REGION 9
SAN FRANCISCO, CA 94105

September 17, 2025

Hannah Morse
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Dear Hannah and Gabrielle:

The Air Section in the Enforcement and Compliance Assurance Division at U.S. Environmental Protection Agency Region 9 received your Application Requesting an Alternative Temperature For Landfill Gas Extraction Wells on behalf of Potrero Hills Landfill, Inc. ("Potrero"), dated May 6, 2022, and the follow-up request, dated February 27, 2025.) The 35 wells that Potrero requested Higher Operating Values ("HOVs") in both requests are PHHC1406, PHL1803S, PHL1804D, PHL1805S, PHLF1904, PHLF1916, PHL2004D, PHL2010D, PHL2012D, PHL2013D, PHL2015D, PHL2016D, PHL2016S, PHL2017S, PHL2102S, PHL2104D, PHL2104S, PHLF2108, PHLF2112, PHL2118D, PHL2119D, PHL2119S, PHL2120D, PHL2121D, PHL2121S, PHL2124D, PHLF2205, PHLF2209, PHLF2302, PHLF2303, PHLF2306, PHLF2308, PHLF2309, PHLF2311, and PHLF2312.

From the data provided to EPA in the requests and in response to our information request submitted on May 23, 2025, and July 8, 2025, EPA has reviewed and made HOV determinations for all but PHL2012D and PHL2104D, as insufficient information was provided. Should Potrero seek HOVs at these or other wells in the future, please submit sufficient demonstrations.

The conditions at the HOV requested wells are summarized as follows:

| Well | Wellhead Temperature (˚F) | CH4:CO2 Ratio | CO (ppm) |
|---|---|---|---|
| PHHC1406 | high 130s | >1.0 | <50 |
| PHL1804D | 130s | >1.0 | <100 |
| PHL1805S | 130s | 1.0 | <20 |
| PHL2015D | 130s | >1.0 | <20 up to 60 |
| PHL2102S | 130s | >1.0 | <50 up to 230 |
| PHL2121D | 135-146 | >1.2 | <30 up to 150 |
| PHL2124D | 130s | >1.2 | <30 up to 180 |
| PHLF2205 | 130s | >1.0 | <20 |
| PHLF2303 | 130s | >1.0 | <30 up to 130 |
| PHL2119S | 130-142 | .7-1.0 | <20 up to 90 |
| PHLF1904 | 130s | >1.0 | <30 |
| PHLF2112 | 135-145 | .8-1.0 | <50 |

| | | | |
|---|---|---|---|
| PHLF2302 | 130s | 1.0 | <50 up to 140 |
| PHL1803S | high 130s | >1.0 | <50 |
| PHLF2108 | 130s | >1.0 | <50 |
| PHLF2306 | High 130s | >1.0 | <50 up to 190 |
| PHLF2308 | 130s | 1.0 | <50 up to 110 |
| PHLF2309 | 130s | .9-1.0 | <75 |
| PHLF2311 | 130s | >1.0 | <25 up to 250 |
| PHLF2312 | 135-145 | >1.0 | <50 up to 290 |
| PHLF2209 | 145-150 | 1 | <50 up to 1200 |
| PHL2004D | 140s | >1.0 | <50 up to 500 |
| PHL2118D | 135-145 | 0.8-1.0 | <100 up to 2000 |
| PHL2119D | 135-145 | >1.0 | <50 up to 230 |
| PHL2120D | 140-145 | >1.0 | <50 up to 400 |
| PHL2010D | 125-135 | >1.2 | <100 |
| PHL2013D | 125-135 | >1.2 | 100 up to 250 |
| PHL2016D | 120s | .8-.9 | <20 up to 60 |
| PHL2016S | 120s | >1.0 | <50 |
| PHL2017S | low 130s | >1.0 | <20 up to 50 |
| PHL2104S | 110-130 | >1.0 | <200 |
| PHL2121S | 120s | .9-1.1 | <100 |
| PHLF1916 | 120-130 | >1.0 | <50 |

Downwell temperature readings are summarized below:

| Well | Maximum Temperature (˚F) | Temperature Depth / Total Depth (ft) |
|---|---|---|
| PHL2004D | 165.1 | 180 / 180 |
| PHL2118D | 144.5 | 120 / 120 |
| PHL2120D | 156.9 | 180 / 180 |
| PHLF2209 | 150.5 | 180 / 180 |

**APPROVALS**

EPA approves Wellhead Temperature HOVs up to 145˚F for the following 25 wells, subject to the conditions below:

