June 6, 2025
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MEMORANDUM

TO: Jeffrey G. Condit– Miller Nash LLP

FROM: Jeff Leadford, P.E. – SCS Engineers

SUBJECT: Beyond Toxics Testimony Response at the Coffin Butte Landfill

The Coffin Butte Landfill (Coffin Butte, or Landfill) is currently in the application process of a proposed expansion. On May 6, 2025 Mason Leavitt with Beyond Toxics submitted testimony and documents in opposition to the proposed expansion effort. This memo serves as the SCS Engineers (SCS) response to his testimony regarding certain odor issues raised, including Mr. Leavitt's critiques of SCS's "Coffin Butte Landfill 2024 Expansion Application Odor Dispersion Modeling Study (Modeling Study).

In Paragraph 6 of his testimony, Mr. Leavitt claims that the Landfill asserts 99% of odor complaints were deemed "impossible" to be from the landfill. Ostensibly, Mr. Leavitt is referring to Section 2.7 (Odor Complaint History) and Section 5.2 (Odor Complaint Conclusions) of SCS's Modeling Study. Mr. Leavitt's testimony misstates the conclusions of the complaint data analysis that SCS completed. The Modeling Study did not determine that 99% of odor complaints were impossible to come from the landfill; the study only noted that 1% could be considered "likely", and 29% "not likely" to have the Landfill as their source. Most of the complaints lacked data to make a complete determination. Contrary to Mr. Leavitt's testimony, SCS properly contextualized and accounted for the complaints in the Modeling Study.

Paragraph 7 in Mr. Leavitt's testimony mentions that the weather (meteorological) data used in the Modeling Study was an "educated guess on how air has moved around the nearby area of the landfill". In fact, however, the meteorological data used in modeling was obtained from an Oregon Department of Environmental Quality (DEQ) certified dataset using an on-site meteorological tower that was in operation in 2004 through 2005. For site-specific modeling, a certified dataset of on-site meteorological data, which is accepted for use in regulatory modeling, is really the "gold standard". This is discussed in Section 3.6 of the Modeling Study.

Paragraph 10 in the testimony discusses the 75% control efficiency used in the Modeling Study (and thus the other 25% being emitted fugitively from the landfill surface). This standardized control efficiency is mentioned in the Oregon Landfill Methane Rule Commission Meeting Document from September 30 and October 1, 2021 (Table 3, citation 1) and was used as a standard benchmark.

Also in Paragraph 10, Mr. Leavitt mentions holes in the covers and tarps over landfill waste as a potential source of additional landfill gas emissions. The covers and tarps (which incidentally are not

required to be used by any applicable regulations) are not in place to keep landfill gas in, rather they are used to help reduce the amount of precipitation entering the Landfill. Cover soils are deposited over waste to control landfill gas migration, as well as the negative pressure applied in the waste by landfill gas collection wells. From the EPA's National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart AAAA regulations, quarterly surface emission monitoring and compliance ensures that the standard of 75% control efficiency is being maintained.

In Paragraph 15 of the testimony, Mr. Leavitt alleges that hydrogen sulfide (H2S) concentrations of 250 to 500 parts per billion (ppb) were detected at residences near the Landfill. There are several issues with the presentation of these concentrations. First, SCS performs hydrogen sulfide (H2S) monitoring frequently on landfills throughout the nation and has never seen levels of 250 to 500 ppb at the property boundary or further away from a landfill. Typical levels at the property boundary can be in the 0 to 10 ppb range, and in serious cases up to 30 ppb. Below are links to publicly available monitoring at two landfills that have had public feedback and/or regulator requirements to perform routine monitoring:

https://bristolvalandfill.org/air-sampling-and-air-monitoring

https://chiquitacanyon.com/reports/community-air-monitoring-program/

SCS is able to provide additional documented studies to back up these typical concentrations upon request.

Second, AERMOD, the modeling software used in the Modeling Study, uses a Gaussian Plume Model to describe concentrations in air from a source. This model describes how concentrations are diluted over time with distance away from a source, and thus show that further out residences can expect much lower concentrations of the pollutant. Also from our site-specific modeling we have confirmed that concentrations do decrease with distance from the Landfill.

Third, the reported H2S monitoring data did not provide training certification for the operators of the Jerome gas analyzer (the device used to detect H2S concentrations). In addition, calibration documentation for the meter were not supplied. These pieces of information would be needed to back up such a significant claim of concentration. The Jerome gas analyzer must maintain a strict maintenance schedule, a sample of which is given in Table 1 below.

Table 1: Jerome Typical Calibration Schedule

PART/COMPONENT	MAINTENANCE CYCLE
Charge battery	Depends on usage. See **Battery Management** section for guidelines.
Change .25 inch fritware	Weekly or as needed
Change internal filters and tubing	After 6 months of use or as needed
Replace Zero Air Filter	Annually
Factory calibration	Annually
Functional check	Monthly or as needed
Replace battery	Annually or as needed. The battery pack contains NiMH batteries. Please dispose of properly.

Finally, the air dispersion model, revised as the County's consultant (Maul Foster and Alongi) requested, indicates that even at final buildout, the maximum impact of H2S would be 9.52 micrograms per meter cubed, or 6.24 ppb, at the fence line. Please see the Modeling Study revised in June 2025. In addition, other sources of H2S in the region were not accounted for in the Beyond Toxics study.

If you have any questions, please contact Jeff Leadford at jleadford@scsengineers.com or 720-272-0172.

Sincerely,

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