Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Mark R. Vickery, P.G., *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 5, 2009

MR RODERICK A CHISHOLM
DIRECTOR OF PUBLIC WORKS
US DEPARTMENT OF THE ARMY
US ARMY GARRISON - FORT HOOD IMWE HOD PW BLDG 4612 ENGINEER DR
FORT HOOD TX 76544-

Re: Standard Permit Number: 88412
Landfill Permit Number: MSW-1866
BLORA LOTP
Fort Hood, Bell County
Regulated Entity Number: RN101612083
Customer Reference Number: CN600126262
Account Number: BF-0129-I
Renewal Date: June 4, 2019

Dear Mr. Chisholm,

This is in response to your Certification Form received on May 15, 2009, regarding the BLORA LOTP Landfill located in Fort Hood, Bell County. After evaluation of the information which you submitted, we have determined that your certification is complete for the Standard Air Permit for Municipal Solid Waste Landfill (MSW) Facilities and Transfer Stations if constructed and operated as described in your Certification. This standard air permit was authorized by the Commissioners pursuant to Title 30 Texas Administrative Code § 330.981 (30 TAC § 330.981). No planned MSS emissions have been represented or reviewed for this registration and none will be authorized by this standard permit.

As of July 1, 2008, all analytical data generated by a mobile or stationary laboratory in support of compliance with air permits must be obtained from a NELAC (National Environmental Laboratory Accreditation Conference) accredited laboratory under the Texas Laboratory Accreditation Program or meet one of several exemptions. Specific information concerning which laboratories must be accredited and which are exempt may be found in 30 TAC §§ 25.4 and 25.6.

For additional information regarding the laboratory accreditation program and a list of accredited laboratories and their fields of accreditation, please see the following website:

http://www.tceq.state.tx.us/compliance/compliance_support/qa/env_lab_accreditation.html

For questions regarding the accreditation program, you may contact the Texas Laboratory Accreditation Program at (512) 239-3754 or by email at labprgms@tceq.state.tx.us.

Recd JUN 15 2009 /PSS

Re: Standard Permit Registration Number 88412

The company is also reminded that these facilities may be subject to and must comply with other state and federal air quality requirements. If you have questions, please contact Ms. Bonnie Barrera at (512) 239-5863.

This action is taken under authority delegated by the Executive Director of the TCEQ.

Sincerely,

Anne M. Inman, P.E., Manager
Rule Registrations Section
Air Permits Division
Texas Commission on Environmental Quality

cc: Air Section Manager, Region 9 - Waco

Project Number: 146973

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TITLE 30	ENVIRONMENTAL QUALITY
PART 1	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
CHAPTER 25	ENVIRONMENTAL TESTING LABORATORY ACCREDITATION AND CERTIFICATION
SUBCHAPTER A	GENERAL PROVISIONS
RULE §25.4	**Applicability**

(a) An environmental testing laboratory may apply for accreditation after the commission publishes notice in the *Texas Register* that the environmental testing laboratory accreditation program has met National Environmental Laboratory Accreditation Conference (NELAC) standards.

(b) An environmental testing laboratory must be accredited according to this chapter, except as provided in §25.6 of this title (relating to Conditions Under Which the Commission May Accept Analytical Data), if the laboratory provides analytical data which is used for a commission decision relating to a:

(1) permit;

(2) authorization;

(3) compliance action;

(4) enforcement action;

(5) corrective action;

(6) characterization of an environmental process or condition; or

(7) assessment of an environmental process or condition.

(c) An in-house environmental testing laboratory is to be accredited if it provides analytical data to a third party and the data is used for a commission decision relating to a:

(1) permit;

(2) authorization;

(3) compliance action;

(4) enforcement action;

(5) corrective action;

(6) characterization of an environmental process or condition; or

(7) assessment of an environmental process or condition.

(d) Subsections (b) and (c) of this section apply only to environmental testing laboratory results prepared and submitted to the commission on or after the third anniversary of the date on which the commission publishes notice in the *Texas Register* that the commission's environmental laboratory testing program established under this chapter has met NELAC standards.

(e) Until subsection (d) of this section is effective, an environmental testing laboratory that provides analytical data used for a commission decision relating to the Safe Drinking Water Act (SDWA) must be:

(1) accredited according to this subchapter and Subchapter B of this chapter (relating to Environmental Testing Laboratory Accreditation);

(2) certified according to this subchapter and Subchapter C of this chapter (relating to Environmental Testing Laboratory Certification); or

(3) certified by EPA.

(f) After subsection (d) of this section is effective, an environmental testing laboratory that provides analytical data used for a commission decision relating to the SDWA will no longer be certified and must be accredited according to this subchapter and Subchapter B of this chapter, unless the laboratory is certified by the EPA.

Source Note: The provisions of this §25.4 adopted to be effective September 12, 2002, 27 TexReg 8480

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CHAPTER 25	ENVIRONMENTAL TESTING LABORATORY ACCREDITATION AND CERTIFICATION
SUBCHAPTER A	GENERAL PROVISIONS
RULE §25.6	**Conditions Under Which the Commission May Accept Analytical Data**

The commission may accept analytical data provided by an environmental testing laboratory, for any matter under the commission's jurisdiction relating to permits or other authorizations, compliance matters, enforcement actions, or corrective actions, that is not accredited according to this chapter if the laboratory:

(1) is an on-site or in-house environmental testing laboratory that is:

(A) inspected at least every three years by the executive director;

(B) located in another state and accredited or periodically inspected by that state; or

(C) inspected at least every three years by the executive director and is performing work:

(i) for another company with a unit located on the same site; or

(ii) without compensation for a governmental agency or a charitable organization.

(2) is accredited under federal law, including certification by the United States Environmental Protection Agency to provide analytical data for decisions relating to compliance with the Safe Drinking Water Act;

(3) provides analytical data necessary for emergency response activities and the required analytical data are not otherwise available from an environmental testing laboratory accredited according to this chapter or federal law; or

(4) provides analytical data for which the commission does not offer accreditation.

