FIRE SAFETY ENGINEERING

USA:
Washington D.C.
New Orleans
Anchorage

www.plcfire.com

Canada:
Fredericton – Toronto
Winnipeg – Saskatoon
Calgary – Vancouver

1 (800) 675 - 2755

PLC-ARMOUR-P2738-001-TPR-Disposition Response Letter-0

https://plcfiresafety.sharepoint.com/sites/Projects/Shared Documents/ACTIVE PROJECTS/P2738-HA-Armour Township-FHA-ON/-001 TPR Hazard Mitigation/Deliverables/Rev /PLC-ARMOUR-P2738-001-TPR-Disposition Response Letter-1.docx

October 3, 2025

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

Dear Ms. Watt:

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

PLC Fire Safety Engineering (PLC) has completed a review of the responses to the Third-Party Review (TPR) of the Hazard Mitigation Analysis Report for the above-captioned project. The original review, documented in report # PLC-ARMOUR-P2738-001-TPR-C, dated May 15, 2025, identified nine (9) clarification items.

Further responses to our clarification items (dated June 5th, 2025), resulted in four (4) items being satisfactorily addressed and closed. The remaining five (5) items required additional information.

Another round of responses was provided for the remaining five (5) items (dated August 12th, 2025). PLC has determined that three (3) items have been satisfactorily addressed and are now considered closed. **The remaining two (2) items require additional information and therefore remain open.**

Please find enclosed PLC's response addressing the five (5) clarification items that remained outstanding.

Prepared by,

Gary Chan, P.Eng.

Technical Specialist

Reviewed by,

Mohamed Mushantat, P.Eng., M.Eng.

Senior Fire Protection Engineer

DISPOSITION OF FINDINGS

NO.	REVIEWER COMMENT	DESIGN DISPOSITION	REVIEWER CONCURRENCE
2	Installation requirements such as electrical, loading and seismic were not addressed in the HMA report. Clarify if the project is compliant with NFPA 855 electrical, loading and seismic requirements of Chapter 4. *Reference: NFPA 855 Section 4.7.1, 4.7.2 and 4.7.3*	FRA Response [06-05-2025]: *This is discussed in Section 5.2 of the HMA. Electrical, Design loading and Seismic requirements are specifically outside of the scope of this HMA. Added a clarification that these must be addressed separately in design documents provided to the AHJ as necessary.* *[FRA Response 08-12-2025]:* *These specific design related matters (electrical, design load, etc.) are typically dealt with and reviewed through a more detailed design process, rather than at a stage of Official Plan Amendment and Zoning By-law Amendment. Additional detail will be provided as the applications progress towards building permits. In the interim, note the following responses:* *Raven (Electrical): NFPA 70 or NEC, and IEEE C2 or NESC are American standards and are not applicable. Design confirmed to follow the Ontario Electrical Safety Code.* *PRI Engineering (Design Loading): Confirms they utilized the equipment weight and dimensions and considered the dead and live loads acting on them to determine the reaction loads to design the foundation elements of the structures. Everything has been designed considering the local building code requirements – which is in line with noted requirements.* *EVLO (Seismic) (manufacturer): BESS is not a building and can in no way be considered as such. Compliance with building code not relevant. BESS is UL 9540 certified, which inherently includes seismic compliance*	PLC Response [07-24-2025]: Response acknowledged. However, this item is to remain open until design details on electrical, design loading and seismic requirements are provided for review. **PLC Response [08-25-2025]:** **While not a conventional building, the structure meets the definition of building under the Ontario Building Code Act. Furthermore, the OBC is relevant as NFPA 855 Section 4.7.2 requires ESS's to be seismically braced in accordance with the local building code. Therefore, it is not agreed that the building code is not relevant. However, the provided seismic requirement IEEE 693 (0.5g) is sufficient. Disposition accepted. Item closed.**

NO.	REVIEWER COMMENT	DESIGN DISPOSITION	REVIEWER CONCURRENCE
4	HMA Report Section 5.4.3 states that the requirements of NFPA 1142 apply. Clarify what are the relevant requirements, and whether they are met for this site. *Reference: NFPA 855 Subsection 4.9.4*	FRA Response [06-05-2025]: *Added the clarification to Section 4.1.6 that the water supply requirements can be relaxed with agreement between AHJ and site owner as listed in NFPA 855 Section 9.5.2.5.* [FRA Response 08-12-2025]: *The reference to alternative fire suppression system was made in error and corrected.*	PLC Response [07-24-2025]: Section 5.4.3 of the updated report states that: *"The ERP recommends alternate methods of suppression that do not rely on water. As such, the Project 903 BESS site design complies with the NFPA 855 water supply requirements".* Clarify or explain what is the alternate fire suppression system that is being proposed and how it complies with NFPA 855 requirements. **PLC Response [08-25-2025]:** **It is acknowledged that no alternative fire suppression is proposed. As noted, Section 9.5.2.5 of NFPA 855 does permit fire suppression system and water supply requirements to be relaxed if there's agreement between AHJ and site owner. No details on an agreement with the AHJ have been provided. Please clarify.**

