

# **Uncertainty EPA has Created with New NSPS XXX and Cf Rules**

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**Gabrielle Stephens**

SCS Engineers, Pleasanton, California

**Cassandra B. Drotman**

SCS Engineers, Santa Rosa, California

**Patrick Sullivan**

SCS Engineers, Sacramento, California

## **INTRODUCTION**

The U.S. Environmental Protection Agency (EPA) has created confusion with its most recent versions of the municipal solid waste (MSW) landfill New Source Performance Standards (NSPS) and Emission Guidelines (EG) [40 Code of Federal Regulations (CFR) Part 60, Subparts XXX and Cf], which were promulgated in August 2016. The NSPS XXX and EG Cf rules do not give clear on and off ramps from the old NSPS Subpart WWW and EG Subpart Cc rules and have various inconsistent and overlapping requirements. EPA made matters worse by not updating the MSW landfill National Emission Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR Part 63 Subpart AAAA, rule at the same time. This created a situation where both the old and new rules could apply simultaneously (with conflicting requirements), even though the new rules were supposed to replace the old rules.

This and other issues forced the industry to petition EPA for relief, and the industry obtained a temporary stay and then a commitment to reconsider the rules. Concurrently, EPA informally agreed not to push forward with approving state plans for the EG under Subpart Cf, which gave the industry hope that EPA could fix the rules before most landfills became subject to the new rules via approved state plans. However, some states sued EPA over this delay, and EPA lost. As such, EPA was forced by the courts to begin approving the state plans as well as issue a federal plan for the EG (Subpart OOO), for which a draft rule was published in August 2019 and a final rule is pending.

Also, before they planned to reconsider Subparts XXX/Cf, EPA decided to update the NESHAP rule, including a risk and technology review (RTR). While doing this, EPA also tried to resolve some of the Subpart XXX/Cf issues using the NESHAPs rule as well as add some new requirements not included in the NSPS XXX and EG Cf rules. However, the NESHAPs rule, which was promulgated on March 26, 2020, demonstrated that EPA had only created more confusion and uncertainty.

The solid waste industry commented on the draft Subpart AAAA rule and most of the industry comments were not addressed in the final rule. EPA says the reconsideration of XXX/Cf has been put off until 2021 or 2022.

Currently, landfill owners and operators remain in a state of limbo. Some sites are complying with Subpart XXX and dealing with the duplicate requirements from Subpart WWW and other issues. Several states have approved Cf EG rules, so landfills in those states must begin to comply with those state rules. Several other states have proposed state plan approvals, and could see approved EG rules issued soon. When EPA issues the federal plan for the EG, all of the remaining landfills in states without approved state plans will have to start to comply. This will put all NSPS/EG-applicable landfills into the same boat with the existing Subpart XXX sites with all of the problems that carries. In addition, landfills are figuring out how the new NESHAPs rule overlays on top of the NSPS/EG requirements.

## **STATUS OF EACH REGULATION**

### **Subpart WWW and Cc (Old NSPS and EG)**

The original NSPS and EG for landfills, denoted as “Old”, were first promulgated in 1996. They set the regulatory minimum requirements for landfills in the United State to follow. The regulatory citation is below:

- Standards of Performance for New Stationary Sources and Guidelines for Control of Existing Sources: Municipal Solid Waste Landfills at 40 CFR 60, Subpart WWW (Old NSPS)
- Standards of Performance for New Stationary Sources and Guidelines for Control of Existing Sources: Municipal Solid Waste Landfills at 40 CFR 60, Subpart Cc, including the Federal Plan (40 CFR Subpart GGG) and State EG rules (Old EG)

The Old NSPS and Old EG required all MSW landfills in the United States with a design capacity over 2.5 million Megagrams (Mg) by mass and 2.5 million cubic meters by volume to be subject to the rule. Once regulated under the rule, it set a non-methane organic compound (NMOC) threshold at which a landfill gas (LFG) collection and control (GCCS) system must be installed at 50 Mg per year (Mg/year).

