DIVISION OF ENVIRONMENTAL QUALITY

DRAFT OPERATING AIR PERMIT

PERMIT NUMBER: 1791-AOP-R3

IS ISSUED TO:
City of Fort Smith Sanitary Landfill
5900 Commerce Road
Fort Smith, AR 72916
Sebastian County
AFIN: 66-00226

PURSUANT TO THE RULES OF THE ARKANSAS OPERATING AIR PERMIT PROGRAM, 8 CAR PT. 42: THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:

AND

THE PERMITTEE IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

Demetria Kimbrough Associate Director, Office of Air Quality	Date

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List of Acronyms and Abbreviations

Ark. Code Ann.	Arkansas Code Annotated
AFIN	Arkansas DEQ Facility Identification Number
C.F.R.	Code of Federal Regulations
CO	Carbon Monoxide
COMS	Continuous Opacity Monitoring System
HAP	Hazardous Air Pollutant
Hp	Horsepower
lb/hr	Pound Per Hour
NESHAP	National Emission Standards (for) Hazardous Air Pollutants
MVAC	Motor Vehicle Air Conditioner
No.	Number
NO_x	Nitrogen Oxide
NSPS	New Source Performance Standards
PM	Particulate Matter
PM_{10}	Particulate Matter Equal To Or Smaller Than Ten Microns
$PM_{2.5}$	Particulate Matter Equal To Or Smaller Than 2.5 Microns
SNAP	Significant New Alternatives Program (SNAP)
SO_2	Sulfur Dioxide
SSM	Startup, Shutdown, and Malfunction Plan
Tpy	Tons Per Year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

SECTION I: FACILITY INFORMATION

PERMITTEE:	City of Fort Smith Sanitary Landfill
AFIN:	66-00226
PERMIT NUMBER:	1791-AOP-R3
FACILITY ADDRESS:	5900 Commerce Road Fort Smith, AR 72916
MAILING ADDRESS:	5900 Commerce Road Fort Smith, AR 72916
COUNTY:	Sebastian County
CONTACT NAME:	Torrey Lougin
CONTACT POSITION:	Landfill Division Manager
TELEPHONE NUMBER:	(479) 788-4142
REVIEWING ENGINEER:	Thamoda Crossen
UTM North South (Y):	Zone 15: 3907016.53 m
UTM East West (X):	Zone 15: 375708.93 m

SECTION II: INTRODUCTION

Summary of Permit Activity

The City of Fort Smith currently owns and operates a municipal solid waste sanitary landfill (FSLF) located in Fort Smith (Sebastian County), Arkansas. The site consists of approximately 1,012-acres and includes separate areas for Class 1 waste, Class 4 waste, and yard compost materials. The Class 1 area consists of approximately 555-acres. This facility has submitted an application to renew the existing Title V permit and update applicable regulation from Landfill from NSPS Subpart WWW to APC & EC 8 CAR § 41-101, Subpart 16. Also, added one underground leachate tank, added a fueling station, added NESHAP Subpart AAAA requirements and added Subpart XXX requirements.

Permitted emission rates are increasing/decreasing by -37.8 tpy PM, -115.1 tpy PM_{10}, -0.1 tpy of SO_2, -52 tpy VOC, -2.2 tpy CO, 0.4 tpy Single HAP, -13.24 tpy Total HAPs and -0.04 tpy of HCL, -0.12 tpy of Hydrogen Sulfide (H_2S). Large decrease in emissions is due to the addition of new gas collection system.

Process Description

The Landfill is operated for the disposal of Class 1 (municipal solid waste), Class 4 (construction and demolition waste), and yard compost materials. The facility includes waste disposal areas, scale house, maintenance facility and a landfill gas (LFG) to renewable natural gas (RNG) processing energy facility owned and operated by a third party. The total disposal capacity for the Landfill is approximately 73,260,463 cubic yards (CY) of air space. The site consists of approximately 1,012 acres, which includes separate areas for Class 1 waste, Class 4 waste, and landfill gas processing. The Class 1 area consists of approximately 555 acres.

Solid waste decomposition is initiated by aerobic bacteria present within the waste at the time of disposal. The primary gas produced during this phase of decomposition is carbon dioxide. As the oxygen supply is depleted, facultative bacteria continue the decomposition process. Ultimately, anaerobic bacteria become the predominant means of waste decomposition. Methane and carbon dioxide are produced at about a 50-50 ratio as the decomposition process proceeds in the facultative and anaerobic stages. Other components present in the gas include hydrogen sulfide and non-methane organic compounds (NMOC). Some NMOC are volatile organic compounds (VOCs) and/or hazardous air pollutants (HAPs).

The purpose of the Landfill Gas (LFG) Collection and Control System (GCCS) is to provide a safe, manageable, and efficient system for the recovery of gaseous by-products that are produced in typical municipal solid waste landfills. These gaseous by-products which consist of a mixture of NMOCs, methane, and carbon dioxide, are collected and utilized at a processing facility to make pipeline quality methane.

The GCCS consists of vertical LFG extraction wells, horizontal collectors, a piping network, condensate management system, and 2,200 standard cubic feet per minute (scfm) gas processing plant, which is owned and operated by a third party, Enbridge – Tomorrow RNG (Previously Morrow). The gas plant includes a pre-treatment system and additional processes to produce pipeline quality gas for injection in a pipeline. There is also a 2,200 scfm backup flare in the event the plant is not operational or cannot process all of the collected LFG.

Emissions result from three (3) sources: (1) uncontrolled emissions from the landfill (SN-01); (2) emissions from the flare unit (SN-02); emissions from vehicles traveling over paved and unpaved roads (SN-03); and (SN-04) gasoline storage tank.

Additional insignificant activities at the Landfill include two diesel storage tanks, a leachate storage tank, and CNG fueling station.

The City of Fort Smith Sanitary landfill is an affected facility under 40 C.F.R. Part 60, Subpart Cf and 8 CAR pt. 41, Subpart 16, since the landfill accepted waste after November 8, 1987 and commenced construction, reconstruction or modification on or before July 17, 2014. The landfill's volumetric capacity increased , therefore the facility is subject to Subpart XXX. The initial notification submitted to comply with 8 CAR pt. 41, Subpart 16 reported emissions of NMOCs of 49.5 Megagrams per year (Mg/year), in excess of the 34 Mg/year limit for gas collection and control. In anticipation of exceeding the 50 Mg/yr threshold for gas collection and control specified under 40 CFR 63 Subpart AAAA, the Landfill also chose to start complying with NESHAP Subpart AAAA requirements effective March 20, 2024.

Rules and Regulations

The following table contains the rules and regulations applicable to this permit.

Rules and Regulations
Arkansas Air Pollution Control Code, 8 CAR pt. 40, effective Date March 14, 2016
Rules of the Arkansas Operating Air Permit Program, 8 CAR pt. 42, effective Date September 11, 2015
Arkansas Asbestos Abatement Rule, 20 CAR, effective July 15, 1997
40 CFR Part 63 Subpart CCCCCC – *National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities*
40 C.F.R. Part 63 Subpart AAAA - *National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills*
40 C.F.R. Part 60 Subpart XXX – *Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014*

Emission Summary

The following table is a summary of emissions from the facility. This table, in itself, is not an enforceable condition of the permit.

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates lb/hr	Emission Rates tpy
Total Allowable Emissions		PM PM_{10} SO_2 VOC CO NO_x	82.6 20.7 1.1 1.0 26.5 5.4	106.7 29.4 4.5 4.1 116.1 23.5
HAPs		Hydrogen Chloride (HCl)[1] HF Single HAP Total HAPs[2]	0.52 0.54 0.95 3.0	2.26 2.36 4.13 7.98
Air Contaminants *		Hydrogen Sulfide (H_2S)*	0.50	1.86
01	Landfill Gas Surface Emissions (Uncontrolled)	VOC CO Hydrogen Sulfide H_2S* TRS Single HAP Total HAPs[2]	0.8 1.8 0.50 1.37 0.42 1.25	3.5 7.8 1.86 5.98 1.86 5.20
02	Open Flare (2200 scfm)	PM PM_{10} SO_2 VOC CO NO_x Hydrogen Chloride (HCl)[1] Hydrogen Fluoride (HF) Single HAP Total HAPs[2]	1.2 1.2 1.0 0.1 24.7 4.5 0.52 0.044 0.52 1.81	5.0 5.0 4.5 0.3 108.3 19.9 2.26 0.192 2.26 2.76
03	Traffic Emissions (Uncontrolled)	PM PM_{10}	81.4 19.5	101.7 24.4
04	1,000 Gallon Gasoline Storage Tank	VOC Single HAP Total HAPs	0.1 0.01 0.01	0.3 0.01 0.02

[1]Hydrogen Chloride is not included in any HAPs totals.
[2]Total HAPs includes Single HAP.
*$PM_{2.5}$ limits are source specific, if required. Not all sources have $PM_{2.5}$ limits.

**HAPs included in the VOC totals. Other HAPs are not included in any other totals unless specifically stated.
***Air Contaminants such as ammonia, acetone, and certain halogenated solvents are not VOCs or HAPs.

SECTION III: PERMIT HISTORY

Permit # 1791-A was the initial Minor Source permit for the facility. The permit was issued to the City of Fort Smith on January 20, 1999. Permitted emissions were: 5.3 tpy PM/PM_{10}, 1.8 tpy VOC, 87.6 tpy CO, 16.2 tpy NO_x, and 0.41 tpy HAPs.

Permit # 1791-AOP was the initial Title V permit for this facility. The permit was issued on July 19, 2010. Pursuant to 40 C.F.R. 60, Subpart WWW, the landfill was required to submit Part 70 (Title V) permit application when the landfill design capacity exceeded 3.27 million cubic yards. There is no increase in the design capacity of the landfill with this modification. Permitted emissions were: 119.5 tpy PM, 27.2 tpy PM_{10}, 4.6 tpy SO_2, 0.2 tpy VOC, 108.3 tpy CO, 19.9 tpy NO_x, 2.30 tpy Hydrogen Chloride, numerous HAPs, and 4.04 tpy Hydrogen Sulfide. The increase of particulate (dust) emissions was due to uncontrolled landfill gas emissions (SN-02) and traffic emissions (SN-03) included in this Title V permit but not in the previous permit.

Permit # 1791-AOP-R1 was issued July 6, 2015. This permitting action was to renew the Title V permit. The 1,000 gallon gasoline tank was removed from the insignificant activity list and added as a source (SN-04) due to it being subject to NESHAP Subpart CCCCCC. Emissions were updated to be in line with current LandGEM test results and HAP reporting was updated to the current department reporting model. Permitted emissions were 121.1 tpy PM/PM_{10}, 4.6 tpy SO_2, 55.9 tpy VOC, 122 tpy CO, 19.9 tpy NO_x, 2.62 tpy Single HAP, 12.08 tpy Total HAPs, and 1.7 tpy Hydrogen Sulfide.

Permit # 1791-AOP-R2 was issued October 14th, 2020. This permitting action was to renew the existing Title V permit. In addition to the renewal to the Title V permit, the following changes were made:

1. Combine all road emissions (Unpaved, Paved and Aggregate Handling) at SN-03.
2. Revise previous plantwide condition #14 (now plantwide condition #11) to require Toluene testing to verify calculations. The condition previously required site-specific individual HAP testing using EPA method 320.
3. Update SN-01 and SN-02 emission rates based on current Tier II test results.
4. Updated calculations at SN-04 and added throughput limit.

Permitted emission were 144.5 tpy $PM/PM_{10,}$ 4.6 tpy of SO_2, 56.1 tpy VOC, 118.3 tpy CO, 23.5 tpy NO_x, 3.73 tpy Single HAP, 21.22 tpy Total HAPs and 1.98 tpy Hydrogen Sulfide (H_2S).

SECTION IV: SPECIFIC CONDITIONS

SN-01 – Landfill Gas Surface Emissions (Uncontrolled)

Source Description

Fugitive landfill gas emissions arising from the surface of the landfill (the portion not collected by the gas collection system) are designated as SN-01. Gas system collection efficiency is affected by the surface area with active gas collection and the type of cover material present. For conservatism, potential SN-01 emissions are the calculated 2030 year emissions and no LFG collection is achieved. 75% of the total landfill gas is being sent to the collection system and 25% remaining uncontrollable fugitives as SN-01. Emissions are not based on the GCS not functioning.

Specific Conditions

1. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Plantwide Conditions #8. [8 CAR § 41-401 et seq. and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
01	Landfill Gas Surface Emissions	VOC CO	0.8 1.8	3.5 7.8

2. The permittee shall not exceed the emission rates set forth in the following table. Both hourly and annual uncontrolled surface emissions (SN-01) are worst case scenario when the GCCS is not in operation. The permittee shall demonstrate compliance with this condition by compliance with Plantwide Conditions #8. [8 CAR § 40-701 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Description	Pollutant	lb/hr	tpy
01	Landfill Gas Surface Emissions (Uncontrolled)	H_2S Single HAP Total HAP[2]	0.50 0.42 1.25	2.2 1.86 5.20

[2]Total HAPs includes Single HAP.

SN-02 – Landfill Gas Open Flare Emissions

Source Description

The blower/flare station unit consists of a 2200 scfm blower that supplies the “vacuum” to transport the LFG to an open or “candlestick” flare unit. The blower/flare station includes valves and safety devices that prevent the system from collecting gas if the flare and LFG processing plant are not operating. This flare unit (LFG Specialties, Inc. Model CF1228I12) is certified to meet the Best Demonstrated Technology (BDT) which mandates that the control device be capable of reducing (combusting) the NMOCs in the collected LFG by 98%.

The flare is utilized as a backup control device to combust collected LFG when the gas processing plant is not operational or cannot process all of the collected LFG. Emissions from the open flare assumes a “worst case” scenario of continual operation at the flare maximum design capacity of 2,200 scfm. The flare generates combustion by-product emissions, mainly CO, NO_X and hydrogen chloride (HCl).

Specific Conditions

3. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Plantwide Conditions #8, #12, #17 and #19. [8 CAR § 41-401 et seq. and 40 C.F.R. § 52 Subpart E]

SN	Pollutant	lb/hr	tpy
02	PM_{10}	1.2	5.0
	SO_2	1.0	4.5
	VOC	0.1	0.3
	CO	24.7	108.2
	NO_X	4.5	19.9

4. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions #5. [8 CAR § 40-701 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Pollutant	lb/hr	tpy
02	PM	1.2	5.0
	Hydrogen Chloride (HCL)[1]	0.52	2.26
	Hydrogen Flouride (HF)	0.05	0.20
	Single HAP	0.52	2.26
	Total HAP[2]	1.11	4.85

[1]Hydrogen Chloride is not included in any HAPs totals.
[2]Total HAPs includes Single HAP.

5. The permittee shall maintain records to demonstrate compliance with Specific Condition #4. These records shall include the simultaneous gas flow to the flares in standard cubic feet per minute (scfm). The permittee shall monitor the gas flow to the flare continuously and shall be recorded once every 15 minutes. Electronic or paper hourly records shall be maintained of the flow rate to the flare. The permittee shall update these records by the fifteenth day of the month following the month to which the records pertain, shall be maintained on site and made available to Department personnel upon request. [8 CAR § 40-101, 8 CAR § 41-101, 40 C.F.R. § 52 Subpart E and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

6. Visible emissions may not exceed the limits specified in the table below except for period not to exceed a total of 5 minutes during any 2 consecutive hours. Compliance with this condition shall be demonstrated through the use of landfill gas as the only fuel combusted.

SN	Limit	Regulatory Citation
02	0%	8 CAR § 40-401, 40 C.F.R. § 60.18(f)(1) & Dept Guidance

7. The permittee shall conduct weekly observations of the opacity of SN-02 and keep a record of these observations. The flare SN-02 shall be designated for and operated with no visible emissions, except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours. EPA Reference Methods 22 shall be used to determine compliance with the visible emission provisions of the flare. If the permittee detects visible emissions in excess of their permitted limit, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of the visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [8 CAR § 40-401 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

8. The permittee must operate the flare (SN-02) pilot flame within the design limitations and manufacturer's specifications. The pilot flames may be lit by landfill gas, natural gas, or propane. [8 CAR § 41-203, 8 CAR § 41-204 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

9. The flare (SN-02) must have a flame present at all times of operation or if no flame is present, the orifice of the unlit flare must be closed and the GCCS piping to the unlit flare shutdown to prevent passive venting of uncontrolled landfill gases. The presence of a flare pilot light shall be monitored continuously using a thermocouple, an ultraviolet sensor or any other equivalent device to detect the presence of a flame. In the event of a flame failure, the extraction system directed to the flare must automatically shut down to prevent passive venting of landfill gas. [8 CAR § 41-203, 8 CAR § 41-204, 40 C.F.R. §§

60.18(b) through (f), and Ark. Code Ann. 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

10. Flares shall be used only with the net heating value of the landfill gas being combusted being 200 BTU/scf (7.45 MJ/scm) or greater for non-assisted flares (SN-02). The net heating value of the gas being combusted shall be determined by the methods specified in 40 C.F.R. Section 60.18(f)(3). A copy of the calculations shall be kept on site and made available to Department personnel upon request. [8 CAR § 41-203, 8 CAR § 41-204, 40 C.F.R. §§ 60.18(c)(3)(ii), and Ark. Code Ann. 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

11. Non-assisted flares (SN-02) shall be designed for and operated with an exit velocity less than 60 ft/sec (18.3 m/sec). The maximum permitted velocity shall be calculated as specified in 40 C.F.R. Section 60.18(f)(5). The actual exit velocity shall be determined as specified in 40 C.F.R. Section 60.18(f)(4). A copy of the calculations shall be kept on site and made available to Department personnel upon request. [8 CAR § 41-203, 8 CAR § 41-204, 40 C.F.R. §§ 60.18(c)(3)(i), and Ark. Code Ann. 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN-03 – Traffic Emissions (Uncontrolled)
(Paved and Unpaved Roads and Aggregate Handling)

Source Description

Particulates (road emissions) are emitted from the operation of vehicles and equipment over the paved and unpaved roads, aggregate handling, and wind erosion of storage piles and from the placing of soil cover material on the landfill surface. These activities are collectively referred to as Traffic Emissions (SN-03). Dust controls may include water dispersion equipment, sweeping, and other techniques.

Specific Conditions

12. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions #14 and #15. [8 CAR § 41-401 et seq. and 40 C.F.R. § 52 Subpart E]

SN	Pollutant	lb/hr	tpy
03	PM_{10}	19.5	24.4

13. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions #14 and #15 and Plantwide Condition #10. [8 CAR § 40-701 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Pollutant	lb/hr	tpy
03	PM	81.4	101.7

14. The permittee shall not operate in a manner such that fugitive emissions from the storage piles, aggregate handling, and haul roads (SN-03) would cause a nuisance off-site or allow visible emissions from extending beyond the property boundary. Under normal conditions, off-site opacity less than or equal to 5% shall not be considered a nuisance. The permittee shall use water sprays, sweeping, or other techniques as necessary to control fugitive emissions that migrate off-site. [8 CAR § 40-101 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

15. Nothing in this permit shall be construed to authorize a violation of the Arkansas Water and Air Pollution Control Act or the federal National Pollutant Discharge Elimination System (NPDES). [Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN-04 – 1,000 Gallon Gasoline Tank

Source Description

The facility contains a 1,000 gallon gasoline tank for refueling purposes. During emptying or filling of the gasoline tank, VOC is emitted. These emissions are categorized under SN-04.

Specific Conditions

16. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Condition #18. [8 CAR § 41-401 et seq. and 40 C.F.R. § 52 Subpart E]

SN	Pollutant	lb/hr	tpy
04	VOC	0.1	0.3

17. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions #18. [8 CAR § 40-701 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Pollutant	lb/hr	tpy
04	Single HAP Total HAPs	0.01 0.01	0.01 0.02

18. The permittee shall not exceed an annual gasoline usage of 24,000 gallons per consecutive 12-month period. [8 CAR § 41-605 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311 and 40 C.F.R. 70.6]

19. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition #18. Records shall be updated by the fifteenth day of the month following the month for which the records pertain. These records shall be kept on site, and shall be made available to Department personnel upon request. [8 CAR § 41-605 and 40 C.F.R. § 52]

NESHAP Subpart CCCCCC Conditions

20. The permittee must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following: [8 CAR § 41-1204 and 40 C.F.R. § 63.11116 (a)]

    i. Minimize gasoline spills;
    ii. Clean up spills as expeditiously as practicable;
    iii. Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;
    iv. Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

21. The permittee is not required to submit notifications or reports as specified in this subpart or subpart A of this part, but the permittee must have records available within 24 hours of a request by the Department to document the permittee's gasoline throughput. [8 CAR § 41-1204 and 40 C.F.R. § 63.11116 (b)]

22. The permittee must comply with the requirements of this subpart by the applicable dates which are specified in §63.11113. [8 CAR § 41-1204 and 40 C.F.R. § 63.11116 (c)]

23. Portable gasoline containers that meet the requirements of 40 CFR part 59, subpart F are considered acceptable for compliance with paragraph (a)(3) of this section. [8 CAR § 41-1204 and 40 C.F.R. § 63.11116 (d)]

24. The permittee shall not allow gasoline to be handled in a manner that results in vapor releases to the atmosphere for extended periods of time. At a minimum, the permittee shall: (a) minimize gasoline spills; (b) clean up spills as expeditiously as practicable; (c) cover all open gasoline containers and all gasoline storage tank fill pipes with a gasketed seal when not in use; and (d) minimize the volume of gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators. Portable gasoline containers that meet the requirements of 40 C.F.R. Part 59, Subpart F are acceptable for compliance with (c). [8 CAR § 41-1204 and 40 C.F.R. §§ 63.11117(a), 63.11116(a) and (d)]

25. Except as provided in Specific Condition #26, the permittee shall load gasoline into each gasoline storage tank at the facility only by submerged filling. The discharge opening of each submerged fill pipe shall be located no more than:

    a. twelve (12) inches from the bottom of the tank, for fill pipes installed on or before November 9, 2006; or
    b. six (6) inches from the bottom of the tank, for fill pipes installed after November 9, 2006. The applicable distance shall be measured from the point in the opening

of the submerged fill pipe that is the greatest distance from the bottom of the storage tank. Bottom filling satisfies this condition.

c. A fill pipe that does not meet the distance in Specific Condition #26 is allowed if the permittee demonstrates that the liquid level in the tank is always above the entire opening of the fill pipe. The permittee shall maintain documentation of that demonstration at the facility and make it available for inspection during a site visit by the Administrator's delegated representative. [40 C.F.R. § 63.11117(b)(3)]

26. Gasoline storage tanks with a capacity of less than 250 gallons are exempt from Specific Condition #25. Such tanks remain subject to SC-X and to the throughput recordkeeping requirement in Specific Condition #24. [8 CAR § 41-1204 and 40 C.F.R. § 63.11117(c)]

27. The permittee shall maintain records documenting the facility's gasoline throughput and shall make those records available within twenty-four (24) hours of a request by the Administrator. [8 CAR § 41-1204 and 40 C.F.R. § 63.11117(d)]

28. The permittee shall submit an Initial Notification and a Notification of Compliance Status to the applicable EPA Regional Office and to the Division of Environmental Quality as specified in 40 C.F.R. § 63.13, on the schedule in 40 C.F.R. § 63.11124(a). The Notification of Compliance Status shall be signed by a responsible official certifying its accuracy, shall state whether the facility has complied with Subpart CCCCCC, and shall state whether monthly throughput is calculated on the volume of gasoline loaded into all storage tanks or the volume dispensed from all storage tanks. A facility that, before January 10, 2008, was operating in compliance with an enforceable State, local, or tribal rule or permit requiring submerged fill as specified in 40 C.F.R. § 63.11117(b) is not required to submit either notification. [8 CAR § 41-1204 40 C.F.R. §§ 63.11117(e), 63.11124(a)]

SECTION V: COMPLIANCE PLAN AND SCHEDULE

City of Fort Smith Sanitary Landfill will continue to operate in compliance with those identified regulatory provisions. The facility will examine and analyze future rules and regulations that may apply and determine their applicability with any necessary action taken on a timely basis.

SECTION VI: PLANTWIDE CONDITIONS

1. The permittee shall notify the Director in writing within thirty (30) days after commencing construction, completing construction, first placing the equipment and/or facility in operation, and reaching the equipment and/or facility target production rate. [8 CAR § 41-604, 40 C.F.R. § 52 Subpart E, and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

2. If the permittee fails to start construction within eighteen months or suspends construction for eighteen months or more, the Director may cancel all or part of this permit. [8 CAR § 41-310(b) and 40 C.F.R. § 52 Subpart E]

3. The permittee must test any equipment scheduled for testing, unless otherwise stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) new equipment or newly modified equipment within sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial start up of the permitted source or (2) operating equipment according to the time frames set forth by the Division of Environmental Quality or within 180 days of permit issuance if no date is specified. The permittee must notify the Division of Environmental Quality of the scheduled date of compliance testing at least fifteen (15) business days in advance of such test. The permittee shall submit the compliance test results to the Division of Environmental Quality within sixty (60) calendar days after completing the testing. [8 CAR § 41-602 and/or 8 CAR § 40-902 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

4. The permittee must provide:

   a. Sampling ports adequate for applicable test methods;
   b. Safe sampling platforms;
   c. Safe access to sampling platforms; and
   d. Utilities for sampling and testing equipment.

   [8 CAR § 41-602 and/or 8 CAR § 40-902 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

5. The permittee must operate the equipment, control apparatus and emission monitoring equipment within the design limitations. The permittee shall maintain the equipment in good condition at all times. [8 CAR § 41-203 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

6. This permit subsumes and incorporates all previously issued air permits for this facility. [8 CAR pt. 42 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

7. Unless otherwise specified in the permit, approval to construct any new major stationary source or a major modification subject to 40 C.F.R. § 52.21 shall become invalid if construction is not commenced within 18 months after receipt of such approval, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Division of Environmental Quality may extend the 18-month period upon a satisfactory showing that an extension is justified. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

Plantwide Limits

8. The facility's current Class I, Solid Waste Permit #0267-S1-R2, issued August 8, 2003, permitted a maximum design capacity of 73,260,463 cubic yards (51,282,324 Mg). The permittee shall accept no more than 381,825 tons of municipal solid waste per rolling 12-month period. The permittee shall weigh every incoming load of waste accepted by the facility on its truck scale. Within 90 days of issuance of a new solid waste permit that allows an increase in the total capacity of the landfill, the permittee shall submit a modification application to update this permit to reflect the new capacity. [8 CAR § 41-1605, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]

9. The permittee shall maintain monthly records to demonstrate compliance with Plantwide Condition #8. The permittee shall update the records by the fifteenth day of the month following the month to which the records pertain to. The permittee shall maintain a lifetime in-place total, a twelve month rolling total, and each individual month's waste acceptance data on site, made available to the Department upon request and submitted semi-annually in accordance with General Provision #7 of this permit. Any density conversions shall be documented and maintained with these records. These records shall be retained at least 5 years. [8 CAR § 41-1605 and 40 C.F.R. § 52 Subpart E and/or Rule 18.1004 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

10. The permittee will limit all landfill operation hours to 12 hours per day, Monday through Saturday. [8 CAR § 40-904 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

11. The permittee must notify the Office of Air Quality according to Plantwide Condition 3 prior to any NSPS AAAA or NSPS XXX testing and at least 5 days prior to any re-monitoring for methane under NSPS AAAA. [Ark. Code Ann. § 8- 4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

NESHAP AAAA Subpart Conditions

12. The permittee operates an area source MSW landfill that has a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters and has estimated uncontrolled NMOC emissions which exceed 50 megagrams per year as calculated in

accordance with 40 C.F.R. § 63.1959. Therefore, the permittee is subject to and shall comply with 40 C.F.R. Part 63, Subpart AAAA – National Emission Standards for Hazardous Air Pollutants – Municipal Solid Waste Landfills (Appendix B). The permittee is responsible for complying with the rule as it appears in the Code of Federal Regulations (C.F.R.). [8 CAR § 41-204 and 40 C.F.R. § 63.1935]

13. Beginning no later than September 28, 2021, the collection and control system design plan may include for approval collection and control systems that include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping, or reporting provisions, as provided in 40 C.F.R. § 63.1981 (d)(2). [8 CAR § 41-204 and 40 C.F.R. § 63.1955 (a)]

14. At all times, beginning no later than September 27, 2021, the permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if the requirements of 40 C.F.R. Part 63, Subpart AAAA have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [8 CAR § 41-204 and 40 C.F.R. § 63.1955 (c)]

15. Each owner or operator is subject to this subpart if you own or operate an MSW landfill that has accepted waste since November 8, 1987, or has additional capacity for waste deposition and meets any one of the three criteria in paragraphs (a)(1) through (3) of this section:
    a. Your MSW landfill is an area source landfill that has a design capacity equal to or greater than 2.5 million megagrams (Mg) and 2.5 million cubic meters (m3) and has estimated uncontrolled emissions equal to or greater than 50 megagrams per year (Mg/yr) NMOC as calculated according to § 63.1959.

    [8 CAR § 41-204 and 40 CFR 63.1935(a)(3)]

16. The permittee shall operate the collection and control device in accordance with the provisions of 40 C.F.R. §§ 63.1958, 63.1960, and 63.1961. [8 CAR § 41-204 and 40 C.F.R. § 63.1957(a)]

17. Each owner or operator of MSW landfill with a gas collection and control system used to comply with the provisions of § 63.1957 must:
    a. Operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for:
        i. 5 years or more if active; or
        ii. 2 years or more if closed or at final grade;

b. Operate the collection system with negative pressure at each wellhead except under the following conditions:
   i. A fire or increased well temperature. The owner or operator must record instances when positive pressure occurs in efforts to avoid a fire. These records must be submitted with the semi-annual reports as provided in § 63.1981(h);
   ii. Use of a geomembrane or synthetic cover. The owner or operator must develop acceptable pressure limits in the design plan;
   iii. A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes must be approved by the Administrator as specified in § 63.1981(d)(2);
c. Operate each interior wellhead in the collection system as specified in 40 CFR 60.753(c), until the landfill owner or operator elects to meet the operational standard for temperature in paragraph (c)(1) of this section.
   i. Beginning no later than September 27, 2021, operate each interior wellhead in the collection system with a landfill gas temperature less than 62.8 degrees Celsius (145 degrees Fahrenheit).
   ii. The owner or operator may establish a higher operating temperature value at a particular well. A higher operating value demonstration must be submitted to the Administrator for approval and must include supporting data demonstrating that the elevated parameter neither causes fires nor significantly inhibits anaerobic decomposition by killing methanogens. The demonstration must satisfy both criteria in order to be approved (i.e., neither causing fires nor killing methanogens is acceptable).
d. Operate the collection system so that the methane concentration is less than 500 parts per million (ppm) above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator must conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at no more than 30-meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan must be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30-meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.
   i. Beginning no later than September 27, 2021, the owner or operator must:
      1. Conduct surface testing using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in § 63.1960(d).
      2. Conduct surface testing at all cover penetrations. Thus, the owner or operator must monitor any cover penetrations that are within an area of the landfill where waste has been placed and a gas collection system is required.

3. Determine the latitude and longitude coordinates of each exceedance using an instrument with an accuracy of at least 4 meters. The coordinates must be in decimal degrees with at least five decimal places.

e. Operate the system as specified in § 60.753(e) of this chapter, except:
    i. Beginning no later than September 27, 2021, operate the system in accordance to § 63.1955(c) such that all collected gases are vented to a control system designed and operated in compliance with § 63.1959(b)(2)(iii). In the event the collection or control system is not operating:
    ii. The gas mover system must be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere must be closed within 1 hour of the collection or control system not operating; and
    iii. Efforts to repair the collection or control system must be initiated and completed in a manner such that downtime is kept to a minimum, and the collection and control system must be returned to operation.

f. Operate the control system at all times when the collected gas is routed to the system.

g. If monitoring demonstrates that the operational requirements in paragraph (b), (c), or (d) of this section are not met, corrective action must be taken as specified in § 63.1960(a)(3) and (5) or (c). If corrective actions are taken as specified in § 63.1960, the monitored exceedance is not a deviation of the operational requirements in this section.

[8 CAR § 41-204 and 40 CFR 63.1958(a-g)]

18. *Collection system.* An active collection system must: [8 CAR § 41-204 and 40 C.F.R. § 63.1959 (b)(2)(ii)(B)]
    a. Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control system equipment; City of Fort Smith Sanitary Landfill Permit #: 1791-AOP-R3 AFIN: 66-00226
    b. Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of 5 years or more if active; or 2 years or more if closed or at final grade;
    c. Collect gas at a sufficient extraction rate; and
    d. Be designed to minimize off-site migration of subsurface gas

19. *Control system.* Route all the collected gas to a control system that complies with the requirements in either paragraph (b)(2)(iii)(A), (B), or (C) of this section.
    a. A non-enclosed flare designed and operated in accordance with the parameters established in § 63.11(b) except as noted in paragraph (e) of this section; or
    b. A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight-percent or reduce the outlet NMOC concentration to less

than 20 ppmv, dry basis as hexane at 3-percent oxygen. The reduction efficiency or ppmv must be established by an initial performance test to be completed no later than 180 days after the initial startup of the approved control system using the test methods specified in paragraph (e) of this section.

1. The control device must be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in §§ 63.1961(b) through (e);

c. A treatment system that processes the collected gas for subsequent sale or beneficial use such as fuel for combustion, production of vehicle fuel, production of high-British thermal unit (Btu) gas for pipeline injection, or use as a raw material in a chemical manufacturing process. Venting of treated landfill gas to the ambient air is not allowed. If the treated landfill gas cannot be routed for subsequent sale or beneficial use, then the treated landfill gas must be controlled according to either paragraph (b)(2)(iii)(A) or (B) of this section.
d. All emissions from any atmospheric vent from the gas treatment system are subject to the requirements of paragraph (b)(2)(iii)(A) or (B) of this section. For purposes of this subpart, atmospheric vents located on the condensate storage tank are not part of the treatment system and are exempt from the requirements of paragraph (b)(2)(iii)(A) or (B) of this section.

20. After the installation and startup of a collection and control system in compliance with this subpart, the owner or operator must calculate the NMOC emission rate for purposes of determining when the system can be capped, removed, or decommissioned as provided in § 63.1957(b)(3), using Equation 3:

$$MNMOC = 1.89 \times 10^{-3} Q_{LFG} C_{NMOC} \text{ (Eq. 3)}$$

Where:

M_{NMOC} = Mass emission rate of NMOC, Mg/yr.

Q_{LFG} = Flow rate of landfill gas, m^3 per minute.

C_{NMOC} = Average NMOC concentration, ppmv as hexane.

$1.89\ 10^{-3}$ = Conversion factor.

a. The flow rate of landfill gas, QLFG, must be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control system using a gas flow measuring device calibrated according to the provisions of section 10 of EPA Method 2E of appendix A-1 of part 60.
b. The average NMOC concentration, CNMOC, must be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in EPA Method

25 or 25C of appendix A-7 to part 60 of this chapter. The sample location on the common header pipe must be before any condensate removal or other gas refining units. The landfill owner or operator must divide the NMOC concentration from EPA Method 25 or 25C of appendix A-7 to part 60 by 6 to convert from CNMOC as carbon to CNMOC as hexane.

c. The owner or operator may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Administrator.

    1. Within 60 days after the date of completing each performance test (as defined in § 63.7), the owner or operator must submit the results of the performance test, including any associated fuel analyses, according to § 63.1981(l)(1).

21. For the performance test required in § 63.1959(b)(2)(iii)(B), EPA Method 25 or 25C (EPA Method 25C of appendix A-7 to part 60 of this chapter may be used at the inlet only) of appendix A of this part must be used to determine compliance with the 98 weight-percent efficiency or the 20- ppmv outlet concentration level, unless another method to demonstrate compliance has been approved by the Administrator as provided by § 63.1981(d)(2). EPA Method 3, 3A, or 3C of appendix A-7 to part 60 must be used to determine oxygen for correcting the NMOC concentration as hexane to 3 percent. In cases where the outlet concentration is less than 50 ppm NMOC as carbon (8 ppm NMOC as hexane), EPA Method 25A should be used in place of EPA Method 25. EPA Method 18 may be used in conjunction with EPA Method 25A on a limited basis (compound specific, e.g., methane) or EPA Method 3C may be used to determine methane. The methane as carbon should be subtracted from the EPA Method 25A total hydrocarbon value as carbon to give NMOC concentration as carbon. The landowner or operator must divide the NMOC concentration as carbon by 6 to convert from the CNMOC as carbon to CNMOC as hexane. Equation 4 must be used to calculate efficiency:

$$\text{Control Efficiency} = (NMOC_{in} - NMOC_{out})/(NMOC_{in}) \qquad \text{(Eq. 4)}$$

Where:

$NMOC_{in}$ = Mass of NMOC entering control device.

$NMOC_{out}$ = Mass of NMOC exiting control device.

[8 CAR § 41-204 and 40 C.F.R. § 63.1959 (e)]

22. For the performance test required in § 63.1959(b)(2)(iii)(A), the net heating value of the combusted landfill gas as determined in § 63.11(b)(6)(ii) is calculated from the concentration of methane in the landfill gas as measured by EPA Method 3C of appendix A to part 60 of this chapter. A minimum of three 30-minute EPA Method 3C samples are determined. The measurement of other organic components, hydrogen, and carbon monoxide is not applicable. EPA Method 3C may be used to determine the landfill gas

molecular weight for calculating the flare gas exit velocity under § 63.11(b)(7) of subpart A.

i. Within 60 days after the date of completing each performance test (as defined in § 63.7), the owner or operator must submit the results of the performance tests, including any associated fuel analyses, required by § 63.1959(c) or (e) according to § 63.1981(l)(1).

[8 CAR § 41-204 and 40 C.F.R. § 63.1959 (d)]

23. The performance tests required in §§ 63.1959(b)(2)(iii)(A) and (B), must be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Representative conditions exclude periods of startup and shutdown unless specified by the Administrator. The owner or operator may not conduct performance tests during periods of malfunction. The owner or operator must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.
[8 CAR § 41-204 and 40 CFR 63.1958(b)(2)-(f)]

24. *Compliance provisions*. Except as provided in § 63.1981(d)(2), each owner or operator of a controlled landfill must keep up-to-date, readily accessible records for the life of the control system equipment of the data listed in paragraphs (b)(1) through (5) of this section as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring must be maintained for a minimum of 5 years. Records of the control device vendor specifications must be maintained until removal.

a. For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with § 63.1959(b)(2)(ii)(C)(1), either Equation 5 or Equation 6 must be used. The owner or operator may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Administrator. The methane generation rate constant (k) and methane generation potential (Lo) kinetic factors should be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42) or other site-specific values demonstrated to be appropriate and approved by the Administrator. If k has been determined as specified in § 63.1959(a)(4), the value of k determined from the test must be used. A value of no more than 15 years must be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure.

i. For sites with unknown year-to-year solid waste acceptance rate:

$$Qm = 2L_oR\,(e^{-kc} - e^{-kt}) \quad \text{(Eq. 5)}$$

Where:
Qm = Maximum expected gas generation flow rate, m3 /yr.

Lo = Methane generation potential, m3 /Mg solid waste.

R = Average annual acceptance rate, Mg/yr.

k = Methane generation rate constant, year−1 .

t = Age of the landfill at equipment installation plus the time the owner or operator intends to use the gas mover equipment or active life of the landfill, whichever is less. If the equipment is installed after closure, t is the age of the landfill at installation, years.

c = Time since closure, years (for an active landfill c = 0 and e−kc = 1).

2 = Constant.

ii. For sites with known year-to-year solid waste acceptance rate:

$$Q_{M=} \sum_{i=1}^{n} 2kL_oM_i\left(e^{-kt_i}\right) \text{ (Eq. 6)}$$

Where:

Qm = Maximum expected gas generation flow rate, m3 /yr.

k = Methane generation rate constant, year−1 .

Lo = Methane generation potential, m3 /Mg solid waste.

Mi = Mass of solid waste in the ith section, Mg.

ti = Age of the ith section, years.

iii. If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, Equation 5 or Equation 6 in paragraphs (a)(1)(i) and (ii) of this section. If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using Equation 5 or Equation 6 in paragraph (a)(1)(i) or (ii) of this section or other methods must be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment.

b. For the purposes of determining sufficient density of gas collectors for compliance with § 63.1959(b)(2)(ii)(B)(2), the owner or operator must design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Administrator, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.

c. For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with § 63.1959(b)(2)(ii)(B)(3), the owner or operator must measure gauge pressure in the gas collection header applied to each individual well monthly. Any attempted corrective measure must not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval. If a positive pressure exists, follow the procedures as specified in § 60.755(a)(3), except:
    i. Beginning no later than September 27, 2021, if a positive pressure exists, action must be initiated to correct the exceedance within 5 days, except for the three conditions allowed under § 63.1958(b).
        1. If negative pressure cannot be achieved without excess air infiltration within 15 days of the first measurement of positive pressure, the owner or operator must conduct a root cause analysis and correct the exceedance as soon as practicable, but no later than 60 days after positive pressure was first measured. The owner or operator must keep records according to § 63.1983(e)(3).
        2. If corrective actions cannot be fully implemented within 60 days following the positive pressure measurement for which the root cause analysis was required, the owner or operator must also conduct a corrective action analysis and develop an implementation schedule to complete the corrective action(s) as soon as practicable, but no more than 120 days following the positive pressure measurement. The owner or operator must submit the items listed in § 63.1981(h)(7) as part of the next semi-annual report. The owner or operator must keep records according to § 63.1983(e)(4).
        3. If corrective action is expected to take longer than 120 days to complete after the initial exceedance, the owner or operator must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Administrator, according to § 63.1981(j). The owner or operator must keep records according to § 63.1983(e)(5).

d. Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the temperature and nitrogen or oxygen operational standards in introductory paragraph § 63.1958(c), for the purpose of identifying whether excess air infiltration into the landfill is occurring, the owner or operator must follow the procedures as specified in § 60.755(a)(5) of this chapter, except:
    i. Once an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the operational standard for temperature in § 63.1958(c)(1), the owner or operator must monitor each well monthly for temperature for the purpose of identifying whether excess air

infiltration exists. If a well exceeds the operating parameter for temperature as provided in § 63.1958(c)(1), action must be initiated to correct the exceedance within 5 days. Any attempted corrective measure must not cause exceedances of other operational or performance standards.

1. If a landfill gas temperature less than or equal to 62.8 degrees Celsius (145 degrees Fahrenheit) cannot be achieved within 15 days of the first measurement of landfill gas temperature greater than 62.8 degrees Celsius (145 degrees Fahrenheit), the owner or operator must conduct a root cause analysis and correct the exceedance as soon as practicable, but no later than 60 days after a landfill gas temperature greater than 62.8 degrees Celsius (145 degrees Fahrenheit) was first measured. The owner or operator must keep records according to § 63.1983(e)(3).
2. If corrective actions cannot be fully implemented within 60 days following the temperature measurement for which the root cause analysis was required, the owner or operator must also conduct a corrective action analysis and develop an implementation schedule to complete the corrective action(s) as soon as practicable, but no more than 120 days following the measurement of landfill gas temperature greater than 62.8 degrees Celsius (145 degrees Fahrenheit). The owner or operator must submit the items listed in § 63.1981(h)(7) as part of the next semi-annual report. The owner or operator must keep records according to § 63.1983(e)(4).
3. If corrective action is expected to take longer than 120 days to complete after the initial exceedance, the owner or operator must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Administrator, according to § 63.1981(h)(7) and (j). The owner or operator must keep records according to § 63.1983(e)(5).
4. If a landfill gas temperature measured at either the wellhead or at any point in the well is greater than or equal to 76.7 degrees Celsius (170 degrees Fahrenheit) and the carbon monoxide concentration measured, according to the procedures in § 63.1961(a)(5)(vi) is greater than or equal to 1,000 ppmv the corrective action(s) for the wellhead temperature standard (62.8 degrees Celsius or 145 degrees Fahrenheit) must be completed within 15 days.

e. An owner or operator seeking to demonstrate compliance with § 63.1959(b)(2)(ii)(B)(4) through the use of a collection system not conforming to the specifications provided in § 63.1962 must provide information satisfactory to the Administrator as specified in § 63.1981(d)(3) demonstrating that offsite migration is being controlled.

[8 CAR § 41-204 and 40 CFR 63.1960(a)-(e)]

25. For purposes of compliance with 40 C.F.R. § 63.1958(a), each owner or operator of a controlled landfill must place each well or design component as specified in the approved design plan as provided in § 63.1981(d). Each well must be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of: [8 CAR § 41-204 and 40 C.F.R. § 63.1960 (b)]
    a. 5 years or more if active; or
    b. 2 years or more if closed or at final grade.

26. The following procedures must be used for compliance with the surface methane operational standard as provided in 40 C.F.R. § 63.1958(d). The permittee must notify the Office of Air Quality in accordance to Plantwide Condition 3 prior to conducting quarterly surface methane monitoring. [8 CAR § 41-204 and 40 C.F.R. § 63.1960 (c)]
    a. The permittee must monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in § 63.1960 (d).
    b. The background concentration must be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells.
    c. Surface emission monitoring must be performed in accordance with section 8.3.1 of EPA Method 21 of Appendix A-7 of 40 C.F.R Part 60, except that the probe inlet must be placed within 5 to 10 centimeters of the ground. Monitoring must be performed during typical meteorological conditions.
    d. Any reading of 500 ppm or more above background at any location must be recorded as a monitored exceedance and the actions specified in § 63.1960 (c)(4)(i) through (v) must be taken. As long as, the specified actions are taken, the exceedance is not a violation of the operational requirements of § 63.1958 (d).
        i. The location of each monitored exceedance must be marked and the location and concentration recorded. The location must be recorded using an instrument with an accuracy of at least 4 meters. The coordinates must be in decimal degrees with at least five decimal places.
        ii. Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance must be made and the location must be re-monitored within 10 days of detecting the exceedance. The permittee must notify the Office of Air Quality at least 5 days prior to the scheduled re-monitoring.
        iii. If the re-monitoring of the location shows a second exceedance, additional corrective action must be taken and the location must be monitored again within 10 days of the second exceedance. If the re-monitoring shows a third exceedance for the same location, the action specified in § 63.1960 (c)(4)(v) must be taken, and no further monitoring of that location is required until the action specified in § 63.1960 (c)(4)(v) has been taken. The permittee must notify the Office of Air Quality at least 5 days prior to the scheduled re-monitoring.

iv. Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in § 63.1960 (c)(4)(ii) or (iii) must be remonitored 1 month from the initial exceedance. If the 1-month remonitoring shows a concentration less than 500 ppm above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month re-monitoring shows an exceedance, the actions specified in § 63.1960 (c)(4)(iii) or (v) must be taken. The permittee must notify the Office of Air Quality in accordance to Plantwide Condition 3 prior to conducting 1-month surface methane re-monitoring.

v. For any location where monitored methane concentration equals or exceeds 500 ppm above background three times within a quarterly period, a new well or other collection device must be installed within 120 days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Administrator for approval.

e. The owner or operator must implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.

27. The permittee shall comply with 40 C.F.R. § 63.1960(c), Plantwide Condition #26, by following the instrumentation specifications and procedures for surface emission monitoring devices as listed below: [8 CAR § 41-204 and 40 C.F.R. § 63.1960 (d)]

a. The portable analyzer must meet the instrument specifications provided in section of EPA Method 21 of Appendix A of 40 C.F.R. Part 60, except that “methane” replaces all references to “VOC”.

b. The calibration gas must be methane, diluted to a nominal concentration of 500 ppm in air.

c. To meet the performance evaluation requirements in section 8.1 of EPA Method 21 of Appendix A of 40 C.F.R. Part 60, the instrument evaluation procedures of section 8.1 of EPA Method 21 of Appendix A of Part 60 must be used.

d. The calibration procedures provided in sections 8 and 10 of EPA Method 21 of Appendix A of 40 C.F.R. Part 60 must be followed immediately before commencing a surface monitoring survey.

28. The provisions of 40 C.F.R. Part 63, Subpart AAAA apply at all times, including periods of SSM. During periods of SSM, the permittee must comply with the work practice requirement specified in § 63.1958(e) in lieu of the compliance provisions in § 63.1960. [8 CAR § 41-204 and 40 C.F.R. § 63.1960 (e)(2)]

29. Each owner or operator seeking to comply with § 63.1959(b)(2)(ii)(B) for an active gas collection system must install a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead and:

a. Measure the gauge pressure in the gas collection header on a monthly basis as provided in § 63.1960(a)(3); and

b. Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as follows:
   i. The nitrogen level must be determined using EPA Method 3C of appendix A-2 to part 60 of this chapter, unless an alternative test method is established as allowed by § 63.1981(d)(2).
   ii. Unless an alternative test method is established as allowed by § 63.1981(d)(2), the oxygen level must be determined by an oxygen meter using EPA Method 3A or 3C of appendix A-2 to part 60 of this chapter or ASTM D6522-11 (incorporated by reference, see § 63.14). Determine the oxygen level by an oxygen meter using EPA Method 3A or 3C of appendix A-2 to part 60 or ASTM D6522-11 (if sample location is prior to combustion) except that:
      1. The span must be set between 10- and 12-percent oxygen;
      2. A data recorder is not required;
      3. Only two calibration gases are required, a zero and span;
      4. A calibration error check is not required; and
      5. The allowable sample bias, zero drift, and calibration drift are ±10 percent.
   iii. A portable gas composition analyzer may be used to monitor the oxygen levels provided:
      1. The analyzer is calibrated; and
      2. The analyzer meets all quality assurance and quality control requirements for EPA Method 3A of appendix A-2 to part 60 of this chapter or ASTM D6522-11 (incorporated by reference, see § 63.14).

c. To demonstrate compliance with the operational standard for temperature in § 63.1958(c)(1), monitor temperature of the landfill gas on a monthly basis as provided in § 63.1960(a)(4). The temperature measuring device must be calibrated annually using the procedure in Section 10.3 of EPA Method 2 of Appendix A-1 to 40 C.F.R. Part 60. Keep records specified in § 63.1983(e).

d. If the permittee seeks to demonstrate compliance with the operational standard for temperature in § 63.1958(c)(1), the permittee must initiate enhanced monitoring at each well with a measurement of landfill gas temperature greater than 62.8 degrees Celsius (145 degrees Fahrenheit) as follows:
   i. Visual observations for subsurface oxidation events (smoke, smoldering ash, damage to well) within the radius of influence of the well.
   ii. Monitor oxygen concentration as provided in paragraph (a)(2) of this section;
   iii. Monitor temperature of the landfill gas at the wellhead as provided in paragraph (a)(4) of this section.
   iv. Monitor temperature of the landfill gas every 10 vertical feet of the well as provided in paragraph (a)(6) of this section.
   v. Monitor the methane concentration with a methane meter using EPA Method 3C of appendix A-6 to part 60, EPA Method 18 of appendix A-6 to part 60 of this chapter, or a portable gas composition analyzer to

monitor the methane levels provided that the analyzer is calibrated and the analyzer meets all quality assurance and quality control requirements for EPA Method 3C or EPA Method 18.

vi. Monitor and determine carbon monoxide concentrations, as follows:
   1. Collect the sample from the wellhead sampling port in a passivated canister or multi-layer foil gas sampling bag (such as the Cali-5-Bond Bag) and analyze that sample using EPA Method 10 of appendix A-4 to part 60 of this chapter, or an equivalent method with a detection limit of at least 100 ppmv of carbon monoxide in high concentrations of methane; or
   2. Collect and analyze the sample from the wellhead using EPA Method 10 of appendix A-4 to part 60 to measure carbon monoxide concentrations.
   3. When sampling directly from the wellhead, you must sample for 5 minutes plus twice the response time of the analyzer. These values must be recorded. The five 1-minute averages are then averaged to give you the carbon monoxide reading at the wellhead.
   4. When collecting samples in a passivated canister or multi-layer foil sampling bag, you must sample for the period of time needed to assure that enough sample is collected to provide five consecutive, 1-minute samples during the analysis of the canister or bag contents, but no less than 5 minutes plus twice the response time of the analyzer. The five (5) consecutive, 1-minute averages are then averaged together to give you a carbon monoxide value from the wellhead.

vii. The enhanced monitoring described in this paragraph (a)(5) must begin 7 calendar days after the first measurement of landfill gas temperature greater than 62.8 degrees Celsius (145 degrees Fahrenheit); and

viii. The enhanced monitoring in this paragraph (a)(5) must be conducted on a weekly basis. If four consecutive weekly carbon monoxide readings are under 100 ppmv, then enhanced monitoring may be decreased to monthly. However, if carbon monoxide readings exceed 100 ppmv again, the landfill must return to weekly monitoring.

ix. The enhanced monitoring in this paragraph (a)(5) can be stopped once a higher operating value is approved, at which time the monitoring provisions issued with the higher operating value should be followed, or once the measurement of landfill gas temperature at the wellhead is less than or equal to 62.8 degrees Celsius (145 degrees Fahrenheit).

e. For each wellhead with a measurement of landfill gas temperature greater than or equal to 73.9 degrees Celsius (165 degrees Fahrenheit), annually monitor temperature of the landfill gas every 10 vertical feet of the well. This temperature can be monitored either with a removable thermometer, or using temporary or permanent thermocouples installed in the well.