Source Note: The provisions of this §25.6 adopted to be effective September 12, 2002, 27 TexReg 8480; amended to be effective August 24, 2005, 30 TexReg 4841

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CHAPTER 106	PERMITS BY RULE
SUBCHAPTER A	GENERAL REQUIREMENTS
RULE §106.4	**Requirements for Permitting by Rule**

(a) To qualify for a permit by rule, the following general requirements must be met.

(1) Total actual emissions authorized under permit by rule from the facility shall not exceed 250 tons per year (tpy) of carbon monoxide (CO) or nitrogen oxides (NO_x); or 25 tpy of volatile organic compounds (VOC) or sulfur dioxide (SO_2) or inhalable particulate matter (PM_{10}); or 25 tpy of any other air contaminant except carbon dioxide, water, nitrogen, methane, ethane, hydrogen, and oxygen.

(2) Any facility or group of facilities, which constitutes a new major stationary source, as defined in §116.12 of this title (relating to Nonattainment Review Definitions), or any modification which constitutes a major modification, as defined in §116.12 of this title, under the new source review requirements of the Federal Clean Air Act (FCAA), Part D (Nonattainment) as amended by the FCAA Amendments of 1990, and regulations promulgated thereunder, must meet the permitting requirements of Chapter 116, Subchapter B of this title (relating to New Source Review Permits) and cannot qualify for a permit by rule under this chapter. Persons claiming a permit by rule under this chapter should see the requirements of §116.150 of this title (relating to New Major Source or Major Modification in Ozone Nonattainment Areas) to ensure that any applicable netting requirements have been satisfied.

(3) Any facility or group of facilities, which constitutes a new major stationary source, as defined in 40 Code of Federal Regulations (CFR) §52.21, or any change which constitutes a major modification, as defined in 40 CFR §52.21, under the new source review requirements of the FCAA, Part C (Prevention of Significant Deterioration) as amended by the FCAA Amendments of 1990, and regulations promulgated thereunder, must meet the permitting requirements of Chapter 116, Subchapter B of this title and cannot qualify for a permit by rule under this chapter.

(4) Unless at least one facility at an account has been subject to public notification and comment as required in Chapter 116, Subchapter B or Subchapter D of this title (relating to New Source Review Permits or Permit Renewals), total actual emissions from all facilities permitted by rule at an account shall not exceed 250 tpy of CO or NO_x; or 25 tpy of VOC or SO_2 or PM_{10}; or 25 tpy of any other air contaminant except carbon dioxide, water, nitrogen, methane, ethane, hydrogen, and oxygen.

(5) Construction or modification of a facility commenced on or after the effective date of a revision of this section or the effective date of a revision to a specific permit by rule in this chapter must meet the revised requirements to qualify for a permit by rule.

(6) A facility shall comply with all applicable provisions of the FCAA, §111 (Federal New Source Performance Standards) and §112 (Hazardous Air Pollutants), and the new source review requirements of the FCAA, Part C and Part D and regulations promulgated thereunder.

(7) There are no permits under the same commission account number that contain a condition or conditions precluding the use of a permit by rule under this chapter.

(8) The proposed facility or group of facilities shall obtain allowances for NO_x if they are subject to Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program).

(b) No person shall circumvent by artificial limitations the requirements of §116.110 of this title (relating to Applicability).

(c) The emissions from the facility shall comply with all rules and regulations of the commission and with the intent of the TCAA, including protection of health and property of the public, and all emissions control

equipment shall be maintained in good condition and operated properly during operation of the facility.

(d) Facilities permitted by rule under this chapter are not exempted from any permits or registrations required by local air pollution control agencies. Any such requirements must be in accordance with TCAA, §382.113 and any other applicable law.

Source Note: The provisions of this §106.4 adopted to be effective November 15, 1996, 21 TexReg 10881; amended to be effective April 7, 1998, 23 TexReg 3502; amended to be effective September 4, 2000, 25 TexReg 8653; amended to be effective March 29, 2001, 26 TexReg 2396

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SUBCHAPTER A	GENERAL REQUIREMENTS
RULE §106.8	**Recordkeeping**

(a) Owners or operators of facilities and sources that are de minimis as designated in §116.119 of this title (relating to De Minimis Facilities or Sources) are not subject to this section.

(b) Owners or operators of facilities operating under a permit by rule (PBR) in Subchapter C of this chapter (relating to Domestic and Comfort Heating and Cooling) or under those PBRs that only name the type of facility and impose no other conditions in the PBR itself do not need to comply with specific recordkeeping requirements of subsection (c) of this section. A list of these PBRs will be available through the commission's Austin central office, regional offices, and the commission's website. Upon request from the commission or any air pollution control program having jurisdiction, claimants must provide information that would demonstrate compliance with §106.4 of this title (relating to Requirements for Permitting by Rule), or the general requirements, if any, in effect at the time of the claim, and the PBR under which the facility is authorized.

(c) Owners or operators of all other facilities authorized to be constructed and operate under a PBR must retain records as follows:

(1) maintain a copy of each PBR and the applicable general conditions of §106.4 of this title or the general requirements, if any, in effect at the time of the claim under which the facility is operating. The PBR and general requirements claimed should be the version in effect at the time of construction or installation or changes to an existing facility, whichever is most recent. The PBR holder may elect to comply with a more recent version of the applicable PBR and general requirements;

(2) maintain records containing sufficient information to demonstrate compliance with the following:

(A) all applicable general requirements of §106.4 of this title or the general requirements, if any, in effect at the time of the claim; and

(B) all applicable PBR conditions;

(3) keep all required records at the facility site. If however, the facility normally operates unattended, records must be maintained at an office within Texas having day-to-day operational control of the plant site;

(4) make the records available in a reviewable format at the request of personnel from the commission or any air pollution control program having jurisdiction;

(5) beginning April 1, 2002, keep records to support a compliance demonstration for any consecutive 12-month period. Unless specifically required by a PBR, records regarding the quantity of air contaminants emitted by a facility to demonstrate compliance with §106.4 of this title prior to April 1, 2002 are not required under this section; and

(6) for facilities located at sites designated as major in accordance with §122.10(13) of this title (relating to General Definitions) or subject to or potentially subject to any applicable federal requirement, retain all records demonstrating compliance for at least five years. For facilities located at all other sites, all records demonstrating compliance must be retained for at least two years. These record retention requirements supercede any retention conditions of an individual PBR.