NO.	REVIEWER COMMENT	DESIGN DISPOSITION	REVIEWER CONCURRENCE
5	HMA Report Section 4.1.5 states that a dry hydrant is being proposed. Confirm the details regarding its location and what standard it is to comply with.	FRA Response [06-05-2025]: *Added details to Section 4.1.5 for the location of the dry hydrant.* Section 4.1.5 of the HMA report indicates that the hydrant is located at 1014 Ferguson Rd. [FRA Response 08-12-2025]: *The distance to the proposed dry hydrant is 5.7 km, which was added in consultation with and at the direction of the Fire Chief. OBC regulation referencing distance to hydrant is not relevant and does not apply to this BESS installation as it is not classified as a building.*	PLC Response [07-24-2025]: Section 4.1.5 of the HMA report states the address of where the hydrant is located, however it does not specify the distance to the Solarbank Project 903 site. Please clarify the distance of the hydrant to the site and whether it complies with OBC Article 3.2.5.5. **PLC Response [08-25-2025]:** **While not a conventional building, the structure meets the definition of building under the Ontario Building Code Act. Therefore, application of the OBC is to be addressed. Furthermore, no information regarding consultation with the Fire Department has been provided. Please provide clarity on this issue.**

NO.	REVIEWER COMMENT	DESIGN DISPOSITION	REVIEWER CONCURRENCE
6	(1) Clarify specifically how the BMS is certified to UL 9540, and (2) Explain whether the TMS forms part of the thermal runaway protection. *Reference: NFPA 855 Section 9.6.5.5*	FRA Response [06-05-2025]: *Added clarification to Section 2.0 that the BESS is compliant with UL 9540 and clarification to Section 5.2.4 that the ESMS complies with the relevant NFPA requirements. Additional commentary on why or how such systems are in compliance is not necessary here.* *FRA Response [08-12-2025]:* *Clarity provided that UL 9540A is distinct from UL 9540. Confirms the BESS is UL 9540 certified. UL 9540A is a specific test standard and is separate. The UL 9540 standard evaluates the whole system.*	PLC Response [07-24-2025]: Section 3.2 of the report states that the "module is not connected to the BMS or TMS" during the UL 9540A module-level testing. In contrast, Section 5.2.4 notes that "The EVLOFLEX is equipped with a BMS that was tested and verified to UL 9540." Could you please clarify whether this statement means the BMS was evaluated as part of the overall UL 9540 system certification, or if the BMS was independently certified to UL 9540? Additionally, provide the relevant certifications. **PLC Response [08-25-2025]:** **Disposition accepted. Item closed.**

NO.	REVIEWER COMMENT	DESIGN DISPOSITION	REVIEWER CONCURRENCE
9	Ontario Electrical Safety Code covers all electrical work and electrical equipment operating or intended to operate at all voltages in electrical installations for buildings, structures, and premises. Section 26 of Ontario Electrical Safety Code in particular outlines requirements for storage battery installations. Ontario Electrical Safety Code is not referenced in the HMA report. Provide further details on whether the installation will comply with CSA C22.1. *Reference: Ontario Electrical Safety Code*	FRA Response [06-05-2025]: *Added the OESC to Section 1.2 for Applicable Codes and Standards. Note that this HMA does not apply to electrical. As per response to comment 2, this limitation is discussed in Section 5.2 of the HMA. Electrical, Design loading and Seismic requirements are specifically outside of the scope of this HMA. This must be addressed separately in design documents provided to the AHJ as necessary.* *FRA Response [08-12-2025]:* *See Response to comment 2 & additional email from Raven Engineering included for this item stating that the design complies with Ontario Electrical Safety Code, which is CSA 22.1 plus Ontario Amendments.*	PLC Response [07-24-2025]: Response acknowledged. However, this item is to remain open until design details on electrical, design loading and seismic requirements are provided. **PLC Response [08-25-2025]:** **Disposition accepted. Item closed.**