These have been the primary rules that mandate a GCCS to be installed at landfills and operated across the United States. However note, some states, such as California, have more stringent landfill requirements, such as the AB 32 Landfill Methane Rule (LMR). As the Old NSPS and EG have been in place for over two decades, there is almost no difference between the subparts (WWW, Cc, GGG, or the state equivalents), as all MSW sites must comply, with essentially the same requirements.

The Old NSPS requirements continue to apply to MSW landfills for which construction, reconstruction, or modification was commenced on or after May 30, 1991, and on or before July 17, 2014 under WWW, until such time construction, reconstruction, or modification occurs

triggering the New NSPS, or the New EG rule is fully implemented (e.g., the rule is finalized and the 30-month compliance window has ended).

The Old EG requirements continue to apply to MSW landfills for which waste was accepted after November 8, 1987 but there were no construction, reconstruction, or modifications after May 30, 1991.

### **Subpart XXX and Cf (New NSPS and EG)**

The updated NSPS and EG for landfills (denoted as “New”) were promulgated on August 29, 2016 and became effective on October 28, 2016. The regulatory citations are below:

- Standards of Performance for Municipal Solid Waste Landfills at 40 CFR 60, Subpart XXX (New NSPS).
- Emissions Guidelines and Compliance Times for Municipal Solid Waste Landfills under 40 CFR Part 60, Subpart Cf including Federal Plan Subpart OOO or State Plans (New EG)

The New NSPS and New EG retained the design capacity requirement which determined if landfills were subject to the rule, but lowered the NMOC threshold at which a GCCS is required from 50 Mg/year to 34 Mg/year (except for designated closed subcategory landfills). Once subject to the new NSPS, there are new or updated requirements that include the creation of a new method to avoid or delay the installation of a GCCS called a Tier 4, updated criteria for removal of GCCS for low LFG producing areas, clarification of LFG treatment, new wellhead operational standards, updated surface monitoring procedures, liquids reporting, and revised startup, shutdown, and malfunction (SSM) provisions.

One of the primary differences between the New NSPS and New EG rules is when they go into effect for landfills. The New NSPS applies to landfills with construction, reconstruction, or modification commenced after July 17, 2014, the date the proposed rule was first published. The New EG (or New Federal Plan), once adopted by each individual state, applies to landfills that accepted waste after November 8, 1987, and that commenced construction, reconstruction, or modification on or before July 17, 2014.

On March 12, 2020, the EPA published in the Federal Register “Notice of Finding of Failure to Submit State Plans for the Municipal Solid Waste Landfills Emission Guidelines” which covers the eleven state plan submissions, which are discussed more in the section below, as well as, stating the publication triggers an obligation for the EPA to promulgate a final federal plan within two years or by March 1, 2022.

### **NESHAP Subpart AAAA**

The initial NESHAP Subpart AAAA (Old NESHAP) was published on and became effective on January 16, 2003. On July 29, 2019, a proposed rule was published, and a final rule was in the Federal Register on March 26, 2020 (New NESHAP). The regulatory citation is below:

- National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills at 40 CFR 63 Subpart AAAA (same for Old and New NESHAP)

The Old NESHAP rule is applicable to both major and area sources, and contains some of the same requirements as the old NSPS promulgated in 1996, such as SSM and other limited criteria, but references the NSPS/EG for specifics. As such, in order to comply with the Old NESHAP, MSW landfills must comply with the Old NSPS/EG, thus creating a condition for certain sites to follow both the Old and New NSPS. The New NESHAP incorporates the LFG control, operational standards, monitoring, recordkeeping, and reporting rule requirements from the NSPS/EG program directly into the NESHAP in order to minimize cross referencing another subpart.

The EPA is not making any changes to the existing standards based on the RTR. However, EPA is finalizing several minor amendments to the NESHAP regulation that they believe will improve clarity, compliance, and implementation of the rule. Revisions to the NESHAP regulation include overall NESHAP reorganization to reduce overlapping applicability and to promote consistency with the Old and New NSPS; regulatory text for the New NSPS that allows landfills to demonstrate compliance by “opting in” to the major compliance provisions of the New NESHAP; revisions to wellhead standards and associated monitoring and corrective action procedures; electronic reporting; and updated language to clarify that the standards are applicable during periods of SSM; and work practice standard for time periods when a landfill’s GCCS is not operating. EPA believes aligning the requirements of the New NSPS and the New NESHAP will allow facilities to streamline their compliance and reporting; however, this creates different requirements that each landfill will have to select individually as well as new timelines, thus creating more confusion, as well as different compliance deadlines.

