

THE TEXAS STATE PLAN FOR THE CONTROL
OF DESIGNATED FACILITIES AND POLLUTANTS



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
P.O. BOX 13087
AUSTIN, TEXAS 78711-3087

June 28, 2023

TABLE OF CONTENTS

| | |
|--|-------|
| I. INTRODUCTION | 1 |
| II. CONTROL STRATEGY | 3 |
| A. - D. (<i>No change</i>) | 3-10 |
| E. Plan for Control of Non-Methane Organic Compounds (NMOC) from Municipal Solid Waste (MSW) Landfills | 11 |
| 1-7. (<i>No change</i>) | 11-44 |
| 8. Transition to 2016 Emission Guidelines based on 40 CFR Part 60, Subpart Cf | 44 |
| F. (<i>No change</i>) | 44-56 |
| G. Plan for Control of NMOC from MSW Landfills (2016 Emission Guidelines based on 40 CFR Part 60, Subpart Cf) | 57 |
| 1. Regulatory Background of 2016 MSW Landfill Emission Guidelines..... | 57 |
| 2. Emission Standards, Available Control Technologies, and Operational Standards | 61 |
| 3. Source Inventory | 64 |
| 4. Emission Inventory | 65 |
| 5. Process for Review of Design Plans | 66 |
| 6. Compliance Schedule and Increments of Progress | 66 |
| 7. Testing, Monitoring, Recordkeeping, and Reporting | 68 |
| 8. State Plan Hearing and Comment Information..... | 71 |
| III. SOURCE SURVEILLANCE, COMPLIANCE ASSURANCE AND ENFORCEMENT, AND REPORTING..... | 73 |
| A. Source Surveillance, Compliance Assurance, and Enforcement..... | 73 |
| B. Reporting (<i>No change</i>) | 74 |
| IV. LEGAL AUTHORITY | 74 |

| | |
|--|----|
| V. STATE PROGRESS REPORTS..... | 78 |
| VI. PUBLIC HEARINGS (<i>No change</i>) | 78 |
| VII. PROPOSED CHANGES TO APPENDICES | 79 |

APPENDICES

A. Justification for Excluding Pre-Subtitle D Closed MSW Landfills from the Plan to Control NMOC Emissions (*No Change*)

B. Legal Authority of the Texas Commission on Environmental Quality

B.1 Chapter 382, Texas Health and Safety Code

B.2 Chapter 5, Texas Water Code

B.3 Chapter 7, Texas Water Code

B.4 Attorney General’s Opinion (*No Change*)

C. Appendices for Control Strategy II.G, Plan for Control of NMOC from MSW Landfills (2016 Emission Guidelines based on 40 CFR Part 60, Subpart Cf)

C.1. Copy of 2016 MSW Landfill Emission Guidelines (40 CFR Part 60, Subpart Cf) and 2021 MSW Landfill Federal Plan (40 CFR Part 62, Subpart OOO)

C.2. Preamble and Adopted Rule Language: 30 TAC Chapter 113, Subchapter D, Divisions 1 and 6

C.3. Inventory of Texas MSW Landfill Sites and NMOC Emissions

C.4. Derivation Table for Adopted Chapter 113 Rules

C.5. Evaluation of Modified Applicability and Collection and Control System Requirements

C.6. Public Hearing, Public Comments, and TCEQ Responses

LIST OF FIGURES

- A.1 Year 2000 NMOC Emissions for Arid Areas (*No change*).....
- A.2 Year 2000 NMOC Emissions for Non-Arid Areas (*No change*).....

LIST OF TABLES

| | |
|-------|--|
| 1 | Sulfuric Acid Mist Emissions from 111(d) Sulfuric Acid Plants (<i>No change</i>) |
| 2 | Techniques for Controlling TRS Emissions from Kraft Pulp Mills (<i>No change</i>) |
| 3 | TRS Emissions from 111(d) Kraft Pulp Mills (<i>No change</i>) |
| 4 | Operating MSW Landfills (<i>No change</i>) |
| 5 | Closed MSW Landfills (<i>No change</i>) |
| 6 | Active MSW Landfills Reported in 1995 (<i>No change</i>) |
| 7 | 2016 MSWLF EG Compliance Schedule and Increments of Progress |
| 8 | State Plan Authority Requirements and Corresponding State Authorities |
| A.1 | Test Cases (<i>No change</i>) |
| A.2 | Landfill NSPS and Chapter 115 Tier II C _{NMOC} Concentrations (<i>No change</i>) |
| A.3 | Closed MSW Landfills with Daily Refuse Acceptance Rate Greater Than 251 Tons (<i>No change</i>) |
| A.4 | MSW Landfills with Area Size Greater Than 67.6 Acres (<i>No change</i>) |
| A.5 | MSW Landfills Greater Than 2.5 M Mg Design Capacity and Year 2000 Emissions (<i>No change</i>) |
| C.3.1 | Active Existing MSW Landfills in Texas |
| C.3.2 | Closed MSW Landfills in Texas |
| C.3.3 | Annual NMOC Emissions from MSW Landfills in Texas |
| C.4.1 | Derivation Table for Correlating Adopted Chapter 113, Subchapter D, Division 6 Rules to Corresponding Federal Rules |
| C.5.1 | Comparison of Gas Collection System Design Requirements. |
| C.5.2 | Comparison of Control System Design Requirements. |

I. INTRODUCTION

The United States Environmental Protection Agency (EPA) has published New Source Performance Standards (NSPS) for several types of facilities, including sulfuric acid plants; kraft pulp mills; primary aluminum plants; phosphate fertilizer plants; municipal solid waste (MSW) landfills; and hospital, medical, and infectious waste incinerators (HMIWI). The following facilities, however, are not required to meet NSPS control requirements:

1. Sulfuric acid plants built or modified before August 17, 1971;
2. Kraft pulp mills built or modified before September 24, 1976;
3. Primary aluminum plants built or modified before October 23, 1974;
4. Phosphate fertilizer plants built or modified before October 22, 1974;
5. MSW landfills built or modified before July 14, 2014; and
6. Hospital, Medical, Infectious Waste Incinerators built or modified before June 20, 1996.

