

Environmental Report Palos Verdes Landfill – Fourth Quarter 2021

At the January 23, 2012 meeting of the Palos Verdes Landfill Citizens' Advisory Committee (CAC), the Committee decided that regularly-scheduled quarterly meetings were no longer necessary. Instead, the Committee decided to meet on an "as-needed" schedule. The Committee requested the Sanitation Districts' staff prepare a quarterly Environmental Report that updates the Committee on the results of routine temperature and landfill gas monitoring. This report covers the Fourth Quarter of 2021 (October 1 through December 31, 2021).

Landfill Gas Well Temperature Monitoring

As discussed at the May 3, 2010 CAC meeting, household refuse includes organic matter that can generate heat as it decomposes (similar to the heat generated in an active backyard compost pile). The composting process and the temperature of the waste can be controlled by limiting the amount of air available within the landfill. The Sanitation Districts control the air available in the Palos Verdes Landfill by monitoring the integrity of the soil cap and by controlling the draw rate at individual gas collection wells (i.e., preventing conditions that could draw excess air into the waste mass). The Sanitation Districts monitor the temperature of the landfill gas collection wells to determine if adjustments are needed. These procedures have been shown to effectively control the temperature of the waste.

At the CAC's request, the Sanitation Districts share the results of temperature monitoring with the CAC on a quarterly basis. Specifically, the Sanitation Districts have been asked to include a discussion in the environmental report whenever the temperature in any well exceeds 170 degrees Fahrenheit. In that case, the Sanitation Districts would also discuss the follow-up actions that were taken to control composting at that location.

During the Fourth Quarter of 2021, there were no gas collection wells where temperature measurements exceeded 170 degrees Fahrenheit.

For more information about landfill gas temperature control, please see Appendix I of the First Five-Year Review for the Palos Verdes Landfill.

Surface Gas Monitoring

As discussed at the April 25, 2011 CAC meeting, the surface of the landfill is monitored for evidence of landfill gas emissions on a quarterly basis. Monitoring is conducted by continuously recording the methane content of the air immediately above the cover surface while traversing the landfill area in a systematic grid pattern. If methane readings are above prescribed action levels, the Sanitation Districts are required to make gas system adjustments or soil cover repair within the time limits specified in the South Coast Air Quality Management District (SCAQMD) Rule 1150.1 Compliance Plan.

At the CAC's request, the Sanitation Districts provide a summary of action level exceedances and the Sanitation Districts' response. Routine surface gas monitoring conducted by site staff in the Fourth Quarter of 2021 did not show any areas of the site where action levels were exceeded.

For more information about surface monitoring of landfill gas, please see Appendix B of the First Five-Year Review for the Palos Verdes Landfill.

Perimeter Probe Monitoring

As discussed at the October 25, 2010 CAC meeting, the subsurface zone around the perimeter of the landfill is monitored for evidence of landfill gas migration on a monthly basis. If methane is detected at greater than five percent by volume in any boundary probe, the Sanitation Districts are required to adjust the gas system to clear the probe within the time limits specified in the SCAQMD Rule 1150.1 Compliance Plan.

At the CAC's request, the Sanitation Districts provide a summary of action level exceedances in boundary probes and the Sanitation Districts' response to clear the probe. Routine boundary probe monitoring in the Fourth Quarter of 2021 did not show any probes where action levels were exceeded.

For more information about boundary probe monitoring, please see Appendix C of the First Five-Year Review for the Palos Verdes Landfill.

Other Issues of Interest to the CAC

During a heavy rainstorm on December 30, 2021, an unauthorized discharge of approximately 150 gallons of landfill gas condensate mixed with groundwater occurred at the Palos Verdes Landfill (PVLf) at approximately 7:15 AM. The spill originated from an overflow of a condensate tank at the low-point on the northeast boundary.

Given the heavy rainfall, the tank's secondary containment contained significant stormwater. A portion of the spilled liquid was captured in the secondary containment and a diluted mix flowed out of the secondary containment to the drainage channel where it mixed with more stormwater before flowing offsite. The direct cause of the spill was the failure of an automatic shut-off valve that failed to completely close. The Districts were alerted to this condition because the tank and containment system triggered high level alarms prompting a technician to respond. The discharge was stopped by 7:45 AM. Due to the heavy rainfall runoff in the storm drain channels, there was no opportunity to recover the liquids that had flowed offsite. The Department of Toxic Substances Control was notified at approximately 11:00 AM. The Districts are taking measures to prevent recurrence by replacing the broken shut off valve, investigating the instrumentation, and lowering the high-level float configuration in the secondary containment to allow more time to prevent liquid spills over the top of the containment.