## **EG PLAN STATUS**

In August 2019, EPA published a draft federal EG Plan for existing MSW landfills in any state, tribe, or locale that has not submitted a satisfactory plan. This was in response to a court order for EPA to finalize a federal plan by November 6, 2019. The proposed Federal Plan includes the same elements as required for a state plan which include:

- Identification of legal authority and mechanisms for implementation;
- Inventory of designated facilities;
- Emissions inventory;
- Emission limits;
- Compliance schedules;
- A process for the EPA or state review of design plans for site-specific GCCS;
- Testing, monitoring, reporting and record keeping requirements;
- Public hearing requirements; and
- Progress reporting requirements.

EPA was granted a stay on signing the Federal Plan on January 13, 2020, and the industry does not expect to see a final Federal Plan earlier than April 2020. A recent rulemaking proposed by EPA would extend the deadline for the federal plan until March 1, 2022; however, this may face

legal scrutiny by certain states. As the EPA is delayed in issuing a final Federal Plan, they tried to delay the implementation of state EG rules; however, the EPA was sued, and the courts ruled that the EPA had to move forward with approving the state rules which were submitted.

On October 30, 2018, EPA issued a proposal to extend plan submission deadlines for the 2016 Municipal Solid Waste Landfills Emission Guidelines, and on August 26, 2019, the proposed amendments were published, aligning state plan timing requirements with those recently proposed in the Affordable Clean Energy (ACE) rule. The new timing requirements extended state plan submission deadlines to August 29, 2019. EPA would review submitted state plans for completeness within 6 months from submission and review for approval within 12 months of the completeness review.

The EPA has received eleven state plan submissions and eight have been approved or partially approved state plans to the implement the New EG rule and they are summarized below. The EPA is not aware of any tribes that have developed plans to implement the 2016 MSW Landfill EG or submitted negative declaration letters. The EPA is proposing this MSW Landfill Federal Plan to implement the 2016 MSW Landfill EG in states, territories, protectorates, and Indian country, which do not have an approved and effective state or tribal plan.

On March 12, 2020, the EPA announced in the Federal Register that 42 states and territories had failed to submit state plans by the required deadline of August 29, 2019.

### **Arizona**

Three plans were submitted for the state, one for Arizona Department of Environmental Quality (ADEQ), one plan for Maricopa County Air Quality District (MCAQD), and one for Pinal County Air Quality Control District (PCAQCD). Both ADEQ and PCAQCD have submitted state plans to the EPA, which were published for approval in the federal register on February 19, 2020. The plans were the same as the federal plan and the EPA did not have any comments. As such, the final ADEQ and PCAQCD EG rules were published as final on March 20, 2020.

MCAQCD submitted a plan to the EPA but it was withdrawn on July 3, 2019.

### **California**

In May 2017, California Environmental Protection Agency (CalEPA) published the California State Plan for Municipal Solid Waste Landfills. In January 2020, EPA gave California a partial approval and partial disapproval of their State Plan to implement Subpart Cf. The partial approval requires landfills to comply with existing California state-only requirements under the LMR and becomes partially effective on February 10, 2020. Therefore, California landfills will continue to comply with currently applicable air regulations with no new requirements at this time, even after February 10, 2020. EPA only granted partial approval of California's State Plan, as it did not incorporate all of the elements under the New EG. As a result, those missing elements will not be effective in California until EPA finalizes the Federal Plan under a separate rulemaking process.

Therefore, in California, landfills that fall under the New EG rule will need to continue to comply with the Old NSPS and the LMR. For landfills that fall under the new NSPS rule, they will need to comply with the full federal requirements, as well as the LMR, as the federal rule does not meet compliance of the LMR.