[8 CAR § 41-204 and 40 CFR 63.1961(a)(1)-(a)(6)]

30. Each owner or operator seeking to comply with § 63.1959(b)(2)(iii) using a non-enclosed flare must install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:
    a. A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame; and
    b. A device that records flow to the flare and bypass of the flare (if applicable). The owner or operator must:
        i. Install, calibrate, and maintain a gas flow rate measuring device that records the flow to the control device at least every 15 minutes; and
        ii. Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism must be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

    [8 CAR § 41-204 and 40 CFR 63.1961(c)]

31. Each owner or operator seeking to demonstrate compliance with § 63.1959(b)(2)(iii) using a device other than a non-enclosed flare or an enclosed combustor or a treatment system must provide information satisfactory to the Administrator as provided in § 63.1981(d)(2) describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Administrator must review the information and either approve it, or request that additional information be submitted. The Administrator may specify additional appropriate monitoring procedures. [8 CAR § 41-204 and 40 CFR 63.1961(d)]

32. Each owner or operator seeking to install a collection system that does not meet the specifications in § 63.1962 or seeking to monitor alternative parameters to those required by §§ 63.1958 through 63.1961 must provide information satisfactory to the Administrator as provided in § 63.1981(d)(2) and (3) describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Administrator may specify additional appropriate monitoring procedures. [8 CAR § 41-204 and 40 CFR 63.1961(e)]

33. Each owner or operator seeking to demonstrate compliance with the 500-ppm surface methane operational standard in § 63.1958(d) must monitor surface concentrations of methane according to the procedures in § 63.1960(c) and the instrument specifications in § 63.1960(d). If you are complying with the 500-ppm surface methane operational standard in § 63.1958(d)(2), for location, you must determine the latitude and longitude coordinates of each exceedance using an instrument with an accuracy of at least 4 meters and the coordinates must be in decimal degrees with at least five decimal places. In the semi-annual report in § 63.1981(h), you must report the location of each exceedance of the 500-ppm methane concentration as provided in § 63.1958(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month. Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any

methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring. [8 CAR § 41-204 and 40 CFR 63.1961(f)]

34. Each owner or operator seeking to demonstrate compliance with § 63.1959(b)(2)(iii)(C) using a landfill gas treatment system must calibrate, maintain, and operate according to the manufacturer's specifications a device that records flow to the treatment system and bypass of the treatment system (if applicable). Beginning no later than September 27, 2021, each owner or operator must maintain and operate all monitoring systems associated with the treatment system in accordance with the site-specific treatment system monitoring plan required in § 63.1983(b)(5)(ii). The owner or operator must:

    a. Install, calibrate, and maintain a gas flow rate measuring device that records the flow to the treatment system at least every 15 minutes; and
    b. Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism must be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

    [8 CAR § 41-204 and 40 CFR 63.1961(g)]

35. The monitoring requirements of paragraphs (a), (b), (c), (d), and (g) of this section apply at all times the affected source is operating, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You are required to complete monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable. Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the temperature and nitrogen or oxygen operational standards in introductory paragraph § 63.1958(c)(1), (d)(2), and (e)(1), the standards apply at all times. [8 CAR § 41-204 and 40 CFR 63.1961(h)]

36. Each owner or operator seeking to comply with § 63.1959(b)(2)(i) must site active collection wells, horizontal collectors, surface collectors, or other extraction devices at a sufficient density throughout all gas producing areas using the following procedures unless alternative procedures have been approved by the Administrator as provided in § 63.1981(d)(2) and (3):
    a. The collection devices within the interior must be certified to achieve comprehensive control of surface gas emissions by a professional engineer. The following issues must be addressed in the design: Depths of refuse, refuse gas generation rates and flow characteristics, cover properties, gas system expandability, leachate and condensate management, accessibility, compatibility with filling operations, integration with closure end use, air intrusion control,

corrosion resistance, fill settlement, resistance to the refuse decomposition heat, and ability to isolate individual components or sections for repair or troubleshooting without shutting down entire collection system.

b. The sufficient density of gas collection devices determined in paragraph (a)(1) of this section must address landfill gas migration issues and augmentation of the collection system through the use of active or passive systems at the landfill perimeter or exterior.

c. The placement of gas collection devices determined in paragraph (a)(1) of this section must control all gas producing areas, except as provided by paragraphs (a)(3)(i) and (ii) of this section.

   i. Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under § 63.1983(d). The documentation must provide the nature, date of deposition, location and amount of asbestos or nondegradable material deposited in the area and must be provided to the Administrator upon request.

   ii. Any nonproductive area of the landfill may be excluded from control, provided that the total of all excluded areas can be shown to contribute less than 1 percent of the total amount of NMOC emissions from the landfill. The amount, location, and age of the material must be documented and provided to the Administrator upon request. A separate NMOC emissions estimate must be made for each section proposed for exclusion, and the sum of all such sections must be compared to the NMOC emissions estimate for the entire landfill.

      1. The NMOC emissions from each section proposed for exclusion must be computed using Equation 7:

$$Q_i = 2\,k\,L_o M_i(e^{-kt_i})\,(C_{NMOC})\,(3.6 \times 10^{-9}) \quad \text{(Eq. 7)}$$

Where:
Qi = NMOC emission rate from the ith section, Mg/yr.
k = Methane generation rate constant, year−1.
Lo = Methane generation potential, m3/Mg solid waste.
Mi = Mass of the degradable solid waste in the ith section, Mg.
ti = Age of the solid waste in the ith section, years.
CNMOC = Concentration of NMOC, ppmv.
3.6 × 10−9 = Conversion factor.

      2. If the owner/operator is proposing to exclude, or cease gas collection and control from, nonproductive physically separated (e.g., separately lined) closed areas that already have gas collection systems, NMOC emissions from each physically separated closed area must be computed using either Equation 3 in § 63.1959(c) or Equation 7 in paragraph (a)(3)(ii)(A) of this section.

   iii. The values for k and CNMOC determined in field testing must be used if field testing has been performed in determining the NMOC emission rate or the radii of influence (the distance from the well center to a point in the landfill where the pressure gradient applied by the blower or compressor approaches zero). If field testing has not been performed, the default values for k, Lo and CNMOC provided in § 63.1959(a)(1) or the alternative values from § 63.1959(a)(5) must be used. The mass of nondegradable solid waste contained within the given section may be subtracted from the total mass of the section when estimating emissions provided the nature, location, age, and amount of the nondegradable material is documented as provided in paragraph (a)(3)(i) of this section.

[8 CAR § 41-204 and 40 CFR 63.1962(a)-(b)]

37. Each owner or operator seeking to comply with § 63.1959(b)(2)(ii) must construct the gas collection devices using the following equipment or procedures:

   a. The landfill gas extraction components must be constructed of polyvinyl chloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion resistant material of suitable dimensions to: Convey projected amounts of gases; withstand installation, static, and settlement forces; and withstand planned overburden or traffic loads. The collection system must extend as necessary to comply with emission and migration standards. Collection devices such as wells and horizontal collectors must be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations must be situated with regard to the need to prevent excessive air infiltration.
   b. Vertical wells must be placed so as not to endanger underlying liners and must address the occurrence of water within the landfill. Holes and trenches constructed for piped wells and horizontal collectors must be of sufficient cross-section so as to allow for their proper construction and completion including, for example, centering of pipes and placement of gravel backfill. Collection devices must be designed so as not to allow indirect short circuiting of air into the cover or refuse into the collection system or gas into the air. Any gravel used around pipe perforations should be of a dimension so as not to penetrate or block perforations.
   c. Collection devices may be connected to the collection header pipes below or above the landfill surface. The connector assembly must include a positive closing throttle valve, any necessary seals and couplings, access couplings and at least one sampling port. The collection devices must be constructed of PVC, HDPE, fiberglass, stainless steel, or other nonporous material of suitable thickness.

[8 CAR § 41-204 and 40 CFR 63.1962(b)]

38. Each owner or operator seeking to comply with § 63.1959(b)(2)(iii) must convey the landfill gas to a control system in compliance with § 63.1959(b)(2)(iii) through the collection header pipe(s). The gas mover equipment must be sized to handle the maximum gas generation flow rate expected over the intended use period of the gas moving equipment using the following procedures:

a. For existing collection systems, the flow data must be used to project the maximum flow rate. If no flow data exists, the procedures in paragraph (c)(2) of this section must be used.
b. For new collection systems, the maximum flow rate must be in accordance with § 63.1960(a)(1).

[8 CAR § 41-204 and 40 CFR 63.1962(c)]

39. Compliance is determined using performance testing, collection system monitoring, continuous parameter monitoring, and other credible evidence. In addition, continuous parameter monitoring data collected under § 63.1961(b)(1), (c)(1), and (d) are used to demonstrate compliance with the operating standards for control systems. If a deviation occurs, you have failed to meet the control device operating standards described in this subpart and have deviated from the requirements of this subpart. After September 27, 2021, the SSM provisions of § 63.6(e) of subpart A no longer apply to this subpart and the SSM plan developed under paragraph (a) of this section no longer applies. Compliance with the emissions standards and the operating standards of § 63.1958 of this subpart is required at all times. [8 CAR § 41-204 and 40 CFR 63.1964(b)]

40. A deviation is defined in § 63.1990. For the purposes of the landfill monitoring and SSM plan requirements, deviations include the items in paragraphs (a) through (b) of this section.
   a. A deviation occurs when the control device operating parameter boundaries described in § 63.1983(c)(1) are exceeded.
   b. A deviation occurs when 1 hour or more of the hours during the 3-hour block averaging period does not constitute a valid hour of data. A valid hour of data must have measured values for at least three 15-minute monitoring periods within the hour.

   [8 CAR § 41-204 and 40 CFR 63.1965]

41. Beginning no later than September 27, 2021, averages are calculated according to § 63.1983(b)(2)(i) for average combustion temperature and § 63.1983(c)(1)(i) for 3-hour average combustion temperature for enclosed combustors, except that the data collected during the event listed in paragraph (a) of this section are not to be included in any average computed under this subpart.
   a. Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments.
   b. Startups
   c. Shutdowns
   d. Malfunctions.

   [8 CAR § 41-204 and 40 CFR 63.1975]

42. *Reports.* The permittee must submit the reports specified in 40 C.F.R. § 63.1981 and the reports specified in Table 1 to Subpart AAAA. If you have previously submitted a design capacity report, amended design capacity report, initial NMOC emission rate report, initial or revised collection and control system design plan, closure report, equipment

removal report, or initial performance test under 40 C.F.R. Part 60, Subpart WWW or an EPA-approved and effective state plan that implements 40 C.F.R. Part 60, Subpart Cf, then that submission constitutes compliance with the design capacity report in § 63.1981(a), the amended design capacity report in § 63.1981(b), the initial NMOC emission rate report in § 63.1981(c), the initial collection and control system design plan in § 63.1981(d), the revised design plan in § 63.1981(e), the closure report in § 63.1981(f), the equipment removal report in § 63.1981(g), and the initial performance test report in § 63.1981(i). You do not need to re-submit the report(s). However, you must include a statement certifying prior submission of the respective report(s) and the date of submittal in the first semi-annual report required in § 63.1981. [8 CAR § 41-204 and 40 C.F.R. § 63.1981]

a. Initial design capacity report. The initial design capacity report must contain the following information.
    i. A map or plot of the landfill, providing the size and location of the landfill, and identifying all areas where solid waste may be landfilled according to the permit issued by the state, local, or tribal agency responsible for regulating the landfill.
    ii. The maximum design capacity of the landfill. Where the maximum design capacity is specified in the permit issued by the state agency responsible for regulating the landfill, a copy of the permit specifying the maximum design capacity may be submitted as part of the report. If the maximum design capacity of the landfill is not specified in the permit, the maximum design capacity must be calculated using good engineering practices. The calculations must be provided, along with the relevant parameters as part of the report. The landfill may calculate design capacity in either Mg or m3 for comparison with the exemption values. If the permittee chooses to convert the design capacity from volume to mass or from mass to volume to demonstrate its design capacity is less than 2.5 million Mg or 2.5 million m3 , the calculation must include a site-specific density, which must be recalculated annually. Any density conversions must be documented and submitted with the design capacity report. The state, tribal, local agency or Administrator may request other reasonable information as may be necessary to verify the maximum design capacity of the landfill.
b. *Amended design capacity report*. An amended design capacity report must be submitted to the Administrator providing notification of an increase in the design capacity of the landfill, within 90 days of an increase in the maximum design capacity of the landfill to meet or exceed 2.5 million Mg and 2.5 million m3 . This increase in design capacity may result from an increase in the permitted volume of the landfill or an increase in the density as documented in the annual recalculation required in § 63.1983(f).
c. *NMOC emission rate report.* Each owner or operator subject to the requirements of Subpart AAAA must submit a copy of the latest NMOC emission rate report that was submitted according to § 60.757(b) of this chapter or submit an NMOC emission rate report to the Administrator initially and annually thereafter, except

as provided for in paragraph (c)(1)(ii)(A) of this section. The Administrator may request such additional information as may be necessary to verify the reported NMOC emission rate. If you have submitted an annual report under 40 C.F.R. Part 60, subpart WWW; or an EPA-approved and effective state plan that implements 40 C.F.R. Part 60, Subpart Cf, then that submission constitutes compliance with the annual NMOC emission rate report in this paragraph. You do not need to re-submit the annual report for the current year. Beginning no later than September 27, 2021, the report must meet the following requirements:

i. The NMOC emission rate report must contain an annual or 5-year estimate of the NMOC emission rate calculated using the formula and procedures provided in § 63.1959(a) or (b), as applicable.
ii. The initial NMOC emission rate report must be submitted no later than 90 days after the date of commenced construction, modification, or reconstruction for landfills that commence construction, modification, or reconstruction on or after March 12, 1996.
iii. NMOC emission rate reports must be submitted annually thereafter, except as provided for in § 63.1981 (c)(1)(ii)(A). Each owner or operator subject to the requirements of Subpart AAAA is exempted from the requirements to submit an NMOC emission rate report, after installing a collection and control system that complies with § 63.1959 (b)(2), during such time as the collection and control system is in operation and in compliance with §§ 63.1958 and 63.1960.

d. *Collection and control system design plan*. Each owner or operator subject to the provisions of § 63.1959(b)(2) must submit a collection and control system design plan to the Administrator for approval according to § 60.757(c) and the schedule in § 60.757(c)(1) and (2). Beginning no later than September 27, 2021, each owner or operator subject to the provisions of § 63.1959(b)(2) must submit a collection and control system design plan to the Administrator according to § 63.1981(d)(1) through (6). The collection and control system design plan must be prepared and approved by a professional engineer.

i. The collection and control system as described in the design plan must meet the design requirements in § 63.1959(b)(2).
ii. The collection and control system design plan must include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of §§ 63.1957 through 63.1983 proposed by the owner or operator.
iii. The collection and control system design plan must either conform with specifications for active collection systems in § 63.1962 or include a demonstration to the Administrator's satisfaction of the sufficiency of the alternative provisions to § 63.1962.
iv. Each owner or operator of an MSW landfill affected by Subpart AAAA must submit a collection and control system design plan to the Administrator for approval within 1 year of becoming subject to the subpart.

v. The landfill owner or operator must notify the Administrator that the design plan is completed and submit a copy of the plan's signature page. The Administrator has 90 days to decide whether the design plan should be submitted for review. If the Administrator chooses to review the plan, the approval process continues as described in § 63.1981(d)(6). In the event that the design plan is required to be modified to obtain approval, the owner or operator must take any steps necessary to conform any prior actions to the approved design plan and any failure to do so could result in an enforcement action.

vi. Upon receipt of an initial or revised design plan, the Administrator must review the information submitted under paragraphs (d)(1) through (3) of this section and either approve it, disapprove it, or request that additional information be submitted. Because of the many site-specific factors involved with landfill gas system design, alternative systems may be necessary. A wide variety of system designs are possible, such as vertical wells, combination horizontal and vertical collection systems, or horizontal trenches only, leachate collection components, and passive systems.

e. *Revised design plan*. Beginning no later than September 27, 2021, the owner or operator who has already been required to submit a design plan under paragraph (d) of this section must submit a revised design plan to the Administrator for approval as follows:

   i. At least 90 days before expanding operations to an area not covered by the previously approved design plan.

   ii. Prior to installing or expanding the gas collection system in a way that is not consistent with the design plan that was submitted to the Administrator according to § 63.1981(d).

f. Closure report. Each owner or operator of a controlled landfill must submit a closure report to the Administrator within 30 days of waste acceptance cessation. The Administrator may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of § 258.60 of this chapter. If a closure report has been submitted to the Administrator, no additional wastes may be placed into the landfill without filing a notification of modification as described under § 63.9(b) of subpart A.

g. *Equipment removal report*. Each owner or operator of a controlled landfill must submit an equipment removal report as provided in § 60.757(e) of this chapter. Each owner or operator of a controlled landfill must submit an equipment removal report to the Administrator 30 days prior to removal or cessation of operation of the control equipment. Beginning no later than September 27, 2021, the equipment removal report must contain all of the following items:

   i. A copy of the closure report submitted in accordance with paragraph (f) of this section;

   ii. A copy of the initial performance test report demonstrating that the 15-year minimum control period has expired, or information that demonstrates that the gas collection and control system will be unable to operate for 15 years due to declining gas flows. In the equipment removal report, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in lieu of the performance test report if the report has been previously submitted to the EPA's Central Data Exchange (CDX); and

iii. Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 Mg or greater of NMOC per year. If the NMOC emission rate reports have been previously submitted to the EPA's CDX, a statement that the NMOC emission rate reports have been submitted electronically and the dates that the reports were submitted to the EPA's CDX may be submitted in the equipment removal report in lieu of the NMOC emission rate reports.

h. *Semi-annual report*. The owner or operator of a landfill seeking to comply with § 63.1959(b)(2) using an active collection system designed in accordance with § 63.1959(b)(2)(ii) must submit to the Administrator semi-annual reports. Beginning no later than September 27, 2021, you must submit the report, following the procedure specified in paragraph (l) of this section. The initial report must be submitted within 180 days of installation and startup of the collection and control system and must include the initial performance test report required under § 63.7 of subpart A, as applicable. In the initial report, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in lieu of the performance test report if the report has been previously submitted to the EPA's CDX. For enclosed combustion devices and flares, reportable exceedances are defined under § 63.1983(c). The semi-annual reports must contain the information in paragraphs (h)(1) through (8) of this section.

i. Number of times that applicable parameters monitored under § 63.1958(b), (c), and (d) were exceeded and when the gas collection and control system was not operating under § 63.1958(e), including periods of SSM. For each instance, report the date, time, and duration of each exceedance.

1. Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the temperature and nitrogen or oxygen operational standards in introductory paragraph § 63.1958(c), provide a statement of the wellhead operational standard for temperature and oxygen you are complying with for the period covered by the report. Indicate the number of times each of those parameters monitored under § 63.1961(a)(3) were exceeded. For each instance, report the date, time, and duration of each exceedance.
2. Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the operational standard for temperature in § 63.1958(c)(1), provide a statement of the wellhead operational standard for temperature and oxygen you are complying with for the period covered by the report. Indicate

the number of times each of those parameters monitored under § 63.1961(a)(4) were exceeded. For each instance, report the date, time, and duration of each exceedance.

3. Beginning no later than September 27, 2021, number of times the parameters for the site specific treatment system in § 63.1961(g) were exceeded.

ii. Description and duration of all periods when the gas stream was diverted from the control device or treatment system through a bypass line or the indication of bypass flow as specified under § 63.1961.

iii. Description and duration of all periods when the control device or treatment system was not operating and length of time the control device or treatment system was not operating.

iv. All periods when the collection system was not operating.

v. The location of each exceedance of the 500-ppm methane concentration as provided in § 63.1958(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month. Beginning no later than September 27, 2021, for location, you record the latitude and longitude coordinates of each exceedance using an instrument with an accuracy of at least 4 meters. The coordinates must be in decimal degrees with at least five decimal places.

vi. The date of installation and the location of each well or collection system expansion added pursuant to § 63.1960(a)(3) and (4), (b), and (c)(4).

vii. For any corrective action analysis for which corrective actions are required in § 63.1960(a)(3)(i) or (a)(5) and that take more than 60 days to correct the exceedance, the root cause analysis conducted, including a description of the recommended corrective action(s), the date for corrective action(s) already completed following the positive pressure or high temperature reading, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

viii. Each owner or operator required to conduct enhanced monitoring in §§ 63.1961(a)(5) and (6) must include the results of all monitoring activities conducted during the period.

1. For each monitoring point, report the date, time, and well identifier along with the value and units of measure for oxygen, temperature (wellhead and downwell), methane, and carbon monoxide.
2. Include a summary trend analysis for each well subject to the enhanced monitoring requirements to chart the weekly readings over time for oxygen, wellhead temperature, methane, and weekly or monthly readings over time, as applicable for carbon monoxide.
3. Include the date, time, staff person name, and description of findings for each visual observation for subsurface oxidation event.

i. Initial performance test report. Each owner or operator seeking to comply with § 63.1959(b)(2)(iii) must include the following information with the initial performance test report required under § 63.7 of subpart A:

a. A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion;
b. The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based;
c. The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material;
d. The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on nonproductivity and the calculations of gas generation flow rate for each excluded area;
e. The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and
f. The provisions for the control of off-site migration.

j. *Corrective action and the corresponding timeline*. The owner or operator must submit information regarding corrective actions according to paragraphs (j)(1) and (2) of this section.
    a. For corrective action that is required according to § 63.1960(a)(3) or (4) and is not completed within 60 days after the initial exceedance, you must submit a notification to the Administrator as soon as practicable but no later than 75 days after the first measurement of positive pressure or temperature exceedance.
    b. For corrective action that is required according to § 63.1960(a)(3) or (4) and is expected to take longer than 120 days after the initial exceedance to complete, you must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Administrator as soon as practicable but no later than 75 days after the first measurement of positive pressure or temperature monitoring value of 62.8 degrees Celsius (145 degrees Fahrenheit) or above unless a higher operating temperature value has been approved by the Administrator for the well under this subpart or under 40 CFR part 60, subpart WWW; 40 CFR part 60, subpart XXX; or a Federal plan or EPA approved and effective state plan or tribal plan that implements either 40 CFR part 60, subpart Cc or 40 CFR part 60, subpart Cf. The Administrator must approve the plan for corrective action and the corresponding timeline.

k. *24-hour high temperature report*. Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the operational standard for temperature in § 63.1958(c)(1) and a landfill gas temperature measured at either the wellhead or at any point in the well is greater than or equal to 76.7 degrees Celsius (170 degrees Fahrenheit) and the carbon monoxide concentration measured is greater than or equal to 1,000 ppmv, then you must report the date, time, well identifier, temperature and carbon monoxide reading via email to the Administrator within 24 hours of the measurement unless a higher operating temperature value has been approved by the Administrator for the well under this subpart or under 40 CFR part 60, subpart WWW; 40 CFR part 60, subpart XXX; or a Federal plan or EPA approved and effective state plan or tribal plan that implements either 40 CFR part 60, subpart Cc or 40 CFR part 60, subpart Cf.

l. *Electronic reporting*. Beginning no later than September 27, 2021, the owner or operator must submit reports electronically according to paragraphs (l)(1) and (2) of this section.
    a. Within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedures specified in paragraphs (l)(1)(i) through (iii) of this section.
    b. Each owner or operator required to submit reports following the procedure specified in this paragraph must submit reports to the EPA via CEDRI. CEDRI can be accessed through the EPA's CDX. The owner or operator must use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the XML schema listed on the CEDRI website (https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reportinginterface-cedri). Once the spreadsheet template upload/forms for the reports have been available in CEDRI for 90 days, the owner or operator must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the reports are submitted. The NMOC emission rate reports, semi-annual reports, and bioreactor 40-percent moisture reports should be electronically reported as a spreadsheet template upload/form to CEDRI. If the reporting forms specific to this subpart are not available in CEDRI at the time that the reports are due, the owner or operator must submit the reports to the Administrator at the appropriate address listed in § 63.13 of subpart A.

m. *Claims of EPA system outage.* Beginning no later than September 27, 2021, if you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of EPA system outage for failure to comply timely with the reporting requirement. To assert a claim of EPA system outage, you must meet the following requirements:
    i. You must have been or will be precluded from accessing CEDRI and submitting a required report within the time prescribed due to an outage of either the EPA's CEDRI or CDX systems.
    ii. The outage must have occurred within the period of time beginning 5 business days prior to the date that the submission is due.
    iii. The outage may be planned or unplanned.
    iv. You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due

diligence should have known, that the event may cause or has caused a delay in reporting.

v. You must provide to the Administrator a written description identifying:
   1. The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;
   2. A rationale for attributing the delay in reporting beyond the regulatory deadline to EPA system outage;
   3. Measures taken or to be taken to minimize the delay in reporting; and
   4. The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

vi. The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

vii. In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.

n. *Claims of force majeure.* Beginning no later than September 27, 2021, if you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of force majeure for failure to comply timely with the reporting requirement. To assert a claim of force majeure, you must meet the following requirements:
   a. You may submit a claim if a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning 5 business days prior to the date the submission is due. For the purposes of this section, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents you from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (e.g., hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (e.g., large scale power outage).
   b. You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.
   c. You must provide to the Administrator:
      i. A written description of the force majeure event;
      ii. A rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event;
      iii. Measures taken or to be taken to minimize the delay in reporting; and

iv. The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

d. The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator.
e. In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs.

[8 CAR § 41-204 and 40 CFR 63.1981]

43. Except as provided in § 63.1981(d)(2), each owner or operator of an MSW landfill subject to the provisions of § 63.1959(b)(2)(ii) and (iii) of this chapter must keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report that triggered § 63.1959(b), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.
[8 CAR § 41-204 and 40 CFR 63.1983(a)]

44. Except as provided in § 63.1981(d)(2), each owner or operator of a controlled landfill must keep up-todate, readily accessible records for the life of the control system equipment of the data listed in paragraphs (b)(1) through (5) of this section as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring must be maintained for a minimum of 5 years. Records of the control device vendor specifications must be maintained until removal.
    a. Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 63.1959(b)(2)(ii):
        i. The maximum expected gas generation flow rate as calculated in § 63.1960(a)(1).
        ii. The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in § 63.1962(a)(1) and (2). (2)

[8 CAR § 41-204 and 40 CFR 63.1983(b)(1)]

45. Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 63.1959(b)(2)(iii)(C) through use of a landfill gas treatment system:
    a. *Bypass records*. Records of the flow of landfill gas to, and bypass of, the treatment system.
    b. *Site-specific treatment monitoring plan*. Beginning no later than September 27, 2021, the owner or operator must prepare a site-specific treatment monitoring plan to include:
        i. Monitoring records of parameters that are identified in the treatment system monitoring plan and that ensure the treatment system is operating properly for each intended end use of the treated landfill gas. At a minimum, records should include records of filtration, dewatering, and

compression parameters that ensure the treatment system is operating properly for each intended end use of the treated landfill gas.

ii. Monitoring methods, frequencies, and operating ranges for each monitored operating parameter based on manufacturer's recommendations or engineering analysis for each intended end use of the treated landfill gas.
iii. Documentation of the monitoring methods and ranges, along with justification for their use.
iv. List of responsible staff (by job title) for data collection.
v. Processes and methods used to collect the necessary data.
vi. Description of the procedures and methods that are used for quality assurance, maintenance, and repair of all continuous monitoring systems (CMS).

[8 CAR § 41-204 and 40 CFR 63.1983(b)(5)]

46. Except as provided in § 63.1981(d)(2), each owner or operator subject to the provisions of this subpart must keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.
    a. Each owner or operator subject to the provisions of this subpart must keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under § 63.1960(b).
    b. Each owner or operator subject to the provisions of this subpart must keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in § 63.1962(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in § 63.1962(a)(3)(ii).

[8 CAR § 41-204 and 40 CFR 63.1983(d)]

47. Except as provided in § 63.1981(d)(2), each owner or operator subject to the provisions of this subpart must keep for at least 5 years up-to-date, readily accessible records of the following:
    a. All collection and control system exceedances of the operational standards in § 63.1958, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.
    b. Each owner or operator subject to the control provisions of this subpart must keep records of each wellhead temperature monitoring value of greater than 55 degrees Celsius (131 degrees Fahrenheit), each wellhead nitrogen level at or above 20 percent, and each wellhead oxygen level at or above 5 percent, except:
        i. When an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the compliance provisions for wellhead temperature in § 63.1958(c)(1), but no later than September 27, 2021, the records of each wellhead temperature monitoring value of 62.8 degrees Celsius (145 degrees Fahrenheit) or above instead of values greater than 55 degrees Celsius (131 degrees Fahrenheit).

ii. Each owner or operator required to conduct the enhanced monitoring provisions in § 63.1961(a)(5), must also keep records of all enhanced monitoring activities.
iii. Each owner or operator required to submit the 24-hour high temperature report in § 63.1981(k), must also keep a record of the email transmission.

c. For any root cause analysis for which corrective actions are required in § 63.1960(a)(3)(i)(A) or (a)(4)(i)(A), keep a record of the root cause analysis conducted, including a description of the recommended corrective action(s) taken, and the date(s) the corrective action(s) were completed.
d. For any root cause analysis for which corrective actions are required in § 63.1960(a)(3)(i)(B) or (a)(4)(i)(B), keep a record of the root cause analysis conducted, the corrective action analysis, the date for corrective action(s) already completed following the positive pressure reading or high temperature reading, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.
e. For any root cause analysis for which corrective actions are required in § 63.1960(a)(3)(i)(C) or (a)(4)(i)(C), keep a record of the root cause analysis conducted, the corrective action analysis, the date for corrective action(s) already completed following the positive pressure reading or high temperature reading, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates, and a copy of any comments or final approval on the corrective action analysis or schedule from the Administrator.

[8 CAR § 41-204 and 40 CFR 63.1983(e)]

NSPS Subpart XXX Conditions

48. The permittee is subject to and shall comply with 40 C.F.R. § 60 Subpart XXX - *Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification after July 17, 2014* (Appendix A), since it has a design fill capacity in excess of 2,500,000 Mg and the facility was modified after July 17, 2014. The gas collection and control system will be subject to the monitoring requirements of 40 C.F.R. § 60 Subpart XXX – *Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification after July 17, 2014*, 30 months (June 19, 2016) after the site specific NMOC emissions are reported to be equal to or greater than 34 Mg per year. [8 CAR § 41-204, 40 C.F.R. §§ 60.762(b), 60.764(a)(3)]

49. The permittee shall be required to modify this permit before starting any modification, construction, or reconstruction at the facility not described in this permit. The permittee is allowed to install additional gas extraction wells and remove and/or replace existing gas extraction wells; any such modifications shall be documented and a record maintained on site and make available to Department personnel upon request. [8 CAR § 41-204 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

50. The permittee shall maintain records of the following on-site and make available to Department personnel upon request:
    a. An up-to-date, readily accessible plot map showing each existing collector in the system and providing a unique identification location label for each collector; and
    b. A readily accessible record of the nature, date of deposition, amount and location of asbestos-containing or non-degradable waste excluded from collection. [8 CAR § 41-605, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

51. Since the calculated Tier 2 NMOC emission rate is equal to or greater than the 34 Mg/yr threshold level, the permittee shall:
    a. Install a collection and control system that captures the gas generated within the landfill areas required paragraphs by 40 C.F.R. §60.762(b)(2)(ii)(A) or (B) and (b)(2)(iii) by May 23, 2019 (which is within 30 months after the first annual report in which the emission rate equals or exceeds 34 Mg/yr). [8 CAR § 41-204 and 40 C.F.R. § 60.762(b)]

52. The GCCS Design plan may allow for alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of 40 C.F.R. §§ 60.763 through 60.768 and the applicable operating parameters of this permit when approved by the administrator. Any approved alternatives in the current plan may be used when applicable under the terms of this permit. [8 CAR § 41-204 and 40 C.F.R. § 60.762]

Title 20. Public Health and Welfare: Part 860. Asbestos Abatement Rule

53. The permittee is subject to and shall comply with CAR 20, *Asbestos Abatement Rule,* §11.2 Standards for Waste Disposal Sites. [20 CAR § 860-505, and 40 C.F.R. § 60.752]

54. The permittee of an active waste disposal site that received asbestos-containing waste material from a source covered by 20 CAR shall meet the following requirements: [20 CAR § 860-505 (A)(i-ii)]
    a. At the end of each operating day, or at least once every 24-hour period while the site is in continuous operation, the asbestos-containing waste material that has been deposited at the site during the operating day or previous 24-hour period shall:
        a. Be covered with at least 6 inches of compacted non-asbestos-containing material; or
        b. Be covered with a resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. Such an agent shall be used in the manner and frequency recommended for the particulate dust by the dust suppression agent manufacturers to achieve and maintain dust control. Other equally effective dust suppression agents may be used upon prior approval by the Director. For purposes of this paragraph, any used, spent, or other waste oil is not considered a dust suppression agent.

b. Use an alternative emissions control method that has received prior written approval by the Director demonstrating the following criteria:
    a. The alternative method will control asbestos emissions equivalent to currently required methods;
    b. The suitability of the alternative method for the intended application;
    c. The alternative method will not violate other regulations; and
    d. The alternative method will not result in increased water pollution, land pollution, or occupational hazards.

55. The permittee shall maintain waste shipment records (WSR) of all asbestos-containing waste material received: [8 CAR § 41-605 and 20 CAR § 860-505 (B)(i-vii)]

i. Maintain waste shipment records (WSR), using a form with the following information:
    a. The name, address, and telephone number of the waste generator;
    b. The name, address, and telephone number of the transporter(s);
    c. The quantity of the asbestos-containing waste material in tons;
    d. The presence of improperly enclosed or uncovered waste, or any asbestos-containing waste material not sealed in leak-tight containers. Report in writing to the Department Official responsible for administering the Asbestos program for the waste generator (identified in the WSR, and, if different the local, State, or EPA regional office responsible for administering the asbestos NESHAP program for the disposal site, by the following working day, the presence of a significant amount of improperly enclosed or uncovered waste. Submit a copy of the WSR along with the report; and
    e. The date of the receipt.

ii. The permittee shall as soon as possible and no longer than 30 days after receipt of the asbestos-containing waste, send a copy of the signed WSR to the waste generator. [20 CAR § 860-505 (B)(ii)]

iii. The permittee shall check the WSR that accompanies each asbestos-containing waste shipment that arrives at the waste disposal site for accuracy of the quantity of waste designated and attempt to reconcile any discrepancy with the waste generator. If the discrepancy is not resolved within 15 days after receiving the waste, the permittee will immediately report in writing to the specific agency responsible for administering the NESHAP program for the waste generator. Describe the discrepancy and attempts to reconcile it, and submit a copy of the WSR along with the report. [8 CAR § 41-605 and 20 CAR § 860-505 2(B)(iii)]

iv. Furnish upon request and make available during normal business hours for inspection by the Department, all records required under 20 CAR § 860-505. [20 CAR § 860-505 (B)(iv)]

v. The permittee shall maintain a copy of all records and reports required by 20 CAR § 860-505 on-site for at least 2 years. [20 CAR § 860-505 (B)(v)]

vi. Maintain until landfill closure, records of the location, depth and area, and quantity in tons of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area. [20 CAR § 860-505 (B)(vi)]

vii. Submit to the Director, upon closure of the facility, a copy of records of asbestos waste disposal locations and quantities. [20 CAR § 860-505 (B)(vii)]

57. The permittee shall notify the Department in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at the waste disposal site and is covered. If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the Department at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. The following information shall be included in the notice: [20 CAR § 860-505 (C)(i-iv)]
    a. Schedule starting and completion dates;
    b. Reason for disturbing the waste;
    c. Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material (if deemed necessary, the Department may require changes in the emission control procedures to be used); and
    d. Location of any temporary storage site and the final disposal site.

58. Within 60 days of a site becoming inactive, the permittee shall record a notation, in accordance with Arkansas State law, on the deed to the facility property and on any other instrument that would normally be examined during a title search. This notation will in perpetuity notify any potential purchaser of the property that: [20 CAR § 860-505 (D)(i-ii)]
    a. The land has been used for the disposal of asbestos-containing waste material; and
    b. The survey plot and record of the location and quantity of asbestos-containing waste disposed of within the disposal site required in 20 CAR § 860-505 (B)(vi) have been filed with the Department.

Title VI Provisions

59. The permittee must comply with the standards for labeling of products using ozone-depleting substances. [40 C.F.R. § 82 Subpart E]
    a. All containers containing a class I or class II substance stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced to interstate commerce pursuant to §82.106.
    b. The placement of the required warning statement must comply with the requirements pursuant to §82.108.
    c. The form of the label bearing the required warning must comply with the requirements pursuant to §82.110.
    d. No person may modify, remove, or interfere with the required warning statement except as described in §82.112.

60. The permittee must comply with the standards for recycling and emissions reduction, except as provided for MVACs in Subpart B. [40 C.F.R. § 82 Subpart F]

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
c. Persons performing maintenance, service repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
d. Persons disposing of small appliances, MVACs, and MVAC like appliances must comply with record keeping requirements pursuant to §82.166. ("MVAC like appliance" as defined at §82.152)
e. Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to §82.156.
f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.

61. If the permittee manufactures, transforms, destroys, imports, or exports a class I or class II substance, the permittee is subject to all requirements as specified in 40 CFR Part 82, Subpart A, Production and Consumption Controls.

62. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

63. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC 22 refrigerant.

64. The permittee can switch from any ozone depleting substance to any alternative listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G.

SECTION VII: INSIGNIFICANT ACTIVITIES

The Division of Environmental Quality deems the following types of activities or emissions as insignificant on the basis of size, emission rate, production rate, or activity in accordance with Group A of the Insignificant Activities list found in 8 CAR pt. 40 and pt. 41 Appendix A. Group B insignificant activities may be listed but are not required to be listed in permits. Insignificant activity emission determinations rely upon the information submitted by the permittee in an application dated April 11th, 2025. [8 CAR § 42-204 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

Description	Category
10,000 Gallon Diesel Storage Tank 01	A-3
3,000 Gallon Diesel Storage Tank 02	A-3
16,000 Gallon Leachate underground Storage Tank	A-3
CNG Fueling Station	A-13

SECTION VIII: GENERAL PROVISIONS

1. Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission 8 CAR pt. 40 or the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 et seq.) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission 8 CAR pt. 40 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 et seq.). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission 8 CAR pt. 40 or the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 et seq.) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute. [40 C.F.R. § 70.6(b)(2)]

2. This permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later. [40 C.F.R. § 70.6(a)(2) and 8 CAR § 42-601(2)]

3. The permittee must submit a complete application for permit renewal at least six (6) months before permit expiration. Permit expiration terminates the permittee's right to operate unless the permittee submitted a complete renewal application at least six (6) months before permit expiration. If the permittee submits a complete application, the existing permit will remain in effect until the Division of Environmental Quality takes final action on the renewal application. The Division of Environmental Quality will not necessarily notify the permittee when the permit renewal application is due. [8 CAR § 42-306]

4. Where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, et seq. (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, the permit incorporates both provisions into the permit, and the Director or the Administrator can enforce both provisions. [40 C.F.R. § 70.6(a)(1)(ii) and 8 CAR § 42-601(1)(C)]

5. The permittee must maintain the following records of monitoring information as required by this permit.

    a. The date, place as defined in this permit, and time of sampling or measurements;
    b. The date(s) analyses performed;
    c. The company or entity performing the analyses;
    d. The analytical techniques or methods used;
    e. The results of such analyses; and
    f. The operating conditions existing at the time of sampling or measurement.

    [40 C.F.R. § 70.6(a)(3)(ii)(A) and 8 CAR § 42-601(3)(C)]

6. The permittee must retain the records of all required monitoring data and support information for at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. [40 C.F.R. § 70.6(a)(3)(ii)(B) and 8 CAR § 42-601(3)(C)(ii)]

7. The permittee must submit reports of all required monitoring every six (6) months. If the permit establishes no other reporting period, the reporting period shall end on the last day of the month six months after the issuance of the initial Title V permit and every six months thereafter. The report is due on the first day of the second month after the end of the reporting period. The first report due after issuance of the initial Title V permit shall contain six months of data and each report thereafter shall contain 12 months of data. The report shall contain data for all monitoring requirements in effect during the reporting period. If a monitoring requirement is not in effect for the entire reporting period, only those months of data in which the monitoring requirement was in effect are required to be reported. The report must clearly identify all instances of deviations from permit requirements. A responsible official as defined in 8 CAR § 42-104 must certify all required reports. The permittee will send the reports electronically using https://eportal.adeq.state.ar.us or mail them to the address below:

    Division of Environmental Quality
    Office of Air Quality
    ATTN: Compliance Inspector Supervisor
    5301 Northshore Drive
    North Little Rock, AR 72118-5317

    [40 C.F.R. § 70.6(a)(3)(iii)(A) and 8 CAR § 42-601(3)(D)(i)]

8. The permittee shall report to the Division of Environmental Quality all deviations from permit requirements, including those attributable to upset conditions as defined in the permit.

    a. For all upset conditions (as defined in 8 CAR § 41-501), the permittee will make an initial report to the Division of Environmental Quality by the next business day after the discovery of the occurrence. The initial report may be made by telephone and shall include:

        i. The facility name and location;
        ii. The process unit or emission source deviating from the permit limit;
        iii. The permit limit, including the identification of pollutants, from which deviation occurs;
        iv. The date and time the deviation started;
        v. The duration of the deviation;
        vi. The emissions during the deviation;

vii. The probable cause of such deviations;
viii. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future; and
ix. The name of the person submitting the report.

The permittee shall make a full report in writing to the Division of Environmental Quality within five (5) business days of discovery of the occurrence. The report must include, in addition to the information required by the initial report, a schedule of actions taken or planned to eliminate future occurrences and/or to minimize the amount the permit's limits were exceeded and to reduce the length of time the limits were exceeded. The permittee may submit a full report in writing (by facsimile, overnight courier, or other means) by the next business day after discovery of the occurrence, and the report will serve as both the initial report and full report.

b. For all deviations, the permittee shall report such events in semi-annual reporting and annual certifications required in this permit. This includes all upset conditions reported in 8a above. The semi-annual report must include all the information as required by the initial and full reports required in 8a.

[8 CAR § 41-501, 8 CAR § 41-502, 8 CAR § 42-601(3)(D)(ii), and 40 C.F.R. § 70.6(a)(3)(iii)(B)]

9. If any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity will not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Rule are declared to be separable and severable. [40 C.F.R. § 70.6(a)(5), 8 CAR § 42-601(5), and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

10. The permittee must comply with all conditions of this Part 70 permit. Any permit noncompliance with applicable requirements as defined in 8 CAR pt. 42 constitutes a violation of the Clean Air Act, as amended, 42 U.S.C. § 7401, et seq. and is grounds for enforcement action; for permit termination, revocation and reissuance, for permit modification; or for denial of a permit renewal application. [40 C.F.R. § 70.6(a)(6)(i) and 8 CAR § 42-601(6)(A)]

11. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit. [40 C.F.R. § 70.6(a)(6)(ii) and 8 CAR § 42-601(6)(B)]

12. The Division of Environmental Quality may modify, revoke, reopen and reissue the permit or terminate the permit for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [40 C.F.R. § 70.6(a)(6)(iii) and 8 CAR § 42-601(6)(C)]

13. This permit does not convey any property rights of any sort, or any exclusive privilege. [40 C.F.R. § 70.6(a)(6)(iv) and 8 CAR § 42-601(6)(D)]

14. The permittee must furnish to the Director, within the time specified by the Director, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee must also furnish to the Director copies of records required by the permit. For information the permittee claims confidentiality, the Division of Environmental Quality may require the permittee to furnish such records directly to the Director along with a claim of confidentiality. [40 C.F.R. § 70.6(a)(6)(v) and 8 CAR § 42-601(6)(E)]

15. The permittee must pay all permit fees in accordance with the procedures established in 8 CAR pt. 12. [40 C.F.R. § 70.6(a)(7) and 8 CAR § 42-601(7)]

16. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes provided for elsewhere in this permit. [40 C.F.R. § 70.6(a)(8) and 8 CAR § 42-601(8)]

17. If the permit allows different operating scenarios, the permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility a record of the operational scenario. [40 C.F.R. § 70.6(a)(9)(i) and 8 CAR § 42-601(9)(B)(i)]

18. The Administrator and citizens may enforce under the Act all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, unless the Division of Environmental Quality specifically designates terms and conditions of the permit as being federally unenforceable under the Act or under any of its applicable requirements. [40 C.F.R. § 70.6(b) and 8 CAR § 42-602(a) and (b)]

19. Any document (including reports) required by this permit pursuant to 40 C.F.R. § 70 must contain a certification by a responsible official as defined in 8 CAR § 42-104. [40 C.F.R. § 70.6(c)(1) and 8 CAR § 42-603(1)]

20. The permittee must allow an authorized representative of the Division of Environmental Quality, upon presentation of credentials, to perform the following: [40 C.F.R. § 70.6(c)(2) and 8 CAR § 42-603(2)]

    a. Enter upon the permittee's premises where the permitted source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
    b. Have access to and copy, at reasonable times, any records required under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for assuring compliance with this permit or applicable requirements.

21. The permittee shall submit a compliance certification with the terms and conditions contained in the permit, including emission limitations, standards, or work practices. The permittee must submit the compliance certification annually. If the permit establishes no other reporting period, the reporting period shall end on the last day of the anniversary month of the initial Title V permit. The report is due on the first day of the second month after the end of the reporting period. The permittee must also submit the compliance certification to the Administrator as well as to the Division of Environmental Quality. All compliance certifications required by this permit must include the following: [40 C.F.R. § 70.6(c)(5) and 8 CAR § 42-603(5)(B)(iii)]

    a. The identification of each term or condition of the permit that is the basis of the certification;
    b. The compliance status;
    c. Whether compliance was continuous or intermittent;
    d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit; and
    e. Such other facts as the Division of Environmental Quality may require elsewhere in this permit or by § 114(a)(3) and § 504(b) of the Act.

22. Nothing in this permit will alter or affect the following: [8 CAR § 42-604(c)]

    a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
    b. The liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
    c. The applicable requirements of the acid rain program, consistent with § 408(a) of the Act; or
    d. The ability of EPA to obtain information from a source pursuant to § 114 of the Act.

23. This permit authorizes only those pollutant emitting activities addressed in this permit. [Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

24. The permittee may request in writing and at least 15 days in advance of the deadline, an extension to any testing, compliance or other dates in this permit. No such extensions are authorized until the permittee receives written Division of Environmental Quality approval. The Division of Environmental Quality may grant such a request, at its discretion in the following circumstances:

a. Such an extension does not violate a federal requirement;
b. The permittee demonstrates the need for the extension; and
c. The permittee documents that all reasonable measures have been taken to meet the current deadline and documents reasons it cannot be met.

[8 CAR § 40-214(a), 8 CAR § 41-316(a), 8 CAR § 42-913(a), Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

25. The permittee may request in writing and at least 30 days in advance, temporary emissions and/or testing that would otherwise exceed an emission rate, throughput requirement, or other limit in this permit. No such activities are authorized until the permittee receives written Division of Environmental Quality approval. Any such emissions shall be included in the facility's total emissions and reported as such. The Division of Environmental Quality may grant such a request, at its discretion under the following conditions:

a. Such a request does not violate a federal requirement;
b. Such a request is temporary in nature;
c. Such a request will not result in a condition of air pollution;
d. The request contains such information necessary for the Division of Environmental Quality to evaluate the request, including but not limited to, quantification of such emissions and the date/time such emission will occur;
e. Such a request will result in increased emissions less than five tons of any individual criteria pollutant, one ton of any single HAP and 2.5 tons of total HAPs; and
f. The permittee maintains records of the dates and results of such temporary emissions/testing.

[8 CAR § 40-214(b), 8 CAR § 41-316(b), 8 CAR § 42-913(b), Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

26. The permittee may request in writing and at least 30 days in advance, an alternative to the specified monitoring in this permit. No such alternatives are authorized until the permittee receives written Division of Environmental Quality approval. The Division of Environmental Quality may grant such a request, at its discretion under the following conditions:

a. The request does not violate a federal requirement;
b. The request provides an equivalent or greater degree of actual monitoring to the current requirements; and
c. Any such request, if approved, is incorporated in the next permit modification application by the permittee.

[8 CAR § 40-214(c), 8 CAR § 41-316(c), 8 CAR § 42-913(c), Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

27. Any credible evidence based on sampling, monitoring, and reporting may be used to determine violations of applicable emission limitations. [8 CAR § 40-901, 8 CAR § 41-601, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

Appendix A

40 CFR Part 63 Subpart CCCCCC – National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities

Title 40 —Protection of Environment
Chapter I —Environmental Protection Agency
Subchapter C —Air Programs
Part 63 —National Emission Standards for Hazardous Air Pollutants for Source Categories

Authority: 42 U.S.C. 7401 *et seq.*

Source: 57 FR 61992, Dec. 29, 1992, unless otherwise noted.

Subpart CCCCCC—National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities

Source: 73 FR 1945, Jan. 10, 2008, unless otherwise noted.

WHAT THIS SUBPART COVERS

§ 63.11110 What is the purpose of this subpart?

This subpart establishes national emission limitations and management practices for hazardous air pollutants (HAP) emitted from the loading of gasoline storage tanks at gasoline dispensing facilities (GDF). This subpart also establishes requirements to demonstrate compliance with the emission limitations and management practices.

§ 63.11111 Am I subject to the requirements in this subpart?

(a) The affected source to which this subpart applies is each GDF that is located at an area source. The affected source includes each gasoline cargo tank during the delivery of product to a GDF and also includes each storage tank.

(b) If your GDF has a monthly throughput of less than 10,000 gallons of gasoline, you must comply with the requirements in § 63.11116.

(c) If your GDF has a monthly throughput of 10,000 gallons of gasoline or more, you must comply with the requirements in § 63.11117.

(d) If your GDF has a monthly throughput of 100,000 gallons of gasoline or more, you must comply with the requirements in § 63.11118.

(e) An affected source shall, upon request by the Administrator, demonstrate that their monthly throughput is less than the 10,000-gallon or the 100,000-gallon threshold level, as applicable. For new or reconstructed affected sources, as specified in § 63.11112(b) and (c), recordkeeping to document monthly throughput must begin upon startup of the affected source. For existing sources, as specified in § 63.11112(d), recordkeeping to document monthly throughput must begin on January 10, 2008. For existing sources that are subject to this subpart only because they load gasoline into fuel tanks other than those in motor vehicles, as defined in § 63.11132, recordkeeping to document monthly throughput must begin on January 24, 2011. Records required under this paragraph shall be kept for a period of 5 years.

(f) If you are an owner or operator of affected sources, as defined in paragraph (a) of this section, you are not required to obtain a permit under 40 CFR part 70 or 40 CFR part 71 as a result of being subject to this subpart. However, you must still apply for and obtain a permit under 40 CFR part 70 or 40 CFR part 71 if you meet one or more of the applicability criteria found in 40 CFR 70.3(a) and (b) or 40 CFR 71.3(a) and (b).

(g) The loading of aviation gasoline into storage tanks at airports, and the subsequent transfer of aviation gasoline within the airport, is not subject to this subpart.

(h) Monthly throughput is the total volume of gasoline loaded into, or dispensed from, all the gasoline storage tanks located at a single affected GDF. If an area source has two or more GDF at separate locations within the area source, each GDF is treated as a separate affected source.

(i) If your affected source's throughput ever exceeds an applicable throughput threshold, the affected source will remain subject to the requirements for sources above the threshold, even if the affected source throughput later falls below the applicable throughput threshold.

(j) The dispensing of gasoline from a fixed gasoline storage tank at a GDF into a portable gasoline tank for the on-site delivery and subsequent dispensing of the gasoline into the fuel tank of a motor vehicle or other gasoline-fueled engine or equipment used within the area source is only subject to § 63.11116 of this subpart.

(k) For any affected source subject to the provisions of this subpart and another Federal rule, you may elect to comply only with the more stringent provisions of the applicable subparts. You must consider all provisions of the rules, including monitoring, recordkeeping, and reporting. You must identify the affected source and provisions with which you will comply in your Notification of Compliance Status required under § 63.11124. You also must demonstrate in your Notification of Compliance Status that each provision with which you will comply is at least as stringent as the otherwise applicable requirements in this subpart. You are responsible for making accurate determinations concerning the more stringent provisions, and noncompliance with this rule is not excused if it is later determined that your determination was in error, and, as a result, you are violating this subpart. Compliance with this rule is your responsibility and the Notification of Compliance Status does not alter or affect that responsibility.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4181, Jan. 24, 2011]

§ 63.11112 What parts of my affected source does this subpart cover?

(a) The emission sources to which this subpart applies are gasoline storage tanks and associated equipment components in vapor or liquid gasoline service at new, reconstructed, or existing GDF that meet the criteria specified in § 63.11111. Pressure/Vacuum vents on gasoline storage tanks and the equipment necessary to unload product from cargo tanks into the storage tanks at GDF are covered emission sources. The equipment used for the refueling of motor vehicles is not covered by this subpart.

(b) An affected source is a new affected source if you commenced construction on the affected source after November 9, 2006, and you meet the applicability criteria in § 63.11111 at the time you commenced operation.

(c) An affected source is reconstructed if you meet the criteria for reconstruction as defined in § 63.2.

(d) An affected source is an existing affected source if it is not new or reconstructed.

§ 63.11113 When do I have to comply with this subpart?

(a) If you have a new or reconstructed affected source, you must comply with this subpart according to paragraphs (a)(1) and (2) of this section, except as specified in paragraph (d) of this section.

(1) If you start up your affected source before January 10, 2008, you must comply with the standards in this subpart no later than January 10, 2008.

(2) If you start up your affected source after January 10, 2008, you must comply with the standards in this subpart upon startup of your affected source.