These existing facilities are addressed in Section 111(d) of the Federal Clean Air Act (FCAA). Section 111(d) requires that the states set emissions limits for existing facilities for which NSPS would apply if the facility were new. Section 111(d) emission limits are set for pollutants not controlled as criteria pollutants under Section 108(a) of the FCAA or as hazardous air pollutants under Section 112(b)(A).

In Subpart B of 40 Code of Federal Regulations (CFR) Part 60, EPA requires states to develop and implement a control plan for 111(d) facilities once a guideline document

has been published. The EPA has published the following guidelines applicable to the source types included under this §111(d) State Plan:

1. Control of Sulfuric Acid Mist Emissions from Existing Sulfuric Acid Production Units, EPA-450/2-77-019;
2. Kraft Pulping-Control of TRS Emissions from Existing Mills, EPA-450/2-78-003b;
3. Primary Aluminum: Guidelines for Control of Fluoride Emissions from Existing Primary Aluminum Plants, EPA-450/2-78-0496;
4. Control of Fluoride Emissions from Existing Phosphate Fertilizer Plants, EPA-450/2-77-005;
5. Emission Guidelines and Compliance times for Control of Non-Methane Organic Compounds (NMOC) Emissions From Municipal Solid Waste Landfills, 40 CFR Part 60, Subpart Cc;
6. Hospital/Medical/Infectious Waste Incinerator Emission Guidelines: Summary of the Requirements for Section 111(d)/129 State Plans, EPA-456/R-97-007; and
7. Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills, 40 CFR Part 60, Subpart Cf.

The following plans contain strategies for controlling emissions from sulfuric acid

production units, kraft pulp mills, MSW landfills, and hospital/medical/infectious waste incinerators.

II. CONTROL STRATEGY

A. Plan for Control of Sulfuric Acid Mist Emissions from Sulfuric Acid Plants

1 - 4. *NO CHANGE*

B. Plan for Control of Total Reduced Sulfur (TRS) Emissions from Kraft Pulp Mills

1 - 6. *NO CHANGE*

C. Plan for Control of Fluorides from Primary Aluminum Plants (Reserved)

NO CHANGE

D. Plan for Control of Fluorides from Phosphate Fertilizer Plants (Reserved)

NO CHANGE

E. Plan for Control of Non-Methane Organic Compounds (NMOC) from Municipal Solid Waste (MSW) Landfills

1 - 7. *NO CHANGE*

8. Transition to 2016 Emission Guidelines based on 40 CFR Part 60, Subpart Cf

On and after the implementation date specified in proposed 30 Texas Administrative Code (TAC) §113.2412, owners or operators of MSW landfills subject to the requirements of 30 TAC Chapter 113, Subchapter D, Division 1 and the corresponding §111(d) State Plan requirements of Section II.E 1-7 would instead comply with the requirements of 30 TAC Chapter 113, Subchapter D, Division 6. The rules in Chapter 113, Subchapter D, Division 6 implement the 2016 emission guidelines (EG) for MSW landfills as established under 40 CFR Part 60, Subpart Cf, with certain adjustments. The implementation date is the date when the EPA's approval of the revised Texas §111(d) State Plan implementing 40 CFR Part 60, Subpart Cf becomes effective.

Owners or operators of MSW landfills in Texas which are subject to the federal plan for existing MSW landfills (40 CFR Part 62, Subpart OOO) would also be required to begin complying with the requirements of Chapter 113, Subchapter D, Division 6 on the implementation date specified in proposed 30 TAC §113.2412. On or after that implementation date, owners or operators of existing MSW landfills would no longer be required to comply with the provisions of Chapter 113, Subchapter D, Division 1, or with 40 CFR Part 62, Subpart OOO, except as otherwise specified in Chapter 113, Subchapter D, Division 6. The requirements of Chapter 113, Subchapter D, Division 6 are discussed in detail in Section II.G of this §111(d) State Plan.

F. Plan for Control of Hospital and Medical/Infectious Waste Incinerators

1 - 7. *NO CHANGE*

G. Plan for Control of NMOC from MSW Landfills (2016 Emission Guidelines based on 40 CFR Part 60, Subpart Cf)

1. Regulatory Background of 2016 MSW Landfill Emission Guidelines

To meet the requirements of the FCAA, §111, the EPA is required to develop regulations to control air pollutant emissions from various types of stationary sources which the EPA has determined cause or contribute significantly to air pollution. FCAA, §111(b) directs the EPA to establish NSPS for new and modified stationary sources. NSPS apply to stationary sources for which construction, reconstruction, or modification commenced after the applicable NSPS is proposed. FCAA, §111(d) directs the EPA to establish Emissions Guidelines (EG) which are generally similar to the NSPS, except that they apply to existing sources for which construction, modification, or reconstruction occurred on or before the date the applicable NSPS is proposed. Essentially, for a given source category, the EG regulate the population of existing sources which are not covered by the corresponding NSPS for new and modified sources. Unlike the NSPS, EG are not enforceable until the EPA approves a state's plan or adopts a federal plan for implementing and enforcing them, and the state or federal plan becomes effective. The NSPS and EG regulations promulgated by the EPA are located in 40 CFR Part 60, Standards of Performance for New Stationary Sources.

FCAA, §111(d) and the EG regulations promulgated by EPA require states to adopt and submit to EPA for approval a state plan to implement and enforce the EG. A §111(d) state plan is required to be at least as protective as the corresponding EG regulations promulgated by the EPA. FCAA, §111(d) requires the EPA to develop, implement, and enforce a federal plan if a state fails to submit a satisfactory state plan by the applicable deadline. Federal plans to implement EG regulations in states without an approved state plan are located under 40 CFR Part 62, Approval and Promulgation of State Plans for Designated Facilities and Pollutants.

