

Date: June 25, 2024
Project No.: 1593-1-1

Prepared For: Ms. Nicole Fowler
COUNTY OF MONTEREY HEALTH DEPARTMENT
1270 Natividad Road
Monterey, California 93906

Re: Moss Landing Vistra Battery Fire Data Review
7301 Highway 1
Moss Landing, CA 95039

Dear Ms. Fowler:

We are pleased to submit the results of the preliminary data review for the Moss Landing Vistra Battery Fire Emergency Response on behalf of the Monterey County Environmental Health Bureau (EHB).

Background

On January 16, 2025, a fire occurred at the Moss 300 battery energy storage facility operated by Vistra Corporation (Vistra) at the Moss Landings Power Plant located at 7301 Highway 1 (source property). The initial fire incident occurred for approximately five days, resulting in evacuation orders for local residents that were lifted on January 19, 2025. A subsequent flare-up fire occurred on the evening of February 18, but was contained by early in the morning of February 19, 2025. Vistra has been named as the responsible party. Due to the widespread nature of potential impacts, a coalition of regulators is overseeing the response, including local, state, and federal agencies.

Samples have been collected at the source property and in the surrounding areas. Samples were collected from the following media: air, soil, surface water, and surface wipes. The sampling was performed by a variety of regulatory agencies, community groups, and by Vistra's environmental consultant. Data has been used for emergency response and decision making purposes. The publicly available environmental data has been consolidated and posted to the County's Data Dashboard Viewer¹, and Testing and Monitoring Website²

We understand that the Monterey County Board of Supervisors desired a review of the available data and preliminary conclusions related to human health risk.

¹ [Moss Landing Vistra Battery Fire Data Dashboard Online Viewer](#)

² [Testing and Monitoring | County of Monterey, CA](#)

Conclusions and Recommendations

Cornerstone's data review and toxicological sub-consultant, Integral Consulting (Integral), reviewed the publicly available environmental data. Based on their review, Integral noted several discrepancies in the data available on the Dashboard. Due to the frequency of discrepancies, Integral concluded that the dataset is currently not sufficient to support the preparation of a robust and defensible human health risk assessment (HHRA). Integral's conclusions and recommendations for improving data quality are presented in the attached summary letter.

Limitations

Findings, opinions, conclusions, and recommendations presented in this report are based on readily available information. Monterey County EHB understands that Cornerstone reviewed and relied on the information presented in these reports and cannot be responsible for their accuracy.

This report, an instrument of professional service, was prepared for the sole use of Monterey County EHB and may not be reproduced or distributed without written authorization from Cornerstone. Cornerstone makes no warranty, expressed or implied, except that our services have been performed in accordance with the environmental principles generally accepted at this time and location.

Closing

Should you have any questions regarding this submittal, please contact us at your convenience.

Sincerely,

Cornerstone Earth Group



Michael F. Chang, P.E.
Senior Project Engineer



Peter M. Langtry, P.G., C.E.G.
Senior Principal Geologist

Attachments: Integral Summary Letter

Copies: Addressee (via email)
Attn: Nicole Fowler
Attn: Marni Flagg

INTEGRAL SUMMARY LETTER



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June 24, 2025

Project No. CF4615

Peter Langtry
Senior Principal Geologist
Cornerstone Earth Group, Inc.
3697 Mt. Diablo Blvd, Suite 310
Lafayette, CA 94549

Subject: **Results of Preliminary Review of Moss Landing Environmental Data**

Dear Mr. Langtry:

Integral Consulting, Inc. (Integral) is pleased to present the results of our preliminary review of the available environmental data for the Moss Landing battery fire site on behalf of Cornerstone Earth Group Inc. (Cornerstone) and the Monterey County Environmental Health Bureau (EHB). In this memo, we describe our review of the available data, provide preliminary conclusions on data quality and usability, and provide recommendations to Monterey County EHB on how to prepare the data for use in a robust, defensible human health risk assessment (HHRA).

Observations from Preliminary Review

Our conclusion at this time is that the data in the Moss Landing Vistra Battery Fire Dashboard (dashboard) is not yet in a state that it could be used in a robust, defensible HHRA. During our preliminary review, several discrepancies were identified when comparing the data in the dashboard to the available laboratory reports. The frequency of the errors leads us to recommend a complete review of the data for accuracy. Because data accuracy cannot be confirmed at this time, further evaluation of data quality cannot be conducted.

