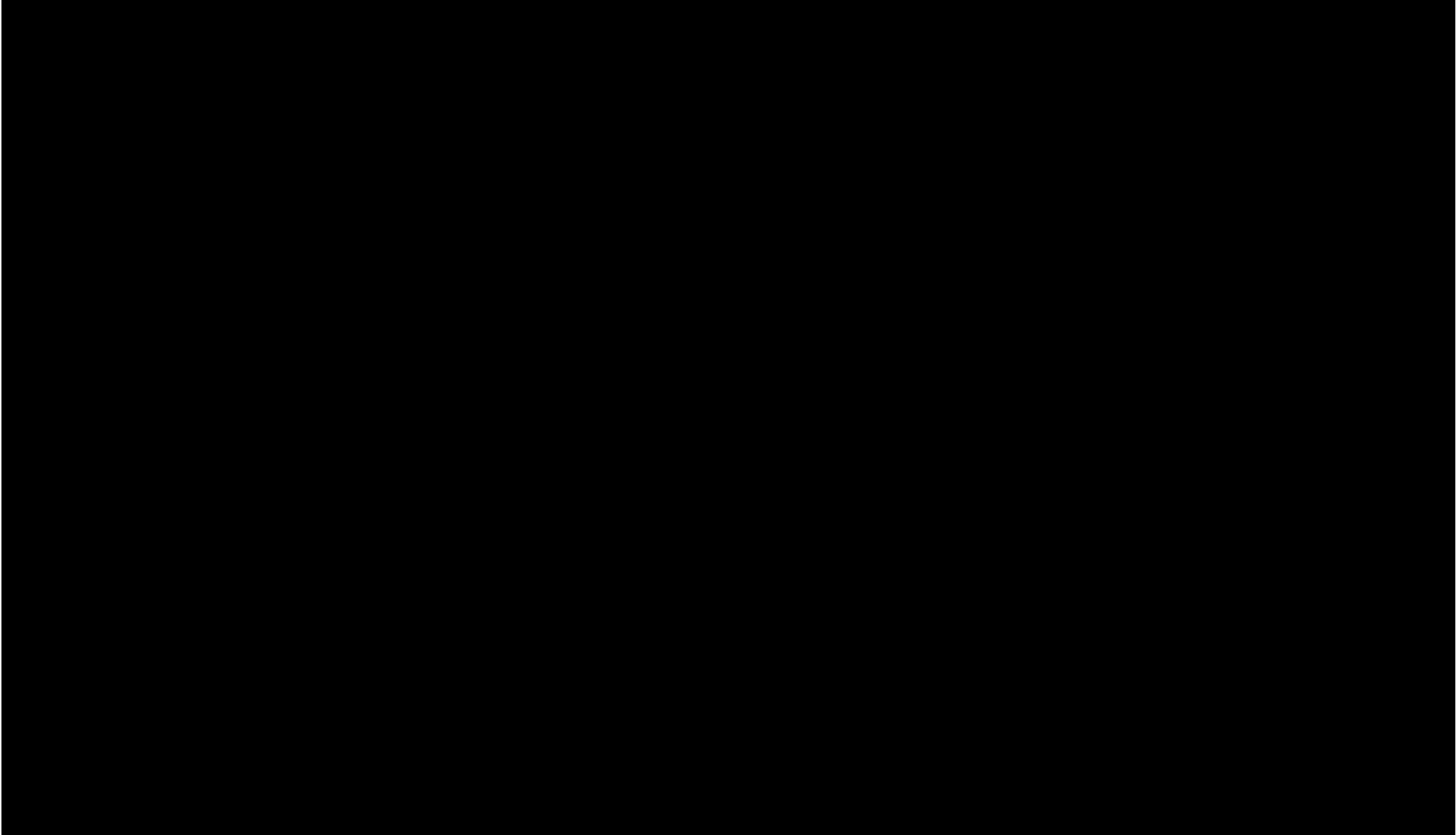
Switchgear Enclosure 1



█: Switchgear Enclosure 2 █

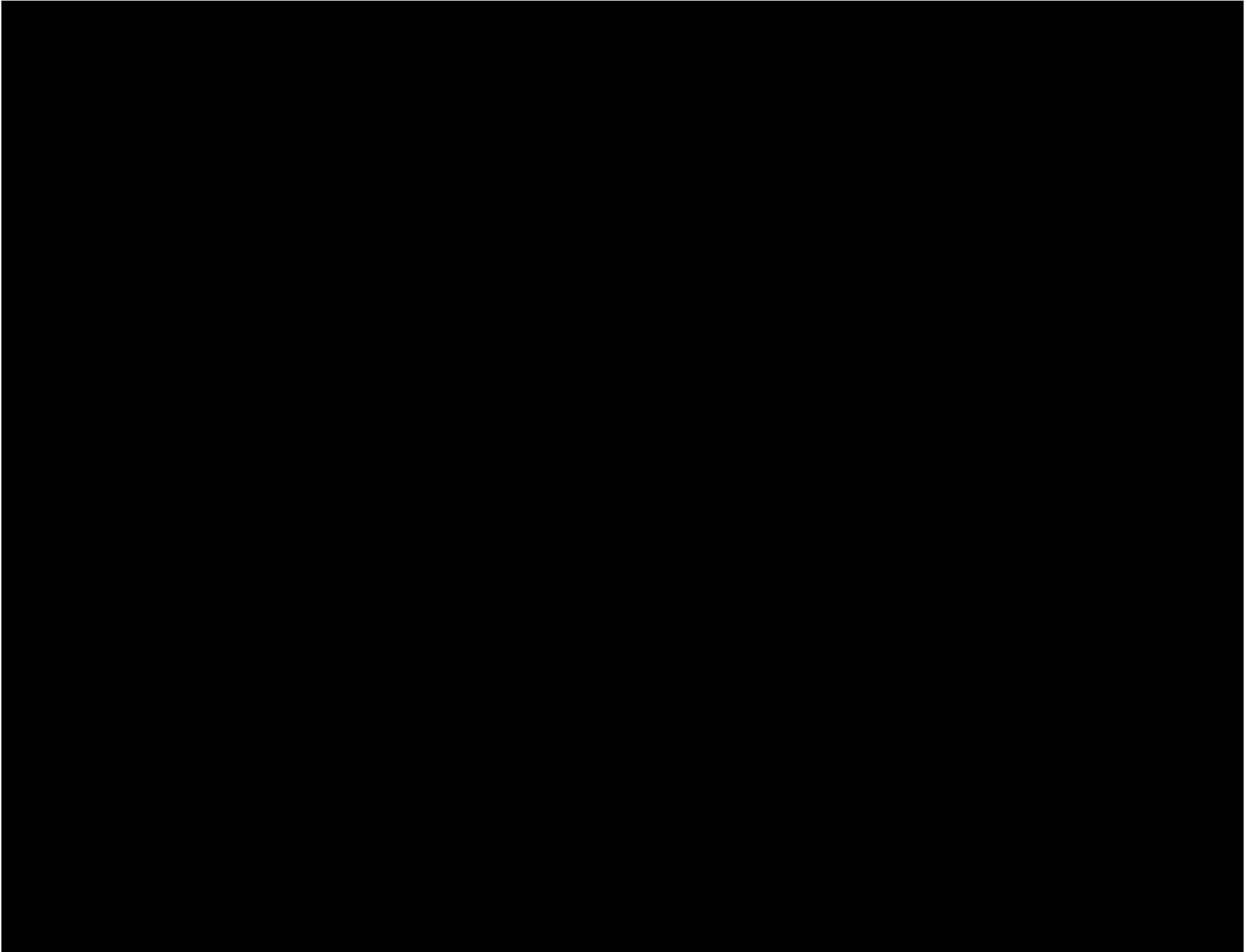


 Switchgear Enclosure 3 



 Incident Command Center 

Site Drainage



 : Site Drainage 

Appendix 2: Building & Equipment Photos



Megapack aerial view looking west