EPA originally adopted NSPS for MSW landfills under 40 CFR Part 60, Subpart WWW, and EG under 40 CFR Part 60, Subpart Cc, in 1996. To implement the 1996 landfill EG, the Texas Commission on Environmental Quality (TCEQ) adopted rules under 30 TAC Chapter 113, Subchapter D, Division 1, and a corresponding §111(d) State Plan, on October 7, 1998 (23 TexReg 10874). The EPA formally approved TCEQ's rules and the Texas §111(d) State Plan for existing MSW landfills on June 17, 1999 (64 FR 32427).

On August 29, 2016, the EPA adopted a new NSPS (40 CFR Part 60, Subpart XXX) and new EG (40 CFR Part 60, Subpart Cf) for MSW landfills, which essentially replaced the 1996 NSPS and EG. The 2016 NSPS and EG rules lowered the annual emission threshold for which a landfill gas collection system is required from 50 megagrams (Mg) of non-methane organic compounds (NMOC) to 34 Mg of NMOC. (The emission threshold for closed landfills remained at 50 Mg.) The EPA's 2016 revisions to the NSPS and EG also included changes to monitoring, recordkeeping, and reporting requirements. The EPA amended Subpart Cf on August 26, 2019, and March 26, 2020. The August 26, 2019 amendments to Subpart Cf, which included changes to the state and federal plan

timing requirements to align with the then-applicable Subpart Ba, were vacated on April 5, 2021, and are not included in this adopted revision to the Texas §111(d) State Plan. On May 21, 2021, the EPA published a federal plan to implement the emission guidelines for MSW landfills located in states where an approved FCAA, §111(d) State Plan is not in effect. The federal plan for MSW landfills was adopted under 40 CFR Part 62, Subpart OOO.

In order to implement the EPA's 2016 EG for existing MSW landfills, TCEQ must revise the corresponding Chapter 113 rules for existing MSW landfills and the previously submitted §111(d) State Plan. TCEQ will use state rules proposed under new Chapter 113, Subchapter D, Division 6, to enforce the 2016 landfill EG. TCEQ's adopted revisions to Chapter 113 and the adopted revisions to the Texas §111(d) State Plan are based on the 40 CFR Part 60, Subpart Cf regulations adopted on August 29, 2016, (81 FR 59276) as amended through March 26, 2020. TCEQ is also including certain elements of the EPA's federal plan (40 CFR Part 62, Subpart OOO) which address reporting and compliance issues for some landfills more specifically than the Subpart Cf regulations. See Appendix C.1 to view a copy of EPA's published EG (Subpart Cf) and the published federal plan (Subpart OOO).

The TCEQ is the agency responsible for developing or revising a state plan as required by FCAA, §111(d) (the §111(d) State Plan) to implement the EPA's landfill EG. The EG contains requirements for emission standards, operational requirements, monitoring and testing requirements, reporting and recordkeeping requirements, and compliance schedules for affected units. The EPA is required to review and take action on state plan submittals and revisions according to the provisions of 40 CFR Part 60, Subpart B, Adoption and Submittal of State Plans for Designated Facilities. The EPA's approval of

the revised Texas §111(d) State Plan for MSW landfills would be a critical milestone, since the compliance deadline for the adopted Chapter 113 rules is triggered once the EPA has published approval of the revised Texas §111(d) State Plan.

Note that under the adopted revisions to the Texas §111(d) State Plan and the Chapter 113 MSW landfill rules, the previously approved MSW landfill §111(d) State Plan (sections II.E 1-7) and the current Chapter 113, Subchapter D, Division 1 regulations for MSW landfills remain in effect until the effective date of the EPA's approval of the revisions to the Texas §111(d) State Plan. Similarly, owners or operators of existing MSW landfills are required to continue compliance with the 40 CFR Part 62, Subpart OOO federal plan until the effective date of the EPA's approval of the revised Texas §111(d) State Plan. The adopted revisions to the Texas §111(d) State Plan are not intended to affect or supersede any part of the previously approved Texas §111(d) State Plan unless specifically indicated otherwise.

In conjunction with the adopted revisions to the Texas §111(d) State Plan, the TCEQ concurrently adopts rulemaking to establish requirements for existing MSW landfills based on the EPA's 2016 EG, as codified in 40 CFR Part 60, Subpart Cf as amended through March 26, 2020. The adopted rules also include certain elements from the 40 CFR Part 62, Subpart OOO federal plan published on May 21, 2021. The adopted rulemaking amends 30 TAC Chapter 113, Standards of Performance for Hazardous Air Pollutants and for Designated Facilities and Pollutants; Subchapter D, Designated Facilities and Pollutants. The TCEQ adopts revisions to 30 TAC Chapter 113, Subchapter D, Division 1, Municipal Solid Waste Landfills, and adopts new Division 6, 2016 Emission Guidelines for Existing Municipal Solid Waste Landfills. See Appendix C.2 to view the preamble and adopted amendments to 30 TAC Chapter 113,

Subchapter D.

2. Emission Standards, Available Control Technologies, and Operational Standards

The adopted Chapter 113, Subchapter D, Division 6 rules are the mechanism through which TCEQ will implement the requirements of 40 CFR Part 60, Subpart Cf (as amended through March 26, 2020). The adopted Chapter 113, Subchapter D, Division 6 rules directly reference the requirements of Subpart Cf, broken down by section. The emission standards and control requirements in the adopted Chapter 113 rules and this corresponding §111(d) State Plan revision are based on the requirements of 40 CFR §60.33f, which is referenced in adopted 30 TAC §113.2404(a)(3). These requirements include the installation and operation of landfill gas collection and control systems at existing active landfills with a capacity greater than or equal to 2.5 million Mg by mass and 2.5 million cubic meters by volume, with an NMOC emission rate that is greater than or equal to 34 Mg per year, or Tier 4 surface emissions monitoring showing a concentration of 500 parts per million (ppm) methane or greater. For closed landfills, the threshold for the requirement to install a gas collection and control systems is an NMOC emission rate of 50 Mg/year. Landfill gas collection and control systems required by 30 TAC §113.2404(a)(3) and 40 CFR §60.33f may comply with the standards through use of a non-enclosed flare or through other types of control devices (such as, but not limited to, boilers or process heaters) that achieve at least a 98 percent reduction in NMOC emissions or reduce the outlet NMOC concentration to less than 20 ppmv as hexane at 3 percent oxygen or less. If a non-enclosed flare is used as a control device, it must be designed and operated in accordance with the requirements of 40 CFR §60.18, except as noted in 40 CFR

§60.37f(d). In addition to the use of flares or other combustion control devices, the landfill gas may be controlled by routing the collected gas to a treatment system that processes the collected gas for subsequent sale or beneficial use (such as, but not limited to, fuel for combustion, vehicle fuel, or a raw material for chemical manufacturing). Additional requirements for emission standards and gas collection and control systems under this adopted revision to the Texas §111(d) State Plan are provided in the full text of 40 CFR §60.33f.