Source Note: The provisions of this §106.8 adopted to be effective November 1, 2001, 26 TexReg 8518

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CHAPTER 106	PERMITS BY RULE
SUBCHAPTER I	MANUFACTURING
RULE §106.227	**Soldering, Brazing, Welding**

Brazing, soldering, or welding equipment, except those which emit 0.6 ton per year or more of lead, are permitted by rule.

Source Note: The provisions of this §106.227 adopted to be effective March 14, 1997, 22 TexReg 2439; amended to be effective September 4, 2000, 25 TexReg 8653

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SUBCHAPTER R	SERVICE INDUSTRIES
RULE §106.412	**Fuel Dispensing**

Equipment used exclusively to store and dispense motor fuels into heavy and light-duty motor vehicles and marine vessels or other watercraft, aircraft, and railroad locomotive engines is permitted by rule.

Source Note: The provisions of this §106.412 adopted to be effective March 14, 1997, 22 TexReg 2439; amended to be effective September 4, 2000, 25 TexReg 8653

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SUBCHAPTER T	SURFACE PREPARATION
RULE §106.454	**Degreasing Units**

Any degreasing unit that satisfies the following conditions of this section is permitted by rule.

(1) The following general requirements are applicable to all degreasers unless specifically noted by the conditions of this section.

(A) Units subject to paragraphs (3) - (5) of this section shall meet the following:

(i) register with the commission's Office of Permitting, Remediation, and Registration in Austin using Form PI-7 and a Degreasing Unit Checklist;

(ii) on a monthly basis, records shall be kept of total solvent makeup (gross usage minus waste disposal).

(B) Waste solvent from all degreasing operations shall be stored in covered containers, and be removed by a licensed disposal service or until emptying into an authorized on-site waste management facility.

(C) Porous or absorbent materials, such as cloth, leather, wood, or rope shall not be degreased.

(D) Leaks shall be repaired immediately, or the degreaser shall be shut down until repairs are completed.

(E) A permanent and conspicuous label summarizing proper operating procedures to minimize emissions shall be posted on or near the degreaser.

(F) Each unit, regardless of the county in which it is located, shall meet the requirements of §115.412 and §115.415 of this title (relating to Control Requirements and Testing Requirements).

(2) The following conditions apply only to remote reservoir cleaners.

(A) The cleaner shall be designed to prevent exposure of the solvent reservoir to the atmosphere except for the drain openings. The drain openings shall not exceed 3.0% of the total cleaner open area and shall under no conditions exceed 16 square inches.

(B) All solvent sprays shall be a solid fluid stream (not a fine, atomized, or shower type spray) and at a minimal operating pressure that is necessary to prevent excessive splashing, but not to exceed ten pounds per square inch, gauge (psig).

(C) The true vapor pressure of the solvent shall not exceed 0.6 pounds per square inch, absolute (psia) as measured or calculated at an operating temperature of 100 degrees Fahrenheit.

(D) The solvent shall not be heated.

(3) The following conditions apply only to cold solvent cleaners, not including remote reservoirs.

(A) The cleaner shall have a freeboard that has a minimum four-inch water cover or provides a freeboard ratio (the distance from top of the solvent level to the top edge of the degreasing tank divided by the degreaser width) equal to or greater than 0.7. For water covers, the solvent must be insoluble in and heavier than water.

(B) The unit shall be equipped with a cover which is closed whenever parts are not being handled in the cleaner. Also, the cover must be designed for easy one-handed operation if any of the following conditions are present:

(i) the true vapor pressure of the solvent is greater than 0.3 psia as measured or calculated at 100 degrees Fahrenheit;

(ii) the solvent is agitated;

(iii) the solvent is heated.

(C) If a solvent spray is used, it shall be a solid fluid stream (not a fine, atomized, or shower-type spray) with a minimal operating pressure that is necessary to prevent splashing above the acceptable freeboard. The operating pressure shall not exceed ten psig.

(D) An internal-cleaned parts drainage rack or facility, for enclosed draining under a cover, shall be provided. An external-cleaned parts drainage rack or facility, for enclosed draining under a cover, may be used if the vapor pressure of the solvent is less than 0.6 psia at 100 degrees Fahrenheit. In all cases, parts shall be drained for at least 15 seconds or until dripping ceases.

(E) The Form PI-7 registration is not required if total solvent makeup (gross usage minus waste disposal) is 110 gallons per year (gallon/yr) or less.

(F) Total solvent makeup shall not exceed the following:

(i) chlorinated solvents--660 gallons/yr;

(ii) all other solvents--1,500 gallons/yr.

(4) The following conditions apply only to open top solvent vapor degreasers.

(A) The surface area of the solvent shall not exceed 15 square feet.

(B) The unit shall be equipped with a cover that can be opened and closed easily without disturbing the vapor zone. If the degreaser opening exceeds ten square feet, a powered cover shall be required.

(C) The cover shall be closed at all times except when parts are moved into and out of the degreaser.

(D) The unit shall be equipped with a properly sized refrigerated chiller, or the unit shall have a freeboard ratio (the distance from top of the vapor level to the top edge of the degreasing tank divided by the degreaser width) equal to or greater than 0.75.

(E) Exhaust ventilation for the unit shall operate between 50 and 65 cubic feet per minute (cfm) per square foot of degreaser open area unless this conflicts with Occupational Safety and Health Administration (OSHA) requirements. Ventilation fans or other sources of air agitation shall not be operated near the degreaser opening.

(F) The exhaust stacks shall discharge vertically with no restrictions or obstructions to flow. The stack height shall extend at least 1.3 times the building height as measured from ground level.

(G) Total solvent makeup (gross usage minus waste disposal) shall not exceed the following:

(i) chlorinated solvents--660 gallons/yr;

(ii) all other solvents--1500 gallons/yr.

(5) The following conditions apply only to conveyorized degreasers.

(A) The inlet and outlet openings shall be closed at all times except when processing work through the degreaser.