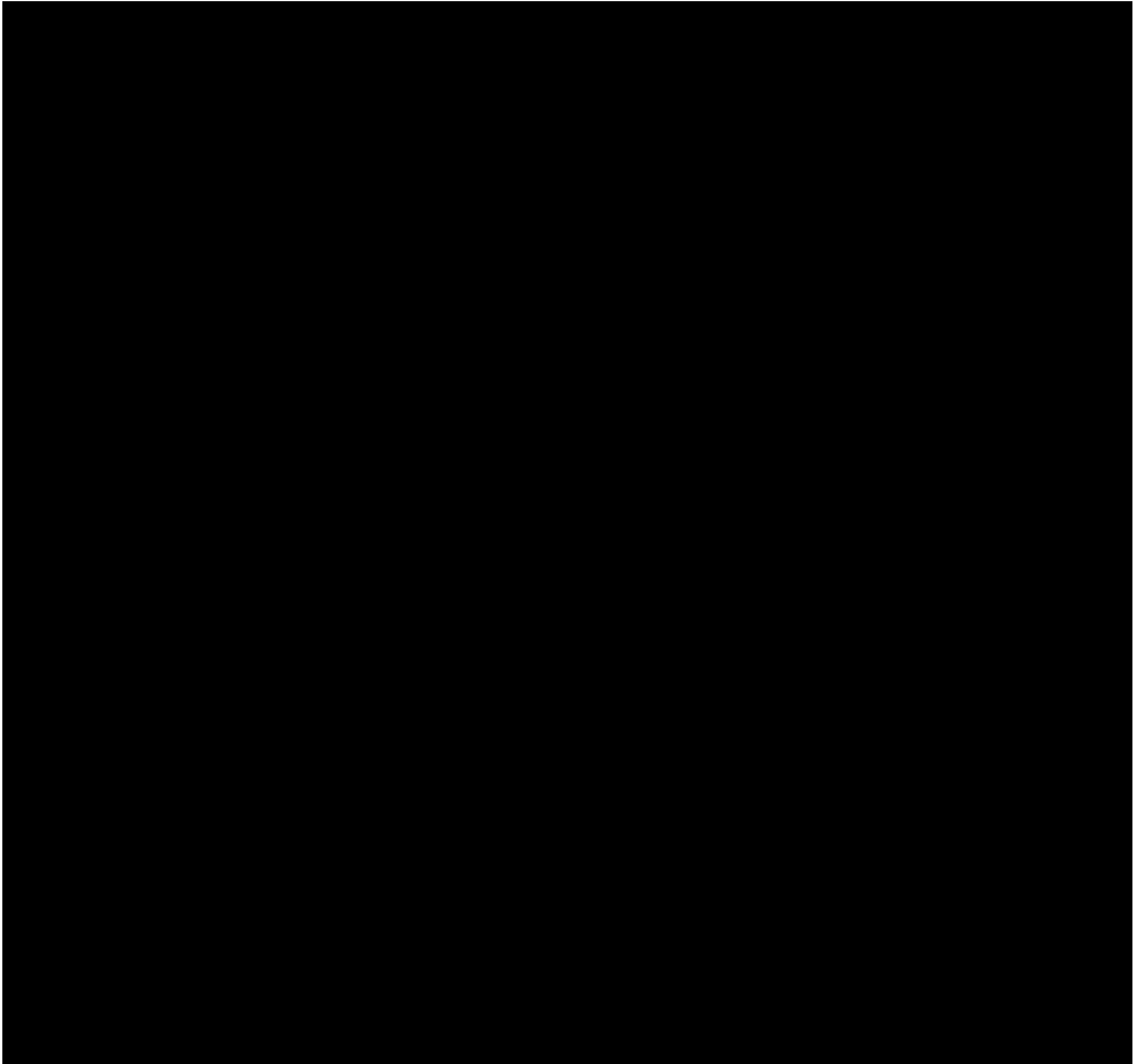
Megapack front view

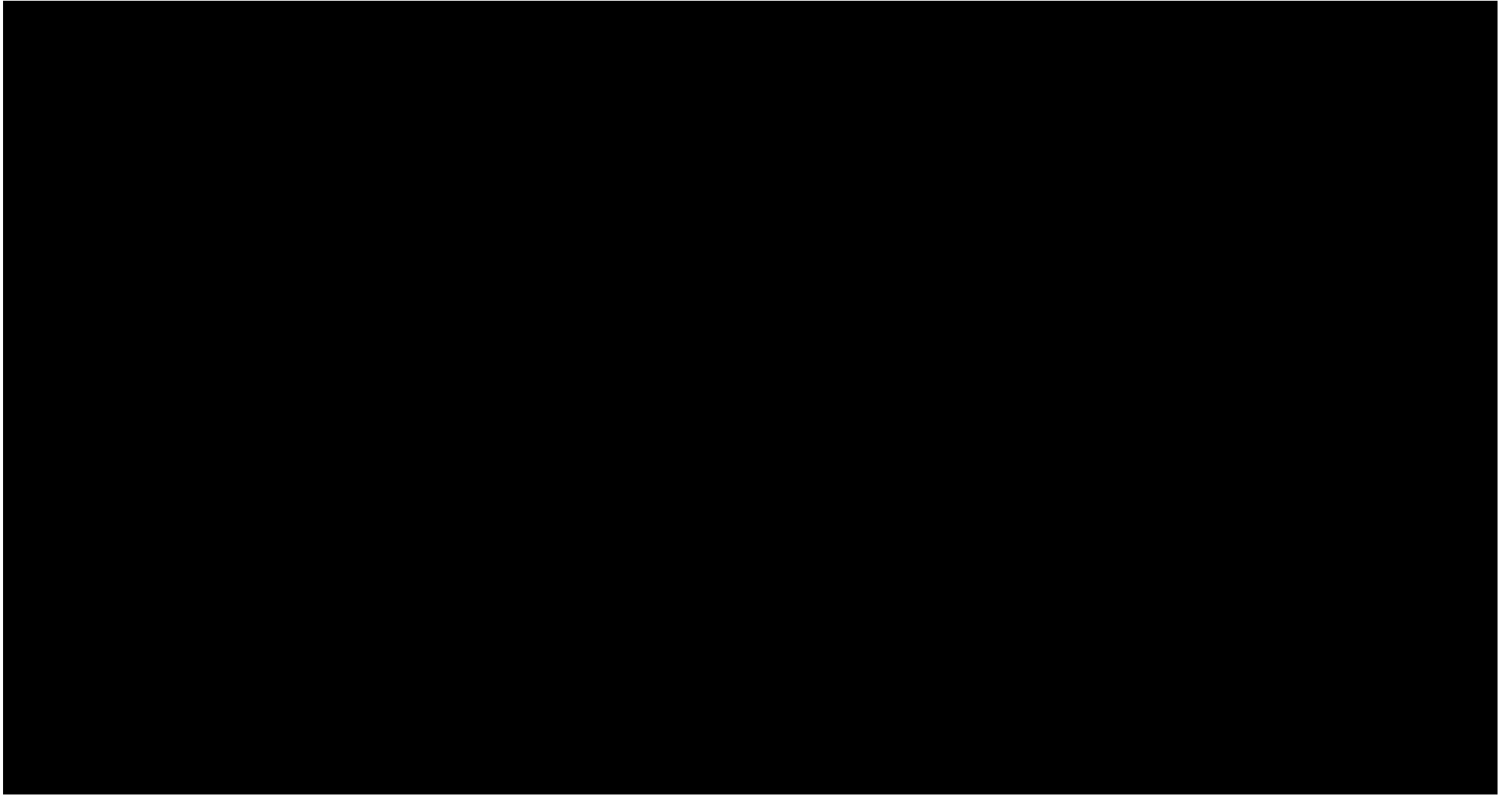


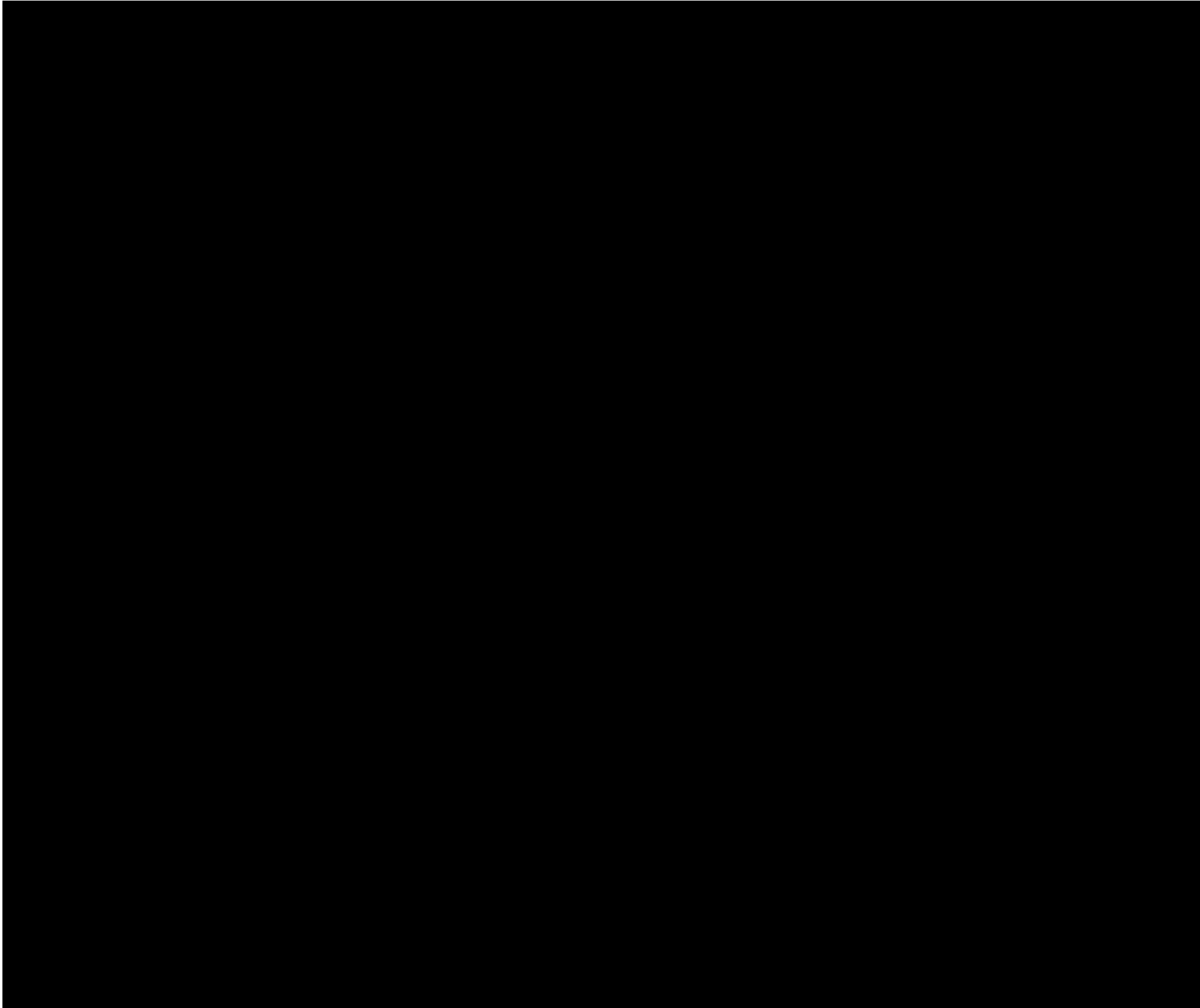
Example Megapack lane looking west



Megapack side view







Appendix 3: Material SDS's

See attached: Coolant SDS, Envirotemp FR3 Fluid SDS, Mineral Oil SDS, HDPE SDS

Revision Notes

Version	What Changed?	Date
Initial Draft	V1.0 - New Document	6/16/2021
V1.1	Added Equipment Photos	6/28/2021
V1.2	Removed Refrigerant from section 3 & 6.5 & SDS list	7/13/2021
V1.3	<ol style="list-style-type: none"> 1. Updated PFP Approvals to remove Substation FM and add Renewables Leadership 2. Reformatted Page 4 Reference Sheet, slightly modifying defensive firefighting application of water to protect unaffected Megapacks, based on Tesla ER guidance. 3. Expanded Section 4 Fire Fighter Quick Reference Guide BESS Emergencies from one page to two and included guidance for IC Building Actions. 4. Revised Section 6 – Battery Emergencies, Sections 6.2 through 6.6, to reflect Tesla ERG Reference dated November 11, 2022 vs. March 2020. All Section 6 technical content verified by Tesla Fire Protection Engineer [REDACTED] 	3/23/2023
V1.4	Updated Document Owner [REDACTED]	01/02/2026
V1.4	Updated Map 4: [REDACTED]	01/02/2026
V1.4	Updated evacuation assembly point [REDACTED]	01/02/2026