TCEQ is implementing operational standards for gas collection and control systems by referencing the requirements of 40 CFR §60.34f in adopted 30 TAC §113.2404(a)(4). These operational standards require that gas collection systems be operated such that gas is collected from each area, cell, or group of cells in which solid waste has been in place for five years or more (if active) or two years or more (if closed or at final grade). The collection system must be operated under negative pressure at each wellhead, except for certain conditions specified in 40 CFR §60.34f(b). In addition, each interior wellhead in the collection system must be operated with a landfill gas temperature less than 55 degrees Celsius (131 degrees Fahrenheit), unless the owner or operator establishes a higher operating temperature value with supporting data demonstrating that the higher temperature will not cause fires or inhibit anaerobic decomposition by killing methanogens. The collection system must also be operated so that the methane concentration at the surface of the landfill is less than 500 ppm above background. Additional operational requirements for the Chapter 113, Subchapter D, Division 6 rules and §111(d) State Plan are provided in the full text of 40 CFR §60.34f.

While the bulk of the adopted Chapter 113, Subchapter D, Division 6 rules and this revised MSW landfill §111(d) State Plan are based on the requirements of 40 CFR Part

60, Subpart Cf, in several situations TCEQ is using selected provisions from the 40 CFR Part 62, Subpart OOO federal plan that are more appropriate. For example, adopted 30 TAC §113.2404(d) specifies that legacy controlled landfills shall comply with the requirements of 40 CFR §62.16714(b)(1) in lieu of the requirements of 40 CFR §60.33f(b)(1). This change in requirements (relative to the Subpart Cf requirements) is appropriate because in the federal plan, 40 CFR §62.16714(b)(1)(ii) addresses the 30-month control deadlines for both legacy controlled landfills and landfills in the closed landfill subcategory, where the corresponding Subpart Cf requirement of 40 CFR §60.33f(b)(1)(ii) only addresses landfills in the closed landfill subcategory. TCEQ is including these aspects of the federal plan within the Chapter 113 rules to reduce redundant or duplicative requirements and minimize disruption for legacy sources which will be transitioning to the new Chapter 113, Subchapter D, Division 6 rules from the already-effective federal plan. The use of these provisions from the federal plan will not reduce the degree of emission control or environmental protection achieved from implementation of the emission guidelines. Please consult the Section by Section Discussion in the adopted rule preamble for a detailed discussion of each situation where the TCEQ is incorporating aspects of the federal plan which differ from the baseline Subpart Cf requirements.

Please refer to Appendix C.4 of this §111(d) State Plan revision for a derivation table which indicates how the adopted Chapter 113, Subchapter D, Division 6 rules correspond to the requirements of 40 CFR Part 60, Subpart Cf and, in certain cases, 40 CFR Part 62, Subpart OOO.

The adopted revisions to the Texas §111(d) State Plan, and the adopted Chapter 113, Subchapter D, Division 6 rules, include two Texas-specific features which differ from

the corresponding requirements in 40 CFR Part 60, Subpart Cf and 40 CFR Part 62, Subpart OOO. These two features are: 1) an alternate date range for determining which MSW landfills are subject to the proposed state plan and proposed Chapter 113, Subchapter D, Division 6 rules; and 2) an option which allows owners or operators of MSW landfills to comply with the collection system and control device requirements of 30 TAC §115.152 in lieu of certain corresponding requirements in 40 CFR Part 60, Subpart Cf. These two features are not new, as they are part of Texas' approved 1998 §111(d) State Plan for MSW landfills and the existing Chapter 113, Subchapter D, Division 1 rules which implement that State Plan. Although these elements of the Texas §111(d) State Plan were previously approved for purposes of implementing the 1996 EG for MSW landfills, a review of these features is warranted to demonstrate that retaining these features is still appropriate for purposes of the 2016 EG. Please refer to Appendix C.5 for a detailed discussion and evaluation of these two elements of the adopted revisions to the Texas §111(d) State Plan.

3. Source Inventory

See Table C.3.1 of Appendix C.3 for an inventory of active, existing MSW landfills in Texas that are potentially subject to the adopted Chapter 113 rules and revised state plan. This inventory is provided for informational purposes, but it is not necessarily determinative of whether a particular MSW landfill would be subject to the control requirements of the adopted Chapter 113 rules implementing the 2016 landfill EG. MSW landfills with permit conditions indicating the applicability of 40 CFR Part 60, Subpart XXX, have been excluded from this list as Subpart XXX landfills are not subject to the 2016 landfill EG. Some landfills shown in this inventory may have waste acceptance dates outside the scope of applicability of the adopted Chapter 113 rules

implementing the 2016 landfill EG. The inventory identifies 133 active MSW landfills as potentially covered by the adopted rules, but the final number of landfills which will be subject to the rules may be somewhat lower. In addition, some MSW landfills may be exempt from most substantive requirements of the EG on the basis of small capacity (less than 2.5 million Mg and 2.5 million cubic meters). The existing and newly-adopted Chapter 113 rules that implement the emission guidelines include complete, self-contained applicability provisions which determine whether or not any particular landfill is subject to the existing and newly-adopted Chapter 113 requirements. Owners or operators of MSW landfills will need to review the applicability provisions closely to determine whether their landfill is affected by the adopted rules and revised §111(d) State Plan.