(b) If you have an existing affected source, you must comply with the standards in this subpart no later than January 10, 2011.

(c) If you have an existing affected source that becomes subject to the control requirements in this subpart because of an increase in the monthly throughput, as specified in § 63.11111(c) or § 63.11111(d), you must comply with the standards in this subpart no later than 3 years after the affected source becomes subject to the control requirements in this subpart.

(d) If you have a new or reconstructed affected source and you are complying with Table 1 to this subpart, you must comply according to paragraphs (d)(1) and (2) of this section.

(1) If you start up your affected source from November 9, 2006 to September 23, 2008, you must comply no later than September 23, 2008.

(2) If you start up your affected source after September 23, 2008, you must comply upon startup of your affected source.

(e) The initial compliance demonstration test required under § 63.11120(a)(1) and (2) must be conducted as specified in paragraphs (e)(1) and (2) of this section.

(1) If you have a new or reconstructed affected source, you must conduct the initial compliance test upon installation of the complete vapor balance system.

(2) If you have an existing affected source, you must conduct the initial compliance test as specified in paragraphs (e)(2)(i) or (e)(2)(ii) of this section.

(i) For vapor balance systems installed on or before December 15, 2009, you must test no later than 180 days after the applicable compliance date specified in paragraphs (b) or (c) of this section.

(ii) For vapor balance systems installed after December 15, 2009, you must test upon installation of the complete vapor balance system.

(f) If your GDF is subject to the control requirements in this subpart only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in § 63.11132, you must comply with the standards in this subpart as specified in paragraphs (f)(1) or (f)(2) of this section.

(1) If your GDF is an existing facility, you must comply by January 24, 2014.

(2) If your GDF is a new or reconstructed facility, you must comply by the dates specified in paragraphs (f)(2)(i) and (ii) of this section.

(i) If you start up your GDF after December 15, 2009, but before January 24, 2011, you must comply no later than January 24, 2011.

(ii) If you start up your GDF after January 24, 2011, you must comply upon startup of your GDF.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 35944, June 25, 2008; 76 FR 4181, Jan. 24, 2011]

EMISSION LIMITATIONS AND MANAGEMENT PRACTICES

§ 63.11115 What are my general duties to minimize emissions?

Each owner or operator of an affected source under this subpart must comply with the requirements of paragraphs (a) and (b) of this section.

(a) You must, at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(b) You must keep applicable records and submit reports as specified in § 63.11125(d) and § 63.11126(b).

[76 FR 4182, Jan. 24, 2011]

§ 63.11116 Requirements for facilities with monthly throughput of less than 10,000 gallons of gasoline.

(a) You must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

(1) Minimize gasoline spills;

(2) Clean up spills as expeditiously as practicable;

(3) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;

(4) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

(b) You are not required to submit notifications or reports as specified in § 63.11125, § 63.11126, or subpart A of this part, but you must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.

(c) You must comply with the requirements of this subpart by the applicable dates specified in § 63.11113.

(d) Portable gasoline containers that meet the requirements of 40 CFR part 59, subpart F, are considered acceptable for compliance with paragraph (a)(3) of this section.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4182, Jan. 24, 2011]

§ 63.11117 Requirements for facilities with monthly throughput of 10,000 gallons of gasoline or more.

(a) You must comply with the requirements in section § 63.11116(a).

(b) Except as specified in paragraph (c) of this section, you must only load gasoline into storage tanks at your facility by utilizing submerged filling, as defined in § 63.11132, and as specified in paragraphs (b)(1), (b)(2), or (b)(3) of this section. The applicable distances in paragraphs (b)(1) and (2) shall be measured from the point in the opening of the submerged fill pipe that is the greatest distance from the bottom of the storage tank.

(1) Submerged fill pipes installed on or before November 9, 2006, must be no more than 12 inches from the bottom of the tank.

(2) Submerged fill pipes installed after November 9, 2006, must be no more than 6 inches from the bottom of the tank.

(3) Submerged fill pipes not meeting the specifications of paragraphs (b)(1) or (b)(2) of this section are allowed if the owner or operator can demonstrate that the liquid level in the tank is always above the entire opening of the fill pipe. Documentation providing such demonstration must be made available for inspection by the Administrator's delegated representative during the course of a site visit.

(c) Gasoline storage tanks with a capacity of less than 250 gallons are not required to comply with the submerged fill requirements in paragraph (b) of this section, but must comply only with all of the requirements in § 63.11116.

(d) You must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.

(e) You must submit the applicable notifications as required under § 63.11124(a).

(f) You must comply with the requirements of this subpart by the applicable dates contained in § 63.11113.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 12276, Mar. 7, 2008; 76 FR 4182, Jan. 24, 2011]

§ 63.11118 Requirements for facilities with monthly throughput of 100,000 gallons of gasoline or more.

(a) You must comply with the requirements in §§ 63.11116(a) and 63.11117(b).

(b) Except as provided in paragraph (c) of this section, you must meet the requirements in either paragraph (b)(1) or paragraph (b)(2) of this section.

(1) Each management practice in Table 1 to this subpart that applies to your GDF.

(2) If, prior to January 10, 2008, you satisfy the requirements in both paragraphs (b)(2)(i) and (ii) of this section, you will be deemed in compliance with this subsection.

(i) You operate a vapor balance system at your GDF that meets the requirements of either paragraph (b)(2)(i)(A) or paragraph (b)(2)(i)(B) of this section.

(A) Achieves emissions reduction of at least 90 percent.

(B) Operates using management practices at least as stringent as those in Table 1 to this subpart.

(ii) Your gasoline dispensing facility is in compliance with an enforceable State, local, or tribal rule or permit that contains requirements of either paragraph (b)(2)(i)(A) or paragraph (b)(2)(i)(B) of this section.

(c) The emission sources listed in paragraphs (c)(1) through (3) of this section are not required to comply with the control requirements in paragraph (b) of this section, but must comply with the requirements in § 63.11117.

(1) Gasoline storage tanks with a capacity of less than 250 gallons that are constructed after January 10, 2008.

(2) Gasoline storage tanks with a capacity of less than 2,000 gallons that were constructed before January 10, 2008.

(3) Gasoline storage tanks equipped with floating roofs, or the equivalent.

(d) Cargo tanks unloading at GDF must comply with the management practices in Table 2 to this subpart.

(e) You must comply with the applicable testing requirements contained in § 63.11120.

(f) You must submit the applicable notifications as required under § 63.11124.

(g) You must keep records and submit reports as specified in §§ 63.11125 and 63.11126.

(h) You must comply with the requirements of this subpart by the applicable dates contained in § 63.11113.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 12276, Mar. 7, 2008]

Testing and Monitoring Requirements

§ 63.11120 What testing and monitoring requirements must I meet?

(a) Each owner or operator, at the time of installation, as specified in § 63.11113(e), of a vapor balance system required under § 63.11118(b)(1), and every 3 years thereafter, must comply with the requirements in paragraphs (a)(1) and (2) of this section.

(1) You must demonstrate compliance with the leak rate and cracking pressure requirements, specified in item 1(g) of Table 1 to this subpart, for pressure-vacuum vent valves installed on your gasoline storage tanks using the test methods identified in paragraph (a)(1)(i) or paragraph (a)(1)(ii) of this section.

(i) California Air Resources Board Vapor Recovery Test Procedure TP-201.1E,—Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves, adopted October 8, 2003 (incorporated by reference, see § 63.14).

(ii) Use alternative test methods and procedures in accordance with the alternative test method requirements in § 63.7(f).

(2) You must demonstrate compliance with the static pressure performance requirement specified in item 1(h) of Table 1 to this subpart for your vapor balance system by conducting a static pressure test on your gasoline storage tanks using the test methods identified in paragraphs (a)(2)(i), (a)(2)(ii), or (a)(2)(iii) of this section.

(i) California Air Resources Board Vapor Recovery Test Procedure TP-201.3,—Determination of 2-Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities, adopted April 12, 1996, and amended March 17, 1999 (incorporated by reference, see § 63.14).

(ii) Use alternative test methods and procedures in accordance with the alternative test method requirements in § 63.7(f).

(iii) Bay Area Air Quality Management District Source Test Procedure ST-30—Static Pressure Integrity Test—Underground Storage Tanks, adopted November 30, 1983, and amended December 21, 1994 (incorporated by reference, *see* § 63.14).

(b) Each owner or operator choosing, under the provisions of § 63.6(g), to use a vapor balance system other than that described in Table 1 to this subpart must demonstrate to the Administrator or delegated authority under paragraph § 63.11131(a) of this subpart, the equivalency of their vapor balance system to that described in Table 1 to this subpart using the procedures specified in paragraphs (b)(1) through (3) of this section.

(1) You must demonstrate initial compliance by conducting an initial performance test on the vapor balance system to demonstrate that the vapor balance system achieves 95 percent reduction using the California Air Resources Board Vapor Recovery Test Procedure TP-201.1,—Volumetric Efficiency for Phase I Vapor Recovery Systems, adopted April 12, 1996, and amended February 1, 2001, and October 8, 2003, (incorporated by reference, see § 63.14).

(2) You must, during the initial performance test required under paragraph (b)(1) of this section, determine and document alternative acceptable values for the leak rate and cracking pressure requirements specified in item 1(g) of Table 1 to this subpart and for the static pressure performance requirement in item 1(h) of Table 1 to this subpart.

(3) You must comply with the testing requirements specified in paragraph (a) of this section.

(c) Conduct of performance tests. Performance tests conducted for this subpart shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance (*i.e.,* performance based on normal operating conditions) of the affected source. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(d) Owners and operators of gasoline cargo tanks subject to the provisions of Table 2 to this subpart must conduct annual certification testing according to the vapor tightness testing requirements found in § 63.11092(f).

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4182, Jan. 24, 2011]

NOTIFICATIONS, RECORDS, AND REPORTS

§ 63.11124 What notifications must I submit and when?

(a) Each owner or operator subject to the control requirements in § 63.11117 must comply with paragraphs (a)(1) through (3) of this section.

(1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or no later than 120 days after the source becomes subject to this subpart, whichever is later, or at the time you become subject to the control requirements in § 63.11117, unless you meet the requirements in

paragraph (a)(3) of this section. If your affected source is subject to the control requirements in § 63.11117 only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in § 63.11132, you must submit the Initial Notification by May 24, 2011, or no later than 120 days after the source becomes subject to this subpart, whichever is later. The Initial Notification must contain the information specified in paragraphs (a)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional office and delegated state authority as specified in § 63.13.

(i) The name and address of the owner and the operator.

(ii) The address (i.e., physical location) of the GDF.

(iii) A statement that the notification is being submitted in response to this subpart and identifying the requirements in paragraphs (a) through (c) of § 63.11117 that apply to you.

(2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in § 63.13, within 60 days of the applicable compliance date specified in § 63.11113, unless you meet the requirements in paragraph (a)(3) of this section. The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy, must indicate whether the source has complied with the requirements of this subpart, and must indicate whether the facilities' monthly throughput is calculated based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (a)(1) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (a)(1) of this section.

(3) If, prior to January 10, 2008, you are operating in compliance with an enforceable State, local, or tribal rule or permit that requires submerged fill as specified in § 63.11117(b), you are not required to submit an Initial Notification or a Notification of Compliance Status under paragraph (a)(1) or paragraph (a)(2) of this section.

(b) Each owner or operator subject to the control requirements in § 63.11118 must comply with paragraphs (b)(1) through (5) of this section.

(1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or no later than 120 days after the source becomes subject to this subpart, whichever is later, or at the time you become subject to the control requirements in § 63.11118. If your affected source is subject to the control requirements in § 63.11118 only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in § 63.11132, you must submit the Initial Notification by May 24, 2011, or no later than 120 days after the source becomes subject to this subpart, whichever is later. The Initial Notification must contain the information specified in paragraphs (b)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional office and delegated state authority as specified in § 63.13.

(i) The name and address of the owner and the operator.

(ii) The address (i.e., physical location) of the GDF.

(iii) A statement that the notification is being submitted in response to this subpart and identifying the requirements in paragraphs (a) through (c) of § 63.11118 that apply to you.

(2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in § 63.13, in accordance with the schedule specified in § 63.9(h). The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy, must indicate whether the source has complied with the requirements of this subpart, and must indicate whether the facility's throughput is determined based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (b)(1) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (b)(1) of this section.

(3) If, prior to January 10, 2008, you satisfy the requirements in both paragraphs (b)(3)(i) and (ii) of this section, you are not required to submit an Initial Notification or a Notification of Compliance Status under paragraph (b)(1) or paragraph (b)(2) of this subsection.

(i) You operate a vapor balance system at your gasoline dispensing facility that meets the requirements of either paragraphs (b)(3)(i)(A) or (b)(3)(i)(B) of this section.

(A) Achieves emissions reduction of at least 90 percent.

(B) Operates using management practices at least as stringent as those in Table 1 to this subpart.

(ii) Your gasoline dispensing facility is in compliance with an enforceable State, local, or tribal rule or permit that contains requirements of either paragraphs (b)(3)(i)(A) or (b)(3)(i)(B) of this section.

(4) You must submit a Notification of Performance Test, as specified in § 63.9(e), prior to initiating testing required by § 63.11120(a) and (b).

(5) You must submit additional notifications specified in § 63.9, as applicable.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 12276, Mar. 7, 2008; 76 FR 4182, Jan. 24, 2011; 85 FR 73919, Nov. 19, 2020]

§ 63.11125 What are my recordkeeping requirements?

(a) Each owner or operator subject to the management practices in § 63.11118 must keep records of all tests performed under § 63.11120(a) and (b).

(b) Records required under paragraph (a) of this section shall be kept for a period of 5 years and shall be made available for inspection by the Administrator's delegated representatives during the course of a site visit.

(c) Each owner or operator of a gasoline cargo tank subject to the management practices in Table 2 to this subpart must keep records documenting vapor tightness testing for a period of 5 years. Documentation must include each of the items specified in § 63.11094(b)(2)(i) through (viii). Records of vapor tightness testing must be retained as specified in either paragraph (c)(1) or paragraph (c)(2) of this section.

(1) The owner or operator must keep all vapor tightness testing records with the cargo tank.

(2) As an alternative to keeping all records with the cargo tank, the owner or operator may comply with the requirements of paragraphs (c)(2)(i) and (ii) of this section.

(i) The owner or operator may keep records of only the most recent vapor tightness test with the cargo tank, and keep records for the previous 4 years at their office or another central location.

(ii) Vapor tightness testing records that are kept at a location other than with the cargo tank must be instantly available (*e.g.,* via e-mail or facsimile) to the Administrator's delegated representative during the course of a site visit or within a mutually agreeable time frame. Such records must be an exact duplicate image of the original paper copy record with certifying signatures.

(d) Each owner or operator of an affected source under this subpart shall keep records as specified in paragraphs (d)(1) and (2) of this section.

(1) Records of the occurrence and duration of each malfunction of operation (*i.e.,* process equipment) or the air pollution control and monitoring equipment.

(2) Records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.11115(a), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4183, Jan. 24, 2011]

§ 63.11126 What are my reporting requirements?

(a) Each owner or operator subject to the management practices in § 63.11118 shall report to the Administrator the results of all volumetric efficiency tests required under § 63.11120(b). Reports submitted under this paragraph must be submitted within 180 days of the completion of the performance testing.

(b) Each owner or operator of an affected source under this subpart shall report, by March 15 of each year, the number, duration, and a brief description of each type of malfunction which occurred during the previous calendar year and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.11115(a), including actions taken to correct a malfunction. No report is necessary for a calendar year in which no malfunctions occurred.

[76 FR 4183, Jan. 24, 2011]

OTHER REQUIREMENTS AND INFORMATION

§ 63.11130 What parts of the General Provisions apply to me?

Table 3 to this subpart shows which parts of the General Provisions apply to you.

§ 63.11131 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. EPA or a delegated authority such as the applicable State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or tribal agency.

(c) The authorities that cannot be delegated to State, local, or tribal agencies are as specified in paragraphs (c)(1) through (3) of this section.

(1) Approval of alternatives to the requirements in §§ 63.11116 through 63.11118 and 63.11120.

(2) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f), as defined in § 63.90, and as required in this subpart.

(3) Approval of major alternatives to recordkeeping and reporting under § 63.10(f), as defined in § 63.90, and as required in this subpart.

§ 63.11132 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act (CAA), or in subparts A and BBBBBB of this part. For purposes of this subpart, definitions in this section supersede definitions in other parts or subparts.

Dual-point vapor balance system means a type of vapor balance system in which the storage tank is equipped with an entry port for a gasoline fill pipe and a separate exit port for a vapor connection.

Gasoline means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals or greater, which is used as a fuel for internal combustion engines.

Gasoline cargo tank means a delivery tank truck or railcar which is loading or unloading gasoline, or which has loaded or unloaded gasoline on the immediately previous load.

Gasoline dispensing facility (GDF) means any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine, including a nonroad vehicle or nonroad engine used solely for competition. These facilities include, but are not limited to, facilities that dispense gasoline into on- and off-road, street, or highway motor vehicles, lawn equipment, boats, test engines, landscaping equipment, generators, pumps, and other gasoline-fueled engines and equipment.

Monthly throughput means the total volume of gasoline that is loaded into, or dispensed from, all gasoline storage tanks at each GDF during a month. Monthly throughput is calculated by summing the volume of gasoline loaded into, or dispensed from, all gasoline storage tanks at each GDF during the current day, plus the total volume of gasoline loaded into, or dispensed from, all gasoline storage tanks at each GDF during the previous 364 days, and then dividing that sum by 12.

Motor vehicle means any self-propelled vehicle designed for transporting persons or property on a street or highway.

Nonroad engine means an internal combustion engine (including the fuel system) that is not used in a motor vehicle or a vehicle used solely for competition, or that is not subject to standards promulgated under section 7411 of this title or section 7521 of this title.

Nonroad vehicle means a vehicle that is powered by a nonroad engine, and that is not a motor vehicle or a vehicle used solely for competition.

Submerged filling means, for the purposes of this subpart, the filling of a gasoline storage tank through a submerged fill pipe whose discharge is no more than the applicable distance specified in § 63.11117(b) from the bottom of the tank. Bottom filling of gasoline storage tanks is included in this definition.

Vapor balance system means a combination of pipes and hoses that create a closed system between the vapor spaces of an unloading gasoline cargo tank and a receiving storage tank such that vapors displaced from the storage tank are transferred to the gasoline cargo tank being unloaded.

Vapor-tight means equipment that allows no loss of vapors. Compliance with vapor-tight requirements can be determined by checking to ensure that the concentration at a potential leak source is not equal to or greater than 100 percent of the Lower Explosive Limit when measured with a combustible gas detector, calibrated with propane, at a distance of 1 inch from the source.

Vapor-tight gasoline cargo tank means a gasoline cargo tank which has demonstrated within the 12 preceding months that it meets the annual certification test requirements in § 63.11092(f) of this part.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4183, Jan. 24, 2011]

Table 1 to Subpart CCCCCC of Part 63—Applicability Criteria and Management Practices for Gasoline Dispensing Facilities With Monthly Throughput of 100,000 Gallons of Gasoline or More[1]

If you own or operate	Then you must
1. A new, reconstructed, or existing GDF subject to § 63.11118	Install and operate a vapor balance system on your gasoline storage tanks that meets the design criteria in paragraphs (a) through (h).
	(a) All vapor connections and lines on the storage tank shall be equipped with closures that seal upon disconnect. (b) The vapor line from the gasoline storage tank to the gasoline cargo tank shall be vapor-tight, as defined in § 63.11132. (c) The vapor balance system shall be designed such that the pressure in the tank truck does not exceed 18 inches water pressure or 5.9 inches water vacuum during product transfer. (d) The vapor recovery and product adaptors, and the method of connection with the delivery elbow, shall be designed so as to prevent the over-tightening or loosening of fittings during normal delivery operations. (e) If a gauge well separate from the fill tube is used, it shall be provided with a submerged drop tube that extends the same distance from the bottom of the storage tank as specified in § 63.11117(b).

[1] The management practices specified in this Table are not applicable if you are complying with the requirements in § 63.11118(b)(2), except that if you are complying with the requirements in § 63.11118(b)(2)(i)(B), you must operate using management practices at least as stringent as those listed in this Table.

If you own or operate	Then you must
	(f) Liquid fill connections for all systems shall be equipped with vapor-tight caps. (g) Pressure/vacuum (PV) vent valves shall be installed on the storage tank vent pipes. The pressure specifications for PV vent valves shall be: a positive pressure setting of 2.5 to 6.0 inches of water and a negative pressure setting of 6.0 to 10.0 inches of water. The total leak rate of all PV vent valves at an affected facility, including connections, shall not exceed 0.17 cubic foot per hour at a pressure of 2.0 inches of water and 0.63 cubic foot per hour at a vacuum of 4 inches of water. (h) The vapor balance system shall be capable of meeting the static pressure performance requirement of the following equation: $Pf = 2e^{-500.887/v}$ Where: Pf = Minimum allowable final pressure, inches of water. v = Total ullage affected by the test, gallons. e = Dimensionless constant equal to approximately 2.718. 2 = The initial pressure, inches water.
2. A new or reconstructed GDF, or any storage tank(s) constructed after November 9, 2006, at an existing affected facility subject to § 63.11118	Equip your gasoline storage tanks with a dual-point vapor balance system, as defined in § 63.11132, and comply with the requirements of item 1 in this Table.

[1] The management practices specified in this Table are not applicable if you are complying with the requirements in § 63.11118(b)(2), except that if you are complying with the requirements in § 63.11118(b)(2)(i)(B), you must operate using management practices at least as stringent as those listed in this Table.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 35944, June 25, 2008; 76 FR 4184, Jan. 24, 2011]

Table 2 to Subpart CCCCCC of Part 63—Applicability Criteria and Management Practices for Gasoline Cargo Tanks Unloading at Gasoline Dispensing Facilities With Monthly Throughput of 100,000 Gallons of Gasoline or More

If you own or operate	Then you must
A gasoline cargo tank	Not unload gasoline into a storage tank at a GDF subject to the control requirements in this subpart unless the following conditions are met:
	(i) All hoses in the vapor balance system are properly connected,
	(ii) The adapters or couplers that attach to the vapor line on the storage tank have closures that seal upon disconnect,
	(iii) All vapor return hoses, couplers, and adapters used in the gasoline delivery are vapor-tight,
	(iv) All tank truck vapor return equipment is compatible in size and forms a vapor-tight connection with the vapor balance equipment on the GDF storage tank, and
	(v) All hatches on the tank truck are closed and securely fastened.
	(vi) The filling of storage tanks at GDF shall be limited to unloading from vapor-tight gasoline cargo tanks. Documentation that the cargo tank has met the specifications of EPA Method 27 shall be carried with the cargo tank, as specified in § 63.11125(c).

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4184, Jan. 24, 2011]

Table 3 to Subpart CCCCCC of Part 63—Applicability of General Provisions

Citation	Subject	Brief description	Applies to subpart CCCCCC
§ 63.1	Applicability	Initial applicability determination; applicability after standard established; permit requirements; extensions, notifications	Yes, specific requirements given in § 63.11111.
§ 63.1(c)(2)	Title V Permit	Requirements for obtaining a title V permit from the applicable permitting authority	Yes, § 63.11111(f) of subpart CCCCCC exempts identified area

Citation	Subject	Brief description	Applies to subpart CCCCCC
			sources from the obligation to obtain title V operating permits.
§ 63.2	Definitions	Definitions for part 63 standards	Yes, additional definitions in § 63.11132.
§ 63.3	Units and Abbreviations	Units and abbreviations for part 63 standards	Yes.
§ 63.4	Prohibited Activities and Circumvention	Prohibited activities; Circumvention, severability	Yes.
§ 63.5	Construction/ Reconstruction	Applicability; applications; approvals	Yes, except that these notifications are not required for facilities subject to § 63.11116
§ 63.6(a)	Compliance with Standards/Operation & Maintenance—Applicability	General Provisions apply unless compliance extension; General Provisions apply to area sources that become major	Yes.
§ 63.6(b)(1)-(4)	Compliance Dates for New and Reconstructed Sources	Standards apply at effective date; 3 years after effective date; upon startup; 10 years after construction or reconstruction commences for CAA section 112(f)	Yes.
§ 63.6(b)(5)	Notification	Must notify if commenced construction or reconstruction after proposal	Yes.
§ 63.6(b)(6)	[Reserved]		
§ 63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources That Become Major	Area sources that become major must comply with major source standards immediately upon becoming major, regardless of whether required to comply when they were an area source	No.
§ 63.6(c)(1)-(2)	Compliance Dates for Existing Sources	Comply according to date in this subpart, which must be no later than	No, § 63.11113

Citation	Subject	Brief description	Applies to subpart CCCCCC
		3 years after effective date; for CAA section 112(f) standards, comply within 90 days of effective date unless compliance extension	specifies the compliance dates.
§ 63.6(c)(3)-(4)	[Reserved]		
§ 63.6(c)(5)	Compliance Dates for Existing Area Sources That Become Major	Area sources That become major must comply with major source standards by date indicated in this subpart or by equivalent time period (e.g., 3 years)	No.
§ 63.6(d)	[Reserved]		
63.6(e)(1)(i)	General duty to minimize emissions	Operate to minimize emissions at all times; information Administrator will use to determine if operation and maintenance requirements were met.	No. *See* § 63.11115 for general duty requirement.
63.6(e)(1)(ii)	Requirement to correct malfunctions ASAP	Owner or operator must correct malfunctions as soon as possible.	No.
§ 63.6(e)(2)	[Reserved]		
§ 63.6(e)(3)	Startup, Shutdown, and Malfunction (SSM) Plan	Requirement for SSM plan; content of SSM plan; actions during SSM	No.
§ 63.6(f)(1)	Compliance Except During SSM	You must comply with emission standards at all times except during SSM	No.
§ 63.6(f)(2)-(3)	Methods for Determining Compliance	Compliance based on performance test, operation and maintenance plans, records, inspection	Yes.
§ 63.6(g)(1)-(3)	Alternative Standard	Procedures for getting an alternative standard	Yes.
§ 63.6(h)(1)	Compliance with Opacity/ Visible Emission (VE) Standards	You must comply with opacity/VE standards at all times except during SSM	No.
§ 63.6(h)(2)(i)	Determining Compliance with Opacity/VE Standards	If standard does not State test method, use EPA Method 9 for opacity in appendix A of part 60 of this chapter and EPA Method 22 for VE in appendix A of part 60 of this chapter	No.
§ 63.6(h)(2)(ii)	[Reserved]		
§ 63.6(h)(2)(iii)	Using Previous Tests To Demonstrate Compliance	Criteria for when previous opacity/ VE testing can be used to show	No.

Citation	Subject	Brief description	Applies to subpart CCCCCC
	With Opacity/VE Standards	compliance with this subpart	
§ 63.6(h)(3)	[Reserved]		
§ 63.6(h)(4)	Notification of Opacity/VE Observation Date	Must notify Administrator of anticipated date of observation	No.
§ 63.6(h)(5)(i), (iii)-(v)	Conducting Opacity/VE Observations	Dates and schedule for conducting opacity/VE observations	No.
§ 63.6(h)(5)(ii)	Opacity Test Duration and Averaging Times	Must have at least 3 hours of observation with 30 6-minute averages	No.
§ 63.6(h)(6)	Records of Conditions During Opacity/VE Observations	Must keep records available and allow Administrator to inspect	No.
§ 63.6(h)(7)(i)	Report Continuous Opacity Monitoring System (COMS) Monitoring Data From Performance Test	Must submit COMS data with other performance test data	No.
§ 63.6(h)(7)(ii)	Using COMS Instead of EPA Method 9	Can submit COMS data instead of EPA Method 9 results even if rule requires EPA Method 9 in appendix A of part 60 of this chapter, but must notify Administrator before performance test	No.
§ 63.6(h)(7)(iii)	Averaging Time for COMS During Performance Test	To determine compliance, must reduce COMS data to 6-minute averages	No.
§ 63.6(h)(7)(iv)	COMS Requirements	Owner/operator must demonstrate that COMS performance evaluations are conducted according to § 63.8(e); COMS are properly maintained and operated according to § 63.8(c) and data quality as § 63.8(d)	No.
§ 63.6(h)(7)(v)	Determining Compliance with Opacity/VE Standards	COMS is probable but not conclusive evidence of compliance with opacity standard, even if EPA Method 9 observation shows otherwise. Requirements for COMS to be probable evidence-proper maintenance, meeting Performance Specification 1 in appendix B of part 60 of this chapter, and data have not	No.

Citation	Subject	Brief description	Applies to subpart CCCCCC
		been altered	
§ 63.6(h)(8)	Determining Compliance with Opacity/VE Standards	Administrator will use all COMS, EPA Method 9 (in appendix A of part 60 of this chapter), and EPA Method 22 (in appendix A of part 60 of this chapter) results, as well as information about operation and maintenance to determine compliance	No.
§ 63.6(h)(9)	Adjusted Opacity Standard	Procedures for Administrator to adjust an opacity standard	No.
§ 63.6(i)(1)-(14)	Compliance Extension	Procedures and criteria for Administrator to grant compliance extension	Yes.
§ 63.6(j)	Presidential Compliance Exemption	President may exempt any source from requirement to comply with this subpart	Yes.
§ 63.7(a)(2)	Performance Test Dates	Dates for conducting initial performance testing; must conduct 180 days after compliance date	Yes.
§ 63.7(a)(3)	CAA Section 114 Authority	Administrator may require a performance test under CAA section 114 at any time	Yes.
§ 63.7(b)(1)	Notification of Performance Test	Must notify Administrator 60 days before the test	Yes.
§ 63.7(b)(2)	Notification of Re-scheduling	If have to reschedule performance test, must notify Administrator of rescheduled date as soon as practicable and without delay	Yes.
§ 63.7(c)	Quality Assurance (QA)/Test Plan	Requirement to submit site-specific test plan 60 days before the test or on date Administrator agrees with; test plan approval procedures; performance audit requirements; internal and external QA procedures for testing	Yes.
§ 63.7(d)	Testing Facilities	Requirements for testing facilities	Yes.
63.7(e)(1)	Conditions for Conducting Performance Tests	Performance test must be conducted under representative conditions	No, § 63.11120(c) specifies conditions for conducting

Citation	Subject	Brief description	Applies to subpart CCCCCC
			performance tests.
§ 63.7(e)(2)	Conditions for Conducting Performance Tests	Must conduct according to this subpart and EPA test methods unless Administrator approves alternative	Yes.
§ 63.7(e)(3)	Test Run Duration	Must have three test runs of at least 1 hour each; compliance is based on arithmetic mean of three runs; conditions when data from an additional test run can be used	Yes.
§ 63.7(f)	Alternative Test Method	Procedures by which Administrator can grant approval to use an intermediate or major change, or alternative to a test method	Yes.
§ 63.7(g)	Performance Test Data Analysis	Must include raw data in performance test report; must submit performance test data 60 days after end of test with the Notification of Compliance Status; keep data for 5 years	Yes.
§ 63.7(h)	Waiver of Tests	Procedures for Administrator to waive performance test	Yes.
§ 63.8(a)(1)	Applicability of Monitoring Requirements	Subject to all monitoring requirements in standard	Yes.
§ 63.8(a)(2)	Performance Specifications	Performance Specifications in appendix B of 40 CFR part 60 apply	Yes.
§ 63.8(a)(3)	[Reserved]		
§ 63.8(a)(4)	Monitoring of Flares	Monitoring requirements for flares in § 63.11 apply	Yes.
§ 63.8(b)(1)	Monitoring	Must conduct monitoring according to standard unless Administrator approves alternative	Yes.
§ 63.8(b)(2)-(3)	Multiple Effluents and Multiple Monitoring Systems	Specific requirements for installing monitoring systems; must install on each affected source or after combined with another affected source before it is released to the atmosphere provided the monitoring is sufficient to demonstrate compliance with the standard; if more than one monitoring system	No.

Citation	Subject	Brief description	Applies to subpart CCCCCC
		on an emission point, must report all monitoring system results, unless one monitoring system is a backup	
§ 63.8(c)(1)	Monitoring System Operation and Maintenance	Maintain monitoring system in a manner consistent with good air pollution control practices	No.
§ 63.8(c)(1)(i)-(iii)	Operation and Maintenance of Continuous Monitoring Systems (CMS)	Must maintain and operate each CMS as specified in § 63.6(e)(1); must keep parts for routine repairs readily available; must develop a written SSM plan for CMS, as specified in § 63.6(e)(3)	No.
§ 63.8(c)(2)-(8)	CMS Requirements	Must install to get representative emission or parameter measurements; must verify operational status before or at performance test	No.
§ 63.8(d)	CMS Quality Control	Requirements for CMS quality control, including calibration, etc.; must keep quality control plan on record for 5 years; keep old versions for 5 years after revisions	No.
§ 63.8(e)	CMS Performance Evaluation	Notification, performance evaluation test plan, reports	No.
§ 63.8(f)(1)-(5)	Alternative Monitoring Method	Procedures for Administrator to approve alternative monitoring	No.
§ 63.8(f)(6)	Alternative to Relative Accuracy Test	Procedures for Administrator to approve alternative relative accuracy tests for continuous emissions monitoring system (CEMS)	No.
§ 63.8(g)	Data Reduction	COMS 6-minute averages calculated over at least 36 evenly spaced data points; CEMS 1 hour averages computed over at least 4 equally spaced data points; data that cannot be used in average	No.
§ 63.9(a)	Notification Requirements	Applicability and State delegation	Yes.
§ 63.9(b)(1)-(2), (4)-(5)	Initial Notifications	Submit notification within 120 days after effective date, or no later than 120 days after the source becomes subject to this subpart, whichever is later; notification of intent to	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCCC
		construct/reconstruct, notification of commencement of construction/ reconstruction, notification of startup; contents of each	
§ 63.9(c)	Request for Compliance Extension	Can request if cannot comply by date or if installed best available control technology or lowest achievable emission rate	Yes.
§ 63.9(d)	Notification of Special Compliance Requirements for New Sources	For sources that commence construction between proposal and promulgation and want to comply 3 years after effective date	Yes.
§ 63.9(e)	Notification of Performance Test	Notify Administrator 60 days prior	Yes.
§ 63.9(f)	Notification of VE/Opacity Test	Notify Administrator 30 days prior	No.
§ 63.9(g)	Additional Notifications when Using CMS	Notification of performance evaluation; notification about use of COMS data; notification that exceeded criterion for relative accuracy alternative	Yes, however, there are no opacity standards.
§ 63.9(h)(1)-(6)	Notification of Compliance Status	Contents due 60 days after end of performance test or other compliance demonstration, except for opacity/VE, which are due 30 days after; when to submit to Federal vs. State authority	Yes, however, there are no opacity standards.
§ 63.9(i)	Adjustment of Submittal Deadlines	Procedures for Administrator to approve change when notifications must be submitted	Yes.
§ 63.9(j)	Change in Previous Information	Must submit within 15 days after the change	Yes.
§ 63.9(k)	Notifications	Electronic reporting procedures	Yes, only as specified in § 63.9(j).
§ 63.10(a)	Recordkeeping/Reporting	Applies to all, unless compliance extension; when to submit to Federal vs. State authority; procedures for owners of more than one source	Yes.
§ 63.10(b)(1)	Recordkeeping/Reporting	General requirements; keep all records readily available; keep for 5	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCCC
		years	
§ 63.10(b)(2)(i)	Records related to SSM	Recordkeeping of occurrence and duration of startups and shutdowns	No.
§ 63.10(b)(2)(ii)	Records related to SSM	Recordkeeping of malfunctions	No. *See* § 63.11125(d) for recordkeeping of (1) occurrence and duration and (2) actions taken during malfunction.
§ 63.10(b)(2)(iii)	Maintenance records	Recordkeeping of maintenance on air pollution control and monitoring equipment	Yes.
§ 63.10(b)(2)(iv)	Records Related to SSM	Actions taken to minimize emissions during SSM	No.
§ 63.10(b)(2)(v)	Records Related to SSM	Actions taken to minimize emissions during SSM	No.
§ 63.10(b)(2)(vi)-(xi)	CMS Records	Malfunctions, inoperative, out-of-control periods	No.
§ 63.10(b)(2)(xii)	Records	Records when under waiver	Yes.
§ 63.10(b)(2)(xiii)	Records	Records when using alternative to relative accuracy test	Yes.
§ 63.10(b)(2)(xiv)	Records	All documentation supporting Initial Notification and Notification of Compliance Status	Yes.
§ 63.10(b)(3)	Records	Applicability determinations	Yes.
§ 63.10(c)	Records	Additional records for CMS	No.
§ 63.10(d)(1)	General Reporting Requirements	Requirement to report	Yes.
§ 63.10(d)(2)	Report of Performance Test Results	When to submit to Federal or State authority	Yes.
§ 63.10(d)(3)	Reporting Opacity or VE Observations	What to report and when	No.
§ 63.10(d)(4)	Progress Reports	Must submit progress reports on schedule if under compliance	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCCC
		extension	
§ 63.10(d)(5)	SSM Reports	Contents and submission	No. *See* § 63.11126(b) for malfunction reporting requirements.
§ 63.10(e)(1)-(2)	Additional CMS Reports	Must report results for each CEMS on a unit; written copy of CMS performance evaluation; two-three copies of COMS performance evaluation	No.
§ 63.10(e)(3)(i)-(iii)	Reports	Schedule for reporting excess emissions	No.
§ 63.10(e)(3)(iv)-(v)	Excess Emissions Reports	Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedances (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as deviations), report contents in a statement that there have been no deviations; must submit report containing all of the information in §§ 63.8(c)(7)-(8) and 63.10(c)(5)-(13)	No.
§ 63.10(e)(3)(iv)-(v)	Excess Emissions Reports	Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedances (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as	No, § 63.11130(K) specifies excess emission events for this subpart.

Citation	Subject	Brief description	Applies to subpart CCCCCC
		deviations), report contents in a statement that there have been no deviations; must submit report containing all of the information in §§ 63.8(c)(7)-(8) and 63.10(c)(5)-(13)	
§ 63.10(e)(3)(vi)-(viii)	Excess Emissions Report and Summary Report	Requirements for reporting excess emissions for CMS; requires all of the information in §§ 63.10(c)(5)-(13) and 63.8(c)(7)-(8)	No.
§ 63.10(e)(4)	Reporting COMS Data	Must submit COMS data with performance test data	No.
§ 63.10(f)	Waiver for Recordkeeping/ Reporting	Procedures for Administrator to waive	Yes.
§ 63.11(b)	Flares	Requirements for flares	No.
§ 63.12	Delegation	State authority to enforce standards	Yes.
§ 63.13	Addresses	Addresses where reports, notifications, and requests are sent	Yes.
§ 63.14	Incorporations by Reference	Test methods incorporated by reference	Yes.
§ 63.15	Availability of Information	Public and confidential information	Yes.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4184, Jan. 24, 2011; 85 FR 73919, Nov. 19, 2020]

Appendix B

Arkansas Asbestos Abatement

Pollution Control and Ecology Commission # 014.00-021

ARKANSAS POLLUTION CONTROL and ECOLOGY COMMISSION

REGULATION NO. 21
ARKANSAS ASBESTOS ABATEMENT REGULATION

GREAT SEAL OF THE STATE OF ARKANSAS

Adopted by the PC&E Commission August 28, 2015

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CHAPTER 1: TITLE

Reg. 21.101 Title

The following rules and regulations of the Arkansas Pollution Control and Ecology Commission adopted pursuant to the Removal of Asbestos Material Act, (Section 3, Act 308 of 1997 codified at Arkansas Code Annotated (Ark. Code Ann.) § 20-27-1001 *et seq.*) hereinafter referred to as "the Act" and the Arkansas Water and Air Pollution Control Act, (Section 7, Act 163 of 1993 codified at Ark. Code Ann. § 8-4-101 *et seq.*) shall be known as the "Asbestos Abatement Regulation" or "Regulation 21".

CHAPTER 2: PURPOSE

Reg. 21.201 Purpose

The purpose of this regulation is:

(A) To protect public health and safety and the environment;

(B) To administer and enforce a program for the licensing of Asbestos Abatement Contractors, Asbestos Abatement Consultants and Training Providers and for the certification of Air Monitors, Contractor/Supervisors, Inspectors, Management Planners, Project Designers, and Workers in accordance with the Removal of Asbestos Material Act (Ark. Code Ann. § 20-27-1001 *et seq.*); and

(C) To establish and enforce standards for demolitions, renovations, and disposal of regulated asbestos-containing materials in order to reduce visible emission of asbestos-containing materials as provided by the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR, Part 61, and to establish standards for response actions.

CHAPTER 3: APPLICABILITY

Reg. 21.301 Applicability

The provisions of this regulation are applicable to all owners and operators conducting a demolition or renovation activity; persons conducting inspections, air monitoring, developing management plans, and designing and/or conducting response actions as defined herein; the management and disposal of asbestos-containing waste materials; and training providers.

CHAPTER 4: DEFINITIONS

"ACBM" or asbestos-containing building material means any friable and nonfriable asbestos-containing material that is in or on interior structural members or other parts of a facility.

"ACM" or asbestos-containing material means any material that contains more than one percent (1%) of friable and/or nonfriable asbestos material.

"Adequately wetted" means sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from asbestos-containing material, then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wet.

"**Aggressive air sampling**" means artificially circulating the air so that fibers remain airborne during sample collection.

"AHERA" means Asbestos Hazard Emergency Response Act, published at Section 203 of Title II of TSCA, Section 15 U.S.C. 2643.

"Air analysis" means the microscopic examination of collected air samples to determine airborne fiber concentrations.

"Air monitor" means any person who collects airborne samples for analysis of asbestos fibers.

"Air monitoring" means the process of measuring the airborne fiber concentration of a specific quantity of air over a given amount of time for purposes of clearance air monitoring as prescribed by this regulation. Air monitoring does not include individual personal monitoring.

"Air sampling" means the collection of units of air to determine airborne fiber concentration for purposes of clearance air monitoring as prescribed by this regulation.

"Asbestos abatement consultant" means any person or other legal entity, however organized, that acts as an agent for the owner or operator in performing demolitions, renovations, air monitoring, and/or response actions which will involve, or may involve, the removal or disturbance of ACM in any facility. This does not include in-house personnel performing work associated with the performance of that person's employment

"Asbestos abatement contractor" means any person or other legal entity, however organized, that acts as an agent for the owner or operator in performing demolitions, renovations, air monitoring, and/or response actions which will involve, or may involve, the removal or disturbance of ACM in any facility. This does not include in-house personnel performing work associated with the performance of that person's employment

"Asbestos-containing waste materials" means mill tailings or any waste that contains commercial asbestos and is generated by a source subject to the provisions of this regulation. This term includes filters from control devices, friable asbestos waste material, and bags or other similar packaging contaminated with commercial asbestos. As applied to demolition and renovations operations, this term also includes regulated asbestos-containing waste and materials contaminated with asbestos including disposable equipment and clothing.

"ASHARA" means Asbestos School Hazard Abatement Reauthorization Act.

"Category I nonfriable asbestos-containing material" means asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than one percent (1%) asbestos as determined using the method specified in Appendix E, Subpart E, 40 CFR Part 763, Section 1, Polarized Light Microscopy.

"Category II nonfriable asbestos-containing material" means any material, excluding category I nonfriable ACM, containing more than one percent (1%) asbestos as determined using the methods specified in Appendix E, Subpart E, 40 CFR Part 763, Section 1, Polarized Light Microscopy that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

"Certificate" means a document issued by the Department to any person certifying that person has satisfactorily completed such asbestos training, examination (as provided in Chapter 18 of this regulation), and other requirements of this regulation to perform the duties of the following: Air Monitor, Contractor/Supervisor, Inspector, Management Planner, Project Designer, and Worker.

"Certification" means the status or classification of an individual who has been accredited in accordance with the EPA Model Accreditation Plan requirements and has satisfactorily met the additional State requirements described in this regulation.

"Certified Industrial Hygienist (CIH)" means a person certified in the comprehensive practice of Industrial Hygiene by the American Board of Industrial Hygiene.

"Clearance air monitor" means as required by this regulation, any person who measures the airborne fiber concentration of a specific quantity of air over a given amount of time at the conclusion of any demolition, renovation, or asbestos response action for which containment was utilized.

"Commercial asbestos" means any material containing asbestos that is extracted from ore and has value because of its asbestos content.

"Commission" means the Arkansas Pollution Control and Ecology Commission.

"Consent Administrative Order (CAO)" means an administrative order entered into by consent of the parties, including the Department.

"**Containment**" means a system installed by the owner or operator designed to minimize or eliminate the risk of the release of asbestos fibers from the work area to adjacent areas not involved in the project**.**

"Contractor/Supervisor" means any person who supervises the following activities with respect to friable ACM in a facility: a response action other than a SSSD activity, a maintenance activity that disturbs friable ACM, or a response action for a major fiber release episode and meets the certification requirements of this regulation.

"Cutting" means to penetrate with a sharp-edged instrument and includes sawing, but does not include shearing, slicing, or punching.

"Demolition" means the wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or intentional burning of a facility.

"Department" means the Arkansas Department of Environmental Quality or its successor.

"Director" means the Director of the Arkansas Department of Environmental Quality or its successor, acting directly or through the staff of the Department.

"Emergency renovation operation" means a renovation operation that was not planned but results from a sudden, unexpected event that, if not immediately attended to presents a safety or public health hazard, is necessary to protect equipment from damage, or is necessary to avoid imposing an unreasonable financial burden. This term includes operations necessitated by nonroutine failures of equipment.

"Encapsulation" means the coating of ACM with a bonding or sealing agent to prevent the release of airborne fibers.

"EPA" means the United States Environmental Protection Agency.

"Facility" means any institutional, commercial, public, industrial, school, or residential structure, installation, or building (including any structure, installation, or building containing condominiums or individual dwelling units operated as a residential cooperative, but excluding residential buildings having four or fewer dwelling units); any ship; and any active or inactive waste disposal site. For purposes of this definition, any building, structure, or installation that contains a loft used as a dwelling is not considered a residential structure, installation, or building. Any structure, installation or building that was previously subject to this regulation is not excluded, regardless of its current use or function.

"Facility component" means any part of a facility, including equipment.

"Friable asbestos-containing building material (ACBM)" means any friable asbestos-containing material that is in or on interior structural members or other parts of a school, public building, or commercial building.

"Friable asbestos material" means any material containing more than one percent (1%) asbestos as determined by using the method specified in Appendix E, Subpart E, 40 CFR Part 763, Section 1, Polarized Light Microscopy that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. If the asbestos content is less than 10% as determined by a method other than point counting by Polarized Light Microscopy (PLM), verify the asbestos content by point counting using PLM. The term includes nonfriable asbestos-containing material after such previously nonfriable material becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure.

“Glovebag” means a sealed compartment with attached inner gloves used for the handling of asbestos-containing materials. Properly installed and used, glovebags provide a small work area enclosure typically used for small-scale short-duration asbestos stripping operations. Information on glovebag installation, equipment and supplies, and work practices is contained in the Occupation Safety and Health Administration’s (OSHA’s) final rule on occupational exposure to asbestos (29 CFR 1926.1101).

“Grinding” means to reduce to powder or small fragments and includes mechanical chipping or drilling.

“HEPA” means High Efficiency Particulate Air (filter).

“HVAC System” means heating, ventilation, and air conditioning system.

“Individual” means any natural person.

“In poor condition” means the binding of the material is losing its integrity as indicated by peeling, cracking, or crumbling of the material.

“Inspection” means an activity undertaken in a facility to determine the presence or location, or to assess the condition, of friable or nonfriable ACM or suspect ACM, whether by visual or physical examination or by collecting samples of such material. This term includes reinspection of friable and nonfriable ACM, known or assumed, which has been previously identified. This definition does not apply to the following:

(A) Periodic visual surveillance solely for the purpose of recording or reporting a change in the condition of identified or assumed ACM;

(B) Regulatory compliance inspections conducted by Federal, State, or local government officials; and

(C) Visual observations conducted solely for the purposes of determining completion of response actions.

“Inspector” means any individual who inspects for ACM in a facility and meets the certification requirements of this regulation.

“Installation” means any building or structure or any group of buildings or structures at a single demolition or renovation site that are under the control of the same owner or operator (or owner or operator under common control).

“Leak-tight” means solids or liquids cannot escape or spill out. It also means dust-tight.

“License” means a document issued by the Department to an Asbestos Abatement Contractor, Asbestos Abatement Consultant, or Training Provider who meets the criteria for licensing described in this regulation.

"Major fiber release episode" means any uncontrolled or unintentional disturbance of ACM, resulting in a visible emission, which involves the falling or dislodging of more than three square or linear feet of friable ACM.

"Management planner" means any person who prepares management plans for a school and and who meets the certification requirements of this regulation.

"Management plan" means a formal written procedure for appropriate actions for surveillance and management of ACM.

"MAP" means a Model Accreditation Plan pursuant to the Asbestos Model Accreditation, Plan; Interim Final Rule, published at 40 CFR, Part 763, Appendix C to Subpart E as of October 13, 2005.

"Minor fiber release episode" means any uncontrolled or unintentional disturbance of ACM, resulting in a visible emission, which involves the falling or dislodging of three square or linear feet or less of friable ACM.

"NESHAP" means National Emission Standards for Hazardous Air Pollutants as found in 40 CFR Part 61 as of May 19, 2009.

"Nonfriable asbestos-containing material" means any material containing more than one percent (1%) asbestos as determined using the method specified in Appendix E, Subpart E, 40 CFR Part 763, Section 1, Polarized Light Microscopy, that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

"Nonscheduled renovation operation" means a renovation operation necessitated by the routine failure of equipment, which is expected to occur within a given period based on past operating experience, but for which an exact date cannot be predicted.

"Notice of Deficiency (NOD)" means a written document which identifies deficiencies in a Notice of Intent.

"Notice of Intent (NOI)" means a written notice to the Department which provides detailed information concerning renovations of RACM and all demolitions.

"Notice of Violation (NOV)" means a written notification to a person of alleged violations. The notice of violation **(NOV)** initiates an administrative enforcement action.

"Outside air" means the air outside buildings and structures including but not limited to, the air under a bridge or in an open air ferry dock.

"Owner or operator of a demolition or renovation activity" means any person who owns, leases, operates, controls, or supervises the facility being demolished or renovated or any person who owns, leases, operates, controls, or supervises the demolition or renovation operation, or both.

“Particulate asbestos material” means finely divided particles of asbestos or material containing asbestos.

“Penetrating encapsulant” means a liquid material applied to RACM to control airborne fiber release by penetrating into the material and binding the fibers together.

“Permitted landfill” means a waste disposal facility in Arkansas which has received a permit from the Department, authorizing the receipt and disposal of certain waste materials under the provisions of the Arkansas Solid Waste Management Code.

“Person or Persons” means any individual, corporation, or other legal entity.

“Phase contrast microscopy (PCM)” means the method of analyzing air samples published at the National Institute for Occupational Safety and Health (NIOSH), Method 7400, issue 2 entitled “ASBESTOS and OTHER FIBERS by PCM” published in the NIOSH Manual of Analytical Methods, Fourth Edition, August 15, 1994.

“Planned renovations operations” means a renovation operation, or a number of such operations, in which some RACM will be removed or stripped within a given period of time and that can be predicted. Individual nonscheduled operations are included if a number of such operations can be predicted to occur during a given period of time based on operating experience.

“Project designer” means any person who designs the following activities with respect to friable ACM in a facility: a response action other than a small-scale short-duration activity, a maintenance activity that disturbs friable ACM other than a small-scale short-duration maintenance activity, or a response action for a major fiber release episode and meets the certification requirements of this regulation.

“Regulated asbestos-containing material (RACM)” means

(A) Friable asbestos material;

(B) Category I nonfriable ACM that has become friable;

(C) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading;

(D) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this regulation;

(E) Category I nonfriable resilient floor covering which contains ACM that will be or has been removed by sanding, grinding, cutting, or abrading; or

(F) Category II mastic which contains ACM that will be removed by sanding, grinding, cutting, or abrading.

"Remove" means to take out RACM or facility components that contain or are covered with RACM from any facility.

"Renovation" means altering a facility or any facility components in any way, including the stripping or removal of RACM from a facility component. Operations in which load-supporting structural members are wrecked or taken out are demolitions.

"Resilient floor covering" means asbestos-containing floor tile, including asphalt and vinyl floor tile, and sheet vinyl floor covering containing more than one percent (1%) asbestos as determined using polarized light microscopy according to the method specified in Appendix E, Subpart E, 40 CFR Part 763, Section 1, Polarized Light Microscopy, as of June 19, 1995.

"Response action" means a method, including removal, encapsulation, enclosure, repair, and operation and maintenance, that protects human health and the environment from friable ACM.

"School" means any elementary or secondary school as defined in Section 198 of the Elementary and Secondary Act of 1965 (20 U.S.C. 2854).

"Small-scale short-duration activities (SSSD)" means:

(A) Tasks including, but not limited to:

(1) removal of asbestos-containing insulation on pipes;

(2) removal of small quantities of asbestos-containing insulation on beams or above ceilings;

(3) replacement of an asbestos-containing gasket or a valve;

(4) installation or removal of a small section of drywall; or

(5) installation of electrical conduits through or proximate to asbestos-containing materials.

(B) SSSD can be further defined by the following considerations:

(1) removal of small quantities of ACM only if required in the performance of another maintenance activity not intended as asbestos abatement;

(2) removal of asbestos-containing thermal system insulation not to exceed amounts greater than those which can be contained in a single glovebag;

(3) minor repairs to damaged thermal system insulation which do not require removal;

(4) repairs to a piece of asbestos-containing wallboard; and

(5) repairs, involving encapsulation, enclosure, or removal, to small amounts of friable ACM only if required in the performance of emergency or routine maintenance activity and not intended solely as asbestos abatement. Such work may not exceed amounts greater than those which can be contained in a single prefabricated mini-enclosure. Such an enclosure shall conform spatially and geometrically to the localized work area, in order to perform its intended containment function.

