

PLC-ARMOUR-P2738-002-TPR-Disposition Response Letter-0

<https://plcfiresafety.sharepoint.com/sites/Projects/Shared Documents/ACTIVE PROJECTS/P2738-HA-Armour Township-FHA-ON/-002 Emergency Response Plan/Deliverables/Rev 0/PLC-ARMOUR-P2738-002-TPR-Disposition Response Letter-0.docx>

November 10, 2025

Ms. Charlene Watt
Township of Armour
PO Box 533, 56 Ontario Street
Burk's Falls, Ontario

RECEIVED
NOVEMBER 12, 2025
TOWNSHIP OF ARMOUR

Dear Ms. Watt:

Subject: Project 903 Battery Energy Storage System – Response to Dispositions

PLC Fire Safety Engineering (PLC) has reviewed the revised Emergency Response Plan (ERP) for the Township of Armour submission, dated September 3, 2025. The revised ERP, prepared by Solarbank (Powerbank) and submitted by Zelinka Priamo Ltd., was provided to address clarification requests made by PLC as part of an independent third-party review (TPR)¹ of the original plan. The referenced TPR documented twenty-five (25) items requiring clarification.

This letter confirms that the revised ERP submission satisfactorily addressed eleven (11) items and partially addressed seven (7) items. Four (4) items have not been addressed in the resubmission, which along with the partially addressed items remain outstanding.

Further to the correspondence with Armour Township dated November 5, 2025, two (2) items have been removed from the list based on the Township's feedback.

Please find enclosed, PLC's updated report, which summarizes the current status of all review items and includes detailed comments and recommendations.

Prepared by,

Reviewed by,



Rudy Cronk

Senior Technical Specialist



Ghaith Qamheiah, P.Eng.

President

¹ PLC-ARMOUR-P2738-002-ERP-D, dated June 24, 2025

DISPOSITION OF FINDINGS

NO.	REVIEWER COMMENT	POWERBANK DISPOSITION	REVIEWER CONCURRENCE
1	PPE Standard Reference – Section 6.1.6 references NFPA 1971 and not the latest version of the standard for PPE NFPA 1970. The ERP must provide a clear justification for continuing to use NFPA 1971 or commit to updating its reference and requirements to NFPA 1970 to align with current standards. <i>Reference: NFPA 1970</i>	Section 6.1.6 now recommends PPE compliant with NFPA 1970 (superseding 1971)	Resolved
2	Community Notification – The ERP (Sections 7 and 9) lacks integration of the Township of Armour’s formal notification procedures or clearly defined evacuation thresholds. Include detailed protocols aligned with the township’s existing emergency management framework. The ERP needs detailed protocols for public notifications that align seamlessly with municipal emergency management practices to enhance public safety during an incident. <i>Reference: CodeRED - https://www.armourtownship.ca/codered</i>	Section 9.3 includes community air monitoring and public notification.	Resolved

NO.	REVIEWER COMMENT	POWERBANK DISPOSITION	REVIEWER CONCURRENCE
3	Hazard Zones – Sections 8 and 9 describe the 100-foot exclusion zone around the battery enclosure and the provision of a 10-foot standoff distance for arc flash precautions. However, protocols for establishing Hot, Warm, and Cold Zones for the hazards defined in the ERP are not described therein. Clarify the procedures for defining and managing these distinct hazards zones around identified hazards, beyond just the exclusion zone, need to be clearly outlined. <i>Reference: NFPA 1500</i>	Figures 24–25 and Section 9.3 now provide Hot, Warm and Cold zones	Resolved

NO.	REVIEWER COMMENT	POWERBANK DISPOSITION	REVIEWER CONCURRENCE
4	Incident Command Structure – Section 8.3 references a sample Incident Command Structure (ICS), but no diagram or organizational structure is provided. Clarify whether the Unified Command structure provided in section 8.2 is to be adopted for incident command or provide an alternative incident command structure. The ERP should provide a more granular breakdown of the SME's responsibilities and specific tasks tailored to different types of incidents, clarifying their integration and decision-making authority within the unified command structure. <i>Reference: NFPA 1561</i>	Sections 8.2 & 8.3 include full Unified and Incident Command Structure graphics and detailed SME tasks	Resolved
5	Incident Command Authority – Clarify <u>explicitly</u> throughout the ERP document that the Fire Department retains full command authority and will communicate directly with BESS staff through a designated liaison from the Fire Department.	Section 8.3 explicitly states Fire Department retains full command authority	Resolved