A table of closed MSW landfills in Texas is also provided in Table C.3.2 of Appendix C.3. As explained previously, this table is provided for informational purposes, but a number of the closed landfills listed in Table C.3.2 may not be subject to the adopted Chapter 113, Subchapter D, Division 6 rules depending on their construction or closure dates, waste acceptance dates, waste capacity, or other site-specific factors affecting applicability.

Additional information on MSW landfills in Texas is available through the TCEQ Municipal Solid Waste Viewer at www.tceq.texas.gov/gis/msw-viewer and through the Commission's website at:

www.tceq.texas.gov/permitting/waste_permits/msw_permits/msw-data.

4. Emission Inventory

See Table C.3.3 of Appendix C.3 for an inventory of annual NMOC emissions for MSW landfills in Texas that are potentially subject to the adopted rules and revised §111(d) State Plan. This NMOC emission data was obtained from the 2019 emission inventory that EPA prepared for the 40 CFR Part 62, Subpart OOO federal plan, as this was the most comprehensive and current information readily available for NMOC emissions from Texas landfills. As part of the adopted revisions to the Texas §111(d) State Plan, TCEQ is requiring that designated landfill facilities provide an annual report of NMOC emissions. This will enable TCEQ to maintain current information on NMOC emissions from designated facilities and support the requirement to provide updated emissions inventory information to the EPA as part of the federal annual progress report requirements of 40 CFR §60.25(e) and (f).

5. Process for Review of Design Plans

In situations where owners or operators of affected MSW landfills are required to submit gas collection and control system design plans, TCEQ proposes to review and process those design plans in a manner similar to the process that is currently used by TCEQ for the existing Chapter 113, Subchapter D, Division 1 rules, as well as for purposes of 40 CFR Part 60, Subparts WWW and XXX. This can be accomplished through relatively minor updates to existing forms and checklists used for this purpose. However, TCEQ is not requiring MSW landfills that have already submitted design plans to the EPA (for purposes of the 40 CFR Part 62, Subpart OOO federal plan) to resubmit those plans to TCEQ, unless specifically requested by the executive director.

6. Compliance Schedule and Increments of Progress

For the adopted Chapter 113 rules and revisions to the §111(d) State Plan, the TCEQ is requiring owners or operators of affected MSW landfills to meet the increments of progress specified in 40 CFR Part 62, Subpart OOO, Table 1. The use of the increments of progress from the EPA’s federal plan is intended to minimize the disruption for landfills which have begun implementing measures to comply with the federal plan but will be transitioning to compliance with the adopted Chapter 113 rules once the EPA has approved Texas’ revised §111(d) State Plan. Table 7 below describes these increments of progress that are required by 40 CFR Part 62, Subpart OOO, Table 1. Under adopted 30 TAC §113.2410, initial design capacity reports and NMOC emission rate reports are due to TCEQ no later than 90 days after the effective date of EPA approval of the revised Texas §111(d) State Plan. If the owner or operator has already submitted those reports to comply with the 40 CFR Part 62, Subpart OOO federal plan, resubmission to TCEQ is not required unless specifically requested by the executive director. Similarly, in parallel to the EPA’s approach in the federal plan, legacy controlled landfills are not required to resubmit certain reports or plans which were previously submitted for purposes of compliance with 40 CFR Part 60, Subpart WWW or the Chapter 113, Subchapter D, Division 1 rules.

Table 7. 2016 MSWLF EG Compliance Schedule and Increments of Progress

| Increment | Date if using tiers 1, 2, or 3 | Date if using tier 4 | Date if a legacy controlled landfill |
|---|---|--|---|
| Increment 1 - Submit cover page of final control plan | 1 year after initial NMOC emission rate report or the first annual emission rate report showing NMOC emissions ≥ 34 megagrams per year. ¹ | 1 year after the first measured concentration of methane of 500 parts per million or greater from the surface of the landfill. | 1 year after the first NMOC emission rate report or the first annual emission rate report showing NMOC emissions ≥ 50 megagrams per year submitted under a previous regulation. ² |

| Increment | Date if using tiers 1, 2, or 3 | Date if using tier 4 | Date if a legacy controlled landfill |
|---|--|--|---|
| Increment 2 - Award Contracts | 20 months after initial NMOC emission rate report or the first annual emission rate report showing NMOC emissions ≥ 34 megagrams per year. ¹ | 20 months after the most recent NMOC emission rate report showing NMOC emissions ≥ 34 megagrams per year. | 20 months after the most recent NMOC emission rate report showing NMOC emissions ≥ 50 megagrams per year submitted under a previous regulation. ² |
| Increment 3 - Begin on-site construction | 24 months after initial NMOC emission rate report or the first annual emission rate report showing NMOC emissions ≥ 34 megagrams per year. ¹ | 24 months after the most recent NMOC emission rate report showing NMOC emissions ≥ 34 megagrams per year. | 24 months after the most recent NMOC emission rate report showing NMOC emissions ≥ 50 megagrams per year submitted under a previous regulation. ² |
| Increment 4 - Complete on-site construction | 30 months after initial NMOC emission rate report or the first annual emission rate report showing NMOC emissions ≥ 34 megagrams per year. ¹ | 30 months after the most recent NMOC emission rate report showing NMOC emissions ≥ 34 megagrams per year. | 30 months after the first NMOC emission rate report or the first annual emission rate report showing NMOC emissions ≥ 50 megagrams submitted under a previous regulation. |
| Increment 5 - Final compliance | 30 months after initial NMOC emission rate report or the first annual emission rate report showing NMOC emissions ≥ 34 megagrams per year. ¹ | 30 months after the most recent NMOC emission rate report showing NMOC emissions ≥ 34 megagrams per year. | 30 months after the first NMOC emission rate report or the first annual emission rate report showing NMOC emissions ≥ 50 megagrams submitted under a previous regulation. ² |

¹ 50 megagrams per year NMOC for the closed landfill subcategory.