"Strip" means to take off RACM from any part of a facility or facility component.

"**Suspect building material**" means any building material which the inspector considers may contain asbestos.

"Thorough inspection" means an inspection which:

(A) is written;

(B) describes the current state of the facility, or portion of the facility if the inspection did not encompass the entire facility, and the building materials therein;

(C) includes all suspect and accessible building materials;

(D) identifies if the inspection encompasses the entire facility or a portion thereof;

(E) includes an assessment of the condition of the of asbestos-containing material; and

(F) uses documented sampling methodology.

"Training day" means a day consisting of eight consecutive hours (including lunch and breaks) in which an approved training course is conducted.

"Training provider" means any person or other legal entity, however organized, who conducts some or all of the training programs for asbestos professional disciplines which are regulated in this regulation and meets the licensing requirements of this regulation.

"Transmission electron microscopy (TEM)" means a method of analyzing air samples and bulk samples through the use of a transmission electron microscope operated under procedures listed in 40 CFR, Part 763, Subpart E, Appendix A (AHERA), as of June 19, 1995. The transmission electron microscope utilizes an electron beam that is focused onto a thin sample.

"Visible emissions" means any emissions which are visually detectable without the aid of instruments, coming from any RACM or asbestos-containing waste material. This does not include uncondensed water vapor.

"Waste generator" means any owner or operator of a source covered by this regulation whose action or process produces asbestos-containing waste materials.

"Waste shipment record" means the shipping documents required to be originated and signed by the waste generator, and used to track and substantiate the disposition of asbestos-containing waste material.

"Working days" means the days Monday through Friday, including any holidays which fall on any of the days Monday through Friday.

"Worker" means any person who meets the certification requirements of this regulation and carries out any of the following activities with respect to friable ACM in a facility: a response action other than a SSSD activity, a maintenance activity that disturbs friable ACM other than a SSSD activity, or a response action for a major fiber release.

CHAPTER 5: GENERAL PROVISIONS

Reg. 21.501 Asbestos Inspection

The owner or operator of a demolition, renovation, or response action shall conduct, or have conducted, a thorough inspection of the affected facility or part of the facility for the presence of asbestos including category I and category II nonfriable asbestos prior to the commencement of the demolition, renovation, or response action.

Reg. 21.502 Project Design

A project design is required prior to renovation, demolition, or response action that is not a SSSD or minor release episode that involves RACM. The project design must be a written document, specific to the job in question. A copy must be maintained at the job site and be made available to Department employees upon request.

Reg. 21.503 Licensing and/or Certification Provisions

A person must meet the licensing and/or certification provisions of this regulation prior to engaging in renovations, demolitions, or response activities involving RACM including, but not limited to, the following:

(A) A person supervising any of the following activities with respect to RACM in a facility—a response action other than a SSSD activity, a maintenance activity that disturbs RACM other than a SSSD activity, or a response action for a major fiber release episode—must be trained, certified as a Contractor/Supervisor, and meet all other requirements of this regulation;

(B) A person conducting an inspection for ACM in a facility must be trained, certified as an Inspector, and meet all other requirements of this regulation;

(C) A person preparing management plans for schools must be trained, certified as a Management Planner, and meet all other requirements of this regulation;

(D) A person designing the following activities with respect to RACM in a facility—a response action other than a SSSD activity, a maintenance activity that disturbs RACM other than a SSSD activity, or a response action for a major fiber release episode—must be trained, certified as a Project Designer, and meet all other requirements of this regulation;

(E) A person who carries out any of the following activities with respect to RACM in a facility—a response action other than a SSSD activity, a maintenance activity that disturbs RACM other than a SSSD activity, or a response action for a major fiber release episode—must be trained, certified as a Worker, Contractor/Supervisor, or Air Monitor , and meet all other requirements of this regulation; and

(F) A person conducting air monitoring as defined in Chapter 4 as required by Reg. 21.901 of this regulation must be trained, certified as an Air Monitor, and meet all other requirements of this regulation. A person need not be certified under this regulation to conduct monitoring activities not required by this regulation.

CHAPTER 6: NOTIFICATIONS

Reg. 21.601 Demolition

For any demolition of a facility or facility component (even if no asbestos is present), the owner or operator shall submit a written NOI to the Department by either hand delivery, post-marked by U.S. Postal Service, or post-marked by a commercial delivery service at least 10 working days before any demolition activity begins. Such notice must be accompanied by the required fee which is described in Chapter 22 of this regulation.

Reg. 21.602 Demolition Under Order of a Government Agency

For any facility being demolished under order of a State or local government agency, issued because the facility is structurally unsound and in danger of imminent collapse, the owner or operator shall submit a written NOI to the Department by either hand delivery, postmarked by U.S. Postal Service, or commercial delivery service as early as possible before, but not later than one working day following commencement of demolition. Such notice shall be accompanied by the required fee which is described in Chapter 22 of this regulation.

Reg. 21.603 Renovation Projects

For the activities listed below, the owner or operator shall submit a NOI to the Department by either hand-delivery, post-marked by U.S. Postal Service, or post-marked by commercial delivery service at least 10 working days before asbestos stripping, removal work, or any other activity begins (such as site preparation that would break up or dislodge or similarly disturb asbestos-containing material). Such notice must be accompanied by the required fee which is described in Chapter 22 of this regulation.

(A) For any renovation project, including any nonscheduled renovation operation involving the following amounts of RACM: at least 80 linear meters (260 linear feet) on pipes or at least 15 square meters (160 square feet) on other facility components, or at least one cubic meter (35 cubic feet) where the length could not be measured previously; or

(B) For any renovation project, including any nonscheduled renovation operation involving the following amounts of resilient floor and/or associated mastic covering which contains ACM (even if no RACM is present): at least 15 square meters (160 square feet).

Reg. 21.604 Planned Renovation Operations

For planned renovation operations involving individual, nonscheduled operations of a combined additive amount of RACM to be removed or stripped during a calendar year in the amounts of at least 80 linear meters (260 linear feet) of pipe, at least 15 square meters (160 square feet) on other facility components, or at least one cubic meter (35 cubic feet) of facility components where the length or area could not be measured previously, the owner or operator shall submit a written NOI to the Department by either hand delivery, post-marked by the U.S. Postal Service, or post-marked by a commercial delivery service by December 21 for the upcoming calendar period of January 1 through December 31. This notice must be accompanied by the required fee which is described in Chapter 22 of this regulation. To determine whether this paragraph applies to planned operations involving nonscheduled operations, the owner or operator shall predict the combined additive amount of RACM to be removed or stripped during a calendar year of January 1 through December 31.

Reg. 21.605 Emergency Renovation Operations

For emergency renovation operations involving a sudden, unexpected event that is not a SSSD or minor fiber release episode, the owner or operator shall submit a written NOI to the Department by either hand delivery, post-marked by the U.S. Postal Service, or post-marked by a commercial delivery service as early as possible, but not later than the following working day. Such notice must be accompanied by the required fee which is described in Chapter 22 of this regulation.

Reg. 21.606 NOI Requirements

All written NOI's shall be submitted on a form provided by the Department and shall include the following:

(A) an indication of whether the notice is the original or a revised notification;

(B) name, address, and telephone number of both the facility owner and operator and the asbestos abatement contractor owner or operator;

(C) type of operation: demolition or renovation;

(D) description of the facility or affected part of the facility including the size (square meters [square feet] and number of floors) age, and present and prior use of the facility;

(E) procedure, including analytical methods, employed to detect the presence of RACM and category I and category II nonfriable ACM;

(F) estimate of the approximate amount of RACM to be removed from the facility in terms of length of pipe in linear meters (linear feet), surface areas in square meters (square feet) on other facility components, or volume in cubic meters (cubic feet) if off facility components where the length or area could not be measured previously. Also, estimate the approximate amount of category I and category II nonfriable ACM in the affected part of the facility that will not be removed before demolition;

(G) location and street address (including building number or name and floor or room number, if appropriate), city, county, and state, of the facility being demolished or renovated;

(H) scheduled starting and completion dates of asbestos removal work (or any other activity, such as site preparation that would break up, dislodge, or similarly disturb ACM) in a demolition or renovation; planned renovation operations involving individual nonscheduled operations shall only include the beginning and ending dates of the report period as described in Reg. 21.604;

(I) scheduled starting and completion dates of demolition or renovation of RACM;

(J) description of planned demolition or renovation work to be performed and method(s) to be employed, including demolition or renovation techniques to be used and description of affected facility components;

(K) description of work practices and engineering controls to be used to comply with the requirements of this subpart, including asbestos removal and waste-handling emission control procedures;

(L) name and location of the waste disposal site where the asbestos-containing waste material will be deposited;

(M) a certification that at least one Contractor/Supervisor trained as required by this regulation will supervise the stripping and removal described by this notification;

(N) for facilities described in Reg. 21.602, the name, title, and authority of the State or local government representative who has ordered the demolition, the date that the order was issued, and the date on which the demolition was ordered to begin. A copy of the order shall be attached to the notification;

(O) for emergency renovations described in Reg. 21.605, the date and hour that the emergency occurred, a description of the sudden, unexpected event, and an explanation of how the event caused an unsafe condition, or would cause equipment damage or an unreasonable financial burden;

(P) description of procedures to be followed in the event that unexpected RACM is found or category II nonfriable ACM becomes crumbled, pulverized, or reduced to powder;

(Q) name, address, and telephone number of the waste transporter;

(R) name, address, Department certification number, and telephone number of the Inspector, Project Designer, and Air Monitor; and

(S) the appropriate fee pursuant to Chapter 22 of this regulation.

Reg. 21.607 Incomplete Notifications

The Department shall review all notifications for accuracy and completeness. Notifications which are incomplete or do not otherwise meet the notification requirements of this chapter shall:

(A) be returned to the owner or operator along with a NOD;

(B) be corrected and resubmitted by the owner or operator within a time frame specified by the Department in the NOD; and

(C) be subject to a new notification period.

Reg. 21.608 Beginning Date/Asbestos Removal Change

An owner or operator who has already submitted a NOI shall notify the Department, as necessary, (1) when the beginning date for prepping and/or removal has changed and/or (2) when the amount of asbestos affected changes by at least 20%. The owner or operator shall also provide, in writing, the reason(s) for the change. Changes shall be submitted in letter form or on a revised notification form with the required fee which is described in Chapter 22 of this regulation. Delivery of the updated notice by the U.S. Postal Service, commercial delivery service, or hand delivery is required.

(A) For any start date earlier than the date provided to the Department, the owner or operator shall notify the Department in writing at least 10 working days prior to the beginning of any stripping or removal work;

(B) For any start date after the date provided to the Department, the owner or operator shall notify the Department by telephone as soon as possible before the original start date and provide the Department with a written notice of the new start date as soon as possible before, and no later than, the original start date.

Reg. 21.609 Changes to the NOI

An owner or operator who has already submitted a NOI shall notify the Department of the following changes. These changes may be submitted by phone or fax. There will be no fee for these submittals.

(A) Ending date,

(B) Scheduled work hours,

(C) Engineering controls and work practices,

(D) Disposal site,

(E) Air Monitor, Inspector, and/or Project Designer, or

(F) A change in owner.

Reg. 21.610 Changes in Operator

Changes in operator will require the submittal of a new NOI with a new notification period and a new fee as described in Chapter 22 of this regulation.

Reg. 21.611 Training Provider's Required Submittals

Training Providers licensed pursuant to this regulation shall:

(A) Submit to the Department a notice of any scheduled MAP asbestos-related training course. Said notice must be submitted at least seven working days prior to the course being conducted unless good cause is demonstrated to the Department that a seven day advance notice is not feasible.

(B) The notice required pursuant to (A) above shall include the following information:

(1) Name of the Licensed Training Provider,

(2) To the extent available contact information for the Licensed Training Provider, including:

(a) address;

(b) telephone number,

(c) facsimile number, and

(d) e-mail address.

(3) Course information, including:

(a) title of course,

(b) date and address where course will be conducted, and

(c) name of instructor conducting the course.

(4) Notices of changes or cancellations of courses shall be submitted to the Department at least two working days prior to the scheduled date of a course unless good cause is demonstrated to the Department that two days advance notice is not feasible.

(C) Submit to the Department, within 10 working days of completion of each MAP asbestos-related training course:

(1) Course name [discipline and type (initial or refresher)],

(2) Dates the course was conducted,

(3) The course instructor's name, and

(4) A roster of course attendees successfully completing the course, including the following information:

(a) Name, and address of each attendee,

(b) Course completion certificate number,

(c) Class photograph or individual photos which clearly show the faces of each student successfully completing the course and a caption identifying each attendee. The photo submission requirement does not apply to refresher training courses or the Arkansas awareness training.

(D) Notify EPA or the Department, as appropriate, in advance whenever it changes course instructors.

CHAPTER 7: RECORD KEEPING

Reg. 21.701 On Site Documents

The owner or operator shall keep at the site:

(A) A copy of the inspection report, including results of any bulk sample analysis, and any air monitoring data,

(B) A copy of the NOI or any revised NOI submitted in compliance with this regulation and the attached order of any State or local government official ordering the demolition of a facility due to structural unsoundness and danger of imminent collapse if applicable,

(C) A copy of the project design, and

(D) A copy of certifications and licenses of personnel participating in demolition, renovation, or response actions.

Reg. 21.702 Wetting Operations

The owner or operator shall keep at the site copies of any written approval issued by the Department such as prior written approval from the Director to allow the owner or operator to not use wetting where it would cause unavoidable damage to equipment or present a safety hazard or to use an alternate collection device. The owner or operator shall also be required to keep copies of the recorded temperature for the area containing the facility components for the beginning, middle, and end of each workday for any period during which wetting operations were suspended due to freezing temperatures.

Reg. 21.703 Submittal of Information

The owner or operator shall make available upon request by the Department any information related to a site, including, but not limited to, the information as set forth at Reg. 21.701 above.

Reg. 21.704 Copies

Copies of all items listed in Reg. 21.701 and Reg. 21.702 shall be kept by the owner and operator for a minimum of two years from the date the regulated activity ended.

CHAPTER 8: WORK PROCEDURES - APPLICABILITY

Reg. 21.801 Applicability

Demolition, renovations, or response actions, involving RACM, and which are not a SSSD or a minor fiber release episode shall be conducted by persons licensed or-certified in accordance with this regulation, unless expressly excluded by this regulation.

CHAPTER 9: GENERAL WORK PROCEDURES

Reg. 21.901 Work Procedure Compliance

Each owner or operator of any RACM demolition~~s~~ or any renovation impacting at least 80 linear meters (260 linear feet) of RACM on pipes or at least 15 square meters (160 square feet) of RACM on other facility components, or at least 1 cubic meter (35 cubic feet) of RACM where the length could not be measured previously shall comply with the following work procedures.

(A) Generally, the owner or operator of a demolition, renovation, or response action to whom this regulation applies shall remove all RACM from a facility before the facility is demolished or renovated or any activity begins that would break up, dislodge, or similarly disturb the material or preclude access to the material for subsequent removal. If a facility is demolished by intentional burning, all RACM including category I and category II nonfriable ACM must be removed in accordance with this regulation before burning.

(B) The owner or operator need not remove ACM before demolition if:

   (1) It is category I nonfriable ACM that is not in poor condition and is not friable;

   (2) It is on a facility component that is encased in concrete or other similarly hard material and is adequately wetted whenever exposed during demolition;

   (3) It was not accessible for testing and was, therefore, not discovered until after demolition began and, as a result of the demolition, the material cannot be safely removed. If not removed for safety reasons, the exposed RACM and any asbestos-contaminated debris must be treated as asbestos-containing waste material and adequately wetted at all times until disposed; or

   (4) It is category II nonfriable asbestos-containing material and the probability is low that the materials will become crumbled, pulverized, or reduced to powder during demolition.

(C) The owner or operator shall ensure that no RACM will be stripped, removed, or otherwise handled or disturbed at a facility regulated by this section unless one Contractor/Supervisor who is trained and meets all certification requirements of this regulation is present during all such activities.

(D) When a facility component that contains, is covered with, or is coated with RACM is taken out of a facility as a unit or in sections, the owner or operator shall:

(1) Ensure that the RACM is adequately wetted when exposed during cutting and disjointing operations; and

(2) Carefully lower each unit or section to the floor and to ground level, not dropping, throwing, sliding, or otherwise damaging or disturbing the RACM.

(E) When RACM is stripped from a facility component while it remains in place in the facility, the owner or operator shall adequately wet the RACM during the stripping operation.

(F) In renovation operations, wetting is not required if:

(1) The owner or operator has obtained prior written approval from the Director or his/her designee based upon a written application that such wetting to comply with this regulation would unavoidably damage equipment or present a safety hazard; and

(2) The owner or operator uses one of the following emission control methods:

(a) A local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material produced by the stripping and removal of the asbestos materials. The system must exhibit no visible emissions to the outside air. The owner or operator may alternatively use air cleaning and shall, for fabric filter collection devices installed after January 10, 1989, provide for easy inspection for faulty bags. After January 10, 1989, if the use of a fabric filter creates a fire or explosion hazard, or the Director determines a fabric filter is not feasible, the Director may authorize as a substitute the use of wet collectors designed to operate with a unit contacting energy of at least 9.95 kilopascals (or 40 inches water gage pressure), or use a HEPA filter that is certified to be at least 99.97 percent efficient for 0.3 micron particles. The Director may authorize the use of filtering equipment other than described in Reg. 21.901(F) if the owner or operator demonstrates to the Director's satisfaction that it is equivalent to the described equipment in filtering particulate asbestos material. A copy of any authorization from the Director must be retained at the site.

(b) A glove-bag system designed and operated to contain particulate asbestos material produced by the stripping of the asbestos materials.

(c) Leak-tight wrapping to contain all RACM prior to dismantlement.

(G) The owner or operator shall cause clearance air monitoring to be conducted inside containment after the completion of any renovation, demolition, or asbestos response action involving RACM for which containment was utilized and which involved projects at least 80 linear meters (260 linear feet) on pipes or at least 15 square meters (160 square feet), or at least one cubic meter (35 cubic feet) where the length could not be measured previously.

(1) The owner or operator shall cause such sampling to be conducted by a person who has met the certification requirements of this regulation for the Air Monitor discipline as provided in this regulation and is not an employee of the licensed asbestos firm conducting the demolition, renovation, or asbestos activities.

(2) The owner or operator shall cause sample analysis to be conducted by a laboratory which, for PCM analysis, uses NIOSH method 7400 and for TEM analysis, the laboratory must be approved by the National Institute of Standards Technology (NIST), National Voluntary Laboratory Accreditation Program (NVLAP).

(3) The owner or operator shall cause aggressive air sampling to be conducted after removal and cleanup activities for which containment was utilized have been completed to determine the final clearance level.

(a) Aggressive sampling results indicate an air fiber count of 0.01 fibers per cubic centimeter (f/cc) or less when using PCM; or

(b) If TEM is used, an arithmetic mean of less than or equal to 70 structures per square millimeter (s/mm^2), or a Z-test result that is less than or equal to 1.65.

(4) If the aggressive air sampling analysis reveals an airborne fiber count greater than 0.01 f/cc (or 70 s/mm^2 or Z-test of 1.65) then the area shall be cleaned again, followed by additional aggressive air sampling. This process shall continue until the required air level has been achieved.

(5) Aggressive clearance sample collection shall be done in accordance with the requirements of 40 CFR Part 763, Subpart E, Appendix A in effect on June 19, 1995.

CHAPTER 10: DISPOSAL PREPARATION

Reg. 21.1001 Disposal Preparation

The owner or operator shall dispose of RACM from all demolitions and all renovations involving projects of at least 80 linear meters (260 linear feet) on pipes or at least 15 square meters (160 square feet) on other facility components, or at least one cubic meter (or 35 cubic feet) where the length could not be measured previously in accordance with the following work procedures:

(A) After a facility component covered with, coated with, or containing RACM has been taken out of the facility as a unit or in sections as provided in this regulation, it shall be stripped or contained in leak-tight wrapping except for large facility components as provided in this section. If stripped either:

(1) The RACM shall be adequately wetted during stripping; or

(2) A local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material produced by the stripping must be used. The system must exhibit no visible emissions to the outside air or be designed and operated as provided in Reg. 21.901(F).

(B) For large facility components such as reactor vessels, large tanks, and steam generators, the RACM is not required to be stripped if:

(1) The component is removed, transported, stored, disposed of, or reused without disturbing the RACM;

(2) The component is encased in a leak-tight wrapping; and

(3) During all loading and unloading operations and during storage, the leak-tight wrapping is labeled according to the following:

Mark vehicles used to transport asbestos-containing waste material during the loading and unloading of the waste so that the signs are visible. The markings must be displayed in such a manner and location that a person can easily read the legend; conform to the requirements for 51 centimeters (cm) X 36 cm (20 inches (in) X 14 in) upright format signs specified in 29 CFR 1910.145 (d)(4) and this paragraph; and display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

Legend:
DANGER
ASBESTOS DUST HAZARD
CANCER AND LUNG DISEASE HAZARD
Authorized Personnel Only
Notation:

2.5 cm (1 in) Sans Serif, Gothic or Block
2.5 cm (1 in) Sans Serif, Gothic or Block
1.9 cm (3/4 in) Sans Serif, Gothic or Block
14 Point Gothic

Spacing between any two lines must be at least equal to the height of the upper of the two lines.

(C) For all RACM, including material that has been removed or stripped:

(1) The material must be adequately wetted and remain adequately wetted until collected and contained or treated in preparation for disposal in accordance with this regulation; and

(2) Carefully lower the material to the ground and floor, not dropping, throwing, sliding, or otherwise damaging or disturbing the material;

(3) Transport the material to the ground via leak-tight chutes or containers if it has been removed or stripped more than 50 feet above ground level and was not removed as units or in sections;

(4) RACM contained in leak-tight wrapping that has been removed in accordance with the following provisions of this regulation need not be wetted if:

(a) The owner or operator is complying with the provisions of Reg. 21.1001(A)(2);

(b) The owner or operator has received prior written approval from the Director to not wet because of resulting equipment damage or safety hazard and is using an alternate method approved in writing by the Director as set out in this regulation; or

(c) The owner or operator shall remove facility components containing, coated with, or covered with RACM as units or in sections to the maximum extent possible when the temperature at the point of wetting is below 0˚ C (or 32˚ F); and for periods during when wetting operations are suspended due to freezing temperatures, the owner or operator must record the temperature in the area containing the facility components at the beginning, middle, and end of each workday and keep daily temperature records available for inspection by the Director during normal business hours at the demolition or renovation site. The owner or operator shall retain the temperature records for at least two years from the date the regulated activity ended.

CHAPTER 11: DISPOSAL

Reg. 21.1101 Disposal

Each owner or operator of a facility shall dispose of RACM from all demolitions and all renovations involving projects of at least 80 linear meters (260 linear feet) on pipes or at least 15 square meters (160 square feet) on other facility components, or at least 1 cubic meter (35 cubic feet) where the length could not be measured previously in a manner to comply with the following work procedures. As applied to demolitions and renovations, the requirements of this section do not apply to category I nonfriable ACM waste and category II nonfriable ACM waste that did not become crumbled, pulverized, or reduced to powder.

(A) No visible emissions may be discharged to the outside air during the collection, packaging, transporting, treatment (including incineration), or disposal process of any asbestos-containing waste material generated by the source, or use one of the following emission control and waste treatment methods specified in this section:

(1) Adequately wet asbestos-containing waste material as follows:

(a) Mix asbestos waste from a control device to form a slurry; adequately wet other asbestos-containing waste material;

(b) Use the methods specified in this regulation to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air;

(c) After wetting, seal all asbestos-containing waste material in leak-tight containers while wet; or, for materials that will not fit into containers without additional breaking, put materials into leak-tight wrapping;

(2) Process asbestos-containing waste material into nonfriable forms as follows:

(a) Form all asbestos-containing waste material into nonfriable pellets or other shapes; and

(b) Discharge no visible emissions to the outside air from collection and processing operations, including incineration, or use the method provided for in this regulation to clean emissions containing particulate asbestos material before they escape to or are vented to the outside air.

(3) For facilities demolished where the RACM is not removed prior to demolition as provided in this regulation, asbestos-containing material shall be adequately wetted at all times during and after demolition and kept wet during handling and loading for transport to a disposal site.

Asbestos-containing waste materials covered by this paragraph must be shipped via leak-tight containers, wrapping, or bulk shipping device.

(4) Use an alternative emission control and waste treatment method that has received prior approval by the Director as provided in this regulation.

(B) Label the containers or wrapped materials specified in this section using warning labels specified by Occupational Safety and Health Standards of the Department of Labor, Occupational Safety and Health Administration (OSHA) under 29 CFR 1910.1001(j)(4) or 1926.1101(k)(8), as of December 12, 2008. The labels shall be printed in letters of sufficient size and contrast so as to be readily visible and legible;

(C) For asbestos-containing waste material to be transported off the facility site, label containers or wrapped materials with the name of the waste generator and the location at which the waste was generated and comply with all applicable Department of Transportation (DOT) requirements;

(D) All asbestos-containing waste material shall be deposited as soon as is practical by the waste generator at a disposal site approved to accept asbestos-containing waste material and that meets the requirements of NESHAP or an EPA approved site that converts RACM and asbestos-containing waste material into nonasbestos (asbestos-free) material according to the provisions of 40 CFR Part 61 as in effect December 14, 2000.

(E) Mark vehicles used to transport asbestos-containing waste material during the loading and unloading of waste so that signs are visible. The markings must conform to the requirements specified in Reg. 21.1001(B)(3).

(F) For all asbestos-containing waste material transported off the facility site a copy of a waste shipment paper, signed by the generator and transporter(s), shall accompany the shipment of asbestos-containing waste material.

Reg. 21.1102 Standards for Generators

The generator shall:

(A) Prepare a waste shipping paper, using a form including the following information:

(1) The name, address, and telephone number of the waste generator;

(2) The name and address of the Department’s Asbestos Section;

(3) The approximate quantity in cubic meters (or cubic yards);

(4) The name, address and telephone number of the waste transporter(s);

(5) The name, physical site location and telephone number of the designated disposal site;

(6) The date transported from the generator site;

(7) The date received and accepted at the designated waste disposal site; and

(8) A certification that the contents of this consignment are fully and accurately described by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transportation by highway according to applicable international and government regulations

(B) The waste generator shall contact the transporter and/or owner or operator of the designated disposal site if a copy of the shipping paper, signed by the owner or operator of the designated disposal site, is not received by the waste generator within 35 calendar days of the date the waste was accepted by the initial transporter, to determine the status of the waste shipment.

(C) The waste generator shall report in writing to the Department if a copy of the waste shipping paper, signed by the owner or operator of the designated waste disposal site, is not received by the waste generator within 45 calendar days of the date the waste was accepted by the initial transporter. The report shall include the following information:

(1) A copy of the waste shipping paper for which a confirmation of delivery was not received; and

(2) A cover letter signed by the waste generator explaining the efforts taken to locate the asbestos-containing waste shipment and the results of those efforts.

(D) The waste generator shall retain a copy of all waste shipping papers, including a copy of the waste shipping paper signed by the owner or operator of the designated waste disposal site, for at least two years.

(E) The waste generator shall furnish upon request, and make available for inspection by the Director, all records required to be kept by this regulation.

Reg. 21.1103 Standards for Waste Transporters

(A) The waste transporter shall sign the waste shipping paper upon acceptance of the shipment from the generator;

(B) The shipment shall be delivered to the designated waste disposal facility as expeditiously as possible;

(C) The waste transporter shall obtain the signature of the owner or operator of the designated waste disposal facility upon delivery of the shipment of asbestos-containing waste material;

(D) The waste transporter shall provide a copy of the waste shipping paper to the designated waste disposal facility owners or operators at the same time as the asbestos-containing waste material is delivered to the disposal site.

Reg. 21.1104 Waste Disposal Sites

Standards for designated waste disposal sites:

(A) The owner or operator of the designated waste disposal facility shall sign and date the waste shipping paper upon its receipt and acceptance of the shipment.

(B) Each owner or operator of an active waste disposal site that received asbestos-containing waste material from a source covered by this regulation shall meet the following requirements:

(1) At least once every 24-hour period while the site is in continuous operation, the asbestos-containing waste material that has been deposited at the site during the operating day or previous 24-hour period shall:

(a) Be covered with at least fifteen centimeters (or six inches) of compacted nonasbestos-containing material; or

(b) Be covered with a resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. Such an agent shall be used in the manner and frequency recommended for the particular dust by the dust suppression agent manufacturers to achieve and maintain dust control. Other equally effective dust suppression agents may be used upon prior approval by the Director. For purposes of this paragraph, any used, spent, or other waste oil is not considered a dust suppression agent;

(c) Use an alternative emissions control method that has received prior written approval by the Director demonstrating the following criteria:

(i) The alternative method will control asbestos emissions equivalent to currently required methods;

(ii) The suitability of the alternative method for the intended application;

(iii) The alternative method will not violate other laws or regulations; and

(iv) The alternative method will not result in increased water pollution, land pollution, or occupational hazards

(C) For all asbestos-containing waste material received, the owner or operator of the active waste disposal site shall:

(1) Maintain a copy of the waste shipping papers as addressed in Reg. 21.1102(A) using a form with the following information:

(a) The name, address, and telephone number of the waste generator;

(b) The name address and telephone number of the transporter(s);

(c) The quantity of the asbestos-containing waste material in cubic meters (cubic yards); and

(d) The date of the receipt.

(D) As soon as possible and no longer than 30 calendar days after receipt of the waste, send a copy of the signed waste shipment record to the waste generator.

(E) Upon discovering a discrepancy between the quantity of waste designated on the waste shipment records and the quantity actually received, attempt to reconcile the discrepancy with the waste generator. If the discrepancy is not resolved within 15 calendar days after receiving the waste, immediately report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator and, if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site. Describe the discrepancy and attempts to reconcile it, and submit a copy of the waste shipment record along with the report.

(F) Report in writing to the Department official responsible for administering the Asbestos program for the waste generator (identified in the waste shipment record), and, if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site, by the following working day, the presence of a significant amount of improperly enclosed or uncovered waste. Submit a copy of the waste shipment record along with the report; and

(G) Furnish upon request and make available during normal business hours for inspection by the Department all records required under this chapter.

(H) Retain a copy of all records and reports required by this chapter for at least two years from the date of disposal.

(I) Maintain, until closure, records of the location, depth and area, and quantity in cubic meters (cubic yards) of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area.

(J) Upon closure of a facility, submit to the Department a copy of records of asbestos waste disposal locations and quantities.

(K) The Department shall be notified in writing at least 45 calendar days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and is covered. If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the Department at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. Include the following information in the notice:

(1) Scheduled start and completion dates;

(2) Reason(s) for disturbing the waste;

(3) Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material (if deemed necessary, the Department may require changes in the emission control procedures to be used); and

(4) Location of any temporary storage site and the final disposal site.

(L) Within 60 calendar days of a site becoming inactive and after the effective date of this regulation, a notation shall be recorded, in accordance with State law, on the deed to the facility property and on any other instrument that would normally be examined during a title search. This notation will in perpetuity notify any potential purchaser of the property that:

(1) The land has been used for the disposal of asbestos-containing waste material; and

(2) The survey plot and record of the location and quantity of asbestos-containing waste disposed of within the disposal site required in Reg. 21.1104(I) have been filed with the Department.

CHAPTER 12: LICENSES (GENERAL)

Reg. 21.1201 Licenses

Licenses shall be issued to Asbestos Abatement Contractors, Asbestos Abatement Consultants and Training Providers. Such licenses shall be issued for a period not to exceed 12 months.

Reg. 21.1202 Renewal

Any Asbestos Abatement Contractor, Asbestos Abatement Consultant or Training Provider may apply for the renewal of a license issued by the Department. Such renewals are valid for a period not to exceed 12 months.

Reg. 21.1203 Annual Fee

The Department shall assess an annual fee for all initial licenses and for all renewals of licenses. The amounts of such fees, listed in Chapter 22 of this regulation, shall be determined by the Department

Reg. 21.1204 Licensing and Certification Requirements

Persons who do not maintain offices in the state of Arkansas and who perform work in this state as an Asbestos Abatement Contractor, Asbestos Abatement Consultant or Training Provider, as defined in this regulation, are subject to the licensing and certification requirements of the Act and this regulation.

Reg. 21.1205 Licensing Requirement Exemptions

(A) State and federal governments (and subdivisions thereof including school districts) shall be exempt from the licensing requirements of Chapter 13 of this regulation.

(B) A facility owner shall not require a license to conduct demolition, renovation, or response actions on the owner's facility provided such actions are conducted by permanent employees of the facility owner.

Reg. 21.1206 Permanent Employees

The permanent employee described in Reg. 21.1205(B) shall:

(A) Be trained in the proper disciplines in accordance with ASHARA and certified with the Department, and

(B) Conduct only asbestos-related activities which are associated with the performance of that person's permanent employment. If the employee conducts asbestos-related activities on any other buildings or structures not associated with that person's permanent employment, then the person must be under the supervision of a Contractor or Consultant licensed pursuant to this regulation.

CHAPTER 13: ASBESTOS ABATEMENT CONSULTANTS AND CONTRACTORS LICENSES

Reg. 21.1301 Initial License Application

Initial application for licenses shall be made to the Department and shall include the following:

(A) A completed application on a form provided by the Department;

(B) Annual Asbestos Abatement Consultant or Asbestos Abatement Contractor license fee as described in Chapter 22 of this regulation;

(C) Proof that the Asbestos Abatement Contractor has at least one supervisor who qualifies as a Contractor/Supervisor as determined by this regulation and who has been certified as such by the Department in accordance with this regulation;

(D) A completed Disclosure Statement pursuant to APC&EC Reg. 8.204 on a form provided by the Department; and

(E) Proof of a minimum of $1,000,000 liability insurance coverage in the form of a certificate of insurance issued by an insurance carrier authorized to do business in Arkansas by the Arkansas Insurance Department that must certify the following:

(1) Liability insurance coverage for the types of asbestos services provided, including abatement and inspection work; and

(2) A rider requiring that the insurer shall notify the Department in writing within 10 working days of any substantive changes made to the policy including, but not limited to, termination or failure to renew, or any reduction of the monetary limits of coverage.

CHAPTER 14: TRAINING PROVIDER LICENSES

Reg. 21.1401 Initial Licenses

Initial applications for licenses of approved Training Providers shall be made to the Department and shall include the following:

(A) A completed application on a form provided by the Department;

(B) Enclosure of the annual training provider fee described in Chapter 22 of this regulation;

(C) A statement certifying that each course complies with the requirements of the 40 CFR Part 763, Appendix C to Subpart E (MAP);

(D) Résumés of all instructors;

(E) Sample course agendas;

(F) A completed disclosure statement pursuant to APC&EC Reg. 8.204 on a form provided by the Department; and

(G) A statement that each discipline course complies with the minimal course content required at Chapter 19 of this regulation.

Reg. 21.1402 Requirements in Lieu of 40 CFR Part 763, Appendix C to Subpart E

Training providers who do not supply the certification described in Reg. 21.1401(C) of this Section but wish to be licensed to teach the course under this regulation shall submit in addition to the information required by Reg. 21.1401 (A), (B), (D), (E), (F) and (G), the following:

(A) The course provider's name, address and telephone number;

(B) A list of any other states that currently approve the training course;

(C) The course curriculum;

(D) A letter from the provider of the training course that clearly indicates how the course meets the MAP and the requirements of this regulation, specifically addressing the following:

  (1) Length of training days in 8-hour increments;

  (2) Amount and type of hands-on training;

  (3) Examination (length, format, and minimum passing score); and

  (4) Topics covered in the course;

(E) A copy of all course materials (including student manuals, instructor notebooks, handbooks and any other printed materials);

(F) A description of the training methods to be used to present each topic (such as lecture, video, or hands-on);

(G) A detailed statement about the development of the examination used in the course;

(H) Names and qualifications of all course instructors. Instructors must have academic and/or field experience in asbestos abatement; and

(I) A description of, and an example of, the certificates issued to students who attend and successfully complete the course by passing the required written examination. Each certificate shall include the information listed in Reg. 21.1808.

Reg. 21.1403 Refresher Training Courses

The following minimum information is required for approval of refresher training courses by the State of Arkansas:

(A) The length of training in half days or days;

(B) The topics covered in the course;

(C) A copy of all course materials (student manuals, instructor notebooks, handouts, etc.);

(D) The names and qualifications of all course instructors. Instructors must have academic and/or field experience in asbestos abatement; and

(E) A description of and an example of the certificates issued to students who complete the refresher course. Certificates shall contain the same information as described in Reg. 21.1402(I).

CHAPTER 15: CERTIFICATION/ACCREDITATION

Reg. 21.1501 Certification

Any person seeking certification in the discipline of Air Monitor, Contractor/Supervisor, Inspector, Management Planner, Project Designer, or Worker shall provide the Department with the following:

(A) The most recent certificate issued by the training provider as proof of successful completion of the applicable training course which has been approved under the provisions of 40 CFR Part 763, Appendix C to Subpart E (MAP) and subsequent revisions (photocopies will not be accepted without prior approval from the Department);

(B) A completed application on a form provided by the Department;

(C) The applicable annual certification fee listed in Chapter 22 of this regulation.

(D) A current photograph of the person requesting certification that:

(1) If printed, shows the full face of the person seeking certification no less than ¾ of an inch wide;

(2) If digital, has a resolution of at least 72 dpi and is in a format specified by the Department; or

(3) Instead of providing a photograph, the person seeking certification may come to the Department's central office during normal business hours where one will be taken.

(E) A completed disclosure statement pursuant to APC&EC Reg. 8.204 on a form provided by the Department.

Reg. 21.1502 Supervision

Except as provided in Reg. 21.1205, Certified Air Monitors, Contractor/Supervisors, Inspectors, Management Planners, Project Designers, and Workers shall work under the supervision of a facility or firm licensed as a Contractor or Consultant pursuant to the provisions of this regulation.

Reg. 21.1503 Certification Time Frame

Certificates issued by the Department shall remain valid for a period of one year from date of training unless suspended or revoked pursuant to Chapter 21 of this regulation.

CHAPTER 16: RENEWAL OF LICENSES AND CERTIFICATIONS

Reg. 21.1601 Contractors/Consultants Renewal

Asbestos Abatement Contractors and Asbestos Abatement Consultants shall submit the following in order to renew their licenses:

(A) A renewal application on a form provided by the Department;

(B) Proof of insurance as described in Reg. 21.1301(E);

(C) A renewal fee as described in Chapter 22 of this regulation; and

(D) A completed disclosure statement pursuant to APC&EC Reg. 8.204 on a form provided by the Department.

Reg. 21.1602 Training Providers Renewal

Asbestos Training Providers shall submit the following in order to renew their licenses:

(A) Renewal application on a form provided by the Department;

(B) Renewal fee as described in Chapter 22 of this regulation; and

(C) A completed disclosure statement pursuant to APC&EC Reg. 8.204 on a form provided by the Department.

Reg. 21.1603 Other Renewals

Air Monitors, Contractor/Supervisors, Inspectors, Management Planners, Project Designers, and Workers shall submit the following in order to renew their certification status:

(A) An official certificate from an EPA accredited firm documenting successful completion of an approved asbestos refresher course applicable to each discipline for which renewal is sought;

(B) An official certificate of training for the 2 hour Arkansas Regulation Course if the refresher course was not provided by an Arkansas licensed asbestos training provider;

(C) Air Monitors who have been certified under the provisions that they are a Certified Industrial Hygienist shall also submit proof of their current certification status;

(D) An application on a form provided by the Department; and

(E) Renewal fee as described in Chapter 22 of this regulation.

CHAPTER 17: LAPSED LICENSES OR CERTIFICATES

Reg. 21.1701 Expired Licenses/Certificates

Any license or certificate holder who allows a license or certificate to expire shall not conduct asbestos-related work subject to the requirements of this regulation until all renewal requirements have been met and a new license or certificate has been issued by the Department.

Reg. 21.1702 Refresher Course

Any license or certificate holder may complete the appropriate refresher course within 12 months of the expiration of the license or certificate without being required to comply with the initial training requirements.

CHAPTER 18: TRAINING

Reg. 21.1801 Training Providers

Formal training for licensing and certification, which is intended to meet the training requirements of the Act and this regulation, may be conducted by any educational institution, business entity, or individual that is licensed as a Training Provider pursuant to this regulation.

Reg. 21.1802 Minimum Requirements

Each initial training course for each discipline taught shall meet the requirements of the MAP and this regulation including the course content as outlined at Chapter 19 of this regulation and the following minimum requirements:

(A) For Workers:

(1) Course length must be a minimum of 32 hours (four 8-hour days) including lectures, demonstrations, instruction on individual respirator fit-testing, and course review with a minimum of 14 hours devoted to hands-on instruction; and

(2) A closed-book written exam of at least 50 multiple-choice questions and a minimum passing score of at least 70 percent.

(B) For Inspectors:

(1) Course length must be a minimum of 24 hours (three 8-hour days) including lectures, demonstrations, instruction on individual respirator fit-testing, course review and a minimum of four hours of hands-on instruction; and

(2) A closed-book written exam of at least 50 multiple-choice questions and a minimum passing score of 70 percent.

(C) For Management Planners**:**

(1) All persons seeking accreditation as Management Planners shall complete a 24-hour (three 8-hour days) Inspector training course as outlined in this section and a 16-hour (two 8-hour days) Management Planner training course. Possession of current and valid Inspector accreditation shall be a prerequisite for admission to the Management Planner training course. The Management Planner course shall include lectures demonstrations, and course review; and

(2) A closed-book written exam of at least 50 multiple choice questions with a minimum passing score of 70 percent.

(D) For Project Designers:

(1) Course length must be a minimum of 24 hours (three 8-hour days) including lectures, demonstrations, a field trip, and course review; and

(2) A closed-book written exam of at least 100 multiple choice questions and a minimum passing score of at least 70 percent.

(E) For Contractor/Supervisors:

(1) Course length must be a minimum of 40 hours (five 8-hour days) including lectures, demonstrations, and instruction on individual respirator fit-testing, course review, and a minimum of 14 hours of hands-on training; and

(2) A closed-book written exam of 100 multiple choice questions with a minimum passing score of 70 percent.

(F) For Air Monitors**:**

(1) All persons seeking accreditation as an Air Monitor shall complete a 40-hour (five 8-hour days) Contractor/Supervisor training course as outlined in this section and an Air Monitoring training course; unless, the applicant possesses certification as a Certified Industrial Hygienist, then current Certified Industrial Hygienist certification will replace the requirement of the Air Monitoring training course. Air Monitors are required to take the Contractor/Supervisor course and the applicable refresher course. Possession of current and valid Contractor/Supervisor accreditation shall be a prerequisite for admission to the Air Monitoring training course. Course length must be a minimum of 12 hours (one and one-half 8-hour days) including lectures, demonstrations, instruction, course review, and a minimum of four hours of hands-on training; and

(2) A closed-book written exam of 50 multiple choice questions with a minimum passing score of 70 percent.

Reg. 21.1803 Separate Discipline Training

Each discipline shall have its own separate and distinct training course and shall not be combined with any other training courses unless otherwise specified herein.

Reg. 21.1804 Examination

A member of the licensed training provider staff must be present at all times during the written examination.

Reg. 21.1805 Department Representatives

Provisions shall be made to allow a representative of the Department to attend one or more presentations of any course conducted by a licensed training provider, without payment of any associated fees. This attendance shall be for the purpose of determining compliance with this regulation and the correctness of the information being presented. The Director may revoke, suspend, or deny the application of any training license on the basis of findings resulting from this attendance.

Reg. 21.1806 Out of State Training

Individuals who have successfully completed approved training courses conducted by a training provider not licensed in accordance with this regulation, or who received training by an Arkansas licensed training provider where the items listed in Reg. 21.1907 were not taught, shall attend a two hour awareness training course to learn about Arkansas asbestos regulatory requirements and policies. Such awareness training shall be conducted by a training provider which has been licensed in accordance with this regulation.

Reg. 21.1807 Minimum Record Keeping Requirements

All licensed training providers must comply with the following minimum record keeping requirements:

(A) Training course materials. A licensed training provider must retain copies of all instructional materials used in the delivery of the classroom training such as student manuals, instructor notebooks, and handouts.

(B) Instructor qualifications. A licensed training provider must retain copies of all instructors' résumés and any document referenced by the résumés, or, for published documents, a bibliography citation sufficient to allow for the document to be located. Records must accurately identify the instructors that taught each particular course for each date that a course is offered.

(C) Examinations. A licensed training provider must document that each person who receives an accreditation certificate for an initial training course has achieved a passing score on the examination. These records must clearly indicate:

(1) the date upon which the exam was administered,

(2) the training course title,

(3) the discipline for which the exam was given,

(4) the name of the person who supervised the exam,

(5) a copy of the exam, and

(6) the name and test score of each person taking the exam.

The topic and dates of the training course must correspond to those listed on that person's accreditation certificate.

(D) Accreditation certificates. The licensed training providers shall maintain records that document:

(1) the names of all persons who have been awarded certificates,

(2) their certificate numbers,

(3) the disciplines for which accreditation was conferred,

(4) training and expiration dates,

(5) the training location, and

(6) a class photograph which clearly shows the faces of each student successfully completing the initial course and a caption identifying each attendee. The photo is not required for Refresher Courses required at Chapter 20 of this regulation.

The licensed training provider shall maintain the records in a manner that allows verification by telephone of the information required in (1)-(6).

(E) Verification of certificate information. Providers of refresher training courses shall confirm that their students possess valid accreditation before granting course admission. Licensed training providers offering the initial Management Planner or Air Monitor training courses shall verify that students have met the prerequisite training and certification at the time of course admission.

(F) Records retention and access. The licensed training provider shall maintain all required records for a minimum of three years.

(G) The licensed training provider must allow reasonable access to all records required by this regulation and the MAP for the approval of asbestos training providers, to the Department and the EPA, on request.

(H) If a licensed training provider ceases to conduct training, the training provider shall notify the Department and allow the opportunity for the Department to take possession of that provider's asbestos training records.

(I) The Department may require a training provider to produce copies or provide for inspection of any of the asbestos training records or materials listed in this Section.

Reg. 21.1808 Accreditation Certificates

Each individual who successfully completes the requirements of a training course shall be presented with an accreditation certificate which contains the following information:

(A) The name of the individual who is being awarded the accreditation certificate;

(B) The accreditation certificate number;

(C) The disciplines for which the accreditation certificate is being awarded;

(D) The training date;

(E) The accreditation certificate expiration date; and

(F) A statement indicating the items listed in Reg. 21.1907 were taught.

CHAPTER 19: TRAINING COURSE CONTENT

Reg. 21.1901 Worker

The Worker training course shall adequately address the following topics:

(A) Physical characteristics of asbestos:

(1) Identification of asbestos;

(2) Aerodynamic characteristics;

(3) Typical uses;

(4) Physical appearance; and

(5) Summary of abatement control options.

(B) Potential health effects related to asbestos exposure:

(1) Nature of asbestos-related disease;

(2) Routes of exposure;

(3) Dose-response relationships and the lack of a safe exposure level;

(4) Synergistic effect between cigarette smoking and asbestos exposure;

(5) Latency periods for asbestos-related diseases; and

(6) Discussion of the relationship of asbestos exposure to asbestosis, lung cancer, mesothelioma, and cancers of other organs.

(C) Employee personal protective equipment:

(1) Classes and characteristics of respirator types;

(2) Limitations of respirators;

(3) Proper selection and inspection;

(4) Donning, use, maintenance and storage procedures for respirators;

(5) Methods for field testing of the face piece-to-face seal (positive and negative-pressure fit checks);

(6) Qualitative and quantitative fit testing procedures;

(7) Variability between field and laboratory protection;

(8) Factors that alter respiratory fit (e.g., facial hair);

(9) Components of a proper respiratory protection program;

(10) Selection and use of personal protective clothing;

(11) Use, storage, and handling of nondisposable clothing; and

(12) Regulations covering personal protective equipment.

(D) State-of-the-art work practices:

(1) Proper work practices for asbestos abatement activities, including descriptions of proper construction;

(2) Maintenance of barriers and decontamination enclosure systems;

(3) Positioning of warning signs;

(4) Lock-out of electrical and ventilation systems;

(5) Proper working techniques for minimizing fiber release;

(6) Use of wet methods;

(7) Use of negative pressure exhaust ventilation equipment;

(8) Use of HEPA vacuums;

(9) Proper cleanup and disposal procedures;

(10) Work practices for removal, encapsulation, enclosure, and repair of ACM;

(11) Emergency procedures for sudden releases;

(12) Potential exposure situations;

(13) Transport and disposal procedures; and

(14) Recommended and prohibited work practices.

(E) Personal hygiene:

(1) Entry and exit procedures for the work area;

(2) Use of showers;

(3) Avoidance of eating, drinking, smoking, and chewing (gum or tobacco) in the work area; and

(4) Potential exposures, such as family exposure.

(F) Additional safety hazards—Hazards encountered during abatement activities and how to deal with them, including:

(1) Electrical hazards;

(2) Heat stress;

(3) Air contaminants other than asbestos;

(4) Fire and explosion hazards;

(5) Scaffold and ladder hazard;

(6) Slips, trips, and falls; and

(7) Confined spaces.

(G) Medical monitoring—OSHA and EPA Worker Protection Rule requirements for physical examinations, including:

(1) Pulmonary function test,

(2) Chest x-rays, and

(3) Medical history for each employee.

(H) Air monitoring—Procedures to determine airborne concentrations of asbestos fibers, including:

(1) Descriptions of aggressive air sampling;

(2) Sampling equipment and methods;

(3) Reasons for air monitoring;

(4) Types of samples; and

(5) Interpretation of results.

(I) Relevant Federal, Arkansas, and local regulatory requirements, procedures, and standards, including but not limited to the items listed in Reg. 21.1907, with particular attention directed at relevant EPA, OSHA, and State regulations concerning asbestos abatement workers.

(J) Establishment of respiratory protection programs.

(K) Course review—A review of key aspects of the training course.

Reg. 21.1902 Contractor/Supervisor

The Contractor/Supervisor training course shall adequately address the following topics:

(A) The physical characteristics of asbestos and ACM:

(1) Identification of asbestos;

(2) Aerodynamic characteristics;

(3) Typical uses;

(4) Physical appearance;

(5) Review of hazard assessment considerations; and

(6) Summary of abatement control options.

(B) Potential health effects related to asbestos exposure:

(1) Nature of asbestos-related diseases;

(2) Routes of exposure;

(3) Dose-response relationships and the lack of a safe exposure level;

(4) Synergism between cigarette smoking and asbestos exposure; and

(5) Latency period for diseases.

(C) Employee personal protective equipment:

(1) Classes and characteristics of respirator types;

(2) Limitations of respirators;

(3) Proper selection and inspection;

(4) Donning, use, maintenance and storage procedures for respirators;

(5) Methods for field testing of the face piece-to-face seal (positive and negative-pressure fit checks);

(6) Qualitative and quantitative fit testing procedures;

(7) Variability between field and laboratory protection factors that alter respiratory fit (e. g., facial hair);

(8) Components of a proper respiratory protection program;

(9) Selection and use of personal protective clothing;

(10) Use, storage, and handling of nondisposable clothing; and

(11) Regulations covering personal protective equipment.

(D) State-of-the-art work practices. Proper work practices for asbestos abatement activities including:

(1) Descriptions of proper construction and maintenance of barriers and decontamination enclosure systems;

(2) Positioning of warning signs;

(3) Lock-out of electrical and ventilation systems;

(4) Proper working techniques for minimizing fiber release;

(5) Use of wet methods;

(6) Use of negative pressure exhaust ventilation equipment;

(7) Use of HEPA vacuums and proper cleanup and disposal procedure;

(8) Work practices for removal, encapsulation, enclosure, and repair of ACM;

(9) Emergency procedures for unplanned releases;

(10) Potential exposure situations;

(11) Transport and disposal procedures and recommended and prohibited work practices; and

(12) New abatement-related techniques and methodologies may be discussed.

(E) Personal hygiene:

(1) Entry and exit procedures for the work area;

(2) Use of showers;

(3) Avoidance of eating, drinking, smoking, and chewing (gum or tobacco) in the work area; and

(4) Potential exposures, such as family exposure, shall also be included.

(F) Additional safety hazards. Hazards encountered during abatement activities and how to deal with them, including:

(1) Electrical hazards;

(2) Heat stress;

(3) Air contaminants other than asbestos;

(4) Fire and explosion hazards;

(5) Scaffold and ladder hazards;

(6) Slips, trips, and falls; and

(7) Confined spaces.

(G) Medical monitoring. OSHA and EPA Worker Protection Rule requirements for physical examinations including:

(1) Pulmonary function test;

(2) Chest X-rays; and

(3) Medical history for each employee.

(H) Air monitoring. Procedures to determine airborne concentrations of asbestos fibers including:

(1) Descriptions of aggressive air sampling;

(2) Sampling equipment and methods;

(3) Reasons for air monitoring;

(4) Types of samples; and

(5) Interpretation of results.