(B) The unit shall be equipped with a properly sized refrigerated chiller which has a volatile organic compound removal efficiency of at least 85%, or the unit shall have a freeboard ratio (the distance from top of the vapor

level to the top edge of the degreasing tank divided by the degreaser width) equal to or greater than 0.75.

(C) A drying tunnel or other means of control shall be used to limit liquid or vapor carry-out.

(D) Entrances and exits to the degreaser shall be designed to silhouette work loads.

(E) Exhaust ventilation for the unit shall operate between 50 and 65 cfm per square foot of degreaser opening unless this conflicts with OSHA requirements. Ventilation fans or other sources of air agitation shall not be operated near the degreaser openings.

(F) The exhaust stacks shall discharge vertically with no restrictions or obstructions to flow. The stack height shall extend at least 1.5 times the building height as measured from ground level.

(G) Total solvent makeup (gross usage minus waste disposal) shall not exceed the following:

(i) chlorinated solvents--660 gallons/yr;

(ii) all other solvents--1,500 gallons/yr.

Source Note: The provisions of this §106.454 adopted to be effective March 14, 1997, 22 TexReg 2439; amended to be effective July 8, 1998, 23 TexReg 6966; amended to be effective September 4, 2000, 25 TexReg 8653; amended to be effective November 1, 2001, 26 TexReg 8518

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CHAPTER 106	PERMITS BY RULE
SUBCHAPTER U	TANKS, STORAGE, AND LOADING
RULE §106.472	**Organic and Inorganic Liquid Loading and Unloading**

Liquid loading or unloading equipment for railcars, tank trucks, or drums; storage containers, reservoirs, tanks; and change of service of material loaded, unloaded, or stored is permitted by rule, provided that no visible emissions result and the chemicals loaded, unloaded, or stored are limited to:

(1) the following list: asphalt, resins, soaps, lube oils, fuel oils, waxes, polymers, detergents, lube oil additives, kerosene, wax emulsions, vegetable oils, greases, animal fats, and diesel fuels;

(2) water or wastewater;

(3) aqueous salt solutions;

(4) aqueous caustic solutions, except ammonia solutions;

(5) inorganic acids except oleum, hydrofluoric, and hydrochloric acids;

(6) aqueous ammonia solutions if vented through a water scrubber;

(7) hydrochloric acid if vented through a water scrubber;

(8) acetic acid if vented through a water scrubber;

(9) organic liquids having an initial boiling point of 300 degrees Fahrenheit or greater. Facilities loading, unloading, or storing butyric acid, isobutyric acid, methacrylic acid, mercaptans, croton oil, 2- methyl styrene, or any other compound with an initial boiling point of 300 degrees Fahrenheit or greater listed in 40 Code of Federal Regulations 261, Appendix VIII shall be located at least 500 feet from any recreational area or residence or other structure not occupied or used solely by the owner of the facility or the owner of the property upon which the facility is located.

Source Note: The provisions of this §106.472 adopted to be effective March 14, 1997, 22 TexReg 2439; amended to be effective September 4, 2000, 25 TexReg 8653

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CHAPTER 106	PERMITS BY RULE
SUBCHAPTER U	TANKS, STORAGE, AND LOADING
RULE §106.473	**Organic Liquid Loading and Unloading**

Organic liquids loading or unloading equipment for railcars, tank trucks, or drums; and storage containers, tanks, or change of service of the material loaded, unloaded, or stored is permitted by rule, provided that all of the following conditions of this section are met.

(1) Uncontrolled emissions calculated using the version of AP-42 in effect at the time are less than 25 tons per year of organic compounds or of any other air contaminant.

(2) The loading rate of the facilities does not exceed 20,000 gallons per day averaged over any consecutive 30-day period.

(3) The capacity of any tank does not exceed 25,000 gallons, except that tanks having a capacity of less than 40,000 gallons may be used to store sweet crude oil, sweet natural gas condensate, gasoline, and petroleum fuels.

(4) The facilities are used exclusively for the loading, unloading, or storage of:

(A) organic liquids normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings;

(B) petroleum, petroleum fuels, other motor vehicle fuels, and natural gas liquids, none of which have a true vapor pressure of 11.0 pounds per square inch, absolute, or greater at maximum temperature of use;

(5) The facilities will meet any applicable requirements of Chapter 115 of this title (relating to Control of Air Pollution from Volatile Organic Compounds);

(6) Facilities used for the loading, unloading, or storage of any compound listed in 40 Code of Federal Regulations 261, Appendix VIII are not permitted by rule under this section.

Source Note: The provisions of this §106.473 adopted to be effective March 14, 1997, 22 TexReg 2439; amended to be effective September 4, 2000, 25 TexReg 8653

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CHAPTER 106	PERMITS BY RULE
SUBCHAPTER U	TANKS, STORAGE, AND LOADING
RULE §106.478	**Storage Tank and Change of Service**

Any fixed or floating roof storage tank, or change of service in any tank, used to store chemicals or mixtures of chemicals shown in Table 478 in paragraph (8) of this section is permitted by rule, provided that all of the following conditions of this section are met:

(1) The tank shall be located at least 500 feet away from any recreational area or residence or other structure not occupied or used solely by the owner of the facility or the owner of the property upon which the facility is located.

(2) The true vapor pressure of the compound to be stored shall be less than 11.0 psia at the maximum storage temperature.

(3) For those compounds that have a true vapor pressure greater than 0.5 psia and less than 11.0 psia at the maximum storage temperature, any storage vessel larger than 40,000 gallons capacity shall be equipped with an internal floating cover or equivalent control.

(A) An open top tank containing an external floating roof using double seal technology shall be an approved control alternative equivalent to an internal floating cover tank, provided the primary seal consists of either a mechanical shoe seal or a liquid-mounted seal. Double seals having a vapor- mounted primary seal are an approved alternative for existing open top floating roof tanks undergoing a change of service.

(B) The floating cover or floating roof design shall incorporate sufficient flotation to conform to the requirements of American Petroleum Institute Code 650, Appendix C or an equivalent degree of flotation.

(4) Compounds with a true vapor pressure of 0.5 psia or less at the maximum storage temperature may be stored in a fixed roof or cone roof tank which includes a submerged fill pipe or utilizes bottom loading.