² Previous regulation refers to 40 CFR Part 60, Subpart WWW; 40 CFR Part 62, Subpart GGG; or a state plan implementing 40 CFR Part 60, Subpart Cc. Increments of progress that have already been completed under previous regulations do not have to be completed again under this subpart.

7. Testing, Monitoring, Recordkeeping, and Reporting

The commission will use the testing, monitoring, recordkeeping, and reporting requirements contained in 40 CFR Part 60, Subpart Cf, as amended through March 26, 2020, to meet federal requirements for the adopted revisions to the Texas §111(d) State Plan. Adopted 30 TAC §113.2404(a)(5), (6), (7), (8), and (9) refer directly to the

requirements of 40 CFR §§60.35f, 60.36f, 60.37f, 60.38f, and 60.39f respectively. These sections of Subpart Cf contain comprehensive requirements for performance testing, monitoring, reporting, recordkeeping, and other compliance-related provisions. These requirements include, but are not limited to, procedures and methods for determining the NMOC emission rate and NMOC concentration, the methodology for surface emission monitoring, and requirements for monitoring wellhead temperatures, landfill gas header pressure, nitrogen or oxygen concentration, and certain control device parameters. In addition, 40 CFR §60.33f, which is referenced by adopted 30 TAC §113.2404(a)(3), contains requirements for initial performance testing. Please refer to the full text of these rule sections for detailed information on these requirements.

For several testing, recordkeeping, and reporting requirements, TCEQ is referencing selected provisions from the 40 CFR Part 62, Subpart OOO federal plan instead of the default provisions from 40 CFR Part 60, Subpart Cf. For example, TCEQ is adopting requirements for legacy controlled landfills which parallel provisions of the federal plan, when those federal plan provisions are more appropriate than the default 40 CFR Part 60, Subpart Cf requirements. TCEQ is including these aspects of the federal plan within the adopted Chapter 113 rules because it will reduce duplicative requirements and minimize disruption for sources which will be transitioning to the new Chapter 113 rules from the already-effective federal plan. The use of these provisions from the federal plan will not reduce the degree of emission control or environmental protection achieved from implementation of the emission guidelines. Please consult the Section by Section Discussion in the adopted rule preamble for a detailed description of each situation where the TCEQ is incorporating aspects of the federal plan which differ from the baseline 40 CFR Part 60, Subpart Cf requirements.

The commission is adopting an additional reporting requirement in 30 TAC §113.2410(a)(4) that requires owners or operators of existing MSW landfills to provide annual calculations of NMOC emissions. This requirement is necessary to enable TCEQ to maintain current information on NMOC emissions from designated facilities covered by the revised Texas §111(d) State Plan and provide updated emissions inventory information to the EPA in compliance with federal annual progress report requirements of 40 CFR §60.25(e) and (f). The commission is excluding landfills with a capacity less than 2.5 million Mg by mass or 2.5 million cubic meters by volume from this annual NMOC inventory reporting requirement, as these small landfills are exempt from most substantive requirements of 40 CFR Part 60, Subpart Cf and 40 CFR Part 62, Subpart OOO, and the NMOC calculation's results would not affect the applicable emission control requirements or monitoring requirements for these small sites. If a small site were to increase capacity above the 2.5 Mg/MCF threshold, the applicable control requirements and monitoring requirements for the site would be determined by the NMOC calculation methodology specified in 40 CFR Part 60, Subpart Cf.

The commission is requiring that designated facilities use calculation methods specified in the EPA's *Compilation of Air Pollutant Emissions Factors* (AP-42) for these annual NMOC inventory reports, as opposed to the calculation methods specified in 40 CFR Part 60, Subpart Cf. The proposed use of AP-42 calculation methods for purposes of the emissions inventory, rather than the methods in 40 CFR Part 60, Subpart Cf, is in accordance with federal guidance for the implementation of §111(d) State Plans for MSW landfills (EPA-456R/98-009, *Summary of the Requirements for Section 111(d) State Plans for Implementing the Municipal Solid Waste Landfills Emission Guidelines*). In this guidance, the EPA explains that the calculation methods (AP-42 vs. the EG rule itself) are intentionally different, as the AP-42 methodology for emission inventories is

designed to reflect typical or average landfill emissions, while the EG rule methodology is purposefully conservative to protect human health, encompass a wide range of MSW landfills, and encourage the use of site-specific data.

8. State Plan Hearing and Comment Information

As codified in 40 CFR §60.23, Adoption and submittal of State plans; public hearings, the minimum public participation requirements for the adoption or revision of a state plan include:

(A) one or more public hearing(s) conducted at a location within the state;

(B) reasonable notice for the public hearing(s), which the EPA defines as at least 30 days;

(C) the date, time, and location of public hearing(s) prominently advertised in each region affected;

(D) the availability of the proposed state plan for public inspection in at least one location in each region affected;

(E) notification of public hearing(s) provided to the following: the EPA Administrator; affected local air pollution control agencies; and other states in the same interstate region;

(F) a record of public hearing(s), available for a minimum of two years for public

inspection, which contains a list of the commenters, their affiliation, a summary of each presentation or comment, and the state's responses to the comments; and

(G) certification that each public hearing was conducted in accordance with the notice required by 40 CFR §60.23(d).

In accordance with these requirements, the commission offered a public hearing (virtual and in-person) on the proposed revisions to the Texas §111(d) State Plan and the corresponding proposed revisions to Chapter 113. The public hearing was held in Austin on February 23, 2023, at the commission's central office located at 12100 Park 35 Circle. Detailed information on the public hearing and on the submittal of written comments was provided in the proposed state plan revision document and in the preamble to the proposed revisions to Chapter 113. Notice of the public hearing was provided to the EPA Administrator; affected local air pollution control agencies; and other affected states. In addition, notice of the public hearing was published in the *Texas Register* on January 27, 2023. Notice of the public hearing was also published in selected newspapers in Austin, Dallas, and Houston.