(I) Relevant Federal, Arkansas, and local regulatory requirements, procedures and standards including:

(1) Requirements of TSCA Title II;

(2) National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61), Subparts A (General Provisions) and M (National Emission Standard for Asbestos);

(3) OSHA standards for permissible exposure to airborne concentrations of asbestos fibers respiratory protection (29 CFR 1910.134) and subsequent changes;

(4) OSHA Asbestos Construction Standard (29 CFR 1926.1101) or any subsequent revisions;

(5) EPA Worker Protection Rule (40 CFR Part 763, Subpart G) or any subsequent revisions, and

(6) The items listed in Reg. 21.1907.

(J) Respiratory Protection Programs and Medical Monitoring Programs.

(K) Insurance and liability issues:

(1) Contractor issues;

(2) Worker's compensation coverage and exclusions;

(3) Third-party liabilities and defenses; and

(4) Insurance coverage and exclusions.

(L) Record keeping for asbestos abatement projects:

(1) Records required by Federal, Arkansas, and local regulations; and

(2) Records recommended for legal and insurance purposes;

(M) Supervisory techniques for asbestos abatement activities: Supervisory practices to enforce and reinforce the required work practices and discourage unsafe work practices.

(N) Contract specifications. Discussions of key elements that are included in contract specifications.

(O) Course review: A review of key aspects of the training course.

Reg. 21.1903 Inspector

The Inspector training course shall adequately address the following topics:

(A) Background information on asbestos:

(1) Identification of asbestos and examples;

(2) Discussion of the uses and locations of asbestos in buildings; and

(3) Physical appearance of asbestos.

(B) Potential health effects related to asbestos exposure:

(1) Nature of asbestos-related diseases;

(2) Routes of exposure;

(3) Dose-response relationships and the lack of a safe exposure level;

(4) Synergistic effect between cigarette smoking and asbestos exposure;

(5) Latency periods for asbestos-related diseases; and

(6) Discussion of the relationship of asbestos exposure to asbestosis, lung cancer, mesothelioma and cancers of other organs.

(C) Functions/qualifications and role of Inspectors:

(1) Discussions of prior experience and qualifications for Inspectors and Management Planners;

(2) Discussions of the functions of an accredited Inspector as compared to those of an accredited Management Planner; and

(3) Discussion of inspection process including inventory of ACM and physical assessment.

(D) Legal liabilities and defenses:

(1) Responsibilities of the Inspector and Management Planner;

(2) Discussion of comprehensive general liability policies;

(3) Claims-made and occurrence-based policies;

(4) Environmental and pollution liability policy clauses;

(5) State liability insurance requirements; and

(6) Bonding and the relationship of insurance availability to bond availability.

(E) Understanding building systems. The interrelationship between building systems including:

(1) Overview of common building physical plan layout;

(2) Heating, ventilation, and air conditioning (HVAC) system types;

(3) Physical organization, and where asbestos is found on HVAC components;

(4) Building mechanical systems, their types and organization, and where to look for asbestos on such systems;

(5) Inspecting electrical systems, including appropriate safety precautions; and

(6) Reading blueprints and as-built drawings.

(F) Public/employee/building occupant relations:

(1) Notifying employee organizations about the inspection;

(2) Signs to warn building occupants;

(3) Tact in dealing with occupants and the press;

(4) Scheduling of inspections to minimize disruptions; and

(5) Education of building occupants about actions being taken.

(G) Pre-inspection planning and review of previous inspection records:

(1) Scheduling the inspection and obtaining access;

(2) Building record review;

(3) Identification of probable homogeneous areas from blueprints or as-built drawings;

(4) Consultation with maintenance or building personnel;

(5) Review of previous inspection, sampling, and abatement records of a building; and

(6) Role of the Inspector in exclusions for previously performed inspections

(H) Inspecting for friable and nonfriable ACM and assessing the condition of friable ACM:

(1) Procedures to follow in conducting visual inspections for friable and nonfriable ACM;

(2) Types of building materials that may contain asbestos;

(3) Touching materials to determine friability;

(4) Open return air plenums and their importance in HVAC systems;

(5) Assessing damage, significant damage, potential damage, and potential significant damage;

(6) Amount of suspected ACM, both in total quantity and as a percentage of the total area;

(7) Type of damage;

(8) Accessibility;

(9) Material's potential for disturbance;

(10) Known or suspected causes of damage or significant damage; and

(11) Deterioration as assessment factors.

(I) Bulk sampling/documentation of asbestos:

(1) Detailed discussion of the "Simplified Sampling Scheme for Friable Surfacing Materials (EPA 560/5-85-03 0ctober 1985)" and any subsequent revisions;

(2) Techniques to ensure sampling in a randomly distributed manner for other than friable surfacing materials;

(3) Sampling of nonfriable materials;

(4) Techniques for bulk sampling;

(5) Inspector sampling and repair equipment;

(6) Patching or repair of damage from sampling;

(7) Discussion of polarized light microscopy;

(8) Choosing an accredited laboratory to analyze bulk samples; and

(9) Quality control and quality assurance procedures.

(J) Inspector respiratory protection and personal protective equipment:

(1) Classes and characteristics of respirator types;

(2) Limitations of respirators;

(3) Proper selection and inspection;

(4) Donning, use, maintenance, and storage procedures for respirators;

(5) Methods for field testing of the face piece-to-face seal (positive and negative-pressure fit checks);

(6) Qualitative and quantitative fit testing procedures;

(7) Variability between field and laboratory protection factors that alter respiratory fit (e.g., facial hair);

(8) Components of a proper respiratory protection program;

(9) Selection and use of personal protective clothing; and

(10) Use, storage, and handling of nondisposable clothing.

(K) Record keeping and writing the inspection report:

(1) Labeling of samples and keying sample identification to sampling location;

(2) Recommendations on sample labeling;

(3) Detailing of ACM inventory;

(4) Photographs of selected sampling areas and examples of ACM condition; and

(5) Information required for school buildings under TSCA Title II, Section 203(i)(1).

(L) Regulatory review. The following topics should be covered:

(1) NESHAP (40 CFR Part 61, Subparts A and M); EPA Worker Protection Rule (40 CFR Part 763, Subpart G);

(2) OSHA Asbestos Construction Standard (29 CFR 1926.1101);

(3) OSHA respirator requirements (29 CFR 1910.134); The Friable Asbestos in Schools Rule (40 CFR Part 763, Subpart E); and

(4) Applicable Arkansas and local regulations including but not limited to the items listed in Reg. 21.1907, and the effects, if any, on public and nonpublic schools or commercial or public buildings.

(M) Field trip. This includes a field exercise including:

(1) Walk-through inspection;

(2) On-site discussion about information gathering and the determination of sampling locations ;

(3) On-site practice in physical assessment; and

(4) Classroom discussion of field exercise.

(N) Course review. A review of key aspects of the training course.

Reg. 21.1904 Management Planner

The Management Planner training course shall adequately address the following topics:

(A) Course overview. The role and responsibilities of the Management Planner:

(1) Operations and maintenance programs;

(2) Setting work priorities; and

(3) Protection of building occupants.

(B) Evaluation/interpretation of survey results:

(1) Review of TSCA Title II requirements for inspection and management plans for school buildings as given in Section 203(i)(1) of TSCA Title II;

(2) Interpretation of field data and laboratory results; and

(3) Comparison of field inspector's data sheet with laboratory results and site survey.

(C) Hazard assessment:

(1) Amplification of the difference between physical assessment and hazard assessment;

(2) Role of the Management Planner in hazard assessment;

(3) Explanation of significant damage, potential damage, and potential significant damage;

(4) Use of a description (or decision tree) code for assessment of ACM;

(5) Assessment of friable ACM; and

(6) Relationship of accessibility, vibration sources, use of adjoining space and air plenums and other factors to hazard assessment.

(D) Legal implications:

(1) Liability;

(2) Insurance issues specific to planners;

(3) Liabilities associated with interim control measures, in-house maintenance, repair and removal; and

(4) Use of results from previously performed inspections.

(E) Evaluation and selection of control options:

(1) Overview of encapsulation;

(2) Enclosure;

(3) Interim operations and maintenance and removal;

(4) Advantages and disadvantages of each method;

(5) Response actions described via a decision tree or other appropriate method;

(6) Work practices for each response action;

(7) Staging and prioritizing of work in both vacant and occupied buildings; and

(8) Need for containment barriers and decontamination in response actions.

(F) Role of other professionals:

(1) Use of industrial hygienists, engineers, and architects in developing technical specifications for response actions;

(2) Any requirements that may exist for architect sign-off of plans; and

(3) Team approach to design of high-quality job specifications.

(G) Developing an operations and maintenance (O & M) plan:

(1) Purpose of the plan;

(2) Discussion of applicable EPA guidance documents;

(3) What actions should be taken by custodial staff; proper cleaning procedures;

(4) Steam cleaning and HEPA vacuuming;

(5) Reducing disturbance of ACM;

(6) Scheduling O & M for off-hours;

(7) Rescheduling or canceling renovation in areas with ACM;

(8) Boiler room maintenance;

(9) Disposal of ACM;

(10) In-house procedures for ACM-bridging and penetrating encapsulant;

(11) Pipe fittings, and metal sleeves;

(12) Polyvinyl chloride (PVC), canvas, and wet wraps;

(13) Muslin with straps, fiber mesh cloth;

(14) Mineral wool and insulating cement;

(15) Discussion of employee protection programs and staff training; and

(16) Case study in developing an O & M plan (development, implementation process, and problems that have been experienced).

(H) Regulatory review. Focusing on:

(1) The OSHA Asbestos Construction Standard found at 29 CFR 1926.1101 and subsequent revisions;

(2) NESHAP found at 40 CFR Part 61, Subpart A (General Provisions) and M (National Emission Standard for Asbestos);

(3) EPA Worker Protection Rule found at 40 CFR Part 763, Subpart G; TSCA Title II; and

(4) Applicable Arkansas regulations including but not limited to the items listed in Reg. 21.1907.

(I) Record keeping of the Management Planner:

(1) Use of field inspector's data sheet along with laboratory results;

(2) Ongoing record keeping as a means to track asbestos disturbance; and

(3) Procedures for record keeping.

(J) Assembling and submitting the management plan.

(1) Plan requirements for schools in TSCA Title II Section 203(I)(1); and

(2) The management plan as a planning tool.

(K) Financing abatement actions:

(1) Economic analysis and cost estimates;

(2) Development of cost estimates;

(3) Present costs of abatement versus future operation and maintenance cost; and

(4) Asbestos School Hazard Abatement Act grants and loans.

(L) Course review. A review of key aspects of the training course.

Reg. 21.1905 Project Designer

The Project Designer training course shall adequately address the following topics:

(A) Background information on asbestos.

(1) Identification of asbestos;

(2) Examples and discussion of the uses and locations of asbestos in buildings; and

(3) Physical appearance of asbestos.

(B) Potential health effects related to asbestos exposure:

(1) Nature of asbestos-related disease and routes of exposure;

(2) Dose-response relationships and the lack of a safe exposure level;

(3) Synergistic effect between cigarette smoking and asbestos exposure;

(4) Latency periods for asbestos-related diseases; and

(5) Discussion of the relationship of asbestos exposure to asbestosis, lung cancer, mesothelioma, and cancers of other organs.

(C) Overview of abatement construction projects:

(1) Abatement as a portion of a renovation project; and

(2) OSHA requirements for notification of other contractors on a multi-employer site (29 CFR 1926.1101).

(D) Safety system design specifications:

(1) Design, construction and maintenance of containment barriers and decontamination enclosure systems;

(2) Positioning of warning signs;

(3) Electrical and ventilation system lockout;

(4) Proper working techniques for minimizing fiber release;

(5) Entry and exit procedures for the work area;

(6) Use of wet methods;

(7) Proper techniques for initial cleaning;

(8) Use of negative-pressure exhaust ventilation equipment;

(9) Use of HEPA vacuums;

(10) Proper cleanup and disposal of asbestos;

(11) Work practices as they apply to encapsulation, enclosure, and repair; and

(12) Use of glovebags and a demonstration of glovebag use.

(E) Field trip. A visit to an abatement site or other suitable building site, including on-site discussions of abatement design and building walk-through inspection and a discussion of the rationale for the concept of functional spaces during the walk-through.

(F) Employee personal protective equipment:

(1) Classes and characteristics of respirator types;

(2) Limitations of respirators;

(3) Proper selection and inspection;

(4) Donning, use, maintenance and storage procedures for respirators;

(5) Methods for field testing of the face piece-to-face seal (positive and negative-pressure fit checks);

(6) Qualitative and quantitative fit testing procedures;

(7) Variability between field and laboratory protection factors that alter respiratory fit (e.g., facial hair);

(8) Components of a proper respiratory protection program;

(9) Selection and use of personal protective clothing;

(10) Use, storage, and handling of nondisposable clothing; and

(11) Regulations covering personal protective equipment.

(G) Additional safety hazards. Hazards encountered during abatement activities and how to deal with them including:

(1) Electrical hazards;

(2) Heat stress;

(3) Contaminants other than asbestos; and

(4) Fire and explosion hazards.

(H) Fiber aerodynamics and control:

(1) Aerodynamic characteristics of asbestos fibers;

(2) Importance of proper containment barriers;

(3) Settling time for asbestos fibers;

(4) Wet methods in abatement;

(5) Aggressive air monitoring following abatement, and

(6) Aggressive air movement and negative-pressure exhaust ventilation as a cleanup method.

(I) Designing abatement solutions:

(1) Discussions of removal, enclosure, and encapsulation methods; and

(2) Asbestos waste disposal.

(J) Final clearance process:

(1) Discussion of the need for a written sampling rationale for aggressive final air clearance;

(2) Requirements of a complete visual inspection; and

(3) Relationship of the visual inspection to final air clearance.

(K) Budgeting/cost estimating:

(1) Development of cost estimates;

(2) Present costs of abatement versus future operation and maintenance costs; and

(3) Setting priorities of abatement jobs to reduce costs.

(L) Writing abatement specifications:

(1) Preparation of and need for a written project design;

(2) Means and methods specifications versus performance specifications;

(3) Design of abatement in occupied buildings;

(4) Modification of guide specifications for a particular building;

(5) Worker and building occupant health/medical considerations; and

(6) Replacement of ACM with nonasbestos substitutes.

(M) Preparing abatement drawings:

(1) Significance and need for drawings;

(2) Use of as-built drawings as base drawings;

(3) Use of inspection photographs and on-site reports;

(4) Methods of preparing abatement drawings;

(5) Diagraming containment barriers;

(6) Relationship of drawings to design specifications; and

(7) Particular problems related to abatement drawings.

(N) Contract preparation and administration.

(O) Legal/liabilities/defenses:

(1) Insurance considerations;

(2) Bonding and hold-harmless clauses;

(3) Use of abatement contractor's liability insurance; and

(4) Claims-made versus occurrence-based policies.

(P) Replacement of asbestos with asbestos-free substitutes.

(Q) Role of other consultants:

(1) Development of technical specification sections by industrial hygienists or engineers; and

(2) Multi-disciplinary team approach to abatement design.

(R) Occupied buildings:

(1) Special design procedures required in occupied buildings;

(2) Education of occupants;

(3) Extra monitoring recommendations;

(4) Staging of work to minimize occupancy exposure; and

(5) Scheduling of renovation to minimize exposure.

(S) Relevant Federal, Arkansas and local regulatory requirements, procedures and standards, including, but not limited to the items listed in Reg. 21.1907 and:

(1) Requirements of TSCA Title II;

(2) NESHAP (40 CFR Part 61) Subparts A (General Provisions) and M (National Emission Standard for Asbestos);

(3) OSHA Respirator Standard found in 29 CFR 1910.134;

(4) EPA Worker Protection Rule found in 40 CFR Part 763, Subpart G;

(5) OSHA Asbestos Construction Standard found in 29 CFR 1926.1101; and

(6) OSHA Hazard Communication Standard found in 29 CFR 1926.59.

(T) Course review: A review of key aspects of the training course.

Reg. 21.1906 Air Monitor

The Air Monitor training course shall adequately address the following topics:

(A) Generally, types of air monitoring:

(1) Personal air monitoring;

(2) Area air monitoring;

(3) Preclearance air monitoring; and

(4) Clearance air monitoring;

(B) Purpose and intent of clearance air monitoring;

(C) How to conduct clearance air monitoring;

(D) How to conduct aggressive sampling;

(E) Calibration of instruments;

(F) Selection of appropriate equipment and media;

(G) Sample placement;

(H) Calculations, chain of custody, preparation of reports, and sample labeling;

(I) General discussion of laboratories;

(J) Health considerations including decontaminating the equipment and the person performing the air monitoring;

(K) Hands-on demonstration of the following:

(5) Calculations;

(6) Calibration of instruments;

(7) Placement of air monitors;

(8) Aggressive air monitoring;

(9) Decontamination procedures; and

(10) Labeling; and

(L) Course overview.

Reg. 21.1907 Out of State Training

Arkansas regulatory awareness training course is a 2-hour course for individuals who have successfully completed an ASHARA-approved training course conducted by a training provider not licensed in accordance with this regulation. The course shall address, at a minimum, the following topics:

(A) The Department's relationship with the EPA, including the delegation of authority to operate Federal regulations;

(B) The Department's authority to enforce regulations on Federal facilities;

(C) The difference between NESHAP and this regulation;

(D) The relationship between the Department and OSHA; and

(E) The certification and licensing requirements in Arkansas.

CHAPTER 20: REFRESHER TRAINING COURSE

Reg. 21.2001 Refresher Training

Asbestos abatement Contractor/Supervisors, Inspectors, Management Planners, Project Designers, and Workers shall annually attend a refresher training course for reaccreditation in their respective disciplines, with the exception that Air Monitors will receive the refresher training through the Contractor/Supervisors training course.

After completing the annual refresher course, each person shall be eligible to apply to the Department to have his or her State of Arkansas certification renewed in accordance with Chapter 16 of this regulation.

Reg. 21.2002 Minimum Length

The minimum length for each refresher course for each discipline shall be as follows:

(A) For Workers, one full day (eight hours);

(B) For Contractor/supervisors, one full day (eight hours);

(C) For Inspectors, one-half (½) day (four hours);

(D) For Management Planners, one-half (½) day (four hours) of inspector refresher training and one-half (½) day of management planning refresher course; and

(E) For Project Designers, one full day (eight hours).

Reg. 21.2003 Minimum Requirements

Each refresher training course shall, at a minimum, address the following:

(A) Changes in Federal and State regulations;

(B) Developments in state-of-the-art procedures; and

(C) Review of key aspects of the initial training course.

Reg. 21.2004 Separate Refresher Courses

Refresher courses shall be conducted as separate and distinct courses and shall not be combined with any other training during the period of the refresher course.

CHAPTER 21: DENIAL AND REVOCATION

Reg. 21.2101 Denial, Suspension and Revocation

The Department may deny the application, suspend or revoke the license or certification of Asbestos Abatement Contractors, Asbestos Abatement Consultants, Air Monitors, Contractor/Supervisors, Inspectors, Management Planners, Project Designers, or Workers for reasons including, but not limited to, the following:

(A) Performing work requiring accreditation at a job site without being in physical possession of initial and current accreditation certificates and/or licenses;

(B) Permitting the duplication and/or use of one's own accreditation certificate and/or license by another;

(C) Performing work for which certification and/or licensing has not been received;

(D) Obtaining certification from a training provider that does not have approval to offer training for the particular discipline from either EPA or from the Department;

(E) Failure to comply with the terms of a Consent Administrative Order ("CAO"), a Default Administrative Order ("DAO"), an Emergency Order ("EO"), or any other final order issued by the Department and/or the Commission.

(F) Being subject to a final order imposing a civil penalty or conviction under Section 16 TSCA, 15 U.S.C. 2615 or 2647, for violations of 40 CFR Part 763, or Section 113 of the Clean Air Act, 42 U.S.C. 7413, for violations of 40 CFR Part 61, Subpart M; or

(G) Any violation of the provisions of the Act or this regulation.

Reg. 21.2102 Non-accredited Persons

The following persons are not accredited for purposes of this regulation:

(A) Any person who obtains accreditation through fraudulent representation of training or examination documents;

(B) Any person who obtains training documentation through fraudulent means;

(C) Any person who gains admission to and completes refresher training through fraudulent representation of initial or previous refresher training documentation; or

(D) Any person who obtains accreditation through fraudulent representation of accreditation requirements such as education, training, professional registration, or experience.

Reg. 21.2103 Training Licensing

Training course approval or Training Provider licensing may be revoked for the following reasons:

(A) Misrepresentation of the extent of a training course's approval pursuant to this regulation;

(B) Failure to submit required information or notifications in a timely manner;

(C) Failure to maintain requisite records;

(D) Falsification of accreditation records, instructor qualifications, or other accreditation information;

(E) Failure to adhere to the training standards and requirements of the EPA MAP or State Accreditation Program, as appropriate;

(F) Failure to comply with the terms of a NOV or CAO issued by the Department;

(G) Being subject to a final order imposing a civil penalty or conviction under Section 16 TSCA, 15 U.S.C. 2615 or 2647, for violations of 40 CFR Part 763, or Section 113 of the Clean Air Act, 42 U.S.C. 7413, for violations of 40 CFR Part 61, Subpart M; or

(H) Any violation of the provisions of the Act or this regulation.

CHAPTER 22: FEE ASSESSMENT

Reg. 21.2201 Fee Assessment

In order to support the costs of operating the asbestos program in the state of Arkansas, the Department will assess the fees as described in this section.

Reg. 21.2202 Asbestos Abatement Consultant

Any Asbestos Abatement Consultant desiring a license to conduct asbestos abatement activities will be assessed an annual fee of $375.

Reg. 21.2203 Asbestos Abatement Contractor

Any Asbestos Abatement Contractor desiring a license to conduct asbestos abatement activities will be assessed an annual fee of $375.

Reg. 21.2204 Training Provider

Any Training Provider desiring a license to conduct asbestos training courses will be assessed an annual fee of $375.

Reg. 21.2205 Air Monitor

Any person desiring certification as an Air monitor will be assessed an annual fee of $115.

Reg. 21.2206 Contractor/Supervisor

Any person desiring certification as a Contractor/Supervisor will be assessed an annual fee of $115.

Reg. 21.2207 Inspector

Any person desiring certification as an Inspector will be assessed an annual fee of $115.

Reg. 21.2208 Management Planner

Any person desiring certification as a Management Planner will be assessed an annual fee of $115.

Reg. 21.2209 Project Designer

Any person desiring certification as a Project Designer will be assessed an annual fee of $115.

Reg. 21.2210 Worker

Any person desiring certification as a Worker will be assessed an annual fee of $25.

Reg. 21.2211 Multiple Certificates

Any person desiring certification in two or more disciplines, including Air Monitor, Contractor/Supervisor, Inspector, Management Planner, or Project Designer will be assessed a $115 fee for the first certificate and a $55 fee for each additional discipline within the same twelve month period.

Reg. 21.2212 Replacement

Any person requesting a replacement for any stolen, lost, or destroyed certification or license shall be assessed a fee of $15.

Reg. 21.2213 Processing

Any person desiring processing of certificates to be completed within thirty-six hours of submission to the Department will be assessed an expedited processing fee of $50.

Reg. 21.2214 Demolition – Greater than One Square/Linear Foot of ACM

Any NOI involving demolition of a facility as described in Reg. 21.601 and Reg. 21.602 which contains greater than one square/one linear foot of ACM shall be accompanied by a fee of $75. There is no fee for a NOI involving demolition of a facility that contains one square/one linear foot of ACM or less.

Reg. 21.2215 Demolition – 160 Square/260 Linear Feet or More of RACM

Any NOI involving demolition of a facility as described in Reg. 21.601 and Reg. 21.602 which contains 160 square/260 linear feet or more of RACM shall be accompanied by a fee of $375.

Reg. 21.2216 Reserved

RESERVED

Reg. 21.2217 Reserved

RESERVED

Reg. 21.2218 Renovation – 160 Square/260 Linear to 5,000 Square/Linear Feet of RACM

Any NOI involving renovation of a facility as described in Reg. 21.603 which contains 160 square/260 linear to 5,000 square/5,000 linear feet of RACM shall be accompanied by a fee of $225.

Reg. 21.2219 Renovation – 5001 Square/Linear to 10,000 Square/Linear Feet of RACM

Any NOI involving renovation of a facility as described in Reg. 21.603 which contains 5001 square/linear to 10,000 square/10,000 linear feet of RACM shall be accompanied by a fee of $375.

Reg. 21.2220 Renovation – Greater than 10,000 Square/Linear Feet of RACM

Any NOI involving renovation of a facility as described in Reg. 21.603 which contains more than 10,000 square/10,000 linear feet of RACM shall be accompanied by a fee of $750.

Reg. 21.2221 Emergency Renovation NOI

Any NOI involving emergency renovation operations as described in Reg. 21.605 shall be accompanied by a fee of $225.

Reg. 21.2222 Annual NOI

Any NOI for a twelve-month notice as described in Reg. 21.604 shall be accompanied by a fee of $1,125.

Reg. 21.2223 NOI Revision

Any revision of an original NOI as described in Reg. 21.608 shall be accompanied by a submittal fee of $50.

CHAPTER 23: POWERS AND DUTIES OF THE DIRECTOR

Reg. 21.2301 Application Requirements

The Director, or his/her designee, shall review applications for initial Asbestos Abatement Contractor and Asbestos Abatement Consultant licenses and renewals thereof based upon a satisfactory submittal of the following:

(A) A completed application with submission of the annual license fee described in Chapter 22 of this regulation,

(B) Proof that the Asbestos Abatement Contractor has one full-time employee in a supervisory capacity, who has been certified by the Department as a Contractor/Supervisor.

Reg. 21.2302 Application Review

The Director, or his/her designee, shall review applications for initial certificates and renewals thereof based upon Chapters 15 and 16 of this regulation and any other information the Director, or his/her designee, deems relevant to determine whether such application shall be approved or denied.

Reg. 21.2303 Training Provider Licenses

The Director, or his/her designee, shall review applications for the initial training provider licenses and renewals based upon Chapters 15 and 16 of this regulation and any other information the Director, or his/her designee, deems relevant to determine whether such application shall be approved or denied.

Reg. 21.2304 Disapproval

The Director, or his/her designee, shall set forth to the applicant in writing the basis for a decision to disapprove an application for a license, certificate, renewal, or revocation. Any denial, disapproval, or revocation by the Director, or his/her designee, may be appealed as provided in the Commission's Regulation Number 8, Administrative Procedures.

Reg. 21.2305 Adoption by Reference

To establish minimum performance standards for the abatement of ACM under the Act, specific regulations promulgated by the EPA in 40 CFR Part 61, Subpart M (National Emissions Standards for Hazardous Air Pollutants) are hereby adopted as provisions of the regulation as though set forth herein line for line and word for word with the exception that all reference therein to the "Administrator" shall be considered as reference to the "Director of the Arkansas Department of Environmental Quality," and all reference to the "United States Environmental Protection Agency" shall be considered a reference to the "Arkansas Department of Environmental Quality"; further, the effective date of provisions adopted herein by reference as provisions of this regulation shall be the date such provisions are specified as being effective by the Commission in its rulemaking, and the effective date of the Federal regulations adopted herein shall have no bearing on the effective date of any provisions of this regulation. The following Federal regulations are hereby adopted from Title 40, Code of Federal Regulations, Part 61, Subpart M:

(A) Section 61.140;

(B) Section 61.141;

(C) Section 61.145;

(D) Section 61.147;

(E) Section 61.148;

(F) Section 61.150;

(G) Section 61.151;

(H) Section 61.152; and

(I) Section 61.154.

All are as adopted as final rules by the EPA on or before December 14, 2000 and Appendix C of Title 40, Code of Federal Regulations, Part 763, Subpart E as adopted as interim final rule by the United States Environmental Protection Agency on or before February 3, 1994. The Commission, within 180 days after the date of promulgation of any new or revised Federal regulations pertaining to National Emissions Standards for Hazardous Air Pollutants or the TSCA Asbestos Model Accreditation Plan, shall conduct rulemaking with reference to this regulation to adopt such provisions. Such new or revised federal regulations, upon the date of their publication as final rules of the EPA, shall constitute minimum guidelines to the Commission in formulating rulemaking proposals to this regulation but shall not be construed to limit or to interfere with the adoption of provisions more stringent than Federal regulations.

CHAPTER 24: RECIPROCITY

Reg. 21.2401 Reciprocity

(A) Individuals applying for an initial certification under this regulation who have not received training in accordance with this regulation by training providers licensed by the Department must submit:

(1) An original certificate of completion of a discipline specific training certificate issued by an EPA approved trainer, and

(2) An original certificate of completion of a two hour Arkansas Awareness class taught by an Arkansas licensed training provider.

(B) In lieu of past certificates, an applicant may submit the most current training certificate and a copy of a certificate for a current asbestos certification by a state or territory or tribe to which EPA has delegated authority, similar to the delegation to Arkansas, as described in Reg. 21.201 (B) of this regulation.

CHAPTER 25: REVIEW OF ACTIONS

Reg. 21.2501 Review of Actions

As provided in Section IV of the Act, an aggrieved party to any action taken under the authority of the Act of this regulation by the Director of the Department, with respect to licenses and certificates, shall have rights of redress as provided in Part I of the Arkansas Water and Air Pollution Control Act, as amended, including but not limited to, Ark. Code Ann. § 8-4-218 and the Arkansas Pollution Control and Ecology Commission Regulation No. 8.

CHAPTER 26: ENFORCEMENT DATE

Reg. 21.2601 Reserved

RESERVED

Reg. 21.2602 Reserved

RESERVED

CHAPTER 27: EFFECTIVE DATE

Reg. 21.2701 Effective Date

This regulation is effective 10 days after filing with the Secretary of State, the State Library and the Bureau of Legislative Research.

ARKANSAS REGISTER

Transmittal Sheet

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Secretary of State
Mark Martin
State Capitol, Suite 026
Little Rock, Arkansas 72201-1094
(501) 682-3527
www.sos.arkansas.gov

For Office Use Only:

Effective Date ____________ Code Number ____________

Name of Agency: Arkansas Pollution Control & Ecology Commission

Department: Arkansas Department of Environmental Quality

Contact: Stuart Spencer E-mail: spencer@adeq.state.ar.us Phone: 501-682-0750

Statutory Authority for Promulgating Rules: Ark. Code Ann. 8-1-203(b)(1)

Rule Title: Arkansas Asbestos Abatement Regulation: Docket No. 13-009-R; Minute Order 15-15

Intended Effective Date (Check One)		Date
☐ Emergency (ACA 25-15-204)	Legal Notice Published	08/28/13
☐ 30 Days After Filing (ACA 25-15-204)	Final Date for Public Comment	10/14/13
☒ Other 10 days after filing (Must be more than 30 days after filing date.)	Reviewed by Legislatice Council	12/03/14
	Adopted by State Agency	08/28/15

Electronic Copy of Rule submitted under ACA 25-15-218 by:

____
Contact Person E-mail Address Date

BY

FILED
REGISTER DIV.
SECRETARY OF STATE
STATE OF ARKANSAS

CERTIFICATION OF AUTHORIZED OFFICER

I Hereby Certify That The Attached Rules Were Adopted
In Compliance with Act 434 of 1967 the Arkansas Administrative Procedures Act. (ACA 25-15-201 et. seq.)

[signature]
Signature

(501) 682-7890 moulton@adeq.state.ar.us
Phone Number E-mail Address

Administrative Law Judge
Title

09/01/15
Date

ARKANSAS POLLUTION CONTROL & ECOLOGY COMMISSION
101 EAST CAPITOL
SUITE 205
LITTLE ROCK, ARKANSAS 72201
PHONE: (501) 682-7890
FAX: (501) 682-7891

September 1, 2015

Ms. Donna Davis
Administrative Rules and Regulations Committee
Room 433, State Capitol Building
Little Rock, Arkansas 72201

RE: Regulation No 21, Asbestos Abatement Regulation - **FINAL FILING**.

Dear Ms. Davis:

I am enclosing the following for filing with your office:

1. One (1) hard copy of the amendment to Regulation No 21, Asbestos Abatement Regulation.
2. One (1) copy of Commission Minute Order No. 15-15
3. One (1) copy of the Financial Impact Statement.

Please provide written confirmation of your receipt of these materials by file-marking the enclosed copy of this letter and returning it to me.

Thank you for your assistance in this matter.

Respectfully,

Charles Moulton

Charles Moulton
Administrative Law Judge

Enclosures

ARKANSAS STATE LIBRARY

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For Office Use Only	
Effective Date:	**Classification Number:**
Name of Agency: Arkansas Department of Environmental Quality	
Contact Person: Stuart Spencer	**Telephone: (501) 682-0750**
Statutory Authority for Promulgating Rules: Ark. Code Ann. §8-1-203(b)(1)	
Title of Rule: Regulation No 21, Asbestos Abatement Regulation; Docket No. 13-009-R	

Rule Status	Effective Date Status	Effective Date
☐ New Rule/Regulation	☐ Emergency	
Amended Rule/Regulation	10 Days after filing	September 11, 2015
☐ Repealed Rule/Regulation	☐ Other	
☐ Order	☐ Repealed	
☐ Emergency Rule/Regulation	Adopted by State Agency	

☐ Rule above is proposed and will be replaced by final version

☒ Financial and/or Fiscal Impact Statement Attached

Certification of Authorized Officer

I hereby certify that the attached rules were adopted in compliance with Act 434 of 1967 as amended.

Signature: Charles Moulton Date: September 1, 2015

Title: Administrative Law Judge

1/14/99

ARKANSAS POLLUTION CONTROL AND ECOLOGY COMMISSION

SUBJECT: Adoption of Amendments to Regulation 21, Arkansas Asbestos Abatement Regulation

DOCKET NO. 13-009-R

MINUTE ORDER NO. 15 - 15

PAGE 1 OF 1

Pursuant to public notice and hearing, and in consideration of public comments received, the Arkansas Pollution Control and Ecology Commission hereby adopts amendments to Regulation No. 21, Arkansas Asbestos Abatement Regulation.

PROMULGATED THIS 28th DAY OF AUGUST 2015, BY ORDER OF THE ARKANSAS POLLUTION CONTROL AND ECOLOGY COMMISSION.

By: Ann Henry
Ann Henry, Chair

Attest: Becky W Keogh
Becky Keogh, Director

COMMISSIONERS

JHB	**J. Bates**	MMG	**M. Goggans**
	L. Bengal		**R. Moss, Jr.**
JHC	**J. Chamberlin**	RR	**R. Reynolds**
RC	**R. Chastain**	WL	**W. Stites**
JSF	**J. Fox**	BW	**B. White**
CG	**C. Gardner**		**R. Young**

Ann Henry
Chair, Ann Henry

Submitted by Stuart Spencer DATE PASSED: 08/28/15

Appendix C

40 C.F.R. Part 63 Subpart AAAA—National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills

Title 40 —Protection of Environment
Chapter I —Environmental Protection Agency
Subchapter C —Air Programs
Part 63 —National Emission Standards for Hazardous Air Pollutants for Source Categories

Authority: 42 U.S.C. 7401 *et seq.*

Source: 57 FR 61992, Dec. 29, 1992, unless otherwise noted.

Subpart AAAA—National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills

Source: 85 FR 17261, Mar. 26, 2020, unless otherwise noted.

WHAT THIS SUBPART COVERS

§ 63.1930 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants for existing and new municipal solid waste (MSW) landfills.

(a) Before September 28, 2021, all landfills described in § 63.1935 must meet the requirements of 40 CFR part 60, subpart WWW, or an approved state or federal plan that implements 40 CFR part 60, subpart Cc, and requires timely control of bioreactors and additional reporting requirements. Landfills must also meet the startup, shutdown, and malfunction (SSM) requirements of the general provisions as specified in Table 1 to subpart AAAA of this part and must demonstrate compliance with the operating conditions by parameter monitoring results that are within the specified ranges. Specifically, landfills must meet the following requirements of this subpart that apply before September 28, 2021, as set out in: §§ 63.1955(a), 63.1955(b), 63.1965(a), 63.1965(c), 63.1975, 63.1981(a), 63.1981(b), and 63.1982, and the definitions of "Controlled landfill" and "Deviation" in § 63.1990.

(b) Beginning no later than September 27, 2021, all landfills described in § 63.1935 must meet the requirements of this subpart. A landfill may choose to meet the requirements of this subpart rather than the requirements identified in § 63.1930(a) at any time before September 27, 2021. The requirements of this subpart apply at all times, including during periods of SSM, and the SSM requirements of the General Provisions of this part do not apply.

§ 63.1935 Am I subject to this subpart?

You are subject to this subpart if you meet the criteria in paragraph (a) or (b) of this section.

(a) You are subject to this subpart if you own or operate an MSW landfill that has accepted waste since November 8, 1987, or has additional capacity for waste deposition and meets any one of the three criteria in paragraphs (a)(1) through (3) of this section:

(1) Your MSW landfill is a major source as defined in § 63.2 of subpart A.

(2) Your MSW landfill is collocated with a major source as defined in § 63.2 of subpart A.

(3) Your MSW landfill is an area source landfill that has a design capacity equal to or greater than 2.5 million megagrams (Mg) and 2.5 million cubic meters (m^3) and has estimated uncontrolled emissions equal to or greater than 50 megagrams per year (Mg/yr) NMOC as calculated according to § 63.1959.

(b) You are subject to this subpart if you own or operate an MSW landfill that has accepted waste since November 8, 1987, or has additional capacity for waste deposition, that includes a bioreactor, as defined in § 63.1990, and that meets any one of the criteria in paragraphs (b)(1) through (3) of this section:

(1) Your MSW landfill is a major source as defined in § 63.2 of subpart A.

(2) Your MSW landfill is collocated with a major source as defined in § 63.2 of subpart A.

(3) Your MSW landfill is an area source landfill that has a design capacity equal to or greater than 2.5 million Mg and 2.5 million m^3 and that is not permanently closed as of January 16, 2003.

§ 63.1940 What is the affected source of this subpart?

(a) An affected source of this subpart is an MSW landfill, as defined in § 63.1990, that meets the criteria in § 63.1935(a) or (b). The affected source includes the entire disposal facility in a contiguous geographic space where household waste is placed in or on land, including any portion of the MSW landfill operated as a bioreactor.

(b) A new affected source of this subpart is an affected source that commenced construction or reconstruction after November 7, 2000. An affected source is reconstructed if it meets the definition of reconstruction in § 63.2 of subpart A.

(c) An affected source of this subpart is existing if it is not new.

§ 63.1945 When do I have to comply with this subpart?

(a) If your landfill is a new affected source, you must comply with this subpart by January 16, 2003, or at the time you begin operating, whichever is later.

(b) If your landfill is an existing affected source, you must comply with this subpart by January 16, 2004.

§ 63.1947 When do I have to comply with this subpart if I own or operate a bioreactor?

You must comply with this subpart by the dates specified in § 63.1945(a) or (b). If you own or operate a bioreactor located at a landfill that is not permanently closed as of January 16, 2003, and has a design capacity equal to or greater than 2.5 million Mg and 2.5 million m^3, then you must install and operate a collection and control system that meets the criteria in § 63.1959(b)(2) according to the schedule specified in paragraph (a), (b), or (c) of this section.

(a) If your bioreactor is at a new affected source, then you must meet the requirements in paragraphs (a)(1) and (2) of this section:

(1) Install the gas collection and control system for the bioreactor before initiating liquids addition.

(2) Begin operating the gas collection and control system within 180 days after initiating liquids addition or within 180 days after achieving a moisture content of 40 percent by weight, whichever is later. If you choose to begin gas collection and control system operation 180 days after achieving a 40-percent moisture content instead of 180 days after liquids addition, use the procedures in §§ 63.1982(c) and (d) to determine when the bioreactor moisture content reaches 40 percent.

(b) If your bioreactor is at an existing affected source, then you must install and begin operating the gas collection and control system for the bioreactor by January 17, 2006, or by the date your bioreactor is required to install a gas collection and control system under 40 CFR part 60, subpart WWW; a federal plan; or an EPA-approved and effective state plan or tribal plan that applies to your landfill, whichever is earlier.

(c) If your bioreactor is at an existing affected source and you do not initiate liquids addition to your bioreactor until later than January 17, 2006, then you must meet the requirements in paragraphs (c)(1) and (2) of this section:

(1) Install the gas collection and control system for the bioreactor before initiating liquids addition.

(2) Begin operating the gas collection and control system within 180 days after initiating liquids addition or within 180 days after achieving a moisture content of 40 percent by weight, whichever is later. If you choose to begin gas collection and control system operation 180 days after achieving a 40-percent moisture content instead of 180 days after liquids addition, use the procedures in §§ 63.1982(c) and (d) to determine when the bioreactor moisture content reaches 40 percent.

[85 FR 17261, Mar. 26, 2020, as amended at 85 FR 64400, Oct. 13, 2020]

§ 63.1950 When am I no longer required to comply with this subpart?

You are no longer required to comply with the requirements of this subpart when your landfill meets the collection and control system removal criteria in § 63.1957(b).

§ 63.1952 When am I no longer required to comply with the requirements of this subpart if I own or operate a bioreactor?

If you own or operate a landfill that includes a bioreactor, you are no longer required to comply with the requirements of this subpart for the bioreactor provided you meet the conditions of either paragraph (a) or (b) of this section.

(a) Your affected source meets the control system removal criteria in § 63.1950 or the bioreactor meets the criteria for a nonproductive area of the landfill in § 63.1962(a)(3)(ii).

(b) The bioreactor portion of the landfill is a closed landfill as defined in § 63.1990, you have permanently ceased adding liquids to the bioreactor, and you have not added liquids to the bioreactor for at least 1 year. A closure report for the bioreactor must be submitted to the Administrator as provided in § 63.1981(g).

STANDARDS

§ 63.1955 What requirements must I meet?

(a) Before September 28, 2021, if alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping, or reporting provisions have already been approved under 40 CFR part 60, subpart WWW; subpart XXX; a federal plan; or an EPA-approved and effective state or tribal plan, these alternatives can be used to comply with this subpart, except that all affected sources must comply with the SSM requirements in subpart A of this part as specified in Table 1 of this subpart and all affected sources must submit compliance reports every 6 months as specified in § 63.1981(h), including information on all deviations that occurred during the 6-month reporting period. Deviations for continuous emission monitors or numerical continuous parameter monitors must be determined using a 3-hour monitoring block average. Beginning no later than September 28, 2021, the collection and control system design plan may include for approval collection and control systems that include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping, or reporting provisions, as provided in § 63.1981(d)(2).

(b) If you own or operate a bioreactor that is located at an MSW landfill that is not permanently closed and has a design capacity equal to or greater than 2.5 million Mg and 2.5 million m^3, then you must meet the requirements of this subpart, including requirements in paragraphs (b)(1) and (2) of this section.

(1) You must comply with this subpart starting on the date you are required to install the gas collection and control system.

(2) You must extend the collection and control system into each new cell or area of the bioreactor prior to initiating liquids addition in that area.

(c) At all times, beginning no later than September 27, 2021, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the owner or operator to make any further efforts to reduce emissions if the requirements of this subpart have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

§ 63.1957 Requirements for gas collection and control system installation and removal.

(a) ***Operation.*** Operate the collection and control device in accordance with the provisions of §§ 63.1958, 63.1960, and 63.1961.

(b) ***Removal criteria.*** The collection and control system may be capped, removed, or decommissioned if the following criteria are met:

(1) The landfill is a closed landfill (as defined in § 63.1990). A closure report must be submitted to the Administrator as provided in § 63.1981(f);

(2) The gas collection and control system has been in operation a minimum of 15 years or the landfill owner or operator demonstrates that the gas collection and control system will be unable to operate for 15 years due to declining gas flow; and

(3) Following the procedures specified in § 63.1959(c), the calculated NMOC emission rate at the landfill is less than 50 Mg/yr on three successive test dates. The test dates must be no less than 90 days apart, and no more than 180 days apart.

§ 63.1958 Operational standards for collection and control systems.

Each owner or operator of an MSW landfill with a gas collection and control system used to comply with the provisions of § 63.1957 must:

(a) Operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for:

(1) 5 years or more if active; or

(2) 2 years or more if closed or at final grade;

(b) Operate the collection system with negative pressure at each wellhead except under the following conditions:

(1) A fire or increased well temperature. The owner or operator must record instances when positive pressure occurs in efforts to avoid a fire. These records must be submitted with the semi-annual reports as provided in § 63.1981(h);

(2) Use of a geomembrane or synthetic cover. The owner or operator must develop acceptable pressure limits in the design plan;

(3) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes must be approved by the Administrator as specified in § 63.1981(d)(2);

(c) Operate each interior wellhead in the collection system as specified in 40 CFR 60.753(c), until the landfill owner or operator elects to meet the operational standard for temperature in paragraph (c)(1) of this section.

(1) Beginning no later than September 27, 2021, operate each interior wellhead in the collection system with a landfill gas temperature less than 62.8 degrees Celsius (145 degrees Fahrenheit).

(2) The owner or operator may establish a higher operating temperature value at a particular well. A higher operating value demonstration must be submitted to the Administrator for approval and must include supporting data demonstrating that the elevated parameter neither causes fires nor significantly inhibits anaerobic decomposition by killing methanogens. The demonstration must satisfy both criteria in order to be approved (*i.e.,* neither causing fires nor killing methanogens is acceptable).

(d)

(1) Operate the collection system so that the methane concentration is less than 500 parts per million (ppm) above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator must conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at no more than 30-meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan must be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30-meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

(2) Beginning no later than September 27, 2021, the owner or operator must:

(i) Conduct surface testing using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in § 63.1960(d).

(ii) Conduct surface testing at all cover penetrations. Thus, the owner or operator must monitor any cover penetrations that are within an area of the landfill where waste has been placed and a gas collection system is required.

(iii) Determine the latitude and longitude coordinates of each exceedance using an instrument with an accuracy of at least 4 meters. The coordinates must be in decimal degrees with at least five decimal places.

(e) Operate the system as specified in § 60.753(e) of this chapter, except:

(1) Beginning no later than September 27, 2021, operate the system in accordance to § 63.1955(c) such that all collected gases are vented to a control system designed and operated in compliance with § 63.1959(b)(2)(iii). In the event the collection or control system is not operating:

(i) The gas mover system must be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere must be closed within 1 hour of the collection or control system not operating; and

(ii) Efforts to repair the collection or control system must be initiated and completed in a manner such that downtime is kept to a minimum, and the collection and control system must be returned to operation.

(2) [Reserved]

(f) Operate the control system at all times when the collected gas is routed to the system.

(g) If monitoring demonstrates that the operational requirements in paragraph (b), (c), or (d) of this section are not met, corrective action must be taken as specified in § 63.1960(a)(3) and (5) or (c). If corrective actions are taken as specified in § 63.1960, the monitored exceedance is not a deviation of the operational requirements in this section.

[85 FR 17261, Mar. 26, 2020, as amended at 85 FR 64400, Oct. 13, 2020]

§ 63.1959 NMOC calculation procedures.

(a) Calculate the NMOC emission rate using the procedures specified in § 60.754(a) of this chapter, except:

(1) ***NMOC emission rate.*** Beginning no later than September 27, 2021 the landfill owner or operator must calculate the NMOC emission rate using either Equation 1 provided in paragraph (a)(1)(i) of this section or Equation 2 provided in paragraph (a)(1)(ii) of this section. Both Equation 1 and Equation 2 may be used if the actual year-to-year solid waste acceptance rate is known, as specified in paragraph (a)(1)(i) of this section, for part of the life of the landfill and the actual year-to-year solid waste acceptance rate is unknown, as specified in paragraph (a)(1)(ii) of this section, for part of the life of the landfill. The values to be used in both Equation 1 and Equation 2 are 0.05 per year for k, 170 cubic meters per megagram (m^3/Mg) for L_O, and 4,000 parts per million by volume (ppmv) as hexane for the C_{NMOC}. For landfills located in geographical areas with a 30-year annual average precipitation of less than 25 inches, as measured at the nearest representative official meteorologic site, the k value to be used is 0.02 per year.

(i)

(A) Equation 1 must be used if the actual year-to-year solid waste acceptance rate is known.

$$M_{NMOC} = \sum_{i=1}^{n} 2\,k\,L_o M_i \left(e^{-kt_i}\right)\left(C_{NMOC}\right)\left(3.6x10^{-9}\right) \text{ (Eq. 1)}$$

Where:

M_{NMOC} = Total NMOC emission rate from the landfill, Mg/yr.

k = Methane generation rate constant, year−1.

L_o = Methane generation potential, m^3/Mg solid waste.

M_i = Mass of solid waste in the ith section, Mg.

t_i = Age of the ith section, years.

C_{NMOC} = Concentration of NMOC, ppmv as hexane.

3.6 × 10−9 = Conversion factor.

(B) The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i if documentation of the nature and amount of such wastes is maintained.

(ii)

(A) Equation 2 must be used if the actual year-to-year solid waste acceptance rate is unknown.

$$M_{NMOC} = 2L_oR\,(e^{-kc} - e^{-kt})\,C_{NMOC}(3.6 \times 10^{-9})\ \text{(Eq. 2)}$$

Where:

M_{NMOC} = Mass emission rate of NMOC, Mg/yr.

L_o = Methane generation potential, m^3/Mg solid waste.

R = Average annual acceptance rate, Mg/yr.

k = Methane generation rate constant, $year^{-1}$.

t = Age of landfill, years.

C_{NMOC} = Concentration of NMOC, ppmv as hexane.

c = Time since closure, years; for active landfill c=0 and $e^{-kc} = 1$.

3.6×10^{-9} = Conversion factor.

(B) The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value of R, if documentation of the nature and amount of such wastes is maintained.

(2) *Tier 1.* The owner or operator must compare the calculated NMOC mass emission rate to the standard of 50 Mg/yr.

(i) If the NMOC emission rate calculated in paragraph (a)(1) of this section is less than 50 Mg/yr, then the landfill owner or operator must submit an NMOC emission rate report according to § 63.1981(c) and must recalculate the NMOC mass emission rate annually as required under paragraph (b) of this section.

(ii) If the calculated NMOC emission rate as calculated in paragraph (a)(1) of this section is equal to or greater than 50 Mg/yr, then the landfill owner must either:

(A) Submit a gas collection and control system design plan within 1 year as specified in § 63.1981(d) and install and operate a gas collection and control system within 30 months of the first annual report in which the NMOC emission rate equals or exceeds 50 Mg/yr, according to paragraphs (b)(2)(ii) and (iii) of this section;

(B) Determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the Tier 2 procedures provided in paragraph (a)(3) of this section; or

(C) Determine a site-specific methane generation rate constant and recalculate the NMOC emission rate using the Tier 3 procedures provided in paragraph (a)(4) of this section.

(3) *Tier 2.* The landfill owner or operator must determine the site-specific NMOC concentration using the following sampling procedure. The landfill owner or operator must install at least two sample probes per hectare, evenly distributed over the landfill surface that has retained waste for at least 2 years. If the landfill is larger than 25 hectares in area, only 50 samples are required. The probes should be evenly distributed across the sample area. The sample probes should be located to avoid known areas of nondegradable solid waste. The owner or operator must collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using EPA Method 25 or 25C of appendix A-7 to part 60. Taking composite samples from different probes into a single cylinder is allowed; however, equal sample volumes must be taken from each probe. For each composite, the sampling rate, collection times, beginning and ending cylinder vacuums, or alternative volume measurements must be recorded to verify that composite volumes are equal. Composite sample volumes should not be less than one liter unless evidence can be provided to substantiate the accuracy of smaller volumes. Terminate compositing before the cylinder approaches ambient pressure where measurement accuracy diminishes. If more than the required number of samples are taken, all samples must be used in the analysis. The landfill owner or operator must divide the NMOC concentration from EPA Method 25 or 25C of appendix A-7 to part 60 by 6 to convert from C_{NMOC} as carbon to C_{NMOC} as hexane. If the landfill has an active or passive gas removal system in place, EPA Method 25 or 25C samples may be collected from these systems instead of surface probes provided the removal system can be shown to provide sampling as representative as the two sampling probe per hectare requirement. For active collection systems, samples may be collected from the common header pipe. The sample location on the common header pipe must be before any gas moving, condensate removal, or treatment system equipment. For active collection systems, a minimum of three samples must be collected from the header pipe.

(i) Within 60 days after the date of completing each performance test (as defined in § 63.7 of subpart A), the owner or operator must submit the results according to § 63.1981(l)(1).

(ii) The landfill owner or operator must recalculate the NMOC mass emission rate using Equation 1 or Equation 2 provided in paragraph (a)(1)(i) or (ii) of this section and use the average site-specific NMOC concentration from the collected samples instead of the default value provided in paragraph (a)(1) of this section.

(iii) If the resulting NMOC mass emission rate is less than 50 Mg/yr, then the owner or operator must submit a periodic estimate of NMOC emissions in an NMOC emission rate report according to § 63.1981(c) and must recalculate the NMOC mass emission rate annually as required under paragraph (b) of this section. The site-specific NMOC concentration must be retested every 5 years using the methods specified in this section.

(iv) If the NMOC mass emission rate as calculated using the Tier 2 site-specific NMOC concentration is equal to or greater than 50 Mg/yr, the landfill owner or operator must either:

(A) Submit a gas collection and control system design plan within 1 year as specified in § 63.1981(d) and install and operate a gas collection and control system within 30 months according to paragraphs (b)(2)(ii) and (iii) of this section; or

(B) Determine a site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the Tier 3 procedures specified in paragraph (a)(4) of this section.

(4) *Tier 3.* The site-specific methane generation rate constant must be determined using the procedures provided in EPA Method 2E of appendix A-1 to part 60 of this chapter. The landfill owner or operator must estimate the NMOC mass emission rate using Equation 1 or Equation 2 in paragraph (a)(1)(i) or (ii) of this section and using a site-specific methane generation rate constant, and the site-specific NMOC concentration as determined in paragraph (a)(3) of this section instead of the default values provided in paragraph (a)(1) of this section. The landfill owner or operator must compare the resulting NMOC mass emission rate to the standard of 50 Mg/yr.