PHHC1406, PHL1803S, PHL1804D, PHL1805S, PHL2004D, PHL2015D, PHL2102S, PHL2118D, PHL2119D, PHL2119S, PHL2120D, PHL2121D, PHL2124D, PHLF1904, PHLF2108, PHLF2112, PHLF2205, PHLF2209, PHLF2302, PHLF2303, PHLF2306, PHLF2308, PHLF2309, PHLF2311, and PHLF2312

**CONDITIONS**

1. Potrero shall monitor CO at PHLF2209, PHL2004D, PHL2118D, PHL2120D, and PHL2119D at least monthly according to the procedure in 63.1961(a)(5)(vi): EPA Method 10 of appendix A-4 to part 60 of this chapter, or an equivalent method with a detection limit of at least 100 ppmv of carbon monoxide in high concentrations of methane.
2. If the wellhead temperature of PHLF2209, PHL2004D, PHL2118D, PHL2120D, or PHL2119D

increases to greater than 145˚F, Potrero shall monitor the well according to the procedure in 40 CFR 63.1961(a)(5). If the wellhead temperature of the well subsequently decreases to below 145˚F, Potrero shall monitor the well in accordance with Condition 1 of this HOV approval.

**DENIALS**

EPA is not approving an HOV as requested of 145˚F for PHL2010D, PHL2013D, PHL2016D, PHL2016S, PHL2017S, PHL2104S, PHL2121S, and PHLF1916 as the demonstrations failed to demonstrate compliant conditions at or near 145˚F. EPA recommends Potrero continue corrective actions that have demonstrated compliance up to 131˚F.

EPA is not approving an HOV as requested of 155˚F for PHLF2209, PHL2004D, PHL2118D, and PHL2120D. The demonstrations failed to demonstrate compliant conditions at or near 155˚F. EPA identified this group of wells clustered with PHL2119D, which all have exhibit increased wellhead temperatures approaching or above 145˚F. EPA recommends Potrero continue corrective actions that have demonstrated compliance up to 145˚F and increasing vacuum at these wells and/or installing additional wells/pumps to increase heat extraction at deeper depths of this area. Potrero should improve well tuning and cover thickness/integrity in areas with increased vacuum or well density to minimize air intrusion.

EPA recommends speciating and addressing high (>20%) balance gas at PHHC1406, PHL1804D, PHL1805S, PHL2010D, PHL2013D, PHL2015D, PHL2016D, PHL2017S, PHL2102S, PHL2121D, PHL2124D, PHLF2205, PHLF2303, PHL2016S, PHL2119S, PHL2121S, PHLF1904, PHLF2112, PHLF2302, PHL1803S, PHL2104S, PHLF1916, PHLF2108, PHLF2306, PHLF2308, PHLF2309, PHLF2311, and PHLF2312.

Generally, EPA recommends the following corrective actions to address elevated temperatures when an area or well(s) exhibit some or all symptoms of subsurface exothermic reactions that may manifest as elevated wellhead temperatures (>145˚F).[1]

1. Increasing vacuum/flow at affected or surrounding wells to increase heat removal.
    a. Addressing liquids in the well. Subsurface exothermic reactions are likely to increase leachate production.
2. Improving cover integrity at affected or surrounding wells to allow for increased vacuum/flow without introducing air intrusion increased heat removal.
3. Installing additional well density within and surrounding the area to allow for increase heat removal.
4. Re-evaluation of well casing materials to ensure they can withstand the increased temperatures at affected wells.
    a. Down well monitoring is necessary to determine the integrity of the entire well to avoid below-grade melting/pinching and decreased collection efficiency.
    b. Consideration may also be needed for wellhead materials.

This approval is not an approval or endorsement, in any way, of the proposed permit language in the February 27, 2025 HOV request. EPA holds that the monitoring, corrective action, and other applicable temperature related provisions of 40 CFR Part 62 Subpart OOO and Part 63 Subpart AAAA still apply to this well, except that the HOV for temperature at the approved wells under 40 CFR § 62.16716(c) is

[1] https://www.epa.gov/land-research/elevated-temperature-landfill
https://www.epa.gov/land-research/citations-elevated-temperature-landfill-research

approved to be 145˚F. Any alternative monitoring request to the monitoring provisions should be made to EPA Region 9 Enforcement and Compliance Assurance Division.

Note that any attempted corrective measures must not cause exceedances of other operational or performance standards, including abandoning or otherwise ceasing supply of vacuum to the well such that collection in the area covered by the well is eliminated. 40 CFR § 63.1960(a)(4)(i).

Sincerely,

ROSHNI BRAHMBHATT

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