No persons registered to make comments at the public hearing. The comment period for the proposed revisions to the Texas §111(d) State Plan and the corresponding revisions to Chapter 113 ended on February 28, 2023. Several commenters provided written comments. A complete record of all comments received on the proposed §111(d) State Plan and/or the proposed revisions to Chapter 113 is included in Appendix C.6. The TCEQ has also included written responses to those comments in Appendix C.6 and provided certification that the public hearing was conducted according to the applicable requirements of 40 CFR Part 60, Subpart B.

III. SOURCE SURVEILLANCE, COMPLIANCE ASSURANCE AND ENFORCEMENT, AND REPORTING

A. Source Surveillance; Compliance Assurance, and Enforcement

Monitoring compliance of emission limits for Section 111(d) pollutants will be accomplished through the existing source surveillance procedures of the commission. The specific legal authority for the commission to conduct source surveillance, compliance assurance, and enforcement is detailed in Section IV and Appendix B. Designated facilities are required to either have a new source review permit or be exempt from permitting. The TCEQ has a history of enforcing requirements on these type of sources. The commission's 16 regional offices conduct site visits for compliance determinations and inspections at all permitted and registered facilities with air emissions. The regional air staff does complaint investigations at permitted and non-permitted facilities based on citizen request. The Office of Compliance and Enforcement also will develop enforcement actions for most types of air violations identified during inspections and/or complaint investigations. This would include those state adopted standards for designated facilities.

The enforcement functions are conducted by the regional offices, the Enforcement Division, and the Litigation Division. Most air violations discovered during inspections are quickly corrected in response to notices of violations. However, if serious and/or continuing air violations are identified during an inspection, the regional office either will initiate administrative enforcement action, potentially resulting in an administrative order with penalties; or the regional office can refer the violation to the Office of the Attorney General for enforcement through the courts, including potential

civil penalties. Enforcement may also be initiated after record reviews indicate serious and/or continuing violations. Where possible, the TCEQ encourages expeditious settlement of enforcement actions by extending a settlement offer. If settlement does not occur within a short time, the Litigation Division will start the process that can lead to an administrative hearing. The commission has ultimate approval of all administrative enforcement orders.

B. Reporting

NO CHANGE

IV. LEGAL AUTHORITY

The Texas Clean Air Act (TCAA), Texas Health & Safety Code, Chapter 382 is the principal enabling authority for air quality in the state of Texas and provides relevant authority required by Federal Clean Air Act (FCAA), §111(d) and 40 Code of Federal Regulations (CFR) §60.26. Since the merger of the Texas Air Control Board and the Texas Water Commission to form the Texas Natural Resource Conservation Commission, the predecessor agency to the Texas Commission on Environmental Quality (TCEQ), the Texas Water Code (TWC), Chapters 5 and 7, also contain administrative and enforcement authority pertinent to the TCEQ's ability to meet FCAA, §111(d) and 40 CFR §60.26 State Plan requirements. All statutes are available in Appendices B.1, B.2, and B.3 to the adopted §111(d) State Plan, or online at the following website: <https://statutes.capitol.texas.gov/>. The TCEQ may rely on any relevant authority contained in either the TCAA or the TWC, but the following table provides specific authority of particular relevance to the 40 CFR §60.26 State Plan requirements.

Table 8. State Plan Authority Requirements and Corresponding State Authorities

| Authority Requirements for §111(d) State Plans | Texas Authority to Implement |
|--|--|
| 40 C.F.R. §60.26, generally | <p><i>General Authority:</i></p> <p>TWC, §5.002, Scope of Chapter</p> <p>TWC, §5.011, Purpose of Chapter</p> <p>TWC, §5.012, Declaration of Policy</p> <p>TWC, §5.013, General Jurisdiction of Commission</p> <p>TWC, §5.102, General Powers</p> <p>TCAA, §382.002, Policy and Purpose</p> <p>TCAA, §382.011, General Powers and Duties</p> <p>TCAA, §382.012, State Air Control Plan</p> |
| 40 C.F.R. §60.23(a)(1) Adopt emission standards and compliance schedules applicable to designated facilities. | <p><i>General authority noted above; and</i></p> <p>TWC, §5.103, Rules</p> <p>TCAA, §382.017, Rules</p> <p>TCAA, §382.0173, Adoption of Rules Regarding Certain State Implementation Plan requirements and Standards of Performance for Certain Sources</p> |
| 40 C.F.R. §60.26(a)(2) Enforce applicable laws, regulations, standards, and compliance schedules, and seek injunctive relief. | <p><i>General authority noted above; and</i></p> <p>TWC, §5.117, Mandatory Enforcement Hearing</p> <p>TWC, §5.230, Enforcement</p> <p>TWC, Chapter 5, Subchapter L, Emergency and Temporary Orders, generally, and in particular:</p> <p>TWC, §5.501, Emergency and Temporary Order or Permit; Temporary Suspension or Amendment of Permit Condition</p> <p>TWC, §5.502, Application for Emergency or Temporary Order</p> <p>TWC, §5.512, Emergency Order Concerning Activity of Solid Waste Management</p> <p>TWC, §5.514, Order Issued Under Air Emergency</p> <p>TWC, §5.515, Emergency Order Because of Catastrophe</p> <p>TWC, Chapter 7, Enforcement, generally, and in particular, the following:</p> <p>Subchapter A, General Provisions:</p> <p>TWC, §7.002, Enforcement Authority</p> <p>TWC, §7.0025, Initiation of Enforcement Action Using Information Provided by Private Individual</p> |