### **Delaware**

Delaware Department of Natural Resources and Environmental Control (DNREC) submitted a state plan to EPA on October 10, 2017. The EPA published the final rule for the Delaware state plan in the federal register on February 20, 2020, which became effective on March 23, 2020.

### **New Mexico**

New Mexico Environment Department (NMED) submitted the New Mexico Plan on May 25, 2017, and covers all existing landfills in New Mexico except in Albuquerque-Bernalillo County. NMED submitted a Plan on behalf of Albuquerque-Bernalillo County on May 24, 2017. Both plans were approved by the EPA and became effective on October 11, 2019, to implement and enforce the EG for existing MSW landfills.

### **Virginia**

The Virginia Department of Environmental Quality (VDEQ) submitted a Virginia state plan on August 29, 2019. The EPA has indicated that the plan is approved in their March 12, 2019 list on the federal register; however, the dates of promulgation have not been published in the federal register to date.

### **West Virginia**

West Virginia Department of Environmental Protection (WVDEP) submitted a West Virginia state plan on September 13, 2018. The EPA published a final rule in the federal register on November 22, 2019, which became effective on December 23, 2019.

### **States with Submitted Plans or Negative Declarations**

In addition, the city of Philadelphia, state of Vermont, and Washington D.C. submitted negative declarations to the EPA. New York, Oregon, and South Dakota have since submitted final state plans to the EPA, which are under review. On March 13, 2020, the EPA published a proposal to approve the Oregon Department of Environmental Quality (ODEQ) state plan.

### **REMAINING AREAS OF UNCERTAINTY**

Based upon the current status of the NSPS, EG, and NESHAP regulations, landfills are subject to multiple rules. For example, sites that accepted waste after November 8, 1987 but are not new or did not commence construction on a modification or expansion after July 17, 2014 are potentially not only subject to the New EG (Subpart Cf/State Plan) and Old NESHAP AAAA, but also the Old NSPS (Subpart WWW) because Old NESHAP AAAA still references the Old

NSPS. This brings added uncertainty where there are state regulations as well. After the phase-in period of the New NESHAP, some of this overlap may be resolved, but there is confusion as to when exactly this will occur.

Another example of uncertainty is the LFG wellhead temperature and oxygen operating parameters are different between the Old NSPS, New NSPS, and NESHAP rules, which can cause multiple reporting requirements. All three rule require monitoring LFG wellheads for all temperature, pressure, and oxygen; however, they each have different operating parameters shown in Table 1 below.

**Table 1. LFG Wellhead Operating Parameters by Each Rule**

<b>Operating Parameter</b>	<b>Old NSPS</b>	<b>New NSPS</b>	<b>New NESHAP</b>
Temperature	Less than 55 degrees Celsius (°C)[131 degrees Fahrenheit (°F)]	Less than 55 °C (131 °F)	Less than 62.8 °C (145 °F)
Pressure	Negative	Negative	Negative
Oxygen	Less than 5%	No Limit (Must Monitor)	No Limit (Must Monitor)

For landfills subject to multiple rules, they may be required to follow all three rules, which causes uncertainty of which requirement to follow, and when an exceedance may occur. This also brings the question if a landfill has an option to choose which rule they would like to follow for different parameters. If a landfill is subject to both the New NSPS and New NESHAP rules, can the site select if they want to use the 55 °C or 62.8 °C LFG wellhead temperature limit, and which corrective action criteria to follow, or would be required to follow both.

### **STRATEGY FOR COMPLIANCE BEING USED BY LANDFILLS DURING THIS PERIOD OF LIMBO**

During this period of limbo, where multiple overlapping regulations exist, certain public and private landfill owners within the solid waste industry have endeavored to take a unified and consistent stand on compliance strategies with guidance coming from the Solid Waste Association of North America (SWANA) and the National Waste and Recycling Association (NW&RA).