(5) For fixed or cone roof tanks having no internal floating cover, all uninsulated tank exterior surfaces exposed to the sun shall be painted chalk white except where a dark color is necessary to help the tank absorb or retain heat in order to maintain the material in the tank in a liquid state.

(6) Emissions shall be calculated by methods specified in Section 4.3 of the current edition of the United States Environmental Protection Agency Publication AP-42. This document may be obtained from the Superintendent of Documents, Washington D.C. 20402. It is Stock Number 0550000251-7, Volume I.

(7) Before construction begins, storage tanks of 25,000 gallons or greater capacity and located in a designated nonattainment area for ozone shall be registered with the commission's Office of Permitting, Remediation, and Registration in Austin using Form PI-7. The registration shall include a list of all tanks, calculated emissions for each carbon compound in tons per year for each tank, and a Table 7 of Form PI-2 for each different tank design.

(8) Mixtures of the chemicals listed in Table 478 which contain more than a total of 1.0% by volume of all other chemicals not listed in Table 478 are not covered by this section.

Attached Graphic

Source Note: The provisions of this §106.478 adopted to be effective March 14, 1997, 22 TexReg 2439; amended to be effective September 4, 2000, 25 TexReg 8653

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SUBCHAPTER W	TURBINES AND ENGINES
RULE §106.511	**Portable and Emergency Engines and Turbines**

Internal combustion engine and gas turbine driven compressors, electric generator sets, and water pumps, used only for portable, emergency, and/or standby services are permitted by rule, provided that the maximum annual operating hours shall not exceed 10% of the normal annual operating schedule of the primary equipment; and all electric motors. For purposes of this section, "standby" means to be used as a "substitute for" and not "in addition to" other equipment.

Source Note: The provisions of this §106.511 adopted to be effective March 14, 1997, 22 TexReg 2439; amended to be effective September 4, 2000, 25 TexReg 8653

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CHAPTER 330	MUNICIPAL SOLID WASTE
SUBCHAPTER U	STANDARD AIR PERMITS FOR MUNICIPAL SOLID WASTE LANDFILL FACILITIES AND TRANSFER STATIONS
RULE §330.981	**Effective Date**

The requirements of this subchapter will take effect on September 1, 2006.

Source Note: The provisions of this §330.981 adopted to be effective March 27, 2006, 31 TexReg 2502

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RULE §330.983	**Definitions**

The terms used in this subchapter have the following meanings, unless the context clearly indicates otherwise.

(1) Bioremediation--The biological breakdown of waste occurring at a landfill prior to placing the waste in a landfill cell. Processing may include adding supplements and oxygen to speed the natural biological processes, after which the material will meet landfill acceptance standards and can be placed in a cell. Common sources of material requiring bioremediation are transportation or pipeline accidents and spills.

(2) Category 1 municipal solid waste landfills--Landfills with a design capacity less than 2.5 million megagrams by mass or 2.5 million cubic meters by volume that operate in accordance with 40 Code of Federal Regulations Part 60, Subpart WWW, or Chapter 113, Subchapter D of this title (relating to Designated Facilities and Pollutants), as applicable.

(3) Category 2 municipal solid waste landfills--Landfills with a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters and a calculated uncontrolled non-methane organic compound emission rate less than 50 megagrams per year that operate in accordance with 40 Code of Federal Regulations Part 60, Subpart WWW or Chapter 113, Subchapter D of this title (relating to Designated Facilities and Pollutants), as applicable.

(4) Category 3 municipal solid waste landfills--Landfills with a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters and a calculated uncontrolled non-methane organic compound emission rate greater than or equal to 50 megagrams per year that operate in accordance with 40 Code of Federal Regulations Part 60, Subpart WWW, 40 Code of Federal Regulations Part 63, Subpart AAAA, or Chapter 113, Subchapter D of this title (relating to Designated Facilities and Pollutants), as applicable.

(5) Construction--Any physical change or change in the method of operation (including fabrication, erection, installation, demolition, or modification of an emissions unit) that would result in a change in actual emissions.

(6) Facility--A discrete or identifiable structure, device, item, equipment, or enclosure that constitutes or contains a stationary source, including appurtenances other than emission control equipment. A mine, quarry, well test, or road is not a facility.

(7) Modification--As pertaining to a municipal solid waste landfill defined in 40 Code of Federal Regulations §60.751, means an increase in the permitted volume design capacity of the landfill by either horizontal or vertical expansion based on its permitted design capacity after May 30, 1991. Modification does not occur until the owner or operator commences construction on the horizontal or vertical expansion.

(8) Modification of existing facility--Any physical change in, or change in the method of operation of, a facility in a manner that increases the amount of any air contaminant emitted by the facility into the atmosphere or that results in the emission of any air contaminant not previously emitted. The term does not include conditions listed under §116.10(11) of this title (relating to General Definitions).

(9) Process--Any action, operation, or treatment embracing chemical, commercial, industrial, or manufacturing factors such as combustion units, kilns, stills, dryers, roasters, and equipment used in connection with them, and all other methods or forms of manufacturing or processing that may emit smoke, particulate matter, gaseous matter, or visible emissions.

(10) Project--As pertaining to a municipal solid waste landfill defined in 40 Code of Federal Regulations §60.751, for the purposes of this subchapter means the construction or modification of a facility or a group of facilities submitted under the same registration.

(11) Receptor--Any off-property recreational area, commercial/industrial structure, residence, or other normally occupied structures not used solely by the owner and/or operator of the municipal solid waste landfill site.

(12) Site--All regulated units, facilities, equipment, structures, or sources at one street address or location that are owned or operated by the same person. Site includes any property identified in the permit or used in connection with the regulated activity at the same street address or location.

(13) Source--A point of origin of air contaminants, whether privately or publicly owned or operated.

(14) Waste solidification--The physical process used to reduce the mobility of constituents in a waste or to eliminate free liquids.

(15) Waste stabilization--The chemical process used to stabilize the volatility of the constituents in a waste.