(i) If the NMOC mass emission rate as calculated using the Tier 2 site-specific NMOC concentration and Tier 3 site-specific methane generation rate is equal to or greater than 50 Mg/yr, the owner or operator must:

(A) Submit a gas collection and control system design plan within 1 year as specified in § 63.1981(d) and install and operate a gas collection and control system within 30 months of the first annual report in which the NMOC emission rate equals or exceeds 50 Mg/yr, according to paragraphs (b)(2)(ii) and (iii) of this section.

(B) [Reserved]

(ii) If the NMOC mass emission rate is less than 50 Mg/yr, then the owner or operator must recalculate the NMOC mass emission rate annually using Equation 1 or Equation 2 in paragraph (a)(1) of this section and using the site-specific Tier 2 NMOC concentration and Tier 3 methane generation rate constant and submit a periodic NMOC emission rate report as provided in § 63.1981(c). The calculation of the methane generation rate constant is performed only once, and the value obtained from this test must be used in all subsequent annual NMOC emission rate calculations.

(5) *Other methods.* The owner or operator may use other methods to determine the NMOC concentration or a site-specific methane generation rate constant as an alternative to the methods required in paragraphs (a)(3) and (4) of this section if the method has been approved by the Administrator.

(b) Each owner or operator of an affected source having a design capacity equal to or greater than 2.5 million Mg and 2.5 million m^3 must either comply with paragraph (b)(2) of this section or calculate an NMOC emission rate for the landfill using the procedures specified in paragraph (a) of this section. The NMOC emission rate must be recalculated annually, except as provided in § 63.1981(c)(1)(ii)(A).

(1) If the calculated NMOC emission rate is less than 50 Mg/yr, the owner or operator must:

(i) Submit an annual NMOC emission rate emission report to the Administrator, except as provided for in § 63.1981(c)(1)(ii); and

(ii) Recalculate the NMOC emission rate annually using the procedures specified in paragraph (a)(1) of this section until such time as the calculated NMOC emission rate is equal to or greater than 50 Mg/yr, or the landfill is closed.

(A) If the calculated NMOC emission rate, upon initial calculation or annual recalculation required in paragraph (b) of this section, is equal to or greater than 50 Mg/yr, the owner or operator must either: comply with paragraph (b)(2) of this section or calculate NMOC emissions using the next higher tier in paragraph (a) of this section.

(B) If the landfill is permanently closed, a closure report must be submitted to the Administrator as provided for in § 63.1981(f).

(2) If the calculated NMOC emission rate is equal to or greater than 50 Mg/yr using Tier 1, 2, or 3 procedures, the owner or operator must either:

(i) Submit a collection and control system design plan prepared by a professional engineer to the Administrator within 1 year as specified in § 63.1981(d) or calculate NMOC emissions using the next higher tier in paragraph (a) of this section. The collection and control system must meet the requirements in paragraphs (b)(2)(ii) and (iii) of this section.

(ii) Collection system. Install and start up a collection and control system that captures the gas generated within the landfill as required by paragraphs (b)(2)(ii)(B) or (C) and (b)(2)(iii) of this section within 30 months after:

(A) The first annual report in which the NMOC emission rate equals or exceeds 50 Mg/yr, unless Tier 2 or Tier 3 sampling demonstrates that the NMOC emission rate is less than 50 Mg.

(B) An active collection system must:

(*1*) Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control system equipment;

(*2*) Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of 5 years or more if active; or 2 years or more if closed or at final grade;

(*3*) Collect gas at a sufficient extraction rate; and

(*4*) Be designed to minimize off-site migration of subsurface gas.

(C) A passive collection system must:

(*1*) Comply with the provisions specified in paragraphs (b)(2)(ii)(B)(1), (2), and (3) of this section; and

(*2*) Be installed with liners on the bottom and all sides in all areas in which gas is to be collected. The liners must be installed as required under § 258.40 of this chapter.

(iii) Control system. Route all the collected gas to a control system that complies with the requirements in either paragraph (b)(2)(iii)(A), (B), or (C) of this section.

(A) A non-enclosed flare designed and operated in accordance with the parameters established in § 63.11(b) except as noted in paragraph (e) of this section; or

(B) A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight-percent or reduce the outlet NMOC concentration to less than 20 ppmv, dry basis as hexane at 3-percent oxygen. The reduction efficiency or ppmv must be established by an initial performance test to be completed no later than 180 days after the initial startup of the approved control system using the test methods specified in paragraph (e) of this section. The performance test is not required for boilers and process heaters with design heat input capacities equal to or greater than 44 megawatts that burn landfill gas for compliance with this subpart.

(*1*) If a boiler or process heater is used as the control device, the landfill gas stream must be introduced into the flame zone.

(*2*) The control device must be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in §§ 63.1961(b) through (e);

(C) A treatment system that processes the collected gas for subsequent sale or beneficial use such as fuel for combustion, production of vehicle fuel, production of high-British thermal unit (Btu) gas for pipeline injection, or use as a raw material in a chemical manufacturing process. Venting of treated landfill gas to the ambient air is not allowed. If the treated landfill gas cannot be routed for subsequent sale or beneficial use, then the treated landfill gas must be controlled according to either paragraph (b)(2)(iii)(A) or (B) of this section.

(D) All emissions from any atmospheric vent from the gas treatment system are subject to the requirements of paragraph (b)(2)(iii)(A) or (B) of this section. For purposes of this subpart, atmospheric vents located on the condensate storage tank are not part of the treatment system and are exempt from the requirements of paragraph (b)(2)(iii)(A) or (B) of this section.

(c) After the installation and startup of a collection and control system in compliance with this subpart, the owner or operator must calculate the NMOC emission rate for purposes of determining when the system can be capped, removed, or decommissioned as provided in § 63.1957(b)(3), using Equation 3:

$$M_{NMOC} = 1.89 \times 10^{-3} Q_{LFG} C_{NMOC} \quad \text{(Eq. 3)}$$

Where:

M_{NMOC} = Mass emission rate of NMOC, Mg/yr.

Q_{LFG} = Flow rate of landfill gas, m^3 per minute.

C_{NMOC} = Average NMOC concentration, ppmv as hexane.

1.89×10^{-3} = Conversion factor.

(1) The flow rate of landfill gas, Q_{LFG}, must be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control system using a gas flow measuring device calibrated according to the provisions of section 10 of EPA Method 2E of appendix A-1 of part 60.

(2) The average NMOC concentration, C_{NMOC}, must be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in EPA Method 25 or 25C of appendix A-7 to part 60 of this chapter. The sample location on the common header pipe must be before any condensate removal or other gas refining units. The landfill owner or operator must divide the NMOC concentration from EPA Method 25 or 25C of appendix A-7 to part 60 by 6 to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

(3) The owner or operator may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Administrator.

(i) Within 60 days after the date of completing each performance test (as defined in § 63.7), the owner or operator must submit the results of the performance test, including any associated fuel analyses, according to § 63.1981(l)(1).

(ii) [Reserved]

(d) For the performance test required in § 63.1959(b)(2)(iii)(B), EPA Method 25 or 25C (EPA Method 25C of appendix A-7 to part 60 of this chapter may be used at the inlet only) of appendix A of this part must be used to determine compliance with the 98 weight-percent efficiency or the 20- ppmv outlet concentration level, unless another method to demonstrate compliance has been approved by the Administrator as provided by § 63.1981(d)(2). EPA Method 3, 3A, or 3C of appendix A-7 to part 60 must be used to determine oxygen for correcting the NMOC concentration as hexane to 3 percent. In cases where the outlet concentration is less than 50 ppm NMOC as carbon (8 ppm NMOC as hexane), EPA Method 25A should be used in place of EPA Method 25. EPA Method 18 may be used in conjunction with EPA Method 25A on a limited basis (compound specific, *e.g.,* methane) or EPA Method 3C may be used to determine methane. The methane as carbon should be subtracted from the EPA Method 25A total hydrocarbon value as carbon to give NMOC concentration as carbon. The landowner or operator must divide the NMOC concentration as carbon by 6 to convert from the C_{NMOC} as carbon to C_{NMOC} as hexane. Equation 4 must be used to calculate efficiency:

$$\text{Control Efficiency} = (NMOC_{in} - NMOC_{out})/(NMOC_{in}) \qquad \text{(Eq. 4)}$$

Where:

$NMOC_{in}$ = Mass of NMOC entering control device.

$NMOC_{out}$ = Mass of NMOC exiting control device.

(e) For the performance test required in § 63.1959(b)(2)(iii)(A), the net heating value of the combusted landfill gas as determined in § 63.11(b)(6)(ii) is calculated from the concentration of methane in the landfill gas as measured by EPA Method 3C of appendix A to part 60 of this chapter. A minimum of three 30-minute EPA Method 3C samples are determined. The measurement of other organic components, hydrogen, and carbon monoxide is not applicable. EPA Method 3C may be used to determine the landfill gas molecular weight for calculating the flare gas exit velocity under § 63.11(b)(7) of subpart A.

(1) Within 60 days after the date of completing each performance test (as defined in § 63.7), the owner or operator must submit the results of the performance tests, including any associated fuel analyses, required by § 63.1959(c) or (e) according to § 63.1981(l)(1).

(2) [Reserved]

(f) The performance tests required in §§ 63.1959(b)(2)(iii)(A) and (B), must be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Representative conditions exclude periods of startup and shutdown unless specified by the Administrator. The owner or operator may not conduct performance tests during periods of malfunction. The owner or operator must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

[85 FR 17261, Mar. 26, 2020, as amended at 85 FR 64400, Oct. 13, 2020]

§ 63.1960 Compliance provisions.

(a) Except as provided in § 63.1981(d)(2), the specified methods in paragraphs (a)(1) through (5) of this section must be used to determine whether the gas collection system is in compliance with § 63.1959(b)(2)(ii).

(1) For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with § 63.1959(b)(2)(ii)(C)(1), either Equation 5 or Equation 6 must be used. The owner or operator may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Administrator. The methane generation rate constant (k) and methane generation potential (L_o) kinetic factors should be those published in the most recent *Compilation of Air Pollutant Emission Factors* (AP-42) or other site-specific values demonstrated to be appropriate and approved by the Administrator. If k has been determined as specified in § 63.1959(a)(4), the value of k determined from the test must be used. A value of no more than 15 years must be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure.

(i) For sites with unknown year-to-year solid waste acceptance rate:

$$Qm = 2L_oR\left(e^{-kc} - e^{-kt}\right) \quad \text{(Eq. 5)}$$

Where:

Qm = Maximum expected gas generation flow rate, m^3/yr.

L_o = Methane generation potential, m^3/Mg solid waste.

R = Average annual acceptance rate, Mg/yr.

k = Methane generation rate constant, $year^{-1}$.

t = Age of the landfill at equipment installation plus the time the owner or operator intends to use the gas mover equipment or active life of the landfill, whichever is less. If the equipment is installed after closure, t is the age of the landfill at installation, years.

c = Time since closure, years (for an active landfill c = 0 and $e^{-kc} = 1$).

2 = Constant.

(ii) For sites with known year-to-year solid waste acceptance rate:

$$Q_{M=} \sum_{i=1}^{n} 2kL_oM_i\left(e^{-kt_i}\right) \text{ (Eq. 6)}$$

Where:

Qm = Maximum expected gas generation flow rate, m^3/yr.

k = Methane generation rate constant, $year^{-1}$.

L_o = Methane generation potential, m^3/Mg solid waste.

M_i = Mass of solid waste in the ith section, Mg.

t_i = Age of the ith section, years.

(iii) If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, Equation 5 or Equation 6 in paragraphs (a)(1)(i) and (ii) of this section. If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using Equation 5 or Equation 6 in paragraph (a)(1)(i) or (ii) of this section or other methods must be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment.

(2) For the purposes of determining sufficient density of gas collectors for compliance with § 63.1959(b)(2)(ii)(B)(*2*), the owner or operator must design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Administrator, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.

(3) For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with § 63.1959(b)(2)(ii)(B)(*3*), the owner or operator must measure gauge pressure in the gas collection header applied to each individual well monthly. Any attempted corrective measure must not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval. If a positive pressure exists, follow the procedures as specified in § 60.755(a)(3), except:

(i) Beginning no later than September 27, 2021, if a positive pressure exists, action must be initiated to correct the exceedance within 5 days, except for the three conditions allowed under § 63.1958(b).

(A) If negative pressure cannot be achieved without excess air infiltration within 15 days of the first measurement of positive pressure, the owner or operator must conduct a root cause analysis and correct the exceedance as soon as practicable, but no later than 60 days after positive pressure was first measured. The owner or operator must keep records according to § 63.1983(e)(3).

(B) If corrective actions cannot be fully implemented within 60 days following the positive pressure measurement for which the root cause analysis was required, the owner or operator must also conduct a corrective action analysis and develop an implementation schedule to complete the corrective action(s) as soon as practicable, but no more than 120 days following the positive pressure measurement. The owner or operator must submit the items listed in § 63.1981(h)(7) as part of the next semi-annual report. The owner or operator must keep records according to § 63.1983(e)(4).

(C) If corrective action is expected to take longer than 120 days to complete after the initial exceedance, the owner or operator must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Administrator, according to § 63.1981(j). The owner or operator must keep records according to § 63.1983(e)(5).

(ii) [Reserved]

(4) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the temperature and nitrogen or oxygen operational standards in introductory paragraph § 63.1958(c), for the purpose of identifying whether excess air infiltration into the landfill is occurring, the owner or operator must follow the procedures as specified in § 60.755(a)(5) of this chapter, except:

(i) Once an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the operational standard for temperature in § 63.1958(c)(1), the owner or operator must monitor each well monthly for temperature for the purpose of identifying whether excess air infiltration exists. If a well exceeds the operating parameter for temperature as provided in § 63.1958(c)(1), action must be initiated to correct the exceedance within 5 days. Any attempted corrective measure must not cause exceedances of other operational or performance standards.

(A) If a landfill gas temperature less than or equal to 62.8 degrees Celsius (145 degrees Fahrenheit) cannot be achieved within 15 days of the first measurement of landfill gas temperature greater than 62.8 degrees Celsius (145 degrees Fahrenheit), the owner or operator must conduct a root cause analysis and correct the exceedance as soon as practicable, but no later than 60 days after a landfill gas temperature greater than 62.8 degrees Celsius (145 degrees Fahrenheit) was first measured. The owner or operator must keep records according to § 63.1983(e)(3).

(B) If corrective actions cannot be fully implemented within 60 days following the temperature measurement for which the root cause analysis was required, the owner or operator must also conduct a corrective action analysis and develop an implementation schedule to complete the corrective action(s) as soon as practicable, but no more than 120 days following the measurement of landfill gas temperature greater than 62.8 degrees Celsius (145 degrees Fahrenheit). The owner or operator must submit the items listed in § 63.1981(h)(7) as part of the next semi-annual report. The owner or operator must keep records according to § 63.1983(e)(4).

(C) If corrective action is expected to take longer than 120 days to complete after the initial exceedance, the owner or operator must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Administrator, according to § 63.1981(h)(7) and (j). The owner or operator must keep records according to § 63.1983(e)(5).

(D) If a landfill gas temperature measured at either the wellhead or at any point in the well is greater than or equal to 76.7 degrees Celsius (170 degrees Fahrenheit) and the carbon monoxide concentration measured, according to the procedures in § 63.1961(a)(5)(vi) is greater than or equal to 1,000 ppmv the corrective action(s) for the wellhead temperature standard (62.8 degrees Celsius or 145 degrees Fahrenheit) must be completed within 15 days.

(5) An owner or operator seeking to demonstrate compliance with § 63.1959(b)(2)(ii)(B)(*4*) through the use of a collection system not conforming to the specifications provided in § 63.1962 must provide information satisfactory to the Administrator as specified in § 63.1981(d)(3) demonstrating that off-site migration is being controlled.

(b) For purposes of compliance with § 63.1958(a), each owner or operator of a controlled landfill must place each well or design component as specified in the approved design plan as provided in § 63.1981(d). Each well must be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of:

(1) 5 years or more if active; or

(2) 2 years or more if closed or at final grade.

(c) The following procedures must be used for compliance with the surface methane operational standard as provided in § 63.1958(d).

(1) After installation and startup of the gas collection system, the owner or operator must monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in paragraph (d) of this section.

(2) The background concentration must be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells.

(3) Surface emission monitoring must be performed in accordance with section 8.3.1 of EPA Method 21 of appendix A-7 of part 60 of this chapter, except that the probe inlet must be placed within 5 to 10 centimeters of the ground. Monitoring must be performed during typical meteorological conditions.

(4) Any reading of 500 ppm or more above background at any location must be recorded as a monitored exceedance and the actions specified in paragraphs (c)(4)(i) through (v) of this section must be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of § 63.1958(d).

(i) The location of each monitored exceedance must be marked and the location and concentration recorded. Beginning no later than September 27, 2021, the location must be recorded using an instrument with an accuracy of at least 4 meters. The coordinates must be in decimal degrees with at least five decimal places.

(ii) Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance must be made and the location must be re-monitored within 10 days of detecting the exceedance.

(iii) If the re-monitoring of the location shows a second exceedance, additional corrective action must be taken and the location must be monitored again within 10 days of the second exceedance. If the re-monitoring shows a third exceedance for the same location, the action specified in paragraph (c)(4)(v) of this section must be taken, and no further monitoring of that location is required until the action specified in paragraph (c)(4)(v) of this section has been taken.

(iv) Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in paragraph (c)(4)(ii) or (iii) of this section must be re-monitored 1 month from the initial exceedance. If the 1-month re-monitoring shows a concentration less than 500 ppm above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month re-monitoring shows an exceedance, the actions specified in paragraph (c)(4)(iii) or (v) of this section must be taken.

(v) For any location where monitored methane concentration equals or exceeds 500 ppm above background three times within a quarterly period, a new well or other collection device must be installed within 120 days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Administrator for approval.

(5) The owner or operator must implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.

(d) Each owner or operator seeking to comply with the provisions in paragraph (c) of this section must comply with the following instrumentation specifications and procedures for surface emission monitoring devices:

(1) The portable analyzer must meet the instrument specifications provided in section 6 of EPA Method 21 of appendix A of part 60 of this chapter, except that “methane” replaces all references to “VOC”.

(2) The calibration gas must be methane, diluted to a nominal concentration of 500 ppm in air.

(3) To meet the performance evaluation requirements in section 8.1 of EPA Method 21 of appendix A of part 60 of this chapter, the instrument evaluation procedures of section 8.1 of EPA Method 21 of appendix A of part 60 must be used.

(4) The calibration procedures provided in sections 8 and 10 of EPA Method 21 of appendix A of part 60 of this chapter must be followed immediately before commencing a surface monitoring survey.

(e)

(1) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the operational standards in introductory paragraph § 63.1958(e), the provisions of this subpart apply at all times, except during periods of SSM, provided that the duration of SSM does not exceed 5 days for collection systems and does not exceed 1 hour for treatment or control devices. You must comply with the provisions in Table 1 to subpart AAAA that apply before September 28, 2021.

(2) Once an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the operational standard in § 63.1958(e)(1), the provisions of this subpart apply at all times, including periods of SSM. During periods of SSM, you must comply with the work practice requirement specified in § 63.1958(e) in lieu of the compliance provisions in § 63.1960.

[85 FR 17261, Mar. 26, 2020, as amended at 85 FR 64400, Oct. 13, 2020; 87 FR 8203, Feb. 14, 2022]

§ 63.1961 Monitoring of operations.

Except as provided in § 63.1981(d)(2):

(a) Each owner or operator seeking to comply with § 63.1959(b)(2)(ii)(B) for an active gas collection system must install a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead and:

(1) Measure the gauge pressure in the gas collection header on a monthly basis as provided in § 63.1960(a)(3); and

(2) Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as follows:

(i) The nitrogen level must be determined using EPA Method 3C of appendix A-2 to part 60 of this chapter, unless an alternative test method is established as allowed by § 63.1981(d)(2).

(ii) Unless an alternative test method is established as allowed by § 63.1981(d)(2), the oxygen level must be determined by an oxygen meter using EPA Method 3A or 3C of appendix A-2 to part 60 of this chapter or ASTM D6522-11 (incorporated by reference, see § 63.14). Determine the oxygen level by an oxygen meter using EPA Method 3A or 3C of appendix A-2 to part 60 or ASTM D6522-11 (if sample location is prior to combustion) except that:

(A) The span must be set between 10- and 12-percent oxygen;

(B) A data recorder is not required;

(C) Only two calibration gases are required, a zero and span;

(D) A calibration error check is not required; and

(E) The allowable sample bias, zero drift, and calibration drift are ±10 percent.

(iii) A portable gas composition analyzer may be used to monitor the oxygen levels provided:

(A) The analyzer is calibrated; and

(B) The analyzer meets all quality assurance and quality control requirements for EPA Method 3A of appendix A-2 to part 60 of this chapter or ASTM D6522-11 (incorporated by reference, see § 63.14).

(3) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the temperature and nitrogen or oxygen operational standards in introductory paragraph § 63.1958(c), the owner or operator must follow the procedures as specified in § 60.756(a)(2) and (3) of this chapter. Monitor temperature of the landfill gas on a monthly basis as provided in § 63.1960(a)(4). The temperature measuring device must be calibrated annually using the procedure in Section 10.3 of EPA Method 2 of appendix A-1 to part 60 of this chapter.

(4) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the operational standard for temperature in § 63.1958(c)(1), monitor temperature of the landfill gas on a monthly basis as provided in § 63.1960(a)(4). The temperature measuring device must be calibrated annually using the procedure in Section 10.3 of EPA Method 2 of appendix A-1 to part 60 of this chapter. Keep records specified in § 63.1983(e).

(5) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the operational standard for temperature in § 63.1958(c)(1), unless a higher operating temperature value has been approved by the Administrator under this subpart or under 40 CFR part 60, subpart WWW; 40 CFR part 60, subpart XXX; or a federal plan or EPA-approved and effective state plan or tribal plan that implements either 40 CFR part 60, subpart Cc or 40 CFR part 60, subpart Cf, you must initiate enhanced monitoring at each well with a measurement of landfill gas temperature greater than 62.8 degrees Celsius (145 degrees Fahrenheit) as follows:

(i) Visual observations for subsurface oxidation events (smoke, smoldering ash, damage to well) within the radius of influence of the well.

(ii) Monitor oxygen concentration as provided in paragraph (a)(2) of this section;

(iii) Monitor temperature of the landfill gas at the wellhead as provided in paragraph (a)(4) of this section.

(iv) Monitor temperature of the landfill gas every 10 vertical feet of the well as provided in paragraph (a)(6) of this section.

(v) Monitor the methane concentration with a methane meter using EPA Method 3C of appendix A-6 to part 60, EPA Method 18 of appendix A-6 to part 60 of this chapter, or a portable gas composition analyzer to monitor the methane levels provided that the analyzer is calibrated and the analyzer meets all quality assurance and quality control requirements for EPA Method 3C or EPA Method 18.

(vi) Monitor and determine carbon monoxide concentrations, as follows:

(A) Collect the sample from the wellhead sampling port in a passivated canister or multi-layer foil gas sampling bag (such as the Cali-5-Bond Bag) and analyze that sample using EPA Method 10 of appendix A-4 to part 60 of this chapter, or an equivalent method with a detection limit of at least 100 ppmv of carbon monoxide in high concentrations of methane; or

(B) Collect and analyze the sample from the wellhead using EPA Method 10 of appendix A-4 to part 60 to measure carbon monoxide concentrations.

(C) When sampling directly from the wellhead, you must sample for 5 minutes plus twice the response time of the analyzer. These values must be recorded. The five 1-minute averages are then averaged to give you the carbon monoxide reading at the wellhead.

(D) When collecting samples in a passivated canister or multi-layer foil sampling bag, you must sample for the period of time needed to assure that enough sample is collected to provide five (5) consecutive, 1-minute samples during the analysis of the canister or bag contents, but no less than 5 minutes plus twice the response time of the analyzer. The five (5) consecutive, 1-minute averages are then averaged together to give you a carbon monoxide value from the wellhead.

(vii) The enhanced monitoring described in this paragraph (a)(5) must begin 7 calendar days after the first measurement of landfill gas temperature greater than 62.8 degrees Celsius (145 degrees Fahrenheit); and

(viii) The enhanced monitoring in this paragraph (a)(5) must be conducted on a weekly basis. If four consecutive weekly carbon monoxide readings are under 100 ppmv, then enhanced monitoring may be decreased to monthly. However, if carbon monoxide readings exceed 100 ppmv again, the landfill must return to weekly monitoring.

(ix) The enhanced monitoring in this paragraph (a)(5) can be stopped once a higher operating value is approved, at which time the monitoring provisions issued with the higher operating value should be followed, or once the measurement of landfill gas temperature at the wellhead is less than or equal to 62.8 degrees Celsius (145 degrees Fahrenheit).

(6) For each wellhead with a measurement of landfill gas temperature greater than or equal to 73.9 degrees Celsius (165 degrees Fahrenheit), annually monitor temperature of the landfill gas every 10 vertical feet of the well. This temperature can be monitored either with a removable thermometer, or using temporary or permanent thermocouples installed in the well.

(b) Each owner or operator seeking to comply with § 63.1959(b)(2)(iii) using an enclosed combustor must calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment:

(1) A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of ±1 percent of the temperature being measured expressed in degrees Celsius or ±0.5 degrees Celsius, whichever is greater. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity equal to or greater than 44 megawatts.

(2) A device that records flow to the control device and bypass of the control device (if applicable). The owner or operator must:

(i) Install, calibrate, and maintain a gas flow rate measuring device that must record the flow to the control device at least every 15 minutes; and

(ii) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism must be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

(c) Each owner or operator seeking to comply with § 63.1959(b)(2)(iii) using a non-enclosed flare must install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:

(1) A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame; and

(2) A device that records flow to the flare and bypass of the flare (if applicable). The owner or operator must:

(i) Install, calibrate, and maintain a gas flow rate measuring device that records the flow to the control device at least every 15 minutes; and

(ii) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism must be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

(d) Each owner or operator seeking to demonstrate compliance with § 63.1959(b)(2)(iii) using a device other than a non-enclosed flare or an enclosed combustor or a treatment system must provide information satisfactory to the Administrator as provided in § 63.1981(d)(2) describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Administrator must review the information and either approve it, or request that additional information be submitted. The Administrator may specify additional appropriate monitoring procedures.

(e) Each owner or operator seeking to install a collection system that does not meet the specifications in § 63.1962 or seeking to monitor alternative parameters to those required by §§ 63.1958 through 63.1961 must provide information satisfactory to the Administrator as provided in § 63.1981(d)(2) and (3) describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Administrator may specify additional appropriate monitoring procedures.

(f) Each owner or operator seeking to demonstrate compliance with the 500-ppm surface methane operational standard in § 63.1958(d) must monitor surface concentrations of methane according to the procedures in § 63.1960(c) and the instrument specifications in § 63.1960(d). If you are complying with the 500-ppm surface methane operational standard in § 63.1958(d)(2), for location, you must determine the latitude and longitude coordinates of each exceedance using an instrument with an accuracy of at least 4 meters and the coordinates must be in decimal degrees with at least five decimal places. In the semi-annual report in § 63.1981(h), you must report the location of each exceedance of the 500-ppm methane concentration as provided in § 63.1958(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month. Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring.

(g) Each owner or operator seeking to demonstrate compliance with § 63.1959(b)(2)(iii)(C) using a landfill gas treatment system must calibrate, maintain, and operate according to the manufacturer's specifications a device that records flow to the treatment system and bypass of the treatment system (if applicable). Beginning no later than September 27, 2021, each owner or operator must maintain and operate all monitoring systems associated with the treatment system in accordance with the site-specific treatment system monitoring plan required in § 63.1983(b)(5)(ii). The owner or operator must:

(1) Install, calibrate, and maintain a gas flow rate measuring device that records the flow to the treatment system at least every 15 minutes; and

(2) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism must be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

(h) The monitoring requirements of paragraphs (a), (b), (c), (d), and (g) of this section apply at all times the affected source is operating, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You are required to complete monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable. Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the temperature and nitrogen or oxygen operational standards in introductory paragraph § 63.1958(c)(1), (d)(2), and (e)(1), the standards apply at all times.

[85 FR 17261, Mar. 26, 2020, as amended at 85 FR 64401, Oct. 13, 2020; 87 FR 8203, Feb. 14, 2022]

§ 63.1962 Specifications for active collection systems.

(a) Each owner or operator seeking to comply with § 63.1959(b)(2)(i) must site active collection wells, horizontal collectors, surface collectors, or other extraction devices at a sufficient density throughout all gas producing areas using the following procedures unless alternative procedures have been approved by the Administrator as provided in § 63.1981(d)(2) and (3):

(1) The collection devices within the interior must be certified to achieve comprehensive control of surface gas emissions by a professional engineer. The following issues must be addressed in the design: Depths of refuse, refuse gas generation rates and flow characteristics, cover properties, gas system expandability, leachate and condensate management, accessibility, compatibility with filling operations, integration with closure end use, air intrusion control, corrosion resistance, fill settlement, resistance to the refuse decomposition heat, and ability to isolate individual components or sections for repair or troubleshooting without shutting down entire collection system.

(2) The sufficient density of gas collection devices determined in paragraph (a)(1) of this section must address landfill gas migration issues and augmentation of the collection system through the use of active or passive systems at the landfill perimeter or exterior.

(3) The placement of gas collection devices determined in paragraph (a)(1) of this section must control all gas producing areas, except as provided by paragraphs (a)(3)(i) and (ii) of this section.

(i) Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under § 63.1983(d). The documentation must provide the nature, date of deposition, location and amount of asbestos or nondegradable material deposited in the area and must be provided to the Administrator upon request.

(ii) Any nonproductive area of the landfill may be excluded from control, provided that the total of all excluded areas can be shown to contribute less than 1 percent of the total amount of NMOC emissions from the landfill. The amount, location, and age of the material must be documented and provided to the Administrator upon request. A separate NMOC emissions estimate must be made for each section proposed for exclusion, and the sum of all such sections must be compared to the NMOC emissions estimate for the entire landfill.

(A) The NMOC emissions from each section proposed for exclusion must be computed using Equation 7:

$$Q_i = 2\,k\,L_o M_i (e^{-kt_i})\,(C_{NMOC})\,(3.6 \times 10^{-9}) \quad (\text{Eq. } 7)$$

Where:

Q_i = NMOC emission rate from the ith section, Mg/yr.

k = Methane generation rate constant, year^{-1}.

L_o = Methane generation potential, m^3/Mg solid waste.

M_i = Mass of the degradable solid waste in the ith section, Mg.

t_i = Age of the solid waste in the ith section, years.

C_{NMOC} = Concentration of NMOC, ppmv.

3.6×10^{-9} = Conversion factor.

(B) If the owner/operator is proposing to exclude, or cease gas collection and control from, nonproductive physically separated (*e.g.,* separately lined) closed areas that already have gas collection systems, NMOC emissions from each physically separated closed area must be computed using either Equation 3 in § 63.1959(c) or Equation 7 in paragraph (a)(3)(ii)(A) of this section.

(iii) The values for k and C_{NMOC} determined in field testing must be used if field testing has been performed in determining the NMOC emission rate or the radii of influence (the distance from the well center to a point in the landfill where the pressure gradient applied by the blower or compressor approaches zero). If field testing has not been performed, the default values for k, L_o and C_{NMOC} provided in § 63.1959(a)(1) or the alternative values from § 63.1959(a)(5) must be used. The mass of nondegradable solid waste contained within the given section may be subtracted from the total mass of the section when estimating emissions provided the nature, location, age, and amount of the nondegradable material is documented as provided in paragraph (a)(3)(i) of this section.

(b) Each owner or operator seeking to comply with § 63.1959(b)(2)(ii) must construct the gas collection devices using the following equipment or procedures:

(1) The landfill gas extraction components must be constructed of polyvinyl chloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion resistant material of suitable dimensions to: Convey projected amounts of gases; withstand installation, static, and settlement forces; and withstand planned overburden or traffic loads. The collection system must extend as necessary to comply with emission and migration standards. Collection devices such as wells and horizontal collectors must be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations must be situated with regard to the need to prevent excessive air infiltration.

(2) Vertical wells must be placed so as not to endanger underlying liners and must address the occurrence of water within the landfill. Holes and trenches constructed for piped wells and horizontal collectors must be of sufficient cross-section so as to allow for their proper construction and completion including, for example, centering of pipes and placement of gravel backfill. Collection devices must be designed so as not to allow indirect short circuiting of air into the cover or refuse into the collection system or gas into the air. Any gravel used around pipe perforations should be of a dimension so as not to penetrate or block perforations.

(3) Collection devices may be connected to the collection header pipes below or above the landfill surface. The connector assembly must include a positive closing throttle valve, any necessary seals and couplings, access couplings and at least one sampling port. The collection devices must be constructed of PVC, HDPE, fiberglass, stainless steel, or other nonporous material of suitable thickness.

(c) Each owner or operator seeking to comply with § 63.1959(b)(2)(iii) must convey the landfill gas to a control system in compliance with § 63.1959(b)(2)(iii) through the collection header pipe(s). The gas mover equipment must be sized to handle the maximum gas generation flow rate expected over the intended use period of the gas moving equipment using the following procedures:

(1) For existing collection systems, the flow data must be used to project the maximum flow rate. If no flow data exists, the procedures in paragraph (c)(2) of this section must be used.

(2) For new collection systems, the maximum flow rate must be in accordance with § 63.1960(a)(1).

General and Continuing Compliance Requirements

§ 63.1964 How is compliance determined?

Compliance is determined using performance testing, collection system monitoring, continuous parameter monitoring, and other credible evidence. In addition, continuous parameter monitoring data collected under § 63.1961(b)(1), (c)(1), and (d) are used to demonstrate compliance with the operating standards for control systems. If a deviation occurs, you have failed to meet the control device operating standards described in this subpart and have deviated from the requirements of this subpart.

(a) Before September 28, 2021, you must develop a written SSM plan according to the provisions in § 63.6(e)(3) of subpart A. A copy of the SSM plan must be maintained on site. Failure to write or maintain a copy of the SSM plan is a deviation from the requirements of this subpart.

(b) After September 27, 2021, the SSM provisions of § 63.6(e) of subpart A no longer apply to this subpart and the SSM plan developed under paragraph (a) of this section no longer applies. Compliance with the emissions standards and the operating standards of § 63.1958 of this subpart is required at all times.

§ 63.1965 What is a deviation?

A deviation is defined in § 63.1990. For the purposes of the landfill monitoring and SSM plan requirements, deviations include the items in paragraphs (a) through (c) of this section.

(a) A deviation occurs when the control device operating parameter boundaries described in § 63.1983(c)(1) are exceeded.

(b) A deviation occurs when 1 hour or more of the hours during the 3-hour block averaging period does not constitute a valid hour of data. A valid hour of data must have measured values for at least three 15-minute monitoring periods within the hour.

(c) Before September 28, 2021, a deviation occurs when a SSM plan is not developed or maintained on site and when an affected source fails to meet any emission limitation, (including any operating limit), or work practice requirement in this subpart during SSM, regardless of whether or not such failure is permitted by this subpart.

§ 63.1975 How do I calculate the 3-hour block average used to demonstrate compliance?

Before September 28, 2021, averages are calculated in the same way as they are calculated in § 60.758(b)(2)(i) of this subchapter for average combustion temperature and § 60.758(c) for 3-hour average combustion temperature for enclosed combustors, except that the data collected during the events listed in paragraphs (a) through (d) of this section are not to be included in any average computed under this subpart. Beginning no later than September 27, 2021, averages are calculated according to § 63.1983(b)(2)(i) for average combustion temperature and § 63.1983(c)(1)(i) for 3-hour average combustion temperature for enclosed combustors, except that the data collected during the event listed in paragraph (a) of this section are not to be included in any average computed under this subpart.

(a) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments.

(b) Startups.

(c) Shutdowns.

(d) Malfunctions.

[85 FR 17261, Mar. 26, 2020, as amended at 87 FR 8204, Feb. 14, 2022]

NOTIFICATIONS, RECORDS, AND REPORTS

§ 63.1981 What reports must I submit?

You must submit the reports specified in this section and the reports specified in Table 1 to this subpart. If you have previously submitted a design capacity report, amended design capacity report, initial NMOC emission rate report, initial or revised collection and control system design plan, closure report, equipment removal report, or initial performance test under 40 CFR part 60, subpart WWW; 40 CFR part 60, subpart XXX; or a federal plan or EPA-approved and effective state plan or tribal plan that implements either 40 CFR part 60, subpart Cc or 40 CFR part 60, subpart Cf, then that submission constitutes compliance with the design capacity report in paragraph (a) of this section, the amended design capacity report in paragraph (b) of this section, the initial NMOC emission rate report in paragraph (c) of this section, the initial collection and control system design plan in paragraph (d) of this section, the revised design plan in paragraph (e) of this section, the closure report in paragraph (f) of this section, the equipment removal report in paragraph (g) of this section, and the initial performance test report in paragraph (i) of this section. You do not need to re-submit the report(s). However, you must include a statement certifying prior submission of the respective report(s) and the date of submittal in the first semi-annual report required in this section.

(a) ***Initial design capacity report.*** The initial design capacity report must contain the information specified in § 60.757(a)(2) of this chapter, except beginning no later than September 28, 2021, the report must contain:

(1) A map or plot of the landfill, providing the size and location of the landfill, and identifying all areas where solid waste may be landfilled according to the permit issued by the state, local, or tribal agency responsible for regulating the landfill.

(2) The maximum design capacity of the landfill. Where the maximum design capacity is specified in the permit issued by the state, local, or tribal agency responsible for regulating the landfill, a copy of the permit specifying the maximum design capacity may be submitted as part of the report. If the

maximum design capacity of the landfill is not specified in the permit, the maximum design capacity must be calculated using good engineering practices. The calculations must be provided, along with the relevant parameters as part of the report. The landfill may calculate design capacity in either Mg or m^3 for comparison with the exemption values. If the owner or operator chooses to convert the design capacity from volume to mass or from mass to volume to demonstrate its design capacity is less than 2.5 million Mg or 2.5 million m^3, the calculation must include a site-specific density, which must be recalculated annually. Any density conversions must be documented and submitted with the design capacity report. The state, tribal, local agency or Administrator may request other reasonable information as may be necessary to verify the maximum design capacity of the landfill.

(b) ***Amended design capacity report.*** An amended design capacity report must be submitted to the Administrator providing notification of an increase in the design capacity of the landfill, within 90 days of an increase in the maximum design capacity of the landfill to meet or exceed 2.5 million Mg and 2.5 million m^3. This increase in design capacity may result from an increase in the permitted volume of the landfill or an increase in the density as documented in the annual recalculation required in § 63.1983(f).

(c) ***NMOC emission rate report.*** Each owner or operator subject to the requirements of this subpart must submit a copy of the latest NMOC emission rate report that was submitted according to § 60.757(b) of this chapter or submit an NMOC emission rate report to the Administrator initially and annually thereafter, except as provided for in paragraph (c)(1)(ii)(A) of this section. The Administrator may request such additional information as may be necessary to verify the reported NMOC emission rate. If you have submitted an annual report under 40 CFR part 60, subpart WWW; 40 CFR part 60, subpart XXX; or a Federal plan or EPA-approved and effective state plan or tribal plan that implements either 40 CFR part 60, subpart Cc or 40 CFR part 60, subpart Cf, then that submission constitutes compliance with the annual NMOC emission rate report in this paragraph. You do not need to re-submit the annual report for the current year. Beginning no later than September 27, 2021, the report must meet the following requirements:

(1) The NMOC emission rate report must contain an annual or 5-year estimate of the NMOC emission rate calculated using the formula and procedures provided in § 63.1959(a) or (b), as applicable.

(i) The initial NMOC emission rate report must be submitted no later than 90 days after the date of commenced construction, modification, or reconstruction for landfills that commence construction, modification, or reconstruction on or after March 12, 1996.

(ii) Subsequent NMOC emission rate reports must be submitted annually thereafter, except as provided for in paragraph (c)(1)(ii)(A) of this section.

(A) If the estimated NMOC emission rate as reported in the annual report to the Administrator is less than 50 Mg/yr in each of the next 5 consecutive years, the owner or operator may elect to submit, an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate must include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based must be provided to the Administrator. This estimate must be revised at least once every 5 years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate must be submitted to the Administrator. The revised estimate must cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.

(B) The report must be submitted following the procedure specified in paragraph (l)(2) of this section.

(2) The NMOC emission rate report must include all the data, calculations, sample reports and measurements used to estimate the annual or 5-year emissions.

(3) Each owner or operator subject to the requirements of this subpart is exempted from the requirements to submit an NMOC emission rate report, after installing a collection and control system that complies with § 63.1959(b)(2), during such time as the collection and control system is in operation and in compliance with §§ 63.1958 and 63.1960.

(d) ***Collection and control system design plan.*** Each owner or operator subject to the provisions of § 63.1959(b)(2) must submit a collection and control system design plan to the Administrator for approval according to § 60.757(c) of this chapter and the schedule in § 60.757(c)(1) and (2). Beginning no later than September 27, 2021, each owner or operator subject to the provisions of § 63.1959(b)(2) must submit a collection and control system design plan to the Administrator according to paragraphs (d)(1) through (6) of this section. The collection and control system design plan must be prepared and approved by a professional engineer.

(1) The collection and control system as described in the design plan must meet the design requirements in § 63.1959(b)(2).

(2) The collection and control system design plan must include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of §§ 63.1957 through 63.1983 proposed by the owner or operator.

(3) The collection and control system design plan must either conform with specifications for active collection systems in § 63.1962 or include a demonstration to the Administrator's satisfaction of the sufficiency of the alternative provisions to § 63.1962.

(4) Each owner or operator of an MSW landfill affected by this subpart must submit a collection and control system design plan to the Administrator for approval within 1 year of becoming subject to this subpart.

(5) The landfill owner or operator must notify the Administrator that the design plan is completed and submit a copy of the plan's signature page. The Administrator has 90 days to decide whether the design plan should be submitted for review. If the Administrator chooses to review the plan, the approval process continues as described in paragraph (d)(6) of this section. In the event that the design plan is required to be modified to obtain approval, the owner or operator must take any steps necessary to conform any prior actions to the approved design plan and any failure to do so could result in an enforcement action.

(6) Upon receipt of an initial or revised design plan, the Administrator must review the information submitted under paragraphs (d)(1) through (3) of this section and either approve it, disapprove it, or request that additional information be submitted. Because of the many site-specific factors involved with landfill gas system design, alternative systems may be necessary. A wide variety of system designs are possible, such as vertical wells, combination horizontal and vertical collection systems, or horizontal trenches only, leachate collection components, and passive systems.

(e) ***Revised design plan.*** Beginning no later than September 27, 2021, the owner or operator who has already been required to submit a design plan under paragraph (d) of this section must submit a revised design plan to the Administrator for approval as follows:

(1) At least 90 days before expanding operations to an area not covered by the previously approved design plan.

(2) Prior to installing or expanding the gas collection system in a way that is not consistent with the design plan that was submitted to the Administrator according to paragraph (d) of this section.

(f) ***Closure report.*** Each owner or operator of a controlled landfill must submit a closure report to the Administrator within 30 days of waste acceptance cessation. The Administrator may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of § 258.60 of this chapter. If a closure report has been submitted to the Administrator, no additional wastes may be placed into the landfill without filing a notification of modification as described under § 63.9(b) of subpart A.

(g) ***Equipment removal report.*** Each owner or operator of a controlled landfill must submit an equipment removal report as provided in § 60.757(e) of this chapter. Each owner or operator of a controlled landfill must submit an equipment removal report to the Administrator 30 days prior to removal or cessation of operation of the control equipment.

(1) Beginning no later than September 27, 2021, the equipment removal report must contain all of the following items:

(i) A copy of the closure report submitted in accordance with paragraph (f) of this section;

(ii) A copy of the initial performance test report demonstrating that the 15-year minimum control period has expired, or information that demonstrates that the gas collection and control system will be unable to operate for 15 years due to declining gas flows. In the equipment removal report, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in lieu of the performance test report if the report has been previously submitted to the EPA's Central Data Exchange (CDX); and

(iii) Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 Mg or greater of NMOC per year. If the NMOC emission rate reports have been previously submitted to the EPA's CDX, a statement that the NMOC emission rate reports have been submitted electronically and the dates that the reports were submitted to the EPA's CDX may be submitted in the equipment removal report in lieu of the NMOC emission rate reports.

(2) The Administrator may request such additional information as may be necessary to verify that all of the conditions for removal in § 63.1957(b) have been met.

(h) ***Semi-annual report.*** The owner or operator of a landfill seeking to comply with § 63.1959(b)(2) using an active collection system designed in accordance with § 63.1959(b)(2)(ii) must submit to the Administrator semi-annual reports. Beginning no later than September 27, 2021, you must submit the report, following the procedure specified in paragraph (l) of this section. The initial report must be submitted within 180 days of installation and startup of the collection and control system and must include the initial performance test report required under § 63.7 of subpart A, as applicable. In the initial report, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in lieu of the performance test report if the report has been previously submitted to the EPA's CDX. For enclosed combustion devices and flares, reportable exceedances are defined under § 63.1983(c). The semi-annual reports must contain the information in paragraphs (h)(1) through (8) of this section.

(1) Number of times that applicable parameters monitored under § 63.1958(b), (c), and (d) were exceeded and when the gas collection and control system was not operating under § 63.1958(e), including periods of SSM. For each instance, report the date, time, and duration of each exceedance.

(i) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the temperature and nitrogen or oxygen operational standards in introductory paragraph § 63.1958(c), provide a statement of the wellhead operational standard for temperature and oxygen you are complying with for the period covered by the report. Indicate the number of times each of those parameters monitored under § 63.1961(a)(3) were exceeded. For each instance, report the date, time, and duration of each exceedance.

(ii) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the operational standard for temperature in § 63.1958(c)(1), provide a statement of the wellhead operational standard for temperature and oxygen you are complying with for the period covered by the report. Indicate the number of times each of those parameters monitored under § 63.1961(a)(4) were exceeded. For each instance, report the date, time, and duration of each exceedance.

(iii) Beginning no later than September 27, 2021, number of times the parameters for the site-specific treatment system in § 63.1961(g) were exceeded.

(2) Description and duration of all periods when the gas stream was diverted from the control device or treatment system through a bypass line or the indication of bypass flow as specified under § 63.1961.

(3) Description and duration of all periods when the control device or treatment system was not operating and length of time the control device or treatment system was not operating.

(4) All periods when the collection system was not operating.

(5) The location of each exceedance of the 500-ppm methane concentration as provided in § 63.1958(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month. Beginning no later than September 27, 2021, for location, you record the latitude and longitude coordinates of each exceedance using an instrument with an accuracy of at least 4 meters. The coordinates must be in decimal degrees with at least five decimal places.

(6) The date of installation and the location of each well or collection system expansion added pursuant to § 63.1960(a)(3) and (4), (b), and (c)(4).

(7) For any corrective action analysis for which corrective actions are required in § 63.1960(a)(3)(i) or (a)(5) and that take more than 60 days to correct the exceedance, the root cause analysis conducted, including a description of the recommended corrective action(s), the date for corrective action(s) already completed following the positive pressure or high temperature reading, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

(8) Each owner or operator required to conduct enhanced monitoring in §§ 63.1961(a)(5) and (6) must include the results of all monitoring activities conducted during the period.

(i) For each monitoring point, report the date, time, and well identifier along with the value and units of measure for oxygen, temperature (wellhead and downwell), methane, and carbon monoxide.

(ii) Include a summary trend analysis for each well subject to the enhanced monitoring requirements to chart the weekly readings over time for oxygen, wellhead temperature, methane, and weekly or monthly readings over time, as applicable for carbon monoxide.

(iii) Include the date, time, staff person name, and description of findings for each visual observation for subsurface oxidation event.

(i) ***Initial performance test report.*** Each owner or operator seeking to comply with § 63.1959(b)(2)(iii) must include the following information with the initial performance test report required under § 63.7 of subpart A:

(1) A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion;

(2) The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based;

(3) The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material;

(4) The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on nonproductivity and the calculations of gas generation flow rate for each excluded area;

(5) The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and

(6) The provisions for the control of off-site migration.

(j) ***Corrective action and the corresponding timeline.*** The owner or operator must submit information regarding corrective actions according to paragraphs (j)(1) and (2) of this section.

(1) For corrective action that is required according to § 63.1960(a)(3) or (4) and is not completed within 60 days after the initial exceedance, you must submit a notification to the Administrator as soon as practicable but no later than 75 days after the first measurement of positive pressure or temperature exceedance.

(2) For corrective action that is required according to § 63.1960(a)(3) or (4) and is expected to take longer than 120 days after the initial exceedance to complete, you must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Administrator as soon as practicable but no later than 75 days after the first measurement of positive pressure or temperature monitoring value of 62.8 degrees Celsius (145 degrees Fahrenheit) or above unless a higher operating temperature value has been approved by the Administrator for the well under this subpart or under 40 CFR part 60, subpart WWW; 40 CFR part 60, subpart XXX; or a Federal plan or EPA approved and effective state plan or tribal plan that implements either 40 CFR part 60, subpart Cc or 40 CFR part 60, subpart Cf. The Administrator must approve the plan for corrective action and the corresponding timeline.

(k) ***24-hour high temperature report.*** Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the operational standard for temperature in § 63.1958(c)(1) and a landfill gas temperature measured at either the wellhead or at any point in the well is greater than or equal to 76.7 degrees Celsius (170 degrees Fahrenheit) and the carbon monoxide concentration measured is greater than or equal to 1,000 ppmv, then you must report the date, time, well identifier, temperature and carbon monoxide reading via email to the Administrator within 24 hours of the measurement unless a higher operating temperature value has been approved by the Administrator for the well under this subpart or under 40 CFR part 60, subpart WWW; 40 CFR part 60, subpart XXX; or a Federal plan or EPA approved and effective state plan or tribal plan that implements either 40 CFR part 60, subpart Cc or 40 CFR part 60, subpart Cf.

(l) ***Electronic reporting.*** Beginning no later than September 27, 2021, the owner or operator must submit reports electronically according to paragraphs (l)(1) and (2) of this section.

(1) Within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedures specified in paragraphs (l)(1)(i) through (iii) of this section.

(i) Data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (*https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert*) at the time of the test. Submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's CDX (*https://cdx.epa.gov/*). The data must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website.

(ii) Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test. The results of the performance test must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the ERT generated package or alternative file to the EPA via CEDRI.

(iii) Confidential business information (CBI). If you claim some of the information submitted under paragraph (a) of this section is CBI, you must submit a complete file, including information claimed to be CBI, to the EPA. The file must be generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in paragraph (l)(1)(i) of this section.

(2) Each owner or operator required to submit reports following the procedure specified in this paragraph must submit reports to the EPA via CEDRI. CEDRI can be accessed through the EPA's CDX. The owner or operator must use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the XML schema listed on the CEDRI website (*https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri*). Once the spreadsheet template upload/forms for the reports have been available in CEDRI for 90 days, the owner or operator must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in this subpart, regardless of the method

in which the reports are submitted. The NMOC emission rate reports, semi-annual reports, and bioreactor 40-percent moisture reports should be electronically reported as a spreadsheet template upload/form to CEDRI. If the reporting forms specific to this subpart are not available in CEDRI at the time that the reports are due, the owner or operator must submit the reports to the Administrator at the appropriate address listed in § 63.13 of subpart A.

(m) ***Claims of EPA system outage.*** Beginning no later than September 27, 2021, if you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of EPA system outage for failure to comply timely with the reporting requirement. To assert a claim of EPA system outage, you must meet the following requirements:

(1) You must have been or will be precluded from accessing CEDRI and submitting a required report within the time prescribed due to an outage of either the EPA's CEDRI or CDX systems.

(2) The outage must have occurred within the period of time beginning 5 business days prior to the date that the submission is due.

(3) The outage may be planned or unplanned.

(4) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(5) You must provide to the Administrator a written description identifying:

(i) The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to EPA system outage;

(iii) Measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(6) The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(7) In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.

(n) ***Claims of force majeure.*** Beginning no later than September 27, 2021, if you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of force majeure for failure to comply timely with the reporting requirement. To assert a claim of force majeure, you must meet the following requirements:

(1) You may submit a claim if a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning 5 business days prior to the date the submission is due. For the purposes of this section, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents you from complying with

the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (*e.g.,* hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (*e.g.,* large scale power outage).

(2) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(3) You must provide to the Administrator:

(i) A written description of the force majeure event;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event;

(iii) Measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(4) The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(5) In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs.

[85 FR 17261, Mar. 26, 2020, as amended at 87 FR 8204, Feb. 14, 2022]

§ 63.1982 What records and reports must I submit and keep for bioreactors or liquids addition other than leachate?

Submit reports as specified in this section and § 63.1981. Keep records as specified in this section and § 63.1983.

(a) For bioreactors at new affected sources you must submit the initial semi-annual compliance report and performance test results described in § 63.1981(h) within 180 days after the date you are required to begin operating the gas collection and control system by § 63.1947(a)(2).

(b) If you must submit a semi-annual compliance report for a bioreactor as well as a semi-annual compliance report for a conventional portion of the same landfill, you may delay submittal of a subsequent semi-annual compliance report for the bioreactor according to paragraphs (b)(1) through (3) of this section so that the reports may be submitted on the same schedule.