| Authority Requirements for §111(d) State Plans | Texas Authority to Implement |
|--|---|
| | <p>TWC, §7.00251, Initiation of Certain Clean Air Act Enforcement Actions Using Information Provided by a Person</p> <p>TWC, §7.006, Enforcement Policies</p> <p>Subchapter B, Corrective Action and Injunctive Relief</p> <p>TWC, §7.032, Injunctive Relief</p> <p>Subchapter C, Administrative Penalties</p> <p>Subchapter D, Civil Penalties</p> <p>Subchapter E, Criminal Offenses and Penalties</p> <p>Subchapter F, Defenses</p> <p>Subchapter G, Revocation and Suspension of Permits, Licenses, Certificates, and Registration</p> <p>TWC, §7.302, Grounds for Revocation or Suspension of Permit</p> <p>TCAA, §382.015, Power to Enter Property</p> <p>TCAA, §382.016, Monitoring Requirements; Examination of Records</p> <p>TCAA, §382.021. Sampling Methods and Procedures</p> <p>TCAA, §382.022, Investigations</p> <p>TCAA, §382.023, Orders</p> <p>TCAA, §382.024, Factors in Issuing Orders and Determinations</p> <p>TCAA, §382.025 Orders Relating to Controlling Air Pollution</p> <p>TCAA, §382.026 Orders Issued Under Emergencies</p> <p>TCAA, Subchapter C, Permits (permitting authority of the commission, generally) and in particular:</p> <p>TCAA, §382.0513, Permit Conditions</p> <p>TCAA, §382.0541, Administration and Enforcement of Federal Operating Permit</p> <p>TCAA, §382.085, Unauthorized Emissions Prohibited</p> |
| <p>40 C.F.R. §60.26(a)(3)</p> <p>Obtain information necessary to determine compliance.</p> | <p><i>General authority noted above; and</i></p> <p>TWC, §5.102, General Powers</p> <p>TWC, §5.117, Mandatory Enforcement Hearing</p> <p>TWC, §7.0025, Initiation of Enforcement Action Using Information Provided by Private Individual</p> <p>TWC, §7.00251, Initiation of Certain Clean Air Act Enforcement Actions Using Information Provided by a Person</p> <p>TCAA, §382.014, Emission Inventory</p> <p>TCAA, §382.015, Power to Enter Property</p> <p>TCAA, §382.016, Monitoring Requirements; Examination of Records</p> |

| Authority Requirements for §111(d) State Plans | Texas Authority to Implement |
|--|---|
| | TCAA, §382.021, Sampling Methods and Procedures TCAA, §382.022, Investigations TCAA, §382.029, Hearing Powers TCAA, §382.034, Research and Investigations TCAA, §382.0513, Permit Conditions TCAA, §382.0514, Sampling, Monitoring, and Certification TCAA, §382.0515, Application for Permit |
| 40 C.F.R. §60.26(a)(3) Require recordkeeping, make inspections, and conduct tests of designated facilities. | <i>General authority noted above; and</i> TCAA, §382.015, Power to Enter Property TCAA, §382.016, Monitoring Requirements; Examination of Records TCAA, §382.021, Sampling Methods and Procedures TCAA, §382.022, Investigations TCAA, §382.034, Research and Investigations TCAA, §382.0513, Permit Conditions TCAA, §382.0514, Sampling, Monitoring, and Certification |
| 40 C.F.R. §60.26(a)(4) Require owners or operators of designated facilities to install, maintain, and use emission monitoring devices and make periodic emission reports. | <i>General authority noted above; and</i> TCAA, §382.021, Sampling Methods and Procedures TCAA, §382.0514, Sampling, Monitoring, and Certification TCAA, §382.0513, Permit Conditions TCAA, §382.014, Emission Inventory |
| 40 C.F.R. §60.26(a)(4) Make emission data available to the public. | <i>General authority noted above; and</i> TWC, §5.121, Public Information TWC, §5.1733, Electronic Posting of Information TCAA, §382.014, Emission Inventory TCAA, §382.040, Documents, Public Property TCAA, §382.041, Confidential Information |

A legal opinion from the Texas Attorney General's Office has previously been filed with the Title V Permit Program and subsequently with the Section 111(d) Plan for Municipal Solid Waste Landfills. The legal opinion includes statements indicating that the Texas

Commission on Environmental Quality (commission) has the authority to carry out all aspects of the program. The opinion specifically states administrative regulations and, where appropriate, judicial decisions that demonstrate adequate authority; lawfully adopted state statutes and regulations demonstrating legal authority to issue permits, assure compliance with each applicable requirement, monitoring, recordkeeping, reporting, and compliance certification requirements. A copy of the Attorney General's legal opinion is also located in Appendix B.4.

V. STATE PROGRESS REPORTS

The commission will submit annual progress reports on the implementation of 30 TAC Chapter 113, §§2060 - 2069, concerning Municipal Solid Waste Landfills, §§2070 - 2079, concerning Hospital/Medical/Infectious Waste Incinerators, and §§2400 - 2412, concerning Municipal Solid Waste Landfills, in compliance with 40 CFR §60.25(a), (e), and (f). The reports will be submitted to the EPA Region VI Administrator on an annual basis as part of the reports required by 40 CFR §51.321. Each progress report will include: enforcement actions, achievement of increments of progress, identification of sources that have ceased operation, emission inventory information for sources that were not in operation at the time of plan development, updated emission inventory and compliance information, and copies of technical reports on all performance testing, including concurrent process data. TCEQ may consult and coordinate with EPA Region 6 to develop efficient methods to provide the required information.

VI. PUBLIC HEARINGS

***NO CHANGE.** Information on the February 23, 2023, public hearing for the proposed revisions to the §111(d) State Plan is provided in section II.G of this document.*

VII. CHANGES TO APPENDICES

The commission is adopting revisions, deletions, and additions to the Appendices of this §111(d) State Plan. The commission is adopting a revision to Appendix B by replacing an outdated listing of state statutes in Appendix B.1 with current versions (see adopted Appendices B.1, B.2, and B.3). The commission is renumbering Appendix B.2, Attorney General's Opinion, as Appendix B.4, with no changes to content. The commission is deleting existing Appendix C, concerning the Multi-Media/Multi-Year Enforcement Memorandum of Understanding Between the Texas Natural Resource Conservation Commission and U.S. Environmental Protection Agency, as this MOU is no longer in effect. The commission is adopting new Appendices C.1 through C.6 which contain supporting information related to the adopted control plan for MSW landfills (section II.G).