Central Coast Regional Water Quality Control Board

April 3, 2026

Nicki Fowler
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County of Monterey
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via Electronic Mail

Dear Nicki Fowler,

SITE CLEANUP PROGRAM: MOSS LANDING ENERGY STORAGE FACILITY, VISTRA CORPORATION BATTERY AND ELECTRONICS FIRE, MONTEREY COUNTY – COMMENTS ON CHARACTERIZATION AND SCREENING-LEVEL RISK EVALUATION REPORT

On March 2, 2026, the Monterey County Environmental Health Bureau (EHB) requested that State partners, including the California Regional Water Quality Control Board, Central Coast Region (Central Coast Water Board), review and provide comments on Characterization and Screening-Level Risk Evaluation Report (PEA Report Equivalent) prepared by Terraphase Engineering Inc. (Terraphase) for Vistra Corporation (Vistra). We appreciate the opportunity to provide comments which follow.

Comment 1: Section 4.2.2

This section states in part that based on available site configuration and response actions, no off-site discharges of fire suppression water or impacted stormwater occurred. This section goes on to argue that based on this understanding, uncontrolled off-site migration of fire suppression water and stormwater is not considered a complete release mechanism for the purposes of this evaluation. The Central Coast Water Board agrees that, based on the available information, off-site migration of fire suppression water and stormwater did not occur at the surface. However, the infiltration of fire suppression water and impacted stormwater into the subsurface likely occurred and has not yet been evaluated. This data gap in the conceptual site model may lead to the exclusion of an exposure scenario that will need to be evaluated in the future to assess human health and ecological risks. The Central Coast Water Board recommends that this data gap be noted section 6.2 of the PEA Report Equivalent.

Comment 2: Section 6.2

This section states in part that Terraphase did not identify any data gaps that would reasonably be expected to materially alter the conclusions of the screening-level evaluation. The Central Coast Water Board contends it is reasonable to suspect that lack of subaqueous sediment samples represents a data gap. The initial deposition of ash and soot to surface waters and subsequent migration of ash and soot to surface waters following rain events have likely resulted sedimentation of these materials to the benthic zone of nearby surface waters. The Central Coast Water Board recommends this data gap be added to Section 6.2 of the PEA Report Equivalent.

Comment 3: Appendix C – Technical Review of Aiello et al. (2025) Journal Article, General Comment

Central Coast Water Board staff reviewed both the Nature journal article entitled "*Coastal Wetland Deposition of Cathode Materials from the World's Largest Lithium-Ion Battery Fire*"[1] (Aiello et al. 2025; hereafter "Aiello Study") and the Terraphase review of the Aiello Study included as Appendix C to the PEA Report Equivalent (hereafter "Appendix C"). Central Coast Water Board maintains the position that the Aiello Study provides a compelling argument that deposition of ash from the fire likely occurred onto land and vegetation surfaces (and into surface water directly) in the Hester Marsh area, much of which subsequently migrated to surface waters following the rain events in February 2025. The Central Coast Water Board recognizes data quality limitations of the data presented in the Aiello Study; however, we find that the pre-fire, post-fire, and post-precipitation data are suitable for qualitative analysis.

Comment 4: Appendix C – Overstatement of Field Portable X-Ray Fluorescence Data Quality

Central Coast Water Board staff agree with the description of the limitations of field portable x-ray fluorescence (FpXRF) in both Appendix C and paragraph 3, "Rapid detection of cathode metals with FpXRF" section of the Aiello Study. The Aiello Study goes on to state that these "methods showed an acceptable level of reproducibility" and "although absolute concentrations may be overestimated, the change in surface concentrations before and after the fire was evaluated using the same FpXRF method, allowing for robust spatial comparison and comparison of relative differences over time." The Central Coast Water Board concurs with these statements regarding reproducibility and temporal comparisons in the Aiello Study and supports the qualitative use of this data.

[1] Aiello Study: https://www.nature.com/articles/s41598-025-25972-8

Comment 5: Appendix C – Lack of Documentation of Proper XRF Practices

Central Coast Water Board staff concur with the Appendix C argument that the Aiello Study does not provide the same level of documentation standard in environmental site characterization reports. However, the Aiello Study references USEPA 6200 and no obvious deviations from the method were noted in the Aiello Study. Temporal comparisons in the Aiello Study suggest that despite a lack of documentation for the standard operating procedures, the data are suitable for qualitative analysis.

Comment 6: Failure of FpXRF Data to Meet Method 6200 Performance Criteria

Appendix C and the Aiello Study both identify a discrepancy between FpXRF results and laboratory measurements. Appendix C further describes these differences in context of them not meeting performance criteria specified by USEPA 6200. The Aiello Study suggests that this difference is "best explained by dilution of a thin, metal-rich veneer during laboratory homogenization" and pointed to Ni/Co ratios in shallow samples to support this explanation. Appendix C argues that differences between FpXRF results and laboratory measurements in the subsurface samples contradict this explanation and that the FpXRF data do not reliably reflect true metal concentrations.

Central Coast Water Board staff suspect that both dilution during laboratory homogenization and the imprecision associated with FpXRF are likely causing the discrepancy between FpXRF results and laboratory measurements. It is the Central Coast Water Boards' understanding that no comparable data were collected following the ML 300 fire and prior to the significant storm events in February 2025. Based in part on this data gap and the reproducibility and temporal comparisons presented in the Aiello Study, the Central Coast Water Board supports qualitative use of this data.

Comment 7: Unsupported Use of Metal Ratios

Appendix C largely argues that the Ni/Co ratios are unsupported due to data quality concerns similar to the concerns presented in Comments 4 and 6 herein. While Central Coast Water Board staff recognize the data quality concerns may limit the use of FpXRF data for quantitative analysis, it is unclear if this would preclude its use for evaluating ratios. If FpXRF demonstrates comparative precision between metals analyzed, ratios may still be supported despite the data quality concerns regarding accuracy. Additionally, Appendix C does not provide an explanation for why differences in ratios were observed prior to and following the ML 300 fire (nor for why only the post fire metals ratios were consistent with the composition of batteries burnt in the fire). With that context, Central Coast Water Board staff are not prepared to dismiss the potential use of Ni/Co ratio fingerprinting.

Comment 8: Unsupported Mass Balance Calculations

As presented in Comment 7 herein, Central Coast Water Board staff recognize the data quality concerns may limit the use of FpXFR data for quantitative analysis, such as estimations of mass balance for aerial deposition of ash, soot, and other debris. The

Central Coast Water Board recommends that mass budget calculations be completed following surface cleanup of ML 300 using waste manifests and the known volumes and compositions of materials housed in ML 300 to better estimate the mass of each material discharged.

Comment 9: Unsupported Statements Regarding Physical Evidence

The Central Coast Water Board recognizes the concerns expressed in Appendix C regarding scanning electron microscope (SEM) images and recommends that additional SEM images be taken of known ML 300 burn debris for comparison.

If you have any questions regarding this letter, please contact Nick Smaira at **(805) 549-3467** or Greg Bishop at (805) 549-3132 (email addresses are provided in the cc section).

Sincerely,

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for Ryan E. Lodge
Executive Officer

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