(1) After submittal of your initial semi-annual compliance report and performance test results for the bioreactor, you may delay submittal of the subsequent semi-annual compliance report for the bioreactor until the date the initial or subsequent semi-annual compliance report is due for the conventional portion of your landfill.

(2) You may delay submittal of your subsequent semi-annual compliance report by no more than 12 months after the due date for submitting the initial semi-annual compliance report and performance test results described in § 63.1981(h) for the bioreactor. The report must cover the time period since the previous semi-annual report for the bioreactor, which would be a period of at least 6 months and no more than 12 months.

(3) After the delayed semi-annual report, all subsequent semi-annual reports for the bioreactor must be submitted every 6 months on the same date the semi-annual report for the conventional portion of the landfill is due.

(c) If you add any liquids other than leachate in a controlled fashion to the waste mass and do not comply with the bioreactor requirements in §§ 63.1947, 63.1955(b), and paragraphs (a) and (b) of this section, you must keep a record of calculations showing that the percent moisture by weight expected in the waste mass to which liquid is added is less than 40 percent. The calculation must consider the waste mass, moisture content of the incoming waste, mass of water added to the waste including leachate recirculation and other liquids addition and precipitation, and the mass of water removed through leachate or other water losses. Moisture level sampling or mass balances calculations can be used. You must document the calculations and the basis of any assumptions. Keep the record of the calculations until you cease liquids addition.

(d) If you calculate moisture content to establish the date your bioreactor is required to begin operating the collection and control system under § 63.1947(a)(2) or (c)(2), keep a record of the calculations including the information specified in paragraph (e) of this section for 5 years. Within 90 days after the bioreactor achieves 40-percent moisture content, report the results of the calculation, the date the bioreactor achieved 40-percent moisture content by weight, and the date you plan to begin collection and control system operation to the Administrator. Beginning no later than September 27, 2021, the reports should be submitted following the procedure specified in § 63.1981(l)(2).

§ 63.1983 What records must I keep?

You must keep records as specified in this subpart. You must also keep records as specified in the general provisions of 40 CFR part 63 as shown in Table 1 to this subpart.

(a) Except as provided in § 63.1981(d)(2), each owner or operator of an MSW landfill subject to the provisions of § 63.1959(b)(2)(ii) and (iii) of this chapter must keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report that triggered § 63.1959(b), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.

(b) Except as provided in § 63.1981(d)(2), each owner or operator of a controlled landfill must keep up-to-date, readily accessible records for the life of the control system equipment of the data listed in paragraphs (b)(1) through (5) of this section as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring must be maintained for a minimum of 5 years. Records of the control device vendor specifications must be maintained until removal.

(1) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 63.1959(b)(2)(ii):

(i) The maximum expected gas generation flow rate as calculated in § 63.1960(a)(1).

(ii) The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in § 63.1962(a)(1) and (2).

(2) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 63.1959(b)(2)(iii) through use of an enclosed combustion device other than a boiler or process heater with a design heat input capacity equal to or greater than 44 megawatts:

(i) The average temperature measured at least every 15 minutes and averaged over the same time period of the performance test.

(ii) The percent reduction of NMOC determined as specified in § 63.1959(b)(2)(iii)(B) achieved by the control device.

(3) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 63.1959(b)(2)(iii)(B)(*1*) through use of a boiler or process heater of any size: A description of the location at which the collected gas vent stream is introduced into the boiler or process heater over the same time period of the performance testing.

(4) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 63.1959(b)(2)(iii)(A) through use of a non-enclosed flare, the flare type (*i.e.*, steam-assisted, air-assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in § 63.11; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame or the flare flame is absent.

(5) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 63.1959(b)(2)(iii)(C) through use of a landfill gas treatment system:

(i) ***Bypass records.*** Records of the flow of landfill gas to, and bypass of, the treatment system.

(ii) ***Site-specific treatment monitoring plan.*** Beginning no later than September 27, 2021, the owner or operator must prepare a site-specific treatment monitoring plan to include:

(A) Monitoring records of parameters that are identified in the treatment system monitoring plan and that ensure the treatment system is operating properly for each intended end use of the treated landfill gas. At a minimum, records should include records of filtration, de-watering, and compression parameters that ensure the treatment system is operating properly for each intended end use of the treated landfill gas.

(B) Monitoring methods, frequencies, and operating ranges for each monitored operating parameter based on manufacturer's recommendations or engineering analysis for each intended end use of the treated landfill gas.

(C) Documentation of the monitoring methods and ranges, along with justification for their use.

(D) List of responsible staff (by job title) for data collection.

(E) Processes and methods used to collect the necessary data.

(F) Description of the procedures and methods that are used for quality assurance, maintenance, and repair of all continuous monitoring systems (CMS).

(c) Except as provided in § 63.1981(d)(2), each owner or operator of a controlled landfill subject to the provisions of this subpart must keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in § 63.1961 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.

(1) The following constitute exceedances that must be recorded and reported under § 63.1981(h):

(i) For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million Btu per hour) or greater, all 3-hour periods of operation during which the average temperature was more than 28 degrees Celsius (82 degrees Fahrenheit) below the average combustion temperature during the most recent performance test at which compliance with § 63.1959(b)(2)(iii) was determined.

(ii) For boilers or process heaters, whenever there is a change in the location at which the vent stream is introduced into the flame zone as required under paragraph (b)(3) of this section.

(2) Each owner or operator subject to the provisions of this subpart must keep up-to-date, readily accessible continuous records of the indication of flow to the control system and the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under § 63.1961(b)(2)(ii), (c)(2)(ii), and (g)(2).

(3) Each owner or operator subject to the provisions of this subpart who uses a boiler or process heater with a design heat input capacity of 44 megawatts or greater to comply with § 63.1959(b)(2)(iii) must keep an up-to-date, readily accessible record of all periods of operation of the boiler or process heater. Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other state, local, tribal, or federal regulatory requirements.

(4) Each owner or operator seeking to comply with the provisions of this subpart by use of a non-enclosed flare must keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under § 63.1961(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.

(5) Each owner or operator of a landfill seeking to comply with § 63.1959(b)(2) using an active collection system designed in accordance with § 63.1959(b)(2)(ii) must keep records of periods when the collection system or control device is not operating.

(6) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the operational standard in § 63.1958(e)(1), the date, time, and duration of each startup and/or shutdown period, recording the periods when the affected source was subject to the standard applicable to startup and shutdown.

(7) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the operational standard in § 63.1958(e)(1), in the event that an affected unit fails to meet an applicable standard, record the information below in this paragraph:

(i) For each failure record the date, time and duration of each failure and the cause of such events (including unknown cause, if applicable).

(ii) For each failure to meet an applicable standard; record and retain a list of the affected sources or equipment.

(iii) Record actions taken to minimize emissions in accordance with the general duty of § 63.1955(c) and any corrective actions taken to return the affected unit to its normal or usual manner of operation.

(8) Beginning no later than September 27, 2021, in lieu of the requirements specified in § 63.8(d)(3) of subpart A you must keep the written procedures required by § 63.8(d)(2) on record for the life of the affected source or until the affected source is no longer subject to the provisions of this part, to be made available for inspection, upon request, by the Administrator. If the performance evaluation plan is revised, you must keep previous (*i.e.*, superseded) versions of the performance evaluation plan on

record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. The program of corrective action should be included in the plan required under § 63.8(d)(2).

(d) Except as provided in § 63.1981(d)(2), each owner or operator subject to the provisions of this subpart must keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.

(1) Each owner or operator subject to the provisions of this subpart must keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under § 63.1960(b).

(2) Each owner or operator subject to the provisions of this subpart must keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in § 63.1962(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in § 63.1962(a)(3)(ii).

(e) Except as provided in § 63.1981(d)(2), each owner or operator subject to the provisions of this subpart must keep for at least 5 years up-to-date, readily accessible records of the following:

(1) All collection and control system exceedances of the operational standards in § 63.1958, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.

(2) Each owner or operator subject to the control provisions of this subpart must keep records of each wellhead temperature monitoring value of greater than 55 degrees Celsius (131 degrees Fahrenheit), each wellhead nitrogen level at or above 20 percent, and each wellhead oxygen level at or above 5 percent, except:

(i) When an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the compliance provisions for wellhead temperature in § 63.1958(c)(1), but no later than September 27, 2021, the records of each wellhead temperature monitoring value of 62.8 degrees Celsius (145 degrees Fahrenheit) or above instead of values greater than 55 degrees Celsius (131 degrees Fahrenheit).

(ii) Each owner or operator required to conduct the enhanced monitoring provisions in § 63.1961(a)(5), must also keep records of all enhanced monitoring activities.

(iii) Each owner or operator required to submit the *24-hour high temperature report in* § 63.1981(k), must also keep a record of the email transmission.

(3) For any root cause analysis for which corrective actions are required in § 63.1960(a)(3)(i)(A) or (a)(4)(i)(A), keep a record of the root cause analysis conducted, including a description of the recommended corrective action(s) taken, and the date(s) the corrective action(s) were completed.

(4) For any root cause analysis for which corrective actions are required in § 63.1960(a)(3)(i)(B) or (a)(4)(i)(B), keep a record of the root cause analysis conducted, the corrective action analysis, the date for corrective action(s) already completed following the positive pressure reading or high temperature reading, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

(5) For any root cause analysis for which corrective actions are required in § 63.1960(a)(3)(i)(C) or (a)(4)(i)(C), keep a record of the root cause analysis conducted, the corrective action analysis, the date for corrective action(s) already completed following the positive pressure reading or high temperature reading, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates, and a copy of any comments or final approval on the corrective action analysis or schedule from the Administrator.

(f) Landfill owners or operators who convert design capacity from volume to mass or mass to volume to demonstrate that landfill design capacity is less than 2.5 million Mg or 2.5 million m^3, as provided in the definition of “design capacity,” must keep readily accessible, on-site records of the annual recalculation of site-specific density, design capacity, and the supporting documentation. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.

(g) Except as provided in § 63.1981(d)(2), each owner or operator subject to the provisions of this subpart must keep for at least 5 years up-to-date, readily accessible records of all collection and control system monitoring data for parameters measured in § 63.1961(a)(1) through (6).

(h) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the operational standard for temperature in § 63.1958(c)(1), you must keep the following records.

(1) Records of the landfill gas temperature on a monthly basis as monitored in § 63.1960(a)(4).

(2) Records of enhanced monitoring data at each well with a measurement of landfill gas temperature greater than 62.8 degrees Celsius (145 degrees Fahrenheit) as gathered in § 63.1961(a)(5) and (6).

(i) Any records required to be maintained by this subpart that are submitted electronically via the EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation.

(ii) [Reserved]

[85 FR 17261, Mar. 26, 2020, as amended at 85 FR 64401, Oct. 13, 2020]

OTHER REQUIREMENTS AND INFORMATION

§ 63.1985 Who enforces this subpart?

(a) This subpart can be implemented and enforced by the EPA, or a delegated authority such as the applicable state, local, or tribal agency. If the EPA Administrator has delegated authority to a state, local, or tribal agency, then that agency as well as the EPA has the authority to implement and enforce this subpart. Contact the applicable EPA Regional office to find out if this subpart is delegated to a state, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a state, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the EPA Administrator and are not transferred to the state, local, or tribal agency.

(c) The authorities that will not be delegated to state, local, or tribal agencies are as follows. Approval of alternatives to the emission standards in §§ 63.1955 through 63.1962. Where this subpart references part 60, subpart WWW of this subchapter, the cited provisions will be delegated according to the delegation provisions of part 60, subpart WWW of this subchapter. For this subpart, the EPA also retains the authority to approve methods for determining the NMOC concentration in § 63.1959(a)(3) and the method for determining the site-specific methane generation rate constant k in § 63.1959(a)(4).

[85 FR 17261, Mar. 26, 2020, as amended at 87 FR 8204, Feb. 14, 2022]

§ 63.1990 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, 40 CFR part 60, subparts A, Cc, Cf, WWW, and XXX; 40 CFR part 62, subpart GGG, and subpart A of this part, and this section that follows:

Active collection system means a gas collection system that uses gas mover equipment.

Active landfill means a landfill in which solid waste is being placed or a landfill that is planned to accept waste in the future.

Bioreactor means an MSW landfill or portion of an MSW landfill where any liquid other than leachate (leachate includes landfill gas condensate) is added in a controlled fashion into the waste mass (often in combination with recirculating leachate) to reach a minimum average moisture content of at least 40 percent by weight to accelerate or enhance the anaerobic (without oxygen) biodegradation of the waste.

Closed area means a separately lined area of an MSW landfill in which solid waste is no longer being placed. If additional solid waste is placed in that area of the landfill, that landfill area is no longer closed. The area must be separately lined to ensure that the landfill gas does not migrate between open and closed areas.

Closed landfill means a landfill in which solid waste is no longer being placed, and in which no additional solid wastes will be placed without first filing a notification of modification as prescribed under § 63.9(b). Once a notification of modification has been filed, and additional solid waste is placed in the landfill, the landfill is no longer closed.

Closure means that point in time when a landfill becomes a closed landfill.

Commercial solid waste means all types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential and industrial wastes.

Controlled landfill means any landfill at which collection and control systems are required under this subpart as a result of the nonmethane organic compounds emission rate. The landfill is considered controlled at the time a collection and control system design plan is submitted in compliance with § 60.752(b)(2)(i) of this chapter or in compliance with § 63.1959(b)(2)(i).

Corrective action analysis means a description of all reasonable interim and long-term measures, if any, that are available, and an explanation of why the selected corrective action(s) is/are the best alternative(s), including, but not limited to, considerations of cost effectiveness, technical feasibility, safety, and secondary impacts.

Cover penetration means a wellhead, a part of a landfill gas collection or operations system, and/or any other object that completely passes through the landfill cover. The landfill cover includes that portion which covers the waste, as well as the portion which borders the waste extended to the point where it is sealed with the landfill liner or the surrounding land mass. Examples of what is not a penetration for purposes of this subpart include but are not limited to: Survey stakes, fencing including litter fences, flags, signs, utility posts, and trees so long as these items do not pass through the landfill cover.

Design capacity means the maximum amount of solid waste a landfill can accept, as indicated in terms of volume or mass in the most recent permit issued by the state, local, or tribal agency responsible for regulating the landfill, plus any in-place waste not accounted for in the most recent permit. If the owner or operator chooses to convert the design capacity from volume to mass or from mass to volume to demonstrate its design capacity is less than 2.5 million Mg or 2.5 million m^3, the calculation must include a site-specific density, which must be recalculated annually.

Deviation before September 28, 2021, means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including, but not limited to, any emissions limitation (including any operating limit) or work practice requirement;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation, (including any operating limit), or work practice requirement in this subpart during SSM, regardless of whether or not such failure is permitted by this subpart.

Deviation beginning no later than September 27, 2021, means any instance in which an affected source subject to this subpart or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart including but not limited to any emission limit, or operating limit, or work practice requirement; or

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit.

Disposal facility means all contiguous land and structures, other appurtenances, and improvements on the land used for the disposal of solid waste.

Emissions limitation means any emission limit, opacity limit, operating limit, or visible emissions limit.

Enclosed combustor means an enclosed firebox which maintains a relatively constant limited peak temperature generally using a limited supply of combustion air. An enclosed flare is considered an enclosed combustor.

EPA approved State plan means a State plan that EPA has approved based on the requirements in 40 CFR part 60, subpart B to implement and enforce 40 CFR part 60, subparts Cc or Cf. An approved state plan becomes effective on the date specified in the document published in the FEDERAL REGISTER announcing EPA's approval.

EPA approved Tribal plan means a plan submitted by a tribal authority pursuant to 40 CFR parts 9, 35, 49, 50, and 81 to implement and enforce 40 CFR part 60, subpart Cc or subpart Cf.

Federal plan means the EPA plan to implement 40 CFR part 60, subparts Cc or Cf for existing MSW landfills located in states and Indian country where state plans or tribal plans are not currently in effect. On the effective date of an EPA approved state or tribal plan, the Federal Plan no longer applies. The Federal Plan implementing 40 CFR part 60, subpart Cc is found at 40 CFR part 62, subpart GGG.

Flare means an open combustor without enclosure or shroud.

Gas mover equipment means the equipment (*i.e.,* fan, blower, compressor) used to transport landfill gas through the header system.

Household waste means any solid waste (including garbage, trash, and sanitary waste in septic tanks) derived from households (including, but not limited to, single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas). Household waste does not include fully segregated yard waste. Segregated yard waste means vegetative matter resulting exclusively from the cutting of grass, the pruning and/or removal of bushes, shrubs, and trees, the weeding of gardens, and other landscaping maintenance activities. Household waste does not include construction, renovation, or demolition wastes, even if originating from a household.

Industrial solid waste means solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under Subtitle C of the Resource Conservation and Recovery Act, 40 CFR parts 264 and 265. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: Electric power generation; fertilizer/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste.

Interior well means any well or similar collection component located inside the perimeter of the landfill waste. A perimeter well located outside the landfilled waste is not an interior well.

Landfill means an area of land or an excavation in which wastes are placed for permanent disposal, and that is not a land application unit, surface impoundment, injection well, or waste pile as those terms are defined under § 257.2 of this chapter.

Lateral expansion means a horizontal expansion of the waste boundaries of an existing MSW landfill. A lateral expansion is not a modification unless it results in an increase in the design capacity of the landfill.

Leachate recirculation means the practice of taking the leachate collected from the landfill and reapplying it to the landfill by any of one of a variety of methods, including pre-wetting of the waste, direct discharge into the working face, spraying, infiltration ponds, vertical injection wells, horizontal gravity distribution systems, and pressure distribution systems.

Modification means an increase in the permitted volume design capacity of the landfill by either lateral or vertical expansion based on its permitted design capacity after November 7, 2000. Modification does not occur until the owner or operator commences construction on the lateral or vertical expansion.

Municipal solid waste landfill or *MSW landfill* means an entire disposal facility in a contiguous geographical space where household waste is placed in or on land. An MSW landfill may also receive other types of RCRA Subtitle D wastes (§ 257.2 of this chapter) such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. Portions of an MSW landfill may be separated by access roads. An MSW landfill may be publicly or privately owned. An MSW landfill may be a new MSW landfill, an existing MSW landfill, or a lateral expansion.

Municipal solid waste landfill emissions or *MSW landfill emissions* means gas generated by the decomposition of organic waste deposited in an MSW landfill or derived from the evolution of organic compounds in the waste.

NMOC means nonmethane organic compounds, as measured according to the provisions of § 63.1959.

Nondegradable waste means any waste that does not decompose through chemical breakdown or microbiological activity. Examples are, but are not limited to, concrete, municipal waste combustor ash, and metals.

Passive collection system means a gas collection system that solely uses positive pressure within the landfill to move the gas rather than using gas mover equipment.

Root cause analysis means an assessment conducted through a process of investigation to determine the primary cause, and any other contributing causes, of an exceedance of a standard operating parameter at a wellhead.

Segregated yard waste means vegetative matter resulting exclusively from the cutting of grass, the pruning and/or removal of bushes, shrubs, and trees, the weeding of gardens, and other landscaping maintenance activities.

Sludge means the term sludge as defined in § 258.2 of this chapter.

Solid waste means the term solid waste as defined in § 258.2 of this chapter.

Sufficient density means any number, spacing, and combination of collection system components, including vertical wells, horizontal collectors, and surface collectors, necessary to maintain emission and migration control as determined by measures of performance set forth in this subpart.

Sufficient extraction rate means a rate sufficient to maintain a negative pressure at all wellheads in the collection system without causing air infiltration, including any wellheads connected to the system as a result of expansion or excess surface emissions, for the life of the blower.

Treated landfill gas means landfill gas processed in a treatment system as defined in this subpart.

Treatment system means a system that filters, de-waters, and compresses landfill gas for sale or beneficial use.

Untreated landfill gas means any landfill gas that is not treated landfill gas.

Work practice requirement means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the Clean Air Act.

Table 1 to Subpart AAAA of Part 63—Applicability of NESHAP General Provisions to Subpart AAAA

As specified in this subpart, you must meet each requirement in the following table that applies to you. The owner or operator may begin complying with the provisions that apply no later than September 27, 2021, any time before that date.

TABLE 1 TO SUBPART AAAA OF PART 63—APPLICABILITY OF NESHAP GENERAL PROVISIONS TO SUBPART AAAA

Part 63 citation	Description	Applicable to subpart AAAA before September 28, 2021	Applicable to subpart AAAA no later than September 27, 2021	Explanation
§ 63.1(a)	Applicability: General applicability of NESHAP in this part	Yes	Yes	
§ 63.1(b)	Applicability determination for stationary sources	Yes	Yes	
§ 63.1(c)	Applicability after a standard has been set	No [1]	Yes	
§ 63.1(e)	Applicability of permit program before relevant standard is set	Yes	Yes	
§ 63.2	Definitions	Yes	Yes	
§ 63.3	Units and abbreviations	No [1]	Yes	
§ 63.4	Prohibited activities and circumvention	Yes	Yes	
§ 63.5(a)	Construction/ reconstruction	No [1]	Yes	
§ 63.5(b)	Requirements for existing, newly constructed, and reconstructed sources	Yes	Yes	
§ 63.5(d)	Application for approval of	No [1]	Yes	

[1] *Before September 28, 2021, this subpart requires affected facilities to follow 40 CFR part 60, subpart WWW, which incorporates the General Provisions of 40 CFR part 60.*

[2] *If an owner or operator has complied with requirements that are parallel to the requirements of the part 63 citation of this table under 40 CFR part 60, subpart WWW or subpart XXX, or a state or federal plan that implements 40 CFR part 60, subpart Cc or Cf, then additional notification for that requirement is not required.*

Part 63 citation	Description	Applicable to subpart AAAA before September 28, 2021	Applicable to subpart AAAA no later than September 27, 2021	Explanation
	construction or reconstruction			
§ 63.5(e) and (f)	Approval of construction and reconstruction	No [1]	Yes	
§ 63.6(a)	Compliance with standards and maintenance requirements—applicability	No [1]	Yes	
§ 63.6(b) and (c)	Compliance dates for new, reconstructed, and existing sources	No [1]	Yes	
§ 63.6(e)(1)(i)-(ii)	Operation and maintenance requirements	Yes	No	See § 63.1955(c) for general duty requirements.
§ 63.6(e)(3)(i)-(ix)	SSM plan	Yes	No	
§ 63.6(f)(1)	Exemption of nonopacity emission standards during SSM	No	No	
§ 63.6(f)(2) and (3)	Compliance with nonopacity emission standards	Yes	Yes	
§ 63.6(g)	Use of an alternative nonopacity standard	No [1]	Yes	
§ 63.6(h)	Compliance with opacity and visible emission standards	No [1]	No	Subpart AAAA does not prescribe opacity or visible emission standards.
§ 63.6(i)	Extension of compliance with emission standards	No [1]	Yes	
§ 63.6(j)	Exemption from	No [1]	Yes	

[1] *Before September 28, 2021, this subpart requires affected facilities to follow 40 CFR part 60, subpart WWW, which incorporates the General Provisions of 40 CFR part 60.*

[2] *If an owner or operator has complied with requirements that are parallel to the requirements of the part 63 citation of this table under 40 CFR part 60, subpart WWW or subpart XXX, or a state or federal plan that implements 40 CFR part 60, subpart Cc or Cf, then additional notification for that requirement is not required.*

Part 63 citation	Description	Applicable to subpart AAAA before September 28, 2021	Applicable to subpart AAAA no later than September 27, 2021	Explanation
	compliance with emission standards			
§ 63.7	Performance testing	No [1]	Yes	
§ 63.7(e)(1)	Conditions for performing performance tests	No [1]	No	40 CFR 63.1959(f) specifies the conditions for performing performance tests.
§ 63.8(a) and (b)	Monitoring requirements—Applicability and conduct of monitoring	No [1]	Yes	
§ 63.8(c)(1)	Operation and Maintenance of continuous emissions monitoring system	No [1]	Yes	
§ 63.8(c)(1)(i)	Operation and Maintenance Requirements	No [1]	No	Unnecessary due to the requirements of § 63.8(c)(1) and the requirements for a quality control plan for monitoring equipment in § 63.8(d)(2).
§ 63.8(c)(1)(ii)	Operation and Maintenance Requirements	No [1]	No	
§ 63.8(c)(1)(iii)	SSM plan for monitors	No [1]	No	
§ 63.8(c)(2)-(8)	Monitoring requirements	No [1]	Yes	
§ 63.8(d)(1)	Quality control for monitors	No [1]	Yes	
§ 63.8(d)(2)	Quality control for monitors	No [1]	Yes	
§ 63.8(d)(3)	Quality control records	No [1]	No	See § 63.1983(c)(8).

[1] Before September 28, 2021, this subpart requires affected facilities to follow 40 CFR part 60, subpart WWW, which incorporates the General Provisions of 40 CFR part 60.

[2] If an owner or operator has complied with requirements that are parallel to the requirements of the part 63 citation of this table under 40 CFR part 60, subpart WWW or subpart XXX, or a state or federal plan that implements 40 CFR part 60, subpart Cc or Cf, then additional notification for that requirement is not required.

Part 63 citation	Description	Applicable to subpart AAAA before September 28, 2021	Applicable to subpart AAAA no later than September 27, 2021	Explanation
§ 63.9(a), (c), and (d)	Notifications	No [1]	Yes	
§ 63.9(b)	Initial notifications	No [1]	Yes [2]	
§ 63.9(e)	Notification of performance test	No [1]	Yes [2]	
§ 63.9(f)	Notification of visible emissions/opacity test	No [1]	No	Subpart AAAA does not prescribe opacity or visible emission standards.
§ 63.9(g)	Notification when using CMS	No [1]	Yes [2]	
§ 63.9(h)	Notification of compliance status	No [1]	Yes [2]	
§ 63.9(i)	Adjustment of submittal deadlines	No [1]	Yes	
§ 63.9(j)	Change in information already provided	No [1]	Yes	
§ 63.10(a)	Recordkeeping and reporting—general	No [1]	Yes	
§ 63.10(b)(1)	General recordkeeping	No [1]	Yes	
§ 63.10(b)(2)(i)	Startup and shutdown records	Yes	No	See § 63.1983(c)(6) for recordkeeping for periods of startup and shutdown.
§ 63.10(b)(2)(ii)	Recordkeeping of failures to meet a standard	Yes	No	See § 63.1983(c)(6)-(7) for recordkeeping for any exceedance of a standard.
§ 63.10(b)(2)(iii)	Recordkeeping of maintenance on air pollution control equipment	Yes	Yes	

[1] Before September 28, 2021, this subpart requires affected facilities to follow 40 CFR part 60, subpart WWW, which incorporates the General Provisions of 40 CFR part 60.

[2] If an owner or operator has complied with requirements that are parallel to the requirements of the part 63 citation of this table under 40 CFR part 60, subpart WWW or subpart XXX, or a state or federal plan that implements 40 CFR part 60, subpart Cc or Cf, then additional notification for that requirement is not required.

Part 63 citation	Description	Applicable to subpart AAAA before September 28, 2021	Applicable to subpart AAAA no later than September 27, 2021	Explanation
§ 63.10(b)(2)(iv)-(v)	Actions taken to minimize emissions during SSM	Yes	No	See § 63.1983(c)(7) for recordkeeping of corrective actions to restore compliance.
§ 63.10(b)(2)(vi)	Recordkeeping for CMS malfunctions	No[1]	Yes	
§ 63.10(b)(2)(vii)-(xiv)	Other Recordkeeping of compliance measurements	No[1]	Yes	
§ 63.10(c)	Additional recordkeeping for sources with CMS	No [1]	No	See § 63.1983 for required CMS recordkeeping.
§ 63.10(d)(1)	General reporting	No [1]	Yes	
§ 63.10(d)(2)	Reporting of performance test results	No [1]	Yes	
§ 63.10(d)(3)	Reporting of visible emission observations	No [1]	No	
§ 63.10(d)(4)	Progress reports for compliance date extensions	No [1]	Yes	
§ 63.10(d)(5)	SSM reporting	Yes	No	All exceedances must be reported in the semi-annual report required by § 63.1981(h).
§ 63.10(e)	Additional reporting for CMS systems	No [1]	Yes	
§ 63.10(f)	Recordkeeping/reporting waiver	No [1]	Yes	
§ 63.11	Control device requirements/flares	No [1]	Yes	§ 60.18 is required before September 27, 2021. However, § 60.18 and

[1] Before September 28, 2021, this subpart requires affected facilities to follow 40 CFR part 60, subpart WWW, which incorporates the General Provisions of 40 CFR part 60.

[2] If an owner or operator has complied with requirements that are parallel to the requirements of the part 63 citation of this table under 40 CFR part 60, subpart WWW or subpart XXX, or a state or federal plan that implements 40 CFR part 60, subpart Cc or Cf, then additional notification for that requirement is not required.

Part 63 citation	Description	Applicable to subpart AAAA before September 28, 2021	Applicable to subpart AAAA no later than September 27, 2021	Explanation
				63.11 are equivalent.
§ 63.12(a)	State authority	Yes	Yes	
§ 63.12(b)-(c)	State delegations	No [1]	Yes	
§ 63.13	Addresses	No [1]	Yes	
§ 63.14	Incorporation by reference	No [1]	Yes	
§ 63.15	Availability of information and confidentiality	Yes	Yes	

[1] *Before September 28, 2021, this subpart requires affected facilities to follow 40 CFR part 60, subpart WWW, which incorporates the General Provisions of 40 CFR part 60.*

[2] *If an owner or operator has complied with requirements that are parallel to the requirements of the part 63 citation of this table under 40 CFR part 60, subpart WWW or subpart XXX, or a state or federal plan that implements 40 CFR part 60, subpart Cc or Cf, then additional notification for that requirement is not required.*

[85 FR 17261, Mar. 26, 2020, as amended at 85 FR 64401, Oct. 13, 2020; 87 FR 8204, Feb. 14, 2022]

Appendix D

60 Subpart XXX – Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014

Title 40 —Protection of Environment
Chapter I —Environmental Protection Agency
Subchapter C —Air Programs
Part 60 —Standards of Performance for New Stationary Sources

Authority: 42 U.S.C. 7401 *et seq.*

Source: 36 FR 24877, Dec. 23, 1971, unless otherwise noted.

Subpart XXX—Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014

Source: 81 FR 59368, Aug. 29, 2016, unless otherwise noted.

§ 60.760 Applicability, designation of affected source, and delegation of authority.

(a) The provisions of this subpart apply to each municipal solid waste landfill that commenced construction, reconstruction, or modification after July 17, 2014. Physical or operational changes made to an MSW landfill solely to comply with subparts Cc, Cf, or WWW of this part are not considered construction, reconstruction, or modification for the purposes of this section.

(b) The following authorities are retained by the Administrator and are not transferred to the state: § 60.764(a)(5).

(c) Activities required by or conducted pursuant to a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), or state remedial action are not considered construction, reconstruction, or modification for purposes of this subpart.

§ 60.761 Definitions.

As used in this subpart, all terms not defined herein have the meaning given them in the Act or in subpart A of this part.

Active collection system means a gas collection system that uses gas mover equipment.

Active landfill means a landfill in which solid waste is being placed or a landfill that is planned to accept waste in the future.

Closed area means a separately lined area of an MSW landfill in which solid waste is no longer being placed. If additional solid waste is placed in that area of the landfill, that landfill area is no longer closed. The area must be separately lined to ensure that the landfill gas does not migrate between open and closed areas.

Closed landfill means a landfill in which solid waste is no longer being placed, and in which no additional solid wastes will be placed without first filing a notification of modification as prescribed under § 60.7(a)(4). Once a notification of modification has been filed, and additional solid waste is placed in the landfill, the landfill is no longer closed.

Closure means that point in time when a landfill becomes a closed landfill.

Commercial solid waste means all types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential and industrial wastes.

Controlled landfill means any landfill at which collection and control systems are required under this subpart as a result of the nonmethane organic compounds emission rate. The landfill is considered controlled at the time a collection and control system design plan is submitted in compliance with either § 60.762(b)(2)(i), 40 CFR part 60, subpart WWW, or a Federal plan or EPA approved and effective state plan or tribal plan that implements either 40 CFR part 60, subparts Cc or Cf, whichever regulation first required submission of a collection and control system design plan for the landfill.

Corrective action analysis means a description of all reasonable interim and long-term measures, if any, that are available, and an explanation of why the selected corrective action(s) is/are the best alternative(s), including, but not limited to, considerations of cost effectiveness, technical feasibility, safety, and secondary impacts.

Design capacity means the maximum amount of solid waste a landfill can accept, as indicated in terms of volume or mass in the most recent permit issued by the state, local, or tribal agency responsible for regulating the landfill, plus any in-place waste not accounted for in the most recent permit. If the owner or operator chooses to convert the design capacity from volume to mass or from mass to volume to demonstrate its design capacity is less than 2.5 million megagrams or 2.5 million cubic meters, the calculation must include a site-specific density, which must be recalculated annually.

Disposal facility means all contiguous land and structures, other appurtenances, and improvements on the land used for the disposal of solid waste.

Emission rate cutoff means the threshold annual emission rate to which a landfill compares its estimated emission rate to determine if control under the regulation is required.

Enclosed combustor means an enclosed firebox which maintains a relatively constant limited peak temperature generally using a limited supply of combustion air. An enclosed flare is considered an enclosed combustor.

Flare means an open combustor without enclosure or shroud.

Gas mover equipment means the equipment (*i.e.,* fan, blower, compressor) used to transport landfill gas through the header system.

Gust means the highest instantaneous wind speed that occurs over a 3-second running average.

Household waste means any solid waste (including garbage, trash, and sanitary waste in septic tanks) derived from households (including, but not limited to, single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas). Household waste does not include fully segregated yard waste. Segregated yard waste means vegetative matter resulting exclusively from the cutting of grass, the pruning and/or removal of bushes, shrubs, and trees, the weeding of gardens, and other landscaping maintenance activities. Household waste does not include construction, renovation, or demolition wastes, even if originating from a household.

Industrial solid waste means solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under Subtitle C of the Resource Conservation and Recovery Act, parts 264 and 265 of this chapter. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: Electric power generation; fertilizer/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste.

Interior well means any well or similar collection component located inside the perimeter of the landfill waste. A perimeter well located outside the landfilled waste is not an interior well.

Landfill means an area of land or an excavation in which wastes are placed for permanent disposal, and that is not a land application unit, surface impoundment, injection well, or waste pile as those terms are defined under § 257.2 of this title.

Lateral expansion means a horizontal expansion of the waste boundaries of an existing MSW landfill. A lateral expansion is not a modification unless it results in an increase in the design capacity of the landfill.

Leachate recirculation means the practice of taking the leachate collected from the landfill and reapplying it to the landfill by any of one of a variety of methods, including pre-wetting of the waste, direct discharge into the working face, spraying, infiltration ponds, vertical injection wells, horizontal gravity distribution systems, and pressure distribution systems.

Modification means an increase in the permitted volume design capacity of the landfill by either lateral or vertical expansion based on its permitted design capacity as of July 17, 2014. Modification does not occur until the owner or operator commences construction on the lateral or vertical expansion.

Municipal solid waste landfill or *MSW landfill* means an entire disposal facility in a contiguous geographical space where household waste is placed in or on land. An MSW landfill may also receive other types of RCRA Subtitle D wastes (§ 257.2 of this title) such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. Portions of an MSW landfill may be separated by access roads. An MSW landfill may be publicly or privately owned. An MSW landfill may be a new MSW landfill, an existing MSW landfill, or a lateral expansion.

Municipal solid waste landfill emissions or *MSW landfill emissions* means gas generated by the decomposition of organic waste deposited in an MSW landfill or derived from the evolution of organic compounds in the waste.

NMOC means nonmethane organic compounds, as measured according to the provisions of § 60.764.

Nondegradable waste means any waste that does not decompose through chemical breakdown or microbiological activity. Examples are, but are not limited to, concrete, municipal waste combustor ash, and metals.

Passive collection system means a gas collection system that solely uses positive pressure within the landfill to move the gas rather than using gas mover equipment.

Root cause analysis means an assessment conducted through a process of investigation to determine the primary cause, and any other contributing causes, of positive pressure at a wellhead.

Segregated yard waste means vegetative matter resulting exclusively from the cutting of grass, the pruning and/or removal of bushes, shrubs, and trees, the weeding of gardens, and other landscaping maintenance activities.

Sludge means the term sludge as defined in 40 CFR 258.2.

Solid waste means the term solid waste as defined in 40 CFR 258.2.

Sufficient density means any number, spacing, and combination of collection system components, including vertical wells, horizontal collectors, and surface collectors, necessary to maintain emission and migration control as determined by measures of performance set forth in this part.

Sufficient extraction rate means a rate sufficient to maintain a negative pressure at all wellheads in the collection system without causing air infiltration, including any wellheads connected to the system as a result of expansion or excess surface emissions, for the life of the blower.

Treated landfill gas means landfill gas processed in a treatment system as defined in this subpart.

Treatment system means a system that filters, de-waters, and compresses landfill gas for sale or beneficial use.

Untreated landfill gas means any landfill gas that is not treated landfill gas.

[81 FR 59368, Aug. 29, 2016, as amended at 87 FR 8202, Feb. 14, 2022]

§ 60.762 Standards for air emissions from municipal solid waste landfills.

(a) Each owner or operator of an MSW landfill having a design capacity less than 2.5 million megagrams by mass or 2.5 million cubic meters by volume must submit an initial design capacity report to the Administrator as provided in § 60.767(a). The landfill may calculate design capacity in either megagrams or cubic meters for comparison with the exemption values. Any density conversions must be documented and submitted with the report. Submittal of the initial design capacity report fulfills the requirements of this subpart except as provided for in paragraphs (a)(1) and (2) of this section.

(1) The owner or operator must submit to the Administrator an amended design capacity report, as provided for in § 60.767(a)(3).

(2) When an increase in the maximum design capacity of a landfill exempted from the provisions of §§ 60.762(b) through 60.769 on the basis of the design capacity exemption in paragraph (a) of this section results in a revised maximum design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, the owner or operator must comply with the provisions of paragraph (b) of this section.

(b) Each owner or operator of an MSW landfill having a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, must either comply with paragraph (b)(2) of this section or calculate an NMOC emission rate for the landfill using the procedures specified in § 60.764. The NMOC emission rate must be recalculated annually, except as provided in § 60.767(b)(1)(ii). The owner or operator of an MSW landfill subject to this subpart with a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters is subject to part 70 or 71 permitting requirements.

(1) If the calculated NMOC emission rate is less than 34 megagrams per year, the owner or operator must:

(i) Submit an annual NMOC emission rate emission report to the Administrator, except as provided for in § 60.767(b)(1)(ii); and

(ii) Recalculate the NMOC emission rate annually using the procedures specified in § 60.764(a)(1) until such time as the calculated NMOC emission rate is equal to or greater than 34 megagrams per year, or the landfill is closed.

(A) If the calculated NMOC emission rate, upon initial calculation or annual recalculation required in paragraph (b) of this section, is equal to or greater than 34 megagrams per year, the owner or operator must either: Comply with paragraph (b)(2) of this section; calculate NMOC emissions using the next higher tier in § 60.764; or conduct a surface emission monitoring demonstration using the procedures specified in § 60.764(a)(6).

(B) If the landfill is permanently closed, a closure report must be submitted to the Administrator as provided for in § 60.767(e).

(2) If the calculated NMOC emission rate is equal to or greater than 34 megagrams per year using Tier 1, 2, or 3 procedures, the owner or operator must either:

(i) ***Calculated NMOC Emission Rate.*** Submit an initial or revised collection and control system design plan prepared by a professional engineer to the Administrator as specified in § 60.767(c) or (d); calculate NMOC emissions using the next higher tier in § 60.764; or conduct a surface emission monitoring demonstration using the procedures specified in § 60.764(a)(6). The collection and control system must meet the requirements in paragraphs (b)(2)(ii) and (iii) of this section.

(ii) ***Collection system.*** Install and start up a collection and control system that captures the gas generated within the landfill as required by paragraphs (b)(2)(ii)(C) or (D) and (b)(2)(iii) of this section within 30 months after:

(A) The first annual report submitted under this subpart or part 62 of this subchapter in which the NMOC emission rate equals or exceeds 34 megagrams per year, unless Tier 2 or Tier 3 sampling demonstrates that the NMOC emission rate is less than 34 megagrams per year, as specified in § 60.767(c)(4); or

(B) The most recent NMOC emission rate report in which the NMOC emission rate equals or exceeds 34 megagrams per year based on Tier 2, if the Tier 4 surface emissions monitoring shows a surface methane emission concentration of 500 parts per million methane or greater as specified in § 60.767(c)(4)(iii).

(C) An active collection system must:

(*1*) Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control system equipment;

(*2*) Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of 5 years or more if active; or 2 years or more if closed or at final grade.

(*3*) Collect gas at a sufficient extraction rate;

(*4*) Be designed to minimize off-site migration of subsurface gas.

(D) A passive collection system must:

(*1*) Comply with the provisions specified in paragraphs (b)(2)(ii)(C)(*1*), (*2*), and (*3*) of this section.

(*2*) Be installed with liners on the bottom and all sides in all areas in which gas is to be collected. The liners must be installed as required under 40 CFR 258.40.

(iii) ***Control system.*** Route all the collected gas to a control system that complies with the requirements in either paragraph (b)(2)(iii)(A), (B), or (C) of this section.

(A) A non-enclosed flare designed and operated in accordance with the parameters established in § 60.18 except as noted in § 60.764(e); or

(B) A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen. The reduction efficiency or parts per million by volume must be established by an initial performance test to be completed no later than 180 days after the initial startup of the approved control system using the test methods specified in § 60.764(d). The performance test is not required for boilers and process heaters with design heat input capacities equal to or greater than 44 megawatts that burn landfill gas for compliance with this subpart.

(*1*) If a boiler or process heater is used as the control device, the landfill gas stream must be introduced into the flame zone.

(*2*) The control device must be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in § 60.766;

(C) Route the collected gas to a treatment system that processes the collected gas for subsequent sale or beneficial use such as fuel for combustion, production of vehicle fuel, production of high-Btu gas for pipeline injection, or use as a raw material in a chemical manufacturing process. Venting of treated landfill gas to the ambient air is not allowed. If the treated landfill gas cannot be routed for subsequent sale or beneficial use, then the treated landfill gas must be controlled according to either paragraph (b)(2)(iii)(A) or (B) of this section.

(D) All emissions from any atmospheric vent from the gas treatment system are subject to the requirements of paragraph (b)(2)(iii)(A) or (B) of this section. For purposes of this subpart, atmospheric vents located on the condensate storage tank are not part of the treatment system and are exempt from the requirements of paragraph (b)(2)(iii)(A) or (B) of this section.

(iv) ***Operation.*** Operate the collection and control device installed to comply with this subpart in accordance with the provisions of §§ 60.763, 60.765, and 60.766; or the provisions of §§ 63.1958, 63.1960, and 63.1961 of this chapter. Once the owner or operator begins to comply with the provisions of §§ 63.1958, 63.1960, and 63.1961 of this chapter, the owner or operator must continue to operate the collection and control device according to those provisions and cannot return to the provisions of §§ 60.763, 60.765, and 60.766.

(v) ***Removal criteria.*** The collection and control system may be capped, removed, or decommissioned if the following criteria are met:

(A) The landfill is a closed landfill (as defined in § 60.761). A closure report must be submitted to the Administrator as provided in § 60.767(e).

(B) The collection and control system has been in operation a minimum of 15 years or the landfill owner or operator demonstrates that the GCCS will be unable to operate for 15 years due to declining gas flow.

(C) Following the procedures specified in § 60.764(b), the calculated NMOC emission rate at the landfill is less than 34 megagrams per year on three successive test dates. The test dates must be no less than 90 days apart, and no more than 180 days apart.

(c) For purposes of obtaining an operating permit under title V of the Clean Air Act, the owner or operator of an MSW landfill subject to this subpart with a design capacity less than 2.5 million megagrams or 2.5 million cubic meters is not subject to the requirement to obtain an operating permit for the landfill under part 70 or 71 of this chapter, unless the landfill is otherwise subject to either part 70 or 71. For purposes of submitting a timely application for an operating permit under part 70 or 71, the owner or operator of an MSW landfill subject to this subpart with a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters, and not otherwise subject to either part 70 or 71, becomes subject to the requirements of § 70.5(a)(1)(i) or § 71.5(a)(1)(i) of this chapter, regardless of when the design capacity report is actually submitted, no later than:

(1) November 28, 2016 for MSW landfills that commenced construction, modification, or reconstruction after July 17, 2014 but before August 29, 2016;

(2) Ninety days after the date of commenced construction, modification, or reconstruction for MSW landfills that commence construction, modification, or reconstruction after August 29, 2016.

(d) When an MSW landfill subject to this subpart is closed as defined in this subpart, the owner or operator is no longer subject to the requirement to maintain an operating permit under part 70 or 71 of this chapter for the landfill if the landfill is not otherwise subject to the requirements of either part 70 or 71 and if either of the following conditions are met:

(1) The landfill was never subject to the requirement for a control system under paragraph (b)(2) of this section; or

(2) The owner or operator meets the conditions for control system removal specified in paragraph (b)(2)(v) of this section.

[81 FR 59368, Aug. 29, 2016, as amended at 85 FR 17261, Mar. 26, 2020; 87 FR 8203, Feb. 14, 2022]

§ 60.763 Operational standards for collection and control systems.

Each owner or operator of an MSW landfill with a gas collection and control system used to comply with the provisions of § 60.762(b)(2) must:

(a) Operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for:

(1) 5 years or more if active; or

(2) 2 years or more if closed or at final grade;

(b) Operate the collection system with negative pressure at each wellhead except under the following conditions:

(1) A fire or increased well temperature. The owner or operator must record instances when positive pressure occurs in efforts to avoid a fire. These records must be submitted with the annual reports as provided in § 60.767(g)(1);

(2) Use of a geomembrane or synthetic cover. The owner or operator must develop acceptable pressure limits in the design plan;

(3) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes must be approved by the Administrator as specified in § 60.767(c);

(c) Operate each interior wellhead in the collection system with a landfill gas temperature less than 55 degrees Celsius (131 degrees Fahrenheit). The owner or operator may establish a higher operating temperature value at a particular well. A higher operating value demonstration must be submitted to the Administrator for approval and must include supporting data demonstrating that the elevated parameter neither causes fires nor significantly inhibits anaerobic decomposition by killing methanogens. The demonstration must satisfy both criteria in order to be approved (*i.e.*, neither causing fires nor killing methanogens is acceptable).

(d) Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator must conduct surface testing using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in § 60.765(d). The owner or operator must conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at no more than 30-meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover and all cover penetrations. Thus, the owner or operator must monitor any openings that are within an area of the landfill where waste has been placed and a gas collection system is required. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan must be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30-meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

(e) Operate the system such that all collected gases are vented to a control system designed and operated in compliance with § 60.762(b)(2)(iii). In the event the collection or control system is not operating, the gas mover system must be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere must be closed within 1 hour of the collection or control system not operating; and

(f) Operate the control system at all times when the collected gas is routed to the system.

(g) If monitoring demonstrates that the operational requirements in paragraphs (b), (c), or (d) of this section are not met, corrective action must be taken as specified in § 60.765(a)(3) and (5) or (c). If corrective actions are taken as specified in § 60.765, the monitored exceedance is not a violation of the operational requirements in this section.

§ 60.764 Test methods and procedures.

(a)

(1) ***NMOC emission rate.*** The landfill owner or operator must calculate the NMOC emission rate using either Equation 1 provided in paragraph (a)(1)(i) of this section or Equation 2 provided in paragraph (a)(1)(ii) of this section. Both Equation 1 and Equation 2 may be used if the actual year-to-year solid waste acceptance rate is known, as specified in paragraph (a)(1)(i) of this section, for part of the life of the landfill and the actual year-to-year solid waste acceptance rate is unknown, as specified in paragraph (a)(1)(ii) of this section, for part of the life of the landfill. The values to be used in both Equation 1 and Equation 2 are 0.05 per year for k, 170 cubic meters per megagram for L_o, and 4,000 parts per million by volume as hexane for the C_{NMOC}. For landfills located in geographical areas with a 30-year annual average precipitation of less than 25 inches, as measured at the nearest representative official meteorologic site, the k value to be used is 0.02 per year.

(i)

(A) Equation 1 must be used if the actual year-to-year solid waste acceptance rate is known.

$$M_{NMOC} = \sum_{i=1}^{n} 2\,k\,L_o M_i \left(e^{-kt_i}\right)\left(C_{NMOC}\right)\left(3.6 \times 10^{-9}\right) \qquad \text{(Eq. 1)}$$

Where:

M_{NMOC} = Total NMOC emission rate from the landfill, megagrams per year.

k = Methane generation rate constant, $year^{-1}$.

L_o = Methane generation potential, cubic meters per megagram solid waste.

M_i = Mass of solid waste in the i^{th} section, megagrams.

t_i = Age of the i^{th} section, years.

C_{NMOC} = Concentration of NMOC, parts per million by volume as hexane.

3.6×10^{-9} = Conversion factor.

(B) The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i if documentation of the nature and amount of such wastes is maintained.

(ii)

(A) Equation 2 must be used if the actual year-to-year solid waste acceptance rate is unknown.

$$M_{NMOC} = 2L_oR\ (e^{-kc}-e^{-kt})\ C_{NMOC}(3.6 \times 10^{-9}) \qquad \text{(Eq.2)}$$

Where:

M_{NMOC} = Mass emission rate of NMOC, megagrams per year.

L_o = Methane generation potential, cubic meters per megagram solid waste.

R = Average annual acceptance rate, megagrams per year.

k = Methane generation rate constant, $year^{-1}$.

t = Age of landfill, years.

C_{NMOC} = Concentration of NMOC, parts per million by volume as hexane.

c = Time since closure, years; for active landfill c = 0 and $e^{-kc} = 1$.

3.6×10^{-9} = Conversion factor.

(B) The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value of R, if documentation of the nature and amount of such wastes is maintained.

(2) *Tier 1.* The owner or operator must compare the calculated NMOC mass emission rate to the standard of 34 megagrams per year.

(i) If the NMOC emission rate calculated in paragraph (a)(1) of this section is less than 34 megagrams per year, then the landfill owner or operator must submit an NMOC emission rate report according to § 60.767(b), and must recalculate the NMOC mass emission rate annually as required under § 60.762(b).

(ii) If the calculated NMOC emission rate as calculated in paragraph (a)(1) of this section is equal to or greater than 34 megagrams per year, then the landfill owner must either:

(A) Submit a gas collection and control system design plan within 1 year as specified in § 60.767(c) and install and operate a gas collection and control system within 30 months according to § 60.762(b)(2)(ii) and (iii);

(B) Determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the Tier 2 procedures provided in paragraph (a)(3) of this section; or

(C) Determine a site-specific methane generation rate constant and recalculate the NMOC emission rate using the Tier 3 procedures provided in paragraph (a)(4) of this section.

(3) *Tier 2.* The landfill owner or operator must determine the site-specific NMOC concentration using the following sampling procedure. The landfill owner or operator must install at least two sample probes per hectare, evenly distributed over the landfill surface that has retained waste for at least 2 years. If the landfill is larger than 25 hectares in area, only 50 samples are required. The probes should be evenly distributed across the sample area. The sample probes should be located to avoid known areas of nondegradable solid waste. The owner or operator must collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using Method 25 or 25C of appendix A of this part. Taking composite samples from different probes into a single cylinder is allowed; however, equal sample volumes must be taken from each probe. For each composite, the sampling rate, collection times, beginning and ending cylinder vacuums, or alternative volume measurements must be recorded to verify that composite volumes are equal. Composite sample volumes should not be less than one liter unless evidence can be provided to substantiate the accuracy of smaller volumes. Terminate compositing before the cylinder approaches ambient pressure where measurement accuracy diminishes. If more than the required number of samples are taken, all samples must be used in the analysis. The landfill owner or operator must divide the NMOC concentration from Method 25 or 25C of appendix A of this part by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane. If the landfill has an active or passive gas removal system in place, Method 25 or 25C samples may be collected from these systems instead of surface probes provided the removal system can be shown to provide sampling as representative as the two sampling probe per hectare requirement. For active collection systems, samples may be collected from the common header pipe. The sample location on the common header pipe must be before any gas moving, condensate removal, or treatment system equipment. For active collection systems, a minimum of three samples must be collected from the header pipe.

(i) Within 60 days after the date of completing each performance test (as defined in § 60.8), the owner or operator must submit the results according to § 60.767(i)(1).

(ii) The landfill owner or operator must recalculate the NMOC mass emission rate using Equation 1 or Equation 2 provided in paragraph (a)(1)(i) or (a)(1)(ii) of this section and using the average site-specific NMOC concentration from the collected samples instead of the default value provided in paragraph (a)(1) of this section.

(iii) If the resulting NMOC mass emission rate is less than 34 megagrams per year, then the owner or operator must submit a periodic estimate of NMOC emissions in an NMOC emission rate report according to § 60.767(b)(1), and must recalculate the NMOC mass emission rate annually as required under § 60.762(b). The site-specific NMOC concentration must be retested every 5 years using the methods specified in this section.

(iv) If the NMOC mass emission rate as calculated using the Tier 2 site-specific NMOC concentration is equal to or greater than 34 megagrams per year, the landfill owner or operator must either:

(A) Submit a gas collection and control system design plan within 1 year as specified in § 60.767(c) and install and operate a gas collection and control system within 30 months according to § 60.762(b)(2)(ii) and (iii);

(B) Determine a site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the Tier 3 procedures specified in paragraph (a)(4) of this section; or

(C) Conduct a surface emission monitoring demonstration using the Tier 4 procedures specified in paragraph (a)(6) of this section.