At this time, for sites that trigger the New NSPS under Subpart XXX, since the federal rule is in place, compliance is required immediately, and for some sites, ongoing, since revisions to NESHAP AAAA are not fully effective yet. Sites subject to Subpart XXX continue to comply with the Old NESHAP AAAA, which also requires compliance with the Old NSPS. Landfill facilities are complying with all requirements including full wellhead monitoring for pressure (Old and New), temperature (Old and New), and oxygen (Old), surface emissions monitoring (Old and New) including cover penetrations and latitude/longitude coordinates (New), and recordkeeping and reporting for all periods of downtime of control device/treatment system (New). Landfills that are subject to state rules, such as the AB 32 LMR in California, would also continue to comply with the LMR.

For sites that are subject to the New EG under Subpart Cf, they are not only subject to the New EG (Subpart Cf/State Plan/Pending Federal Plan) and Old NESHAP AAAA, but also the Old NSPS at least until the New NESHAP is fully effective. For landfills that have State EG Plans approved, compliance must be met, which means you must comply with State Plans which may directly overlap with the Old NSPS in monitoring, recordkeeping, and reporting. For example, in California, the EG sites must comply with sections within the partially approved State Plan, excluding missing elements until the EPA finalizes the Federal Plan, the NESHAP AAAA (whichever version is applicable at the moment), Old NSPS Subpart WWW, as well as the AB 32 LMR.

## REFERENCES

1. Code of Federal Regulations Title 40 Part 60 Subpart WWW.
2. Federal Register, Title 40 Part 60 Emission Guidelines, Compliance Times, and Standards of Performance for Municipal Solid Waste Landfill; Proposed Rules, 2015.
3. Federal Register, Title 40 Part 60 Emission Guidelines, Compliance Times, and Standards of Performance for Municipal Solid Waste Landfill; Final Rule.
4. Code of Federal Regulations Title 40 Part 60 Subpart XXX, Standards of Performance for Municipal Solid Waste Landfills; Proposed Rule
5. Code of Federal Regulations Title 40 Part 60 Subpart XXX, Standards of Performance for Municipal Solid Waste Landfills; Final Rule
6. Code of Federal Regulations Title 40 Part 63 Subpart AAAA, National Emission Standards for Hazardous Air Pollutants for Source Categories
7. Federal Register, Title 40 Part 62 Approval and Promulgation of State Plans for Designated Facilities and Pollutants; New Mexico and Albuquerque-Bernalillo County; Municipal Solid Waste Landfills, Proposed Rule, 21 June 2019
8. Federal Register, Title 40 Part 62 Approval and Promulgation of State Plans for Designated Facilities and Pollutants; West Virginia; Control of Emissions From Existing Municipal Solid Waste Landfills, Proposed Rule, 1 July 2019
9. Federal Register, Title 40 Part 62 Approval and Promulgation of State Plans for Designated Facilities and Pollutants; Delaware; Control of Emissions From Existing Municipal Solid Waste Landfills, Proposed Rule, 1 July 2019
10. Federal Register, Title 40 Part 62 Approval and Promulgation of State Plans for Designated Facilities and Pollutants; Arizona; Control of Emissions From Existing Municipal Solid Waste Landfills, Proposed Rule, 8 July 2019

11. Federal Register, Title 40 Part 62 Approval and Promulgation of State Plans for Designated Facilities and Pollutants; Pinal County Air Quality Control District; Control of Emissions From Existing Municipal Solid Waste Landfills, Proposed Rule, 8 July 2019
12. Federal Register, Title 40 Part 62 Partial Approval, Partial Disapproval and Promulgation of State Plans for Designated Facilities and Pollutants; California; Control of Emissions From Existing Municipal Solid Waste Landfills, Proposed Rule, 30 July 2019
13. Federal Register, Title 40 Part 62 Approval and Promulgation of State Plans for Designated Facilities and Pollutants; Virginia; Control of Emissions From Existing Municipal Solid Waste Landfills, Proposed Rule, 29 August 2019
14. Federal Register, Title 40 Part 60 Notice of Finding of Failure to Submit State Plans for the Municipal Solid Waste Landfills Notice of Finding of Failure to Submit State Plans for the Municipal Solid Waste Landfills, 12 March 2020