

Solid Waste Landfills (40 CFR Part 60, Subpart WWW or the Landfill NSPS). The regulation at 40 CFR § 60.753(b) requires the owner or operator to operate the collection system with negative pressure at each wellhead except under certain situations, one being a decommissioned well. 40 CFR § 60.753(c) requires the owner or operator to operate each interior wellhead in the collection system with a landfill gas temperature of less than 131 degrees Fahrenheit and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The owner or operator may establish a higher temperature, nitrogen or oxygen value at a particular well.

VES-Zion's request for approval of alternate standards for pressure and oxygen pertains to extraction locations where gas flows are so low that applying even minimal vacuum results in air infiltration that causes exceedances of the applicable oxygen concentration limit. Shutting down such wells will prevent the air infiltration that leads to the oxygen exceedances, but shutting down a well may cause positive pressure in the wellhead as landfill gas builds up. Therefore, simultaneously complying with both the pressure and oxygen concentration limits in 40 CFR § 60.753 can be difficult for wells where gas flow rates are low.

The extraction locations that VES-Zion wants covered by these alternative standards and procedures are extraction locations: EW01, EW12A, EW164, CEW1W, CEW5, and CEW5E:

EW01 is a vertical gas extraction well located in one of the oldest areas of the landfill where gas flow rates have been steadily declining. However, since the well will occasionally show decent gas quality, VES-Zion does not want to decommission the well.

EW12A is another vertical gas extraction well located in the same area as EW01 but EW12A is shallow and located at the edge of waste. The facility does not want to decommission this well since it is useful for controlling subsurface migration.

EW164 is a vertical gas extraction well installed in a newer area of waste. Since the waste is still fairly young, gas production is not yet firmly established. It is likely when gas production is well underway that alternate standards/procedures will no longer be required.

CEW1W, CEW5 and CEW5E are leachate cleanout risers. Because of the design of these systems, there is often air intrusion. In addition, if the leachate pipe perforations are submerged with leachate, very little landfill gas can enter the piping for collection. The site does not want to disconnect the cleanout risers from the gas control system since they periodically do contain large quantities of gas and are a key tool for odor control.

According to VES-Zion, the persistent exceedances of oxygen and pressure at the above extraction locations are not due to operational or maintenance issues but are the result of declining gas quality and flow rates. Instead of decommissioning or permanently disconnecting such extraction locations, which would result in no gas control, VES-Zion wants to keep operating them and allow the locations to remain shut off, under positive pressure, with monthly monitoring and periodic adjustment to vacuum to remove accumulated landfill gas.

EPA's Determination

EPA agrees and has already determined that the procedures outlined below have the potential to lower overall non-methane organic compound (NMOC) emissions from the extraction points in comparison to decommissioning. The potential increase in NMOC control system efficiency stems from the ability of the facility to quickly resume gas collection if there are improvements in gas quality or increases in the gas production rate at the extraction points. If extraction locations in a nonproductive area are only intermittently shut off as opposed to decommissioned (physically disconnected from the collection and control system), there is greater NMOC emission control.

Therefore, EPA approves the below described alternate procedures for extraction points EW01, EW12A, EW164, CEW1W, CEW5, and CEW5E. These procedures are generally the same as those proposed by VES-Zion, except for additional reporting requirements and a requirement that the alternate procedures be terminated if gas quality improvements can be maintained. 1. When the oxygen concentration at the extraction location does not decline to acceptable levels after more than one hour of reduced vacuum, the location may be shut off until the gas quality recovers.

2. The monthly monitoring required by 40 CFR Part 60, Subpart WWW will be conducted for these

locations, but positive pressure or elevated oxygen concentrations will not be considered as exceedances of the operating limits in 40 CFR § 60.753. However, the monthly monitoring results must be reported to the Illinois Environmental Protection Agency (IEPA). The reports to IEPA shall note if and when the extraction points are shut off in accordance with this letter.

3. If monthly monitoring indicates that pressure has built up in the extraction point and the oxygen concentration still exceeds 5 percent, the location will be briefly opened to relieve the pressure and may then be shut down until it is monitored the following month.

4. The surface monitoring required by 40 CFR Part 60, Subpart WWW will continue to be conducted in this area. Standard remediation steps, including evaluating the need to return the extraction location to full-time service, must be followed if exceedances of the 500 ppm methane surface concentration limits are detected in the immediate vicinity.

5. If the monthly monitoring indicates that gas quality has improved (i.e., the oxygen concentration has dropped below 5 percent), the extraction location will be brought back on line until the gas quality declines again. If the oxygen levels can be maintained below the regulatory limit of 5 percent, this alternate operating procedure is terminated and the well shall be operated in accordance with the regulatory requirements.

In addition, you should submit this information to IEPA as part of a design plan change. IEPA must be made aware that the above six extraction points are low gas-producing wells and that they are subject to alternative limits/procedures. IEPA will periodically review the wells' status to ensure that if higher gas quality can be maintained, this alternate operating procedure should be terminated and the extraction points shall be operated in accordance with the regulatory requirements.

This response has been coordinated with Yasmine Keppner of IEPA. If you have any questions regarding this letter, feel free to contact Linda H. Rosen, of my staff, at (312) 886-6810.

Sincerely yours,

George T. Czerniak, Chief
Air Enforcement and Compliance Assurance Branch

cc: Ray Pilapil, Manager
Bureau of Air Compliance and Enforcement Section
Illinois Environmental Protection Agency