NO.	REVIEWER COMMENT	POWERBANK DISPOSITION	REVIEWER CONCURRENCE
6	Post-Incident Decontamination Procedures – Section 10 omits procedures for firefighter decontamination and handling of contaminated PPE. Provide decontamination protocols for firefighters leaving the hot/warm zones. Also provide post incident decontamination requirements for contaminated PPE. <i>Reference: NFPA 1072</i>	Post-incident decontamination protocols are not described in Section 10.	Outstanding
7	Training Program Detail – Section 11 lacks details on training curriculum, delivery methods, audience segmentation, instructor qualifications, and performance evaluation. Specifically include details of expected fire department support roles, such as ventilation operations. Where there is an expectation that the Fire Department may be required to support ventilation operations to reduce the possibility of explosive atmosphere development, this needs to be detailed in the training document. Provide a detailed training program document. <i>Reference: NFPA 1001, NFPA 1072</i>	Section 11 exists but lacks details including curriculum and frequency of training, etc. This section should reference the formal training program in development.	A formal training program is in development and will provide to the Township of Armour. Section 11 should reference this formal training program

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8	Suppression Agents – Although CO₂, dry chemical, and Purple-K agents are mentioned, their deployment procedures, volumes, and equipment types are not described. Additionally, the ERP lacks a visual map identifying extinguisher types and locations. Clearly describe deployment procedures, agent quantities, and equipment types for CO₂, dry chemical, Purple-K, or other agents. Include a visual site map indicating extinguisher locations and ratings. <i>Reference: NFPA 10, Best Practice, NFPA 855</i>	Fire Extinguisher types have now been defined, however, a map as to the location of the extinguishers has not been provided.	Partial
9	Fire Suppression System Details – The ERP describes the alarm annunciation (Section 5.3) but lacks detailed information on the activation procedures, manual override capabilities, maintenance schedules, and inspection requirements for any integrated fire suppression systems. Comprehensive procedures for the operation, override, and ongoing maintenance/inspection of the fire suppression systems are to be included in the ERP.	Section 5 covers detection but not manual override or maintenance	Partial

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10	Water Supply and Fire Flow Calculations – The ERP states that water will be supplied by fire department tankers (Section 2.1) but critically omits fire flow calculations, detailed water delivery strategies, or specifics on available drafting sites/hydrants. This section requires significant details, including precise fire flow calculations and comprehensive water delivery strategies, identifying all drafting/hydrant locations and their capacities.	Section 2.1 and 9.3 reference “Draft Water Analysis 11-20-2024” but no flow calculations	Partial
11	Evacuation Routes and Safety Zones – The ERP lacks clearly defined evacuation routes, an evacuation radius, and designated hold-and-secure zones. Clearly define evacuation routes, the evacuation radius, and designated hold-and-secure zones. Provide detailed maps and descriptions.	Section 9.3 mentions evacuation radius and mass notification, but no maps	Partial
12	Comprehensive Evacuation Plan – Develop a thorough evacuation plan that addresses variables including wind direction, time of day, seasonal variations, and specific types of incidents to ensure effective emergency management and public safety.	General guidance added but no wind/time-of-day matrix	Partial

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13	Emergency Lighting and Backup Power – The ERP does not address provisions for emergency lighting or backup power for critical systems in the event of a power outage during an incident. Details on emergency lighting systems and backup power provisions for all critical systems within the facility are necessary.	Not addressed in Rev 1	Outstanding
14	Emergency Shutdown Procedures – The ERP discusses autonomous equipment isolation by the EMS (Section 9.2) and mentions Lock Out/Tag Out (Section 10.3), but it lacks detailed, step-by-step emergency shutdown procedures for various critical systems (e.g., electrical, HVAC, battery management system) that might require manual intervention or specific coordinated actions by emergency personnel or BESS staff. Clear, sequential shutdown procedures for all critical systems are required.	Section 10.3 (LOTO) covered but lacks step-by-step manual actions	Partial
15	Emergency Contacts – Update the ERP to include the Township of Armour's Community Emergency Management Coordinator, Amy Tilley (705-382-3332), in the Emergency Contact List.	Amy Tilley (705-382-3332) now listed in Section 1.6	Resolved