(4) *Tier 3.* The site-specific methane generation rate constant must be determined using the procedures provided in Method 2E of appendix A of this part. The landfill owner or operator must estimate the NMOC mass emission rate using Equation 1 or Equation 2 in paragraph (a)(1)(i) or (ii) of this section and using a site-specific methane generation rate constant, and the site-specific NMOC concentration as determined in paragraph (a)(3) of this section instead of the default values provided in paragraph (a)(1) of this section. The landfill owner or operator must compare the resulting NMOC mass emission rate to the standard of 34 megagrams per year.

(i) If the NMOC mass emission rate as calculated using the Tier 2 site-specific NMOC concentration and Tier 3 site-specific methane generation rate is equal to or greater than 34 megagrams per year, the owner or operator must either:

(A) Submit a gas collection and control system design plan within 1 year as specified in § 60.767(c) and install and operate a gas collection and control system within 30 months according to § 60.762(b)(2)(ii) and (iii); or

(B) Conduct a surface emission monitoring demonstration using the Tier 4 procedures specified in paragraph (a)(6) of this section.

(ii) If the NMOC mass emission rate is less than 34 megagrams per year, then the owner or operator must recalculate the NMOC mass emission rate annually using Equation 1 or Equation 2 in paragraph (a)(1) of this section and using the site-specific Tier 2 NMOC concentration and Tier 3 methane generation rate constant and submit a periodic NMOC emission rate report as provided in § 60.767(b)(1). The calculation of the methane generation rate constant is performed only once, and the value obtained from this test must be used in all subsequent annual NMOC emission rate calculations.

(5) *Other methods.* The owner or operator may use other methods to determine the NMOC concentration or a site-specific methane generation rate constant as an alternative to the methods required in paragraphs (a)(3) and (4) of this section if the method has been approved by the Administrator.

(6) *Tier 4.* The landfill owner or operator must demonstrate that surface methane emissions are below 500 parts per million. Surface emission monitoring must be conducted on a quarterly basis using the following procedures. Tier 4 is allowed only if the landfill owner or operator can demonstrate that NMOC emissions are greater than or equal to 34 Mg/yr but less than 50 Mg/yr using Tier 1 or Tier 2. If both Tier 1 and Tier 2 indicate NMOC emissions are 50 Mg/yr or greater, then Tier 4 cannot be used. In addition, the landfill must meet the criteria in paragraph (a)(6)(viii) of this section.

(i) The owner or operator must measure surface concentrations of methane along the entire perimeter of the landfill and along a pattern that traverses the landfill at no more than 30-meter intervals using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in § 60.765(d).

(ii) The background concentration must be determined by moving the probe inlet upwind and downwind at least 30 meters from the waste mass boundary of the landfill.

(iii) Surface emission monitoring must be performed in accordance with section 8.3.1 of Method 21 of appendix A of this part, except that the probe inlet must be placed no more than 5 centimeters above the landfill surface; the constant measurement of distance above the surface should be based on a mechanical device such as with a wheel on a pole, except as described in paragraph (a)(6)(iii)(A) of this section.

(A) The owner or operator must use a wind barrier, similar to a funnel, when onsite average wind speed exceeds 4 miles per hour or 2 meters per second or gust exceeding 10 miles per hour. Average on-site wind speed must also be determined in an open area at 5-minute intervals using an on-site anemometer with a continuous recorder and data logger for the entire duration of the monitoring event. The wind barrier must surround the SEM monitor, and must be placed on the ground, to ensure wind turbulence is blocked. SEM cannot be conducted if average wind speed exceeds 25 miles per hour.

(B) Landfill surface areas where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover, and all cover penetrations must also be monitored using a device meeting the specifications provided in § 60.765(d).

(iv) Each owner or operator seeking to comply with the Tier 4 provisions in paragraph (a)(6) of this section must maintain records of surface emission monitoring as provided in § 60.768(g) and submit a Tier 4 surface emissions report as provided in § 60.767(c)(4)(iii).

(v) If there is any measured concentration of methane of 500 parts per million or greater from the surface of the landfill, the owner or operator must submit a gas collection and control system design plan within 1 year of the first measured concentration of methane of 500 parts per million or greater from the surface of the landfill according to § 60.767(c) and install and operate a gas collection and control system according to § 60.762(b)(2)(ii) and (iii) within 30 months of the most recent NMOC emission rate report in which the NMOC emission rate equals or exceeds 34 megagrams per year based on Tier 2.

(vi) If after four consecutive quarterly monitoring periods at a landfill, other than a closed landfill, there is no measured concentration of methane of 500 parts per million or greater from the surface of the landfill, the owner or operator must continue quarterly surface emission monitoring using the methods specified in this section.

(vii) If after four consecutive quarterly monitoring periods at a closed landfill there is no measured concentration of methane of 500 parts per million or greater from the surface of the landfill, the owner or operator must conduct annual surface emission monitoring using the methods specified in this section.

(viii) If a landfill has installed and operates a collection and control system that is not required by this subpart, then the collection and control system must meet the following criteria:

(A) The gas collection and control system must have operated for 6,570 out of 8,760 hours preceding the Tier 4 surface emissions monitoring demonstration.

(B) During the Tier 4 surface emissions monitoring demonstration, the gas collection and control system must operate as it normally would to collect and control as much landfill gas as possible.

(b) After the installation and startup of a collection and control system in compliance with this subpart, the owner or operator must calculate the NMOC emission rate for purposes of determining when the system can be capped, removed or decommissioned as provided in § 60.762(b)(2)(v), using Equation 3:

$$M_{NMOC} = 1.89 \times 10^{-3} Q_{LFG} C_{NMOC} \quad \text{(Eq. 3)}$$

Where:

M_{NMOC} = Mass emission rate of NMOC, megagrams per year.

Q_{LFG} = Flow rate of landfill gas, cubic meters per minute.

C_{NMOC} = NMOC concentration, parts per million by volume as hexane.

(1) The flow rate of landfill gas, Q_{LFG}, must be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control system using a gas flow measuring device calibrated according to the provisions of section 10 of Method 2E of appendix A of this part.

(2) The average NMOC concentration, C_{NMOC}, must be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25 or Method 25C. The sample location on the common header pipe must be before any condensate removal or other gas refining units. The landfill owner or operator must divide the NMOC concentration from Method 25 or Method 25C of appendix A of this part by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

(3) The owner or operator may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Administrator.

(i) Within 60 days after the date of completing each performance test (as defined in § 60.8), the owner or operator must submit the results of the performance test, including any associated fuel analyses, according to § 60.767(i)(1).

(ii) [Reserved]

(c) When calculating emissions for Prevention of Significant Deterioration purposes, the owner or operator of each MSW landfill subject to the provisions of this subpart must estimate the NMOC emission rate for comparison to the Prevention of Significant Deterioration major source and significance levels in §§ 51.166 or 52.21 of this chapter using Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources (AP-42) or other approved measurement procedures.

(d) For the performance test required in § 60.762(b)(2)(iii)(B), Method 25 or 25C (Method 25C may be used at the inlet only) of appendix A of this part must be used to determine compliance with the 98 weight-percent efficiency or the 20 parts per million by volume outlet concentration level, unless another method to demonstrate compliance has been approved by the Administrator as provided by § 60.767(c)(2). Method 3, 3A, or 3C must be used to determine oxygen for correcting the NMOC concentration as hexane to 3 percent. In cases where the outlet concentration is less than 50 ppm NMOC as carbon (8 ppm NMOC as hexane), Method 25A should be used in place of Method 25. Method 18 may be used in conjunction with Method 25A on a limited basis (compound specific, *e.g.,* methane) or Method 3C may be used to determine methane. The methane as carbon should be subtracted from the Method 25A total hydrocarbon value as carbon to give NMOC concentration as carbon. The landowner or operator must divide the NMOC concentration as carbon by 6 to convert from the CNMOC as carbon to CNMOC as hexane. Equation 4 must be used to calculate efficiency:

$$\text{Control Efficiency} = (NMOC_{in} - NMOC_{out})/(NMOC_{in}) \qquad \text{(Eq. 4)}$$

Where:

$NMOC_{in}$ = Mass of NMOC entering control device.

$NMOC_{out}$ = Mass of NMOC exiting control device.

(e) For the performance test required in § 60.762(b)(2)(iii)(A), the net heating value of the combusted landfill gas as determined in § 60.18(f)(3) is calculated from the concentration of methane in the landfill gas as measured by Method 3C. A minimum of three 30-minute Method 3C samples are determined. The measurement of other organic components, hydrogen, and carbon monoxide is not applicable. Method 3C may be used to determine the landfill gas molecular weight for calculating the flare gas exit velocity under § 60.18(f)(4).

(1) Within 60 days after the date of completing each performance test (as defined in § 60.8), the owner or operator must submit the results of the performance tests, including any associated fuel analyses, required by § 60.764(b) or (d) according to § 60.767(i)(1).

(2) [Reserved]

§ 60.765 Compliance provisions.

(a) Except as provided in § 60.767(c)(2), the specified methods in paragraphs (a)(1) through (6) of this section must be used to determine whether the gas collection system is in compliance with § 60.762(b)(2)(ii).

(1) For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with § 60.762(b)(2)(ii)(C)(*1*), either Equation 5 or Equation 6 must be used. The methane generation rate constant (k) and methane generation potential (L_o) kinetic factors should be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42) or other site specific values demonstrated to be appropriate and approved by the Administrator. If k has been determined as specified in § 60.764(a)(4), the value of k determined from the test must be used. A value of no more than 15 years must be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure.

(i) For sites with unknown year-to-year solid waste acceptance rate:

$$Q_m = 2L_oR\,(e^{-kc} - e^{-kt}) \qquad \text{(Eq. 5)}$$

Where:

Q_m = Maximum expected gas generation flow rate, cubic meters per year.

L_o = Methane generation potential, cubic meters per megagram solid waste.

R = Average annual acceptance rate, megagrams per year.

k = Methane generation rate constant, $year^{-1}$.

t = Age of the landfill at equipment installation plus the time the owner or operator intends to use the gas mover equipment or active life of the landfill, whichever is less. If the equipment is installed after closure, t is the age of the landfill at installation, years.

c = Time since closure, years (for an active landfill c = 0 and $e^{-kc} = 1$).

(ii) For sites with known year-to-year solid waste acceptance rate:

$$Q_M = \sum_{i=1}^{n} 2kL_oM_i(e^{-kt_i}) \quad \text{(Eq. 6)}$$

Where:

Q_M = Maximum expected gas generation flow rate, cubic meters per year.

k = Methane generation rate constant, $year^{-1}$.

L_o = Methane generation potential, cubic meters per megagram solid waste.

M_i = Mass of solid waste in the i^{th} section, megagrams.

t_i = Age of the i^{th} section, years.

(iii) If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, Equation 5 or Equation 6 in paragraphs (a)(1)(i) and (ii) of this section. If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using Equation 5 or Equation 6 in paragraphs (a)(1)(i) or (ii) of this section or other methods must be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment.

(2) For the purposes of determining sufficient density of gas collectors for compliance with § 60.762(b)(2)(ii)(C)(2), the owner or operator must design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Administrator, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.

(3) For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with § 60.762(b)(2)(ii)(C)(*3*), the owner or operator must measure gauge pressure in the gas collection header applied to each individual well, monthly. If a positive pressure exists, action must be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under § 60.763(b). Any attempted corrective measure must not cause exceedances of other operational or performance standards.

(i) If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement of positive pressure, the owner or operator must conduct a root cause analysis and correct the exceedance as soon as practicable, but no later than 60 days after positive pressure was first measured. The owner or operator must keep records according to § 60.768(e)(3).

(ii) If corrective actions cannot be fully implemented within 60 days following the positive pressure measurement for which the root cause analysis was required, the owner or operator must also conduct a corrective action analysis and develop an implementation schedule to complete the corrective action(s) as soon as practicable, but no more than 120 days following the positive pressure measurement. The owner or operator must submit the items listed in § 60.767(g)(7) as part of the next annual report. The owner or operator must keep records according to § 60.768(e)(4).

(iii) If corrective action is expected to take longer than 120 days to complete after the initial exceedance, the owner or operator must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Administrator, according to § 60.767(g)(7) and § 60.767(j). The owner or operator must keep records according to § 60.768(e)(5).

(4) [Reserved]

(5) For the purpose of identifying whether excess air infiltration into the landfill is occurring, the owner or operator must monitor each well monthly for temperature as provided in § 60.763(c). If a well exceeds the operating parameter for temperature, action must be initiated to correct the exceedance within 5 calendar days. Any attempted corrective measure must not cause exceedances of other operational or performance standards.

(i) If a landfill gas temperature less than 55 degrees Celsius (131 degrees Fahrenheit) cannot be achieved within 15 calendar days of the first measurement of landfill gas temperature greater than 55 degrees Celsius (131 degrees Fahrenheit), the owner or operator must conduct a root cause analysis and correct the exceedance as soon as practicable, but no later than 60 days after a landfill gas temperature greater than 55 degrees Celsius (131 degrees Fahrenheit) was first measured. The owner or operator must keep records according to § 60.768(e)(3).

(ii) If corrective actions cannot be fully implemented within 60 days following the positive pressure or elevated temperature measurement for which the root cause analysis was required, the owner or operator must also conduct a corrective action analysis and develop an implementation schedule to complete the corrective action(s) as soon as practicable, but no more than 120 days following the measurement of landfill gas temperature greater than 55 degrees Celsius (131 degrees Fahrenheit) or positive pressure. The owner or operator must submit the items listed in § 60.767(g)(7) as part of the next annual report. The owner or operator must keep records according to § 60.768(e)(4).

(iii) If corrective action is expected to take longer than 120 days to complete after the initial exceedance, the owner or operator must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Administrator, according to § 60.767(g)(7) and § 60.767(j). The owner or operator must keep records according to § 60.768(e)(5).

(6) An owner or operator seeking to demonstrate compliance with § 60.762(b)(2)(ii)(C)(*4*) through the use of a collection system not conforming to the specifications provided in § 60.769 must provide information satisfactory to the Administrator as specified in § 60.767(c)(3) demonstrating that off-site migration is being controlled.

(b) For purposes of compliance with § 60.763(a), each owner or operator of a controlled landfill must place each well or design component as specified in the approved design plan as provided in § 60.767(c). Each well must be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of:

(1) Five (5) years or more if active; or

(2) Two (2) years or more if closed or at final grade.

(c) The following procedures must be used for compliance with the surface methane operational standard as provided in § 60.763(d).

(1) After installation and startup of the gas collection system, the owner or operator must monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in paragraph (d) of this section.

(2) The background concentration must be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells.

(3) Surface emission monitoring must be performed in accordance with section 8.3.1 of Method 21 of appendix A of this part, except that the probe inlet must be placed within 5 to 10 centimeters of the ground. Monitoring must be performed during typical meteorological conditions.

(4) Any reading of 500 parts per million or more above background at any location must be recorded as a monitored exceedance and the actions specified in paragraphs (c)(4)(i) through (v) of this section must be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of § 60.763(d).

(i) The location of each monitored exceedance must be marked and the location and concentration recorded.

(ii) Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance must be made and the location must be re-monitored within 10 calendar days of detecting the exceedance.

(iii) If the re-monitoring of the location shows a second exceedance, additional corrective action must be taken and the location must be monitored again within 10 days of the second exceedance. If the re-monitoring shows a third exceedance for the same location, the action specified in paragraph (c)(4)(v) of this section must be taken, and no further monitoring of that location is required until the action specified in paragraph (c)(4)(v) of this section has been taken.

(iv) Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in paragraph (c)(4)(ii) or (iii) of this section must be re-monitored 1 month from the initial exceedance. If the 1-month re-monitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month re-monitoring shows an exceedance, the actions specified in paragraph (c)(4)(iii) or (v) of this section must be taken.

(v) For any location where monitored methane concentration equals or exceeds 500 parts per million above background three times within a quarterly period, a new well or other collection device must be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Administrator for approval.

(5) The owner or operator must implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.

(d) Each owner or operator seeking to comply with the provisions in paragraph (c) of this section or § 60.764(a)(6) must comply with the following instrumentation specifications and procedures for surface emission monitoring devices:

(1) The portable analyzer must meet the instrument specifications provided in section 6 of Method 21 of appendix A of this part, except that “methane” replaces all references to “VOC”.

(2) The calibration gas must be methane, diluted to a nominal concentration of 500 parts per million in air.

(3) To meet the performance evaluation requirements in section 8.1 of Method 21 of appendix A of this part, the instrument evaluation procedures of section 8.1 of Method 21 of appendix A of this part must be used.

(4) The calibration procedures provided in sections 8 and 10 of Method 21 of appendix A of this part must be followed immediately before commencing a surface monitoring survey.

(e) The provisions of this subpart apply at all times, including periods of startup, shutdown or malfunction. During periods of startup, shutdown, and malfunction, you must comply with the work practice specified in § 60.763(e) in lieu of the compliance provisions in § 60.765.

[81 FR 59368, Aug. 29, 2016, as amended at 85 FR 17261, Mar. 26, 2020]

§ 60.766 Monitoring of operations.

Except as provided in § 60.767(c)(2):

(a) Each owner or operator seeking to comply with § 60.762(b)(2)(ii)(C) for an active gas collection system must install a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead and:

(1) Measure the gauge pressure in the gas collection header on a monthly basis as provided in § 60.765(a)(3); and

(2) Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as follows:

(i) The nitrogen level must be determined using Method 3C, unless an alternative test method is established as allowed by § 60.767(c)(2).

(ii) Unless an alternative test method is established as allowed by § 60.767(c)(2), the oxygen level must be determined by an oxygen meter using Method 3A, 3C, or ASTM D6522-11 (incorporated by reference, see § 60.17). Determine the oxygen level by an oxygen meter using Method 3A, 3C, or ASTM D6522-11 (if sample location is prior to combustion) except that:

(A) The span must be set between 10 and 12 percent oxygen;

(B) A data recorder is not required;

(C) Only two calibration gases are required, a zero and span;

(D) A calibration error check is not required;

(E) The allowable sample bias, zero drift, and calibration drift are ±10 percent.

(iii) A portable gas composition analyzer may be used to monitor the oxygen levels provided:

(A) The analyzer is calibrated; and

(B) The analyzer meets all quality assurance and quality control requirements for Method 3A or ASTM D6522-11 (incorporated by reference, see § 60.17).

(3) Monitor temperature of the landfill gas on a monthly basis as provided in 60.765(a)(5). The temperature measuring device must be calibrated annually using the procedure in 40 CFR part 60, appendix A-1, Method 2, section 10.3 such that a minimum of two temperature points, bracket within 10 percent of all landfill absolute temperature measurements or two fixed points of ice bath and boiling water, corrected for barometric pressure, are used.

(b) Each owner or operator seeking to comply with § 60.762(b)(2)(iii) using an enclosed combustor must calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment:

(1) A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of ±1 percent of the temperature being measured expressed in degrees Celsius or ±0.5 degrees Celsius, whichever is greater. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity equal to or greater than 44 megawatts.

(2) A device that records flow to the control device and bypass of the control device (if applicable). The owner or operator must:

(i) Install, calibrate, and maintain a gas flow rate measuring device that must record the flow to the control device at least every 15 minutes; and

(ii) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism must be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

(c) Each owner or operator seeking to comply with § 60.762(b)(2)(iii) using a non-enclosed flare must install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:

(1) A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame.

(2) A device that records flow to the flare and bypass of the flare (if applicable). The owner or operator must:

(i) Install, calibrate, and maintain a gas flow rate measuring device that records the flow to the control device at least every 15 minutes; and

(ii) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism must be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

(d) Each owner or operator seeking to demonstrate compliance with § 60.762(b)(2)(iii) using a device other than a non-enclosed flare or an enclosed combustor or a treatment system must provide information satisfactory to the Administrator as provided in § 60.767(c)(2) describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Administrator must review the information and either approve it, or request that additional information be submitted. The Administrator may specify additional appropriate monitoring procedures.

(e) Each owner or operator seeking to install a collection system that does not meet the specifications in § 60.769 or seeking to monitor alternative parameters to those required by §§ 60.763 through 60.766 must provide information satisfactory to the Administrator as provided in § 60.767(c)(2) and (3) describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Administrator may specify additional appropriate monitoring procedures.

(f) Each owner or operator seeking to demonstrate compliance with the 500 parts per million surface methane operational standard in § 60.763(d) must monitor surface concentrations of methane according to the procedures in § 60.765(c) and the instrument specifications in § 60.765(d). Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring.

(g) Each owner or operator seeking to demonstrate compliance with § 60.762(b)(2)(iii) using a landfill gas treatment system must maintain and operate all monitoring systems associated with the treatment system in accordance with the site-specific treatment system monitoring plan required in § 60.768(b)(5)(ii) and must calibrate, maintain, and operate according to the manufacturer's specifications a device that records flow to the treatment system and bypass of the treatment system (if applicable). The owner or operator must:

(1) Install, calibrate, and maintain a gas flow rate measuring device that records the flow to the treatment system at least every 15 minutes; and

(2) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism must be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

(h) The monitoring requirements of paragraphs (b), (c) (d) and (g) of this section apply at all times the affected source is operating, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You are required to complete monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable.

[81 FR 59368, Aug. 29, 2016, as amended at 85 FR 63403, Oct. 7, 2020]

§ 60.767 Reporting requirements.

(a) ***Design capacity report.*** Each owner or operator subject to the requirements of this subpart must submit an initial design capacity report to the Administrator.

(1) ***Submission.*** The initial design capacity report fulfills the requirements of the notification of the date construction is commenced as required by § 60.7(a)(1) and must be submitted no later than:

(i) November 28, 2016, for landfills that commenced construction, modification, or reconstruction after July 17, 2014 but before August 29, 2016; or

(ii) Ninety days after the date of commenced construction, modification, or reconstruction for landfills that commence construction, modification, or reconstruction after August 29, 2016.

(2) ***Initial design capacity report.*** The initial design capacity report must contain the following information:

(i) A map or plot of the landfill, providing the size and location of the landfill, and identifying all areas where solid waste may be landfilled according to the permit issued by the state, local, or tribal agency responsible for regulating the landfill.

(ii) The maximum design capacity of the landfill. Where the maximum design capacity is specified in the permit issued by the state, local, or tribal agency responsible for regulating the landfill, a copy of the permit specifying the maximum design capacity may be submitted as part of the report. If the maximum design capacity of the landfill is not specified in the permit, the maximum design capacity must be calculated using good engineering practices. The calculations must be provided, along with the relevant parameters as part of the report. The landfill may calculate design capacity in either megagrams or cubic meters for comparison with the exemption values. If the owner or operator chooses to convert the design capacity from volume to mass or from mass to volume to demonstrate its design capacity is less than 2.5 million megagrams or 2.5 million cubic meters, the calculation must include a site-specific density, which must be recalculated annually. Any density conversions must be documented and submitted with the design capacity report. The state, tribal, local agency or Administrator may request other reasonable information as may be necessary to verify the maximum design capacity of the landfill.

(3) ***Amended design capacity report.*** An amended design capacity report must be submitted to the Administrator providing notification of an increase in the design capacity of the landfill, within 90 days of an increase in the maximum design capacity of the landfill to meet or exceed 2.5 million megagrams and 2.5 million cubic meters. This increase in design capacity may result from an increase in the permitted volume of the landfill or an increase in the density as documented in the annual recalculation required in § 60.768(f).

(b) ***NMOC emission rate report.*** Each owner or operator subject to the requirements of this subpart must submit an NMOC emission rate report following the procedure specified in paragraph (i)(2) of this section to the Administrator initially and annually thereafter, except as provided for in paragraph (b)(1)(ii) of this section. The Administrator may request such additional information as may be necessary to verify the reported NMOC emission rate.

(1) The NMOC emission rate report must contain an annual or 5-year estimate of the NMOC emission rate calculated using the formula and procedures provided in § 60.764(a) or (b), as applicable.

(i) The initial NMOC emission rate report may be combined with the initial design capacity report required in paragraph (a) of this section and must be submitted no later than indicated in paragraphs (b)(1)(i)(A) and (B) of this section. Subsequent NMOC emission rate reports must be submitted annually thereafter, except as provided for in paragraph (b)(1)(ii) of this section.

(A) November 28, 2016, for landfills that commenced construction, modification, or reconstruction after July 17, 2014, but before August 29, 2016, or

(B) Ninety days after the date of commenced construction, modification, or reconstruction for landfills that commence construction, modification, or reconstruction after August 29, 2016.

(ii) If the estimated NMOC emission rate as reported in the annual report to the Administrator is less than 34 megagrams per year in each of the next 5 consecutive years, the owner or operator may elect to submit, following the procedure specified in paragraph (i)(2) of this section, an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate must include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based must be provided to the Administrator. This estimate must be revised at least once every 5 years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate must be submitted to the Administrator. The revised estimate must cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.

(2) The NMOC emission rate report must include all the data, calculations, sample reports and measurements used to estimate the annual or 5-year emissions.

(3) Each owner or operator subject to the requirements of this subpart is exempted from the requirements to submit an NMOC emission rate report, after installing a collection and control system that complies with § 60.762(b)(2), during such time as the collection and control system is in operation and in compliance with §§ 60.763 and 60.765.

(c) ***Collection and control system design plan.*** Each owner or operator subject to the provisions of § 60.762(b)(2) must submit a collection and control system design plan to the Administrator for approval according to the schedule in paragraph (c)(4) of this section. The collection and control system design plan must be prepared and approved by a professional engineer and must meet the following requirements:

(1) The collection and control system as described in the design plan must meet the design requirements in § 60.762(b)(2).

(2) The collection and control system design plan must include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of §§ 60.763 through 60.768 proposed by the owner or operator.

(3) The collection and control system design plan must either conform with specifications for active collection systems in § 60.769 or include a demonstration to the Administrator's satisfaction of the sufficiency of the alternative provisions to § 60.769.

(4) Each owner or operator of an MSW landfill having a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters must submit a collection and control system design plan to the Administrator for approval within 1 year of the first NMOC emission rate report in which the NMOC emission rate equals or exceeds 34 megagrams per year, except as follows:

(i) If the owner or operator elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis as provided in § 60.764(a)(3) and the resulting rate is less than 34 megagrams per year, annual periodic reporting must be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 34 megagrams per year or the landfill is closed. The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, must be submitted, following the procedures in paragraph (i)(2) of this section, within 180 days of the first calculated exceedance of 34 megagrams per year.

(ii) If the owner or operator elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant k, as provided in Tier 3 in § 60.764(a)(4), and the resulting NMOC emission rate is less than 34 Mg/yr, annual periodic reporting must be resumed. The resulting site-specific methane generation rate constant k must be used in the emission rate calculation until such time as the emissions rate calculation results in an exceedance. The revised NMOC emission rate report based on the provisions of § 60.764(a)(4) and the resulting site-specific methane generation rate constant k must be submitted, following the procedure specified in paragraph (i)(2) of this section, to the Administrator within 1 year of the first calculated emission rate equaling or exceeding 34 megagrams per year.

(iii) If the owner or operator elects to demonstrate that site-specific surface methane emissions are below 500 parts per million methane, based on the provisions of § 60.764(a)(6), then the owner or operator must submit annually a Tier 4 surface emissions report as specified in this paragraph following the procedure specified in paragraph (i)(2) of this section until a surface emissions readings of 500 parts per million methane or greater is found. If the Tier 4 surface emissions report shows no surface emissions readings of 500 parts per million methane or greater for four consecutive quarters at a closed landfill, then the landfill owner or operator may reduce Tier 4 monitoring from a quarterly to an annual frequency. The Administrator may request such additional information as may be necessary to verify the reported instantaneous surface emission readings. The Tier 4 surface emissions report must clearly identify the location, date and time (to nearest second), average wind speeds including wind gusts, and reading (in parts per million) of any value 500 parts per million methane or greater, other than non-repeatable, momentary readings. For location, you must determine the latitude and longitude coordinates using an instrument with an accuracy of at least 4 meters. The coordinates must be in decimal degrees with at least five decimal places. The Tier 4 surface emission report must also include the results of the most recent Tier 1 and Tier 2 results in order to verify that the landfill does not exceed 50 Mg/yr of NMOC.

(A) The initial Tier 4 surface emissions report must be submitted annually, starting within 30 days of completing the fourth quarter of Tier 4 surface emissions monitoring that demonstrates that site-specific surface methane emissions are below 500 parts per million methane, and following the procedure specified in paragraph (i)(2) of this section.

(B) The Tier 4 surface emissions report must be submitted within 1 year of the first measured surface exceedance of 500 parts per million methane, following the procedure specified in paragraph (i)(2) of this section.

(5) The landfill owner or operator must notify the Administrator that the design plan is completed and submit a copy of the plan's signature page. The Administrator has 90 days to decide whether the design plan should be submitted for review. If the Administrator chooses to review the plan, the approval process continues as described in paragraph (c)(6) of this section. However, if the Administrator indicates that submission is not required or does not respond within 90 days, the landfill owner or operator can continue to implement the plan with the recognition that the owner or operator is proceeding at their own risk. In the event that the design plan is required to be modified to obtain approval, the owner or operator must take any steps necessary to conform any prior actions to the approved design plan and any failure to do so could result in an enforcement action.

(6) Upon receipt of an initial or revised design plan, the Administrator must review the information submitted under paragraphs (c)(1) through (3) of this section and either approve it, disapprove it, or request that additional information be submitted. Because of the many site-specific factors involved with landfill gas system design, alternative systems may be necessary. A wide variety of system designs are possible, such as vertical wells, combination horizontal and vertical collection systems, or horizontal trenches only, leachate collection components, and passive systems. If the Administrator does not approve or disapprove the design plan, or does not request that additional information be submitted within 90 days of receipt, then the owner or operator may continue with implementation of the design plan, recognizing they would be proceeding at their own risk.

(7) If the owner or operator chooses to demonstrate compliance with the emission control requirements of this subpart using a treatment system as defined in this subpart, then the owner or operator must prepare a site-specific treatment system monitoring plan as specified in § 60.768(b)(5).

(d) ***Revised design plan.*** The owner or operator who has already been required to submit a design plan under paragraph (c) of this section, subpart WWW of this part, or a Federal plan or EPA-approved and effective state plan or tribal plan that implements subparts Cc or Cf of this part, must submit a revised design plan to the Administrator for approval as follows:

(1) At least 90 days before expanding operations to an area not covered by the previously approved design plan.

(2) Prior to installing or expanding the gas collection system in a way that is not consistent with the design plan that was submitted to the Administrator according to paragraph (c) of this section.

(e) ***Closure report.*** Each owner or operator of a controlled landfill must submit a closure report to the Administrator within 30 days of waste acceptance cessation. The Administrator may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR 258.60. If a closure report has been submitted to the Administrator, no additional wastes may be placed into the landfill without filing a notification of modification as described under § 60.7(a)(4).

(f) *Equipment removal report.* Each owner or operator of a controlled landfill must submit an equipment removal report to the Administrator 30 days prior to removal or cessation of operation of the control equipment.

(1) The equipment removal report must contain all of the following items:

(i) A copy of the closure report submitted in accordance with paragraph (e) of this section;

(ii) A copy of the initial performance test report demonstrating that the 15-year minimum control period has expired, unless the report of the results of the performance test has been submitted to the EPA via the EPA's CDX, or information that demonstrates that the GCCS will be unable to operate for 15 years due to declining gas flows. In the equipment removal report, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in lieu of the performance test report if the report has been previously submitted to the EPA's CDX; and

(iii) Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 34 megagrams or greater of NMOC per year, unless the NMOC emission rate reports have been submitted to the EPA via the EPA's CDX. If the NMOC emission rate reports have been previously submitted to the EPA's CDX, a statement that the NMOC emission rate reports have been submitted electronically and the dates that the reports were submitted to the EPA's CDX may be submitted in the equipment removal report in lieu of the NMOC emission rate reports.

(2) The Administrator may request such additional information as may be necessary to verify that all of the conditions for removal in § 60.762(b)(2)(v) have been met.

(g) *Annual report.* The owner or operator of a landfill seeking to comply with § 60.762(b)(2) using an active collection system designed in accordance with § 60.762(b)(2)(ii) must submit to the Administrator, following the procedure specified in paragraph (i)(2) of this section, annual reports of the recorded information in paragraphs (g)(1) through (7) of this section. The initial annual report must be submitted within 180 days of installation and startup of the collection and control system and must include the initial performance test report required under § 60.8, as applicable, unless the report of the results of the performance test has been submitted to the EPA via the EPA's CDX. In the initial annual report, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in lieu of the performance test report if the report has been previously submitted to the EPA's CDX. For enclosed combustion devices and flares, reportable exceedances are defined under § 60.768(c). If complying with the operational provisions of §§ 63.1958, 63.1960, and 63.1961 of this chapter, as allowed at § 60.762(b)(2)(iv), the owner or operator must follow the semi-annual reporting requirements in § 63.1981(h) of this chapter in lieu of this paragraph.

(1) Value and length of time for exceedance of applicable parameters monitored under § 60.766(a), (b), (c), (d), and (g).

(2) Description and duration of all periods when the gas stream was diverted from the control device or treatment system through a bypass line or the indication of bypass flow as specified under § 60.766.

(3) Description and duration of all periods when the control device or treatment system was not operating and length of time the control device or treatment system was not operating.

(4) All periods when the collection system was not operating.

(5) The location of each exceedance of the 500 parts per million methane concentration as provided in § 60.763(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month. For location, you must determine the latitude and longitude coordinates using an instrument with an accuracy of at least 4 meters. The coordinates must be in decimal degrees with at least five decimal places.

(6) The date of installation and the location of each well or collection system expansion added pursuant to § 60.765(a)(3), (a)(5), (b), and (c)(4).

(7) For any corrective action analysis for which corrective actions are required in § 60.765(a)(3) or (5) and that take more than 60 days to correct the exceedance, the root cause analysis conducted, including a description of the recommended corrective action(s), the date for corrective action(s) already completed following the positive pressure or elevated temperature reading, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

(h) ***Initial performance test report.*** Each owner or operator seeking to comply with § 60.762(b)(2)(iii) must include the following information with the initial performance test report required under § 60.8:

(1) A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion;

(2) The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based;

(3) The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material;

(4) The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on nonproductivity and the calculations of gas generation flow rate for each excluded area; and

(5) The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and

(6) The provisions for the control of off-site migration.

(i) ***Electronic reporting.*** The owner or operator must submit reports electronically according to paragraphs (i)(1) and (2) of this section.

(1) Within 60 days after the date of completing each performance test (as defined in § 60.8), the owner or operator must submit the results of each performance test according to the following procedures:

(i) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (*https://www3.epa.gov/ttn/chief/ert/ert_info.html*) at the time of the test, you must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*). Performance test data must be submitted in a file format generated through the use of the EPA's ERT or an alternative file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT

Web site, once the XML schema is available. If you claim that some of the performance test information being submitted is confidential business information (CBI), you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(ii) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in § 60.4.

(2) Each owner or operator required to submit reports following the procedure specified in this paragraph must submit reports to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) The owner or operator must use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the XML schema listed on the CEDRI Web site (*https://www3.epa.gov/ttn/chief/cedri/index.html*). If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the owner or operator must submit the report to the Administrator at the appropriate address listed in § 60.4. Once the form has been available in CEDRI for 90 calendar days, the owner or operator must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the reports are submitted.

(j) ***Corrective action and the corresponding timeline.*** The owner or operator must submit according to paragraphs (j)(1) and (2) of this section. If complying with the operational provisions of §§ 63.1958, 63.1960, and 63.1961 of this chapter, as allowed at § 60.762(b)(2)(iv), the owner or operator must follow the corrective action and the corresponding timeline requirements in § 63.1981(j) of this chapter in lieu of this paragraph.

(1) For corrective action that is required according to § 60.765(a)(3)(iii) or (a)(5)(iii) and is expected to take longer than 120 days after the initial exceedance to complete, you must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Administrator as soon as practicable but no later than 75 days after the first measurement of positive pressure or temperature monitoring value of 55 degrees Celsius (131 degrees Fahrenheit). The Administrator must approve the plan for corrective action and the corresponding timeline.

(2) For corrective action that is required according to § 60.765(a)(3)(iii) or (a)(5)(iii) and is not completed within 60 days after the initial exceedance, you must submit a notification to the Administrator as soon as practicable but no later than 75 days after the first measurement of positive pressure or temperature exceedance.

(k) ***Liquids addition.*** The owner or operator of an affected landfill with a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters that has employed leachate recirculation or added liquids based on a Research, Development, and Demonstration permit (issued through Resource Conservation and Recovery Act, subtitle D, part 258) within the last 10 years must submit to the Administrator, annually, following the procedure specified in paragraph (i)(2) of this section, the following information:

(1) Volume of leachate recirculated (gallons per year) and the reported basis of those estimates (records or engineering estimates).

(2) Total volume of all other liquids added (gallons per year) and the reported basis of those estimates (records or engineering estimates).

(3) Surface area (acres) over which the leachate is recirculated (or otherwise applied).

(4) Surface area (acres) over which any other liquids are applied.

(5) The total waste disposed (megagrams) in the areas with recirculated leachate and/or added liquids based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates.

(6) The annual waste acceptance rates (megagrams per year) in the areas with recirculated leachate and/or added liquids, based on on-site records to the extent data are available, or engineering estimates.

(7) The initial report must contain items in paragraph (k)(1) through (6) of this section per year for the initial annual reporting period as well as for each of the previous 10 years, to the extent historical data are available in on-site records, and the report must be submitted no later than:

(i) September 27, 2017, for landfills that commenced construction, modification, or reconstruction after July 17, 2014 but before August 29, 2016 containing data for the first 12 months after August 29, 2016; or

(ii) Thirteen (13) months after the date of commenced construction, modification, or reconstruction for landfills that commence construction, modification, or reconstruction after August 29, 2016 containing data for the first 12 months after August 29, 2016.

(8) Subsequent annual reports must contain items in paragraph (k)(1) through (6) of this section for the 365-day period following the 365-day period included in the previous annual report, and the report must be submitted no later than 365 days after the date the previous report was submitted.

(9) Landfills may cease annual reporting of items in paragraphs (k)(1) through (7) of this section once they have submitted the closure report in paragraph (e) of this section.

(l) *Tier 4 notification.*

(1) The owner or operator of an affected landfill with a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters must provide a notification of the date(s) upon which it intends to demonstrate site-specific surface methane emissions are below 500 parts per million methane, based on the Tier 4 provisions of § 60.764(a)(6). The landfill must also include a description of the wind barrier to be used during the SEM in the notification. Notification must be postmarked not less than 30 days prior to such date.

(2) If there is a delay to the scheduled Tier 4 SEM date due to weather conditions, including not meeting the wind requirements in § 60.764(a)(6)(iii)(A), the owner or operator of a landfill shall notify the Administrator by email or telephone no later than 48 hours before any delay or cancellation in the original test date, and arrange an updated date with the Administrator by mutual agreement.

(m) Each owner or operator that chooses to comply with the provisions in §§ 63.1958, 63.1960, and 63.1961, as allowed at § 60.762(b)(2)(iv), must submit the 24-hour high temperature report according to § 63.1981(k) of this chapter.

[81 FR 59368, Aug. 29, 2016, as amended at 85 FR 17261, Mar. 26, 2020; 87 FR 8203, Feb. 14, 2022]

§ 60.768 Recordkeeping requirements.

(a) Except as provided in § 60.767(c)(2), each owner or operator of an MSW landfill subject to the provisions of § 60.762(b)(2)(ii) and (iii) must keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report that triggered § 60.762(b), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.

(b) Except as provided in § 60.767(c)(2), each owner or operator of a controlled landfill must keep up-to-date, readily accessible records for the life of the control system equipment of the data listed in paragraphs (b)(1) through (5) of this section as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring must be maintained for a minimum of 5 years. Records of the control device vendor specifications must be maintained until removal.

(1) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 60.762(b)(2)(ii):

(i) The maximum expected gas generation flow rate as calculated in § 60.765(a)(1). The owner or operator may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Administrator.

(ii) The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in § 60.769(a)(1).

(2) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 60.762(b)(2)(iii) through use of an enclosed combustion device other than a boiler or process heater with a design heat input capacity equal to or greater than 44 megawatts:

(i) The average temperature measured at least every 15 minutes and averaged over the same time period of the performance test.

(ii) The percent reduction of NMOC determined as specified in § 60.762(b)(2)(iii)(B) achieved by the control device.

(3) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 60.762(b)(2)(iii)(B)(*1*) through use of a boiler or process heater of any size: A description of the location at which the collected gas vent stream is introduced into the boiler or process heater over the same time period of the performance testing.

(4) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 60.762(b)(2)(iii)(A) through use of a non-enclosed flare, the flare type (*i.e.,* steam-assisted, air-assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in § 60.18; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent.

(5) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 60.762(b)(2)(iii) through use of a landfill gas treatment system:

(i) ***Bypass records.*** Records of the flow of landfill gas to, and bypass of, the treatment system.

(ii) *Site-specific treatment monitoring plan,* to include:

(A) Monitoring records of parameters that are identified in the treatment system monitoring plan and that ensure the treatment system is operating properly for each intended end use of the treated landfill gas. At a minimum, records should include records of filtration, de-watering, and compression parameters that ensure the treatment system is operating properly for each intended end use of the treated landfill gas.

(B) Monitoring methods, frequencies, and operating ranges for each monitored operating parameter based on manufacturer's recommendations or engineering analysis for each intended end use of the treated landfill gas.

(C) Documentation of the monitoring methods and ranges, along with justification for their use.

(D) Identify who is responsible (by job title) for data collection.

(E) Processes and methods used to collect the necessary data.

(F) Description of the procedures and methods that are used for quality assurance, maintenance, and repair of all continuous monitoring systems.

(c) Except as provided in § 60.767(c)(2), each owner or operator of a controlled landfill subject to the provisions of this subpart must keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in § 60.766 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.

(1) The following constitute exceedances that must be recorded and reported under § 60.767(g):

(i) For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million British thermal units per hour) or greater, all 3-hour periods of operation during which the average temperature was more than 28 degrees Celsius (82 degrees Fahrenheit) below the average combustion temperature during the most recent performance test at which compliance with § 60.762(b)(2)(iii) was determined.

(ii) For boilers or process heaters, whenever there is a change in the location at which the vent stream is introduced into the flame zone as required under paragraph (b)(3) of this section.

(2) Each owner or operator subject to the provisions of this subpart must keep up-to-date, readily accessible continuous records of the indication of flow to the control system and the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under § 60.766.

(3) Each owner or operator subject to the provisions of this subpart who uses a boiler or process heater with a design heat input capacity of 44 megawatts or greater to comply with § 60.762(b)(2)(iii) must keep an up-to-date, readily accessible record of all periods of operation of the boiler or process heater. (Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other state, local, tribal, or federal regulatory requirements.)

(4) Each owner or operator seeking to comply with the provisions of this subpart by use of a non-enclosed flare must keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under § 60.766(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.

(5) Each owner or operator of a landfill seeking to comply with § 60.762(b)(2) using an active collection system designed in accordance with § 60.762(b)(2)(ii) must keep records of periods when the collection system or control device is not operating.

(d) Except as provided in § 60.767(c)(2), each owner or operator subject to the provisions of this subpart must keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.

(1) Each owner or operator subject to the provisions of this subpart must keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under § 60.765(b).

(2) Each owner or operator subject to the provisions of this subpart must keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in § 60.769(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in § 60.769(a)(3)(ii).

(e) Except as provided in § 60.767(c)(2), each owner or operator subject to the provisions of this subpart must keep for at least 5 years up-to-date, readily accessible records of the items in paragraphs (e)(1) through (5) of this section. Each owner or operator that chooses to comply with the provisions in §§ 63.1958, 63.1960, and 63.1961 of this chapter, as allowed at § 60.762(b)(2)(iv), must keep the records in paragraph (e)(6) of this section and must keep records according to §§ 63.1983(e)(1) through (5) of this chapter in lieu of paragraphs (e)(1) through (5) of this section.

(1) All collection and control system exceedances of the operational standards in § 60.763, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.

(2) Each owner or operator subject to the provisions of this subpart must also keep records of each wellhead temperature monitoring value of 55 degrees Celsius (131 degrees Fahrenheit) or above, each wellhead nitrogen level at or above 20 percent, and each wellhead oxygen level at or above 5 percent.

(3) For any root cause analysis for which corrective actions are required in § 60.765(a)(3)(i) or (a)(5)(i), keep a record of the root cause analysis conducted, including a description of the recommended corrective action(s) taken, and the date(s) the corrective action(s) were completed.

(4) For any root cause analysis for which corrective actions are required in § 60.765(a)(3)(ii) or (a)(5)(ii), keep a record of the root cause analysis conducted, the corrective action analysis, the date for corrective action(s) already completed following the positive pressure reading or high temperature reading, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

(5) For any root cause analysis for which corrective actions are required in § 60.765(a)(3)(iii) or (a)(5)(iii), keep a record of the root cause analysis conducted, the corrective action analysis, the date for corrective action(s) already completed following the positive pressure reading or high temperature reading, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates, and a copy of any comments or final approval on the corrective action analysis or schedule from the regulatory agency.

(6) Each owner or operator that chooses to comply with the provisions in §§ 63.1958, 63.1960, and 63.1961 of this chapter, as allowed at § 60.762(b)(2)(iv), must keep records of the date upon which the owner or operator started complying with the provisions in §§ 63.1958, 63.1960, and 63.1961.

(f) Landfill owners or operators who convert design capacity from volume to mass or mass to volume to demonstrate that landfill design capacity is less than 2.5 million megagrams or 2.5 million cubic meters, as provided in the definition of "design capacity", must keep readily accessible, on-site records of the annual recalculation of site-specific density, design capacity, and the supporting documentation. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.

(g) Landfill owners or operators seeking to demonstrate that site-specific surface methane emissions are below 500 parts per million by conducting surface emission monitoring under the Tier 4 procedures specified in § 60.764(a)(6) must keep for at least 5 years up-to-date, readily accessible records of all surface emissions monitoring and information related to monitoring instrument calibrations conducted according to sections 8 and 10 of Method 21 of appendix A of this part, including all of the following items:

(1) Calibration records:

(i) Date of calibration and initials of operator performing the calibration.

(ii) Calibration gas cylinder identification, certification date, and certified concentration.

(iii) Instrument scale(s) used.

(iv) A description of any corrective action taken if the meter readout could not be adjusted to correspond to the calibration gas value.

(v) If an owner or operator makes their own calibration gas, a description of the procedure used.

(2) Digital photographs of the instrument setup, including the wind barrier. The photographs must be time and date-stamped and taken at the first sampling location prior to sampling and at the last sampling location after sampling at the end of each sampling day, for the duration of the Tier 4 monitoring demonstration.

(3) Timestamp of each surface scan reading:

(i) Timestamp should be detailed to the nearest second, based on when the sample collection begins.

(ii) A log for the length of time each sample was taken using a stopwatch (*e.g.,* the time the probe was held over the area).

(4) Location of each surface scan reading. The owner or operator must determine the coordinates using an instrument with an accuracy of at least 4 meters. Coordinates must be in decimal degrees with at least five decimal places.

(5) Monitored methane concentration (parts per million) of each reading.

(6) Background methane concentration (parts per million) after each instrument calibration test.

(7) Adjusted methane concentration using most recent calibration (parts per million).

(8) For readings taken at each surface penetration, the unique identification location label matching the label specified in paragraph (d) of this section.

(9) Records of the operating hours of the gas collection system for each destruction device.

(h) Except as provided in § 60.767(c)(2), each owner or operator subject to the provisions of this subpart must keep for at least 5 years up-to-date, readily accessible records of all collection and control system monitoring data for parameters measured in § 60.766(a)(1), (2), and (3).

(i) Any records required to be maintained by this subpart that are submitted electronically via the EPA's CDX may be maintained in electronic format.

(j) For each owner or operator reporting leachate or other liquids addition under § 60.767(k), keep records of any engineering calculations or company records used to estimate the quantities of leachate or liquids added, the surface areas for which the leachate or liquids were applied, and the estimates of annual waste acceptance or total waste in place in the areas where leachate or liquids were applied.

[81 FR 59368, Aug. 29, 2016, as amended at 85 FR 17261, Mar. 26, 2020]

§ 60.769 Specifications for active collection systems.

(a) Each owner or operator seeking to comply with § 60.762(b)(2)(i) must site active collection wells, horizontal collectors, surface collectors, or other extraction devices at a sufficient density throughout all gas producing areas using the following procedures unless alternative procedures have been approved by the Administrator as provided in § 60.767(c)(2) and (3):

(1) The collection devices within the interior must be certified to achieve comprehensive control of surface gas emissions by a professional engineer. The following issues must be addressed in the design: Depths of refuse, refuse gas generation rates and flow characteristics, cover properties, gas system expandability, leachate and condensate management, accessibility, compatibility with filling operations, integration with closure end use, air intrusion control, corrosion resistance, fill settlement, resistance to the refuse decomposition heat, and ability to isolate individual components or sections for repair or troubleshooting without shutting down entire collection system.

(2) The sufficient density of gas collection devices determined in paragraph (a)(1) of this section must address landfill gas migration issues and augmentation of the collection system through the use of active or passive systems at the landfill perimeter or exterior.

(3) The placement of gas collection devices determined in paragraph (a)(1) of this section must control all gas producing areas, except as provided by paragraphs (a)(3)(i) and (ii) of this section.

(i) Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under § 60.768(d). The documentation must provide the nature, date of deposition, location and amount of asbestos or nondegradable material deposited in the area, and must be provided to the Administrator upon request.

(ii) Any nonproductive area of the landfill may be excluded from control, provided that the total of all excluded areas can be shown to contribute less than 1 percent of the total amount of NMOC emissions from the landfill. The amount, location, and age of the material must be documented and provided to the Administrator upon request. A separate NMOC emissions estimate must be made for each section proposed for exclusion, and the sum of all such sections must be compared to the NMOC emissions estimate for the entire landfill.

(A) The NMOC emissions from each section proposed for exclusion must be computed using Equation 7:

$$Q_i = 2\ k\ L_o M_i (e^{-kt_i})\ (C_{NMOC})\ (3.6 \times 10^{-9}) \qquad \text{(Eq.7)}$$

Where:

Q_i = NMOC emission rate from the i^{th} section, megagrams per year.

k = Methane generation rate constant, $year^{-1}$.

L_o = Methane generation potential, cubic meters per megagram solid waste.

M_i = Mass of the degradable solid waste in the i^{th} section, megagram.

t_i = Age of the solid waste in the i^{th} section, years.

C_{NMOC} = Concentration of nonmethane organic compounds, parts per million by volume.

3.6×10^{-9} = Conversion factor.

(B) If the owner/operator is proposing to exclude, or cease gas collection and control from, nonproductive physically separated (*e.g.,* separately lined) closed areas that already have gas collection systems, NMOC emissions from each physically separated closed area must be computed using either Equation 3 in § 60.764(b) or Equation 7 in paragraph (a)(3)(ii)(A) of this section.

(iii) The values for k and C_{NMOC} determined in field testing must be used if field testing has been performed in determining the NMOC emission rate or the radii of influence (this distance from the well center to a point in the landfill where the pressure gradient applied by the blower or compressor approaches zero). If field testing has not been performed, the default values for k, L_o and C_{NMOC} provided in § 60.764(a)(1) or the alternative values from § 60.764(a)(5) must be used. The mass of nondegradable solid waste contained within the given section may be subtracted from the total mass of the section when estimating emissions provided the nature, location, age, and amount of the nondegradable material is documented as provided in paragraph (a)(3)(i) of this section.

(b) Each owner or operator seeking to comply with § 60.762(b)(2)(ii)(A) construct the gas collection devices using the following equipment or procedures:

(1) The landfill gas extraction components must be constructed of polyvinyl chloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion resistant material of suitable dimensions to: Convey projected amounts of gases; withstand installation, static, and settlement forces; and withstand planned overburden or traffic loads. The collection system must extend as necessary to comply with emission and migration standards. Collection devices such as wells and horizontal collectors must be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations must be situated with regard to the need to prevent excessive air infiltration.

(2) Vertical wells must be placed so as not to endanger underlying liners and must address the occurrence of water within the landfill. Holes and trenches constructed for piped wells and horizontal collectors must be of sufficient cross-section so as to allow for their proper construction and completion including, for example, centering of pipes and placement of gravel backfill.

Collection devices must be designed so as not to allow indirect short circuiting of air into the cover or refuse into the collection system or gas into the air. Any gravel used around pipe perforations should be of a dimension so as not to penetrate or block perforations.

(3) Collection devices may be connected to the collection header pipes below or above the landfill surface. The connector assembly must include a positive closing throttle valve, any necessary seals and couplings, access couplings and at least one sampling port. The collection devices must be constructed of PVC, HDPE, fiberglass, stainless steel, or other nonporous material of suitable thickness.

(c) Each owner or operator seeking to comply with § 60.762(b)(2)(iii) must convey the landfill gas to a control system in compliance with § 60.762(b)(2)(iii) through the collection header pipe(s). The gas mover equipment must be sized to handle the maximum gas generation flow rate expected over the intended use period of the gas moving equipment using the following procedures:

(1) For existing collection systems, the flow data must be used to project the maximum flow rate. If no flow data exists, the procedures in paragraph (c)(2) of this section must be used.

(2) For new collection systems, the maximum flow rate must be in accordance with § 60.765(a)(1).