

Technical Bulletin

Status Update on New NSPS/EG Rules for Landfills

Background

New U.S. Environmental Protection Agency (EPA) landfill gas (LFG) rules were published in the Federal Register on August 29, 2016. These rules included a New Source Performance Standards (NSPS) rule under Title 40 Code of Federal Regulations (40 CFR) Part 60, Subpart XXX and an Emission Guideline (EG) rule under 40 CFR Part 60, Subpart Cf. The rules affect newly-defined NSPS sites (i.e., “new” landfills that are new or modified (expanded in capacity) after July 17, 2014) and EG sites (i.e., “existing” landfills that have not been expanded after July 17, 2014), respectively.

The new rules will eventually replace the existing NSPS rule (40 CFR Part 60, Subpart WWW) and EG rules (40 CFR Part 60, Subpart Cc and state-equivalent rules) after a transition period. The new rules took effect on October 28, 2016, with compliance obligations under the NSPS Subpart XXX rule beginning November 28, 2016.

Originally, states and local air jurisdictions were to submit their proposed EG rules by May 30, 2017; however, there have been some delays in this process, which is detailed below. Once submitted, EPA was to have four months to approve or disapprove of the state/local EG rules. For existing sites subject to the EG rule, there is a time lag before the EG rules become fully effective in each jurisdiction based on this process of state/local rulemaking and EPA approval.

Status Update

The landfill industry reviewed these new rules and found serious issues with them. As a result, the industry (as represented by major waste companies, the Solid Waste Association of North America (SWANA) and the National Waste and Recycling Association (NW&RA)) filed administrative and judicial petitions against EPA to force reconsideration on the rules to correct these deficiencies. EPA initially responded by issuing a 90-day stay of the regulations on May 31, 2017, but the

stay expired on August 29, 2017, and has not been extended. EPA has abandoned any efforts to further stay the rules based on concerns raised by environmentalists.

EPA has committed to reconsideration of the NSPS/EG rules, with draft reconsidered rules due in 2019 and final rules in 2020. There remain some serious issues related to applicability, interpretation, and implementation that must be resolved, and the industry will continue to work with EPA during reconsideration to resolve these concerns.

At this time, landfill owners/operators need to determine whether their landfill is considered new or existing under the rules. New sites under Subpart XXX must comply with the new requirements and deadlines as they are established in the rule. Unfortunately for these landfills, many requirements from the new NSPS rule will be required to be met prior to the issuance of the reconsidered rules in 2020.

Sites classified as existing under the new rules can wait until the states develop/gain EPA approval for their EG rules while complying with currently applicable rules. Because of the stay and reconsideration, many states have delayed their EG rulemakings, a position that the industry supports and EPA appears to accept. It makes sense for the states/local jurisdictions to wait for the reconsidered rules so they do not complete an entire rulemaking process for rules that will be changed within two years. However, some states are moving forward with EG rules, so it is important to track each state and local jurisdiction, as applicable, to stay current on their rulemaking process. Ultimately, EPA will develop a federal plan to act as the EG rule in jurisdictions that do not develop their own rules.

It should be noted that EPA had not revised the landfill National Emission Standard for Hazardous Air Pollutants (NESHAPs; 40 CFR Part 63, Subpart AAAA), which has created one of the major issues with the new rules. They will do so in concert with

the reconsideration of the NSPS/EG rules. However, EPA must first address the residual risk requirements at the same time, which will necessitate a review of toxic emissions from LFG. Landfills currently subject to the NESHAPs must continue to comply with it.

Primary Element of the Rules

The major component of both rules is that the 50 Mg/year of non-methane organic compounds (NMOCs) emission threshold, which triggers the installation of a LFG collection and control system (GCCS), was lowered to **34 Mg/year** for all landfills with one exception. Existing, closed sites, as defined in the rule under the closed landfill subcategory, will continue to be able to use the 50 Mg/year threshold.

Key Components of the Rules

Other key areas of the NSPS/EG rules include:

Treatment Definition. The definition of LFG treatment has reverted to the original definition used throughout the industry of filtration, dewatering and compression; without numeric limits or continuous monitoring requirements. However, the rules include a requirement for each regulated landfill to develop a treatment system monitoring plan to address treatment criteria.