Source Note: The provisions of this §330.983 adopted to be effective March 27, 2006, 31 TexReg 2502

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RULE §330.985	**Applicability and Exceptions**

(a) This subchapter authorizes air emissions from municipal solid waste landfill sites and transfer stations that meet the conditions listed in this subchapter. Individual authorizations under this subchapter are not subject to public notice or comment or contested case hearing opportunity.

(b) This standard permit does not relieve the owner and/or operator from complying with any other applicable provisions of the Texas Health and Safety Code, Texas Water Code, rules of the Texas Commission on Environmental Quality, or any other applicable state and federal rules and regulations.

(c) An owner and/or operator may claim this standard permit for the operation, construction, or modification of a municipal solid waste landfill or a Type V transfer station including Type I, Type IAE, Type IV, and Type IVAE landfill as defined in §330.5 of this title (relating to Classification of Municipal Solid Waste Facilities), except as specified in subsection (d) of this section.

(d) Exceptions.

(1) Any project that constitutes a new major source, or major modification under the new source review requirements of the Federal Clean Air Act, Part C (Prevention of Significant Deterioration of Air Quality) or Part D (Plan Requirements for Nonattainment Areas), and the related adopted regulations are subject to the requirements of §116.110 of this title (relating to Applicability) rather than this subchapter.

(2) Separate permit authorization under Chapter 106 of this title (relating to Permits by Rule) or Chapter 116 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification) must be obtained for the following activities at a site and may not be claimed under this subchapter:

(A) incineration (not including flares or air curtain incinerators), other than that used to control landfill gas emissions, as defined in 40 Code of Federal Regulations Part 60, Subpart WWW;

(B) rock crushers not used as temporary installations exclusively for cell construction, concrete batch plants, or hot mix asphalt concrete plants;

(C) composting; and

(D) a municipal solid waste landfill site that is permitted to accept 51% or more by weight or volume of Class 1 industrial nonhazardous waste.

Source Note: The provisions of this §330.985 adopted to be effective March 27, 2006, 31 TexReg 2502

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RULE §330.987	**Certification Requirements**

(a) Type IV landfills are exempt from the requirements of this subsection.

(b) Certification under this subchapter constitutes an acknowledgment and agreement that the permit holder will comply with all rules, regulations, and orders of the commission issued in conformity with Texas Clean Air Act, Texas Health and Safety Code, Chapter 382, and the conditions precedent to the claiming of this standard permit. If more than one state or federal rule or regulation or permit condition are applicable, the most stringent limit or condition will govern. Acceptance includes consent to the entrance of commission employees and designated representatives of any local air pollution control agency having jurisdiction over the site into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the standard permit.

(c) A certification under this subchapter is valid for a term not to exceed ten years from the date of receipt by the Texas Commission on Environmental Quality. An owner and/or operator is required to renew a certification by no later than the expiration date of the certification. The commission will provide written notice to operators of the renewal deadline at least 180 days prior to the expiration of the certification.

(d) Two copies of the certification must be submitted to the Waste Permits Division. One copy must be submitted to the appropriate regional office, and one copy must be sent to any appropriate local air pollution control program having jurisdiction over the site. The certification must be based on the capacity of the landfill minimum of a ten-year period. The certification must include supporting documentation to demonstrate compliance with the conditions of this subchapter and any other applicable federal and state requirements, and at a minimum should include the following:

(1) the basis and quantification of emission estimates;

(2) sufficient information to demonstrate that the project will comply with all applicable conditions of this subchapter; and

(3) a description of any equipment and related processes.

(e) Certifications must be submitted as follows.

(1) Owners or operators of existing municipal solid waste landfill sites that have been modified and do not continue to meet the existing standard permit under §116.621 of this title (relating to Municipal Solid Waste Landfills) must certify.

(2) Owners or operators must submit a certification for the initial construction of a municipal solid waste landfill under this subchapter at least 120 days prior to building or installation of any equipment or structure that may emit air contaminants.

(3) Modifications to an existing municipal solid waste landfill site that results in a change in categories as listed in §330.983 of this title (relating to Definitions) must submit a certification at least 60 days after changes occurring at the site.

(f) New facilities or changes to existing facilities that do not cause a site to become ineligible for this standard permit can be authorized by meeting one of the following:

(1) independently claiming the permit by rule under Chapter 106 of this title (relating to Permits by Rule) or a standard permit under Chapter 116, Subchapter F of this title (relating to Standard Permits), including all

registrations, fees, and documentation. These independent registrations must be administratively incorporated at the next standard permit certification renewal or modification; or

(2) including the claimed permit by rule or standard permit as a part of an initial or modified certification. A claimed permit by rule or standard permit included under a municipal solid waste landfill standard permit certification is exempt from the registration and fee requirements normally required of permits by rule or standard permits. The certification must include sufficient information necessary to demonstrate qualification for those authorizations. Certifications must meet the following:

(A) update the site certification within one year of constructing new facilities or modifications if the cumulative amount of emissions resulting from the new facilities or modifications is:

(i) less than five tons per year of any criteria air contaminant for sites located in a designated nonattainment area; or

(ii) less than 25 tons per year of any criteria air contaminant for sites located in an attainment area;

(B) update the site certification within 30 days of constructing new facilities or modifications if the site is not considered an existing major source in accordance with prevention of significant deterioration review or nonattainment new source review, and the cumulative amount of emissions for these changes is:

(i) greater than or equal to five tons per year of any criteria air contaminant for sites located in a designated nonattainment area; or

(ii) greater than or equal to 25 tons per year of any criteria air contaminant for sites located in attainment areas; or

(C) update the site certification at least 30 days prior to the change, including any applicable major source netting demonstration as specified in §116.150 of this title (relating to New Major Source or Major Modification in Ozone Nonattainment Areas), if the site is considered an existing major site in accordance with prevention of significant deterioration review or nonattainment new source review, and the cumulative amount of emissions for changes is:

(i) greater than or equal to five tons per year of any criteria air contaminant for sites located in a designated nonattainment area; or

(ii) greater than or equal to 25 tons per year of any criteria air contaminant for sites located in an attainment area.