NO.	REVIEWER COMMENT	POWERBANK DISPOSITION	REVIEWER CONCURRENCE
16	Local Alarm Response – Section 5.3 (Alarm Enunciation) does not adequately address procedures for responding to local alarm activations given that the monitoring site is located four hours away. Provide clear and actionable guidance on immediate response steps when local alarms activate.	Section 5.2 notes alarm flow to ROC but local action still unclear.	Partial
17	SolarBank Response Protocol – 1. Clarify the protocol and provide specific anticipated response times for local SolarBank representatives during a significant emergency event. 2. Clarify in Section 9.3 the expected arrival time of BESS Subject Matter Experts (SMEs) and indicate whether preliminary incident assessment actions should begin while SMEs are en route to the facility. 3. Provide more detailed and concrete timelines for the arrival of other BESS staff and trained electricians during emergency conditions, as generalized terms are insufficient for planning and operational effectiveness.	Section 3.11 adds 2-hour SME arrival standard	Resolved

NO.	REVIEWER COMMENT	POWERBANK DISPOSITION	REVIEWER CONCURRENCE
18	Alarm Notification Sequence – Clarify alarm notification sequences in Section 9. The ERP should explicitly indicate that the primary purpose of monitoring the company's notification is to provide timely alerts to the Fire Department. Notifications to other parties would be initiated post Fire Department notification.	Section 7 adds Notification Matrix and ROC sequence	Resolved
19	Mandatory Air Monitoring – Mandate and detail community air monitoring procedures during all active fire scenarios including stranded energy, cell venting, thermal runaway, large-scale fires, and explosions. The ERP needs to be revised to reflect that community air monitoring is a mandatory procedure during all specified active fire scenarios, not merely a consideration.	Section 9.3 explicitly requires air monitoring during active fires	Resolved
20	Roles and Notification Clarity – The ERP requires clear delineation of roles and responsibilities, specifying levels of notification and activation procedures (e.g., Full Alert vs. Stand-by) for distinct scenarios, ensuring accountability and clarity of actions during emergencies.	Sections 8.2 & 8.3 include full Unified and Incident Command Structure graphics and detailed SME tasks	Resolved

NO.	REVIEWER COMMENT	POWERBANK DISPOSITION	REVIEWER CONCURRENCE
21	Comprehensive Scenario Coverage – The ERP lists four response scenarios (Section 9.4). While a "Transformer Fire" is depicted in a figure, it is not detailed as an explicit response scenario with associated tactics within the text of Section 9.4, nor are wildland fires impinging on the facility included. The ERP must expand its scenario coverage to include all plausible emergencies, specifically detailing hazards and tactical responses for events such as transformer fires and wildland fires threatening the facility. Clearly detail associated hazards and tactical responses for informed decision-making by emergency responders.	Sections 9.4.4 and 9.4.5 added with graphics	Resolved
21	Lighting Protection – The ERP does not address the potential impacts of a lightning strike on the facility, nor does it detail preventative measures or expected mitigation responses. Information on lightning protection, including potential impacts, preventative strategies, and mitigation responses, should be added.	Not included	Outstanding
22	Post-Incident Procedures – Clarify specific post-incident procedures including billing responsibilities to SolarBank for emergency services rendered and related administrative processes.	Not included	Outstanding

NO.	REVIEWER COMMENT	POWERBANK DISPOSITION	REVIEWER CONCURRENCE
23	Post-Incident Environmental Remediation – The ERP does not include procedures for post-incident environmental remediation, such as spill containment, hazardous waste disposal beyond general "disposal", or soil/water contamination assessment. Detailed procedures covering spill containment, hazardous waste disposal, and environmental assessment for soil and water contamination are critical additions.	No specific spill or hazmat remediation section	Outstanding