Surface Monitoring. All penetrations to the landfill cover must now be monitored during each quarterly surface emission monitoring (SEM) event. This is in addition to monitoring of the required serpentine path across the landfill surface, the path around the perimeter of the landfill, and for areas where visual observations suggest a potential leak.

Tier 4. A new Tier 4 methodology has been promulgated to assess whether a GCCS is required once NMOC emissions exceed 34 Mg/year but are less than 50 Mg/year. The procedure includes SEM with no exceedance of the 500 parts per million by volume (ppmv) threshold for methane, which, if met, would allow a delay in the applicability of the full NSPS/EG requirements.

Wellhead Criteria. EPA removed the wellhead monitoring threshold criterion for oxygen. Oxygen monitoring will still be required monthly, but no limits or exceedances will exist. Maintaining

negative pressure and a temperature of less than 131 F° are still requirements as in the existing NSPS and EG rules. The rules also provide for specific timelines for corrective action and remonitoring not contained in the original rules.

Criteria for Removing GCCS. For removal/decommissioning of the GCCS, the following three criteria must be met: (1) must be a closed landfill; (2) GCCS must have operated for 15 years or landfill must demonstrate that the GCCS could not operate for 15 years due to declining flow; and (3) the calculated NMOC emission rate at the landfill is less than 34 Mg/year on three consecutive test dates (50 Mg/year for the closed landfill subcategory).

Startup, Shutdown, and Malfunction (SSM) Requirements. The rule will now apply at all times, including SSM. This would remove the former SSM “exemption” that was contained within the existing NSPS/EG rules and allowed landfills to avoid non-compliance through the use of SSM. In recognition of the unique nature of landfill emissions, and consistent with the need for standards to apply at all times, including during periods of SSM, EPA has indicated that a work practice standard applies during SSM events. During such events, owners or operators must shut down the gas mover system and close all valves in the GCCS, which could contribute to the potential venting of the gas to the atmosphere, within one hour.

Other Issues Addressed

EPA also provided rule clarifications and other minor changes to the rules on the following issues:

GCCS Design Plans. Will be required to be updated under two situations: (1) due 90 days after expansion of the GCCS into a new area not covered in the existing plan; and (2) if changes made to the GCCS were not consistent with the current plan. Under the new rules, landfills must notify the state/local agency when a Design Plan has been completed and submit the signature page, stamped by a professional engineer.

Electronic Reporting. Electronic reporting will be required for performance test reports, NMOC emission rate reports, annual reports, Tier 4 reports, and wet landfilling practices through the EPA’s Central Data Exchange (CDX) using the Compliance

and Emissions Data Reporting Interface (CEDRI) once EPA creates specific report templates.

EPA Method 25A. will be included in the rule for testing low NMOC concentrations on the control device outlet, but **EPA Method 18** will not be allowed for NMOC analysis by itself. It can, however, be used in conjunction with Method 25A.

Waste Definitions. EPA has clarified the definitions of “household waste” and “segregated yard waste” so that landfills that take these materials would not be defined as municipal solid waste (MSW) landfills under the rules unless they accepted other materials that would classify them as MSW.

Wet Landfills. EPA elected not to include any additional regulations for so-called “wet” (those that recirculate leachate or accept liquid wastes) landfills; however, they are requiring specific information to be submitted as part of the electronic reporting that would help them decide how to regulate wet landfills in the future.

Portable Meters. EPA explicitly allowed the use of portable meters for compliance with EPA Methods 3A and 3C (nitrogen and oxygen) for wellhead monitoring.

Low-Producing Areas. EPA still requires that low-producing areas must be generating less than 1% of the NMOC emissions compared to the landfill as a whole before they can be removed from the gas collection and monitoring requirements. However, with the new rules, actual gas flow data can be used in lieu of the LFG generation model for estimating NMOC emissions.

Some of the new or revised requirements noted above are the subject of the industry petitions, and we expect them to become a major part of the reconsideration effort with EPA.

For a copy of the rules and related documents:

<https://www.epa.gov/stationary-sources-air-pollution/municipal-solid-waste-landfills-new-source-performance-standards>

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