



**City of Morro Bay**  
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## **Vistra Offsite Consequences Analysis Summary**

On March 20, 2024, I received the Vistra Morro Bay Powerplant BESS Offsite Consequence Analysis (OCA) report prepared by Ramboll consulting. This OCA evaluates the potential risks to the public from smoke associated with a fire at the proposed battery energy storage facility in Morro Bay. What this report does is identify the risks associated with a maximum credible fire event. This report does not evaluate all safety aspects of this project, it specifically evaluates the hazard to the public from a fire event. A maximum credible fire event would be one full container in the enclosure alternative, and one full block of batteries (48 racks) in the building proposal.

The consultants used industry standard computer modeling and EPA guidelines for dispersion of airborne contaminants that were utilized to evaluate the smoke related to a fire. The exposure level guidelines were based on EPA Acute Exposure Guideline Levels (AEGLs) and American Industrial Hygiene Foundation Emergency Response Planning Guidelines (ERPGs). AEGLs describe the “human health effects from once-in-a-lifetime, or rare, exposure to airborne chemicals.” ERPG’s “ are the maximum airborne concentration below which nearly all individuals could be exposed for up to 1 hour without experiencing health effects.” AEGLs are reported as a concentration (in ppm or mg/m<sup>3</sup>) of a given airborne contaminant at which the described health effects would occur if a human were exposed to that concentration for a certain duration (e.g., 10 minutes, 60 minutes, 8 hours). What this means in plain language is if you stood outside exposed to the smoke from this incident for a specific amount of time, such as 1 hour or 8 hours, etc., you would receive a certain level of exposure from these contaminants. The amount of exposure varies based on how far away and how long you are exposed. This report assumes a person is outside and exposed to the smoke for the entire time period simulated here to evaluate the simulated maximum exposure.

These AEGL and ERPG exposure levels have 3 levels. Level 1 exposure produce mild irritation and symptoms that resolve once removed from the exposure. Level 2 exposures can produce some lasting, serious health effects after exposure has resolved. Level 3 exposures are irreversible, life-threatening health effects. The maximum threshold level selected for this report was level 2 since that is the level that can produce serious or lasting adverse health effects.

The computer modeling uses the minimum and maximum temperatures, relative humidities, and other atmospheric conditions and models them to produce the worst possible meteorological conditions to produce the maximum possible concentrations of contaminants. The report also assumed wind directions remained constant in the direction of the closest residence to maximize concentrations at that location. This report also assumes that no active protective measures such as fire sprinklers, or active firefighting are deployed as those mitigation features would reduce the concentrations of pollutants.



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The emissions created when a battery storage product catches on fire varies greatly depending on the materials used to package the batteries and associated components, the metals and materials used in the production of the battery, and how charged the batteries are. All these factors contribute to the quantity and types of pollutants in the air and smoke. The pollutants identified were reported based on live fire testing of common lithium-ion batteries in laboratory testing

Based upon the evaluation of this report, there are a few key points identified.

- The proposed building project and enclosure alternative do not exceed AEGL-2 or ERPG-2 thresholds at the closest residence if involved in a fire.
- The concentrations of airborne pollutants are reduced by half or more in the enclosure alternative over the proposed building version.
- A distance of 131 meters is the maximum distance CO would exceed ERPG-2 or AEGL-2 levels for the proposed building project or 70 meters for the enclosure alternative in an 8-hour duration.
- Hydrogen Fluoride (HF) and Carbon Monoxide (CO) are the only 2 chemicals to exceed 50% of the health protective thresholds at 8 hours at the closest residence in the proposed building project. The enclosure alternative does not exceed 50% for any chemical measured.

In Summary,

This Offsite consequences Analysis report helps to identify the hazards to the public related to the smoke from a fire event at the proposed battery energy storage facility in both the proposed building configuration, and the enclosure alternative. This report identifies that the enclosure alternative reduces the concentrations of various chemicals at the closest receptor by 50% or more than the building proposal. Based on exposure guidelines established by the EPA, this report identifies that there is not a significant health risk to the public beyond the distances described in the report. This report does not address other hazards such as earthquake or tsunami and is not a comprehensive emergency response and hazard mitigation plan. Evacuation or shelter in place distances, and emergency response guidelines are not included in this report and would be evaluated and determined at the appropriate point in this process.

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