Examples of specific observations on the quality/ usability of the dashboard datasets are detailed below. These observations are based on Integral's preliminary review under the current project scope; Integral can conduct a more extensive review of the available data if requested by Monterey EHB.

- For some non-detect (ND) samples in the water dataset, the associated detection limit (DL) or quantitation limit (QL) is not reported. Inclusion of the DL or QL is necessary when processing non-detect samples for statistical analysis in an HHRA



(USEPA Region 3, 1991). As such, the DLs or QLs should be added into the dataset from the lab reports, as available.

- Laboratory qualifiers are not consistently reported among the dashboard datasets. For example, there are no qualifier columns in either the air or water datasets. Laboratory qualifiers should be consistently included in the datasets, so that any potential uncertainty in the data can be contextualized in the HHRA.
- Transcription errors were identified in the reported results for some of the water samples collected by the California Department of Toxic Substances Control (DTSC) on January 24, 2025. For example, the nickel result for sample ML007A/B was reported as 0.382 mg/L in the lab report, but as 0.82 mg/L in the dashboard dataset. Further, the barium result for sample ML0010A/B was listed as 0.397 mg/L in the lab report, but as 1.397 mg/L in the dashboard dataset. Other results in the dashboard dataset add a “1” in front of the decimal place, where it should be “0.”
- The analytical method is not consistently included for samples analyzed in a laboratory.
- Certain samples that appear in the provided source datasets do not appear in the dashboard. For example, the Clarity Node-S PM_{2.5} measurements collected by Monterey Bay Air Resources District (MBARD) do not appear in the dashboard air dataset. Further, no quantitative PM_{2.5} measurements are reported from the Clarity Node-S devices in the originating dataset, raising questions of whether PM_{2.5} results are missing from the original dataset as well as from the dashboard dataset.

Recommendations

Given that the dashboard is, to our knowledge, the most complete collection of publicly-available environmental data associated with the Moss Landing fire, the inconsistencies described above preclude the completion of a more thorough review of data quality at this time. Consequently, the completion of a robust, defensible HHRA is also not currently feasible. It is Integral’s understanding that Monterey EHB will conduct a thorough review of the data to prepare it for use in a HHRA. Our specific recommendations to inform Monterey EHB’s review include the following; however, we refer Monterey EHB to the resources on data quality included in the References section, below, for more information:

1. Decide which data are most critical for the HHRA before collating the data. It is our recommendation that field screening data such as readings from a handheld X-ray fluorescence (XRF) device should generally be omitted from the risk assessment. Data from field screening methods and laboratory analyses serve different purposes, and also involve differences in analytical sensitivity.

2. Gather information on background concentrations of any constituents of interest from the Moss Landing fire to contextualize environmental concentrations post-fire.
3. To minimize transcription errors, use an automated approach of extracting information from the original laboratory reports, if available. If an automated approach is not available or practical at this time, we recommend a full quality check of all of the data contained in the dashboard against their original lab reports.
4. Ensure that all QC samples (e.g., duplicates, replicates, and/or collocated samples) and non-detect samples are also entered into the dataset.
5. If feasible, enlist a chemist to review the laboratory reports to assess any bias in sampling or analysis.
6. For surface wipe samples, include the specific surfaces wiped, and the area wiped.
7. Determine data quality (i.e., use of an appropriate standard curve) once data accuracy is confirmed.

We look forward to continuing to support Cornerstone and Monterey EHB in this effort. Integral is happy to assist with any additional tasks, such as compilation of a data usability report, data analysis, and preparation of the HHRA. Please do not hesitate to reach out to us with any questions.

Sincerely,



Ernest Fung, Ph.D., DABT, ERT
Principal, Toxicology, Health, & Ecological Sciences

REFERENCES

- United States Environmental Protection Agency (USEPA). 1989. Risk Assessment Guidance for Superfund (RAGS) Volume I, Human Health Evaluation Manual (Part A), Interim Final. Office of Emergency and Remedial Response. EPA/540/1-89/002. December 1989.
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- USEPA. 1992. Guidance for Data Useability in Risk Assessment (Part A-1), Final, April, 1992. Last updated on March 18, 2025. Accessed June 20, 2025:
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