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RULE §330.989	**General Requirements**

(a) An owner and/or operator of a municipal solid waste landfill site must comply with the following general requirements, as applicable:

(1) provisions of Federal Clean Air Act (FCAA), §111 (concerning Standards of Performance for New Stationary Sources) as listed under 40 Code of Federal Regulations (CFR) Part 60, promulgated by the United States Environmental Protection Agency (EPA), including, but not limited to, Subpart WWW or Chapter 113, Subchapter D of this title (relating to Designated Facilities and Pollutants);

(2) provisions of FCAA, §112 (concerning Hazardous Air Pollutants) as listed under 40 CFR Part 61, promulgated by the EPA;

(3) maximum achievable control technology standards as listed under 40 CFR Part 63, promulgated by the EPA under FCAA, §112 or as listed under Chapter 113, Subchapter C of this title (relating to National Emissions Standards for Hazardous Air Pollutants for Source Categories (FCAA, §112, 40 CFR 63)), including, but not limited to, Subpart AAAA;

(4) if subject to Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program), obtain allocations to operate; and

(5) rules and regulations of the commission adopted under Texas Clean Air Act, Texas Health and Safety Code, Chapter 382, and with the intent of the Texas Clean Air Act, including the protection of health and property of the public.

(b) All representations with regard to construction plans, operating procedures, permits by rule, or standard permits claimed, and maximum emission rates in any certification for this subchapter, become conditions upon which the municipal solid waste landfill must be constructed and operated. The owner or operator must submit a revised certification for changes that vary from the original representations. If changes occur and the site remains eligible for this subchapter, the owner and/or operator of the site must follow the notification/certification procedures listed in §330.987 of this title (relating to Certification Requirements). Any change that occurs such that a site, facility, or project is no longer eligible to claim this standard permit requires proper authorization under §116.111 of this title (relating to General Application).

Source Note: The provisions of this §330.989 adopted to be effective March 27, 2006, 31 TexReg 2502

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RULE §330.991	**Technical and Operational Requirements for all Municipal Solid Waste Landfill Sites**

(a) Air emissions from the following stationary sources are authorized by this standard permit:

(1) recycling (e.g., crushing glass, shredding or crushing aluminum, light bulb crushing, wood chipping, or mulching);

(2) transfer stations:

(A) located at a municipal solid waste (MSW) landfill site; or

(B) not located at a landfill and store over 1,000 tons of MSW overnight, defined as sunset to sunrise, must have the waste holding area covered by a ventilated building that has a minimum 16-foot vertical exhaust of 45,000 cubic feet per minute or greater;

(3) waste solidification/stabilization operations, which must be conducted with the following conditions:

(A) when dry fine powdery materials, including, but not limited to, fly ash, cement kiln dust, hydrated lime, and fine sawdust are used for mixing in the waste solidification/stabilization process loading/unloading, transporting, and mixing, they must be controlled so as to minimize particular matter emissions. Controls to minimize particular matter emissions may include loading and storing in enclosed containers, or mixing and unloading under conditions where the materials cannot become airborne; and

(B) no site-generated visible emissions may cross the property line for a period not to exceed 30 seconds in any six-minute period, as determined by United States Environmental Protection Agency (EPA) Test Method 22;

(4) landfill cell construction, operation, and closures, including landfill gas emissions and associated capture and control equipment;

(5) landfill mist spray systems to control odor. These landfill mist spray systems will operate such that no visible emissions may cross the property line for a period not to exceed 30 seconds in any six-minute period, as determined by EPA Test Method 22;

(6) any other facility or group of facilities that meets a permit by rule under Chapter 106 of this title (relating to Permits by Rule) or a standard permit under Chapter 116, Subchapter F of this title (relating to Standard Permits) with the exception of activities listed in §330.985(d)(2) of this title (relating to Applicability and Exceptions);

(7) leachate and landfill gas condensate activities, which must be conducted as follows:

(A) leachate and/or landfill gas condensate may be recirculated on-site at a rate not to exceed 100,000 gallons per day, and in accordance with the conditions and limitations specified in §330.177 of this title (relating to Leachate and Gas Condensate Recirculation); and

(B) air emissions are authorized from leachate and/or landfill gas condensate stored in tanks or disposed in evaporation ponds that are lined in accordance with §330.331(b) of this title (relating to Design Criteria), and meet the requirements in §330.17 of this title (relating to Technical Guidelines);

(8) fuel storage tanks, which must meet the following requirements:

(A) storage and transfer of gasoline, diesel fuel, or kerosene are authorized by this standard permit;

(B) permanent gasoline tanks must be located at least 500 feet from any off-property receptor;

(C) total annual throughput of gasoline for all tanks may not exceed 20,000 gallons per year unless a vapor balance system as defined in §115.10 of this title (relating to Definitions), is used; and

(D) records of annual throughput must be maintained;

(9) tire shredding, which may be conducted at a rate not to exceed 11 tons per hour. Records of the amount of tires shredded per hour must be maintained;

(10) bioremediation pads, which must be operated such that the pad must be located at least 165 feet from any off-property receptor;

(11) the GCCS, which must be designed to route total collected landfill gas to one of the following control devices:

(A) flares that satisfy requirements and are operated in accordance with 40 CFR Part 60, Subpart WWW, as applicable;

(B) a landfill gas-fired stationary, reciprocating internal combustion engine or a landfill gas-fired turbine not used to generate electricity, that satisfies all of the requirements of §106.4(a)(1) of this title (relating to Requirements for Permitting by Rule) and §106.512 of this title (relating to Stationary Engines and Turbines);

(C) a landfill gas-fired stationary electric generating unit that satisfies all of the requirements of Chapter 116, Subchapter F of this title;

(D) a landfill gas-fired boiler, heater, or other combustion unit, not including stationary, reciprocating internal combustion engines or turbines, that satisfies the maximum heat input and nitrous oxide requirements of §106.4 (a)(1) of this title and §106.183 of this title (relating to Boilers, Heaters, and Other Combustion Devices) and applicable sections of Chapter 117 of this title (relating to Control of Air Pollution from Nitrogen Compounds);

(E) a pollution control project that satisfies all the requirements of §116.617 of this title (relating to Standard Permits for Pollution Control Projects). Any facility or process added under this subsection is not considered a new production facility for the purposes of §116.617 of this title; or

(F) a gas treatment system that processes the collected gas to produce a product or by-product for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system must be subject to the requirements of 40 CFR §60.752(b)(2)(iii)(A) or (B); and

(12) a temporary rock crusher that is used exclusively for cell construction that satisfies all the requirements of the Air Quality Standard Permit for Temporary Rock Crushers.

(b) If sampling of stacks and/or process vents are required, the owner or operator must contact the appropriate regional office and any other air pollution control program having jurisdiction over the site prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The owner or operator is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant.

(c) The facilities covered by this standard permit may not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. Notification for emissions events and unscheduled maintenance must be made in accordance with §101.201 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements) and §101.211 of this title (relating to Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements).

(d) Owners and/or operators must monitor and control particulate matter as follows.

(1) All operations must be conducted in a manner so as to minimize any particulate matter emissions at the landfill boundary. No site-generated visible emissions, as determined by EPA Test Method 22, may not cross the

property line for a period exceeding 30 seconds in any six-minute period.

(2) Roads and other areas subject to vehicle traffic must be kept clean of debris and either be watered, treated with dust-suppressant chemicals, or paved with a cohesive hard surface that is maintained intact and cleaned as necessary.

(3) All excavated areas must be watered or treated with dust-suppressant chemicals as necessary to control particulate matter emissions.

(e) Tire shredding, outdoor dry abrasive blasting, the operation of a temporary rock crusher used exclusively for cell construction, or waste solidification/stabilization when fine materials are used in the process, must not occur simultaneously (no two or more processes can occur at the same time).

(f) An MSW landfill cell that contains Class 1 industrial nonhazardous waste greater than 20% by weight or volume must have a GCCS associated with the location of the Class 1 waste, and that GCCS is subject to the provisions of §330.995 of this title (relating to Recordkeeping and Reporting Requirements for all Municipal Solid Waste Landfill Sites).

Source Note: The provisions of this §330.991 adopted to be effective March 27, 2006, 31 TexReg 2502

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RULE §330.993	**Additional Requirements for Owners or Operators of Category 3 Municipal Solid Waste Landfills**

(a) The owner and/or operator must comply with the applicable provisions as specified in 40 Code of Federal Regulations §§60.752 - 60.759 and 40 Code of Federal Regulations Part 63, Subparts A and AAAA. The landfill gas collection and control system may be capped or removed provided that the following are met:

(1) the municipal solid waste landfill is permanently closed in accordance with Subchapter K of this chapter (relating to Closure and Post-Closure); and

(2) the conditions of 40 Code of Federal Regulations §60.752(2)(b)(v) are met, and a closure report has been submitted to the Texas Commission on Environmental Quality's Air Permits Division in accordance with 40 Code of Federal Regulations §60.757(d).

(b) Methane concentration at the surface of the municipal solid waste landfill must be monitored quarterly, as specified in 40 Code of Federal Regulations §60.755(c).

(c) The gas collection and control system must be monitored in accordance with the provisions specified in 40 Code of Federal Regulations §60.756.

Source Note: The provisions of this §330.993 adopted to be effective March 27, 2006, 31 TexReg 2502

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RULE §330.995	**Recordkeeping and Reporting Requirements for all Municipal Solid Waste Landfill Sites**

(a) A copy of this subchapter along with any claimed permit by rule, the applicable general conditions of Chapter 106, Subchapter A of this title (relating to General Requirements), and any claimed standard permits must be kept at the site.

(b) The operator will keep records for any permit by rule or standard permit claimed containing sufficient information to demonstrate compliance with Chapter 106, Subchapter A of this title and all applicable permit by rule or standard permit conditions. This information must include, but is not limited to, production records and operating hours.

(c) The owner or operator will maintain additional records specified in 40 Code of Federal Regulations (CFR) Part 60, Subpart WWW or 40 CFR 63, Subpart AAAA, if applicable, including:

(1) an initial design capacity report required by 40 CFR §60.757(a)(2), or an amended design capacity report required by 40 CFR §60.757(a)(3);

(2) records of the non-methane organic compound emission rates, determined annually using the procedures specified in 40 CFR §60.754(a)(1), or every five years using the procedures of 40 CFR §60.757(b)(1)(ii), as applicable, and submit the non-methane organic compound emissions rate report within 90 days of exceeding 2.5 million megagrams and 2.5 million cubic meters and annually thereafter, or every five years in accordance with 40 CFR §60.757(b); and

(3) all records in accordance with the provisions of 40 CFR §60.758, Recordkeeping Requirements.

(d) A semiannual compliance report must be submitted to the Texas Commission on Environmental Quality's Office of Compliance and Enforcement, in accordance with the provisions of 40 CFR §63.1980.

(e) Records must be maintained at the site and made available at the request of representatives of the executive director, the United States Environmental Protection Agency, or any local air pollution control program having jurisdiction over the site.

(f) Records must be retained for at least 60 months.

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CHAPTER 332	COMPOSTING
SUBCHAPTER A	GENERAL INFORMATION
RULE §332.4	**General Requirements**

All composting facilities and backyard operations shall comply with all of the following general requirements. Violations of these requirements are subject to enforcement by the commission and may result in the assessment of civil or administrative penalties pursuant to Texas Water Code, Chapter 7 (relating to Enforcement).

(1) Compliance with Texas Water Code. The activities that are subject to this chapter shall be conducted in a manner that prevents the discharge of material to or the pollution of surface water or groundwater in accordance with the provisions of the Texas Water Code, Chapter 26 (relating to Water Quality Control).

(2) Nuisance conditions. The composting, mulching, and land application of material shall be conducted in a sanitary manner that shall prevent the creation of nuisance conditions as defined in §330.2 of this title (relating to Definitions) and as prohibited by the Texas Health and Safety Code, Chapters 341 and 382 (relating to Minimum Standards of Sanitation and Health Protection Measures; and Clean Air Act), the Texas Water Code, Chapter 26 (relating to Water Quality Control), §101.4 of this title (relating to Nuisance), and any other applicable regulations or statutes.

(3) Discharge to surface water or groundwater. The discharge of material to or the pollution of surface water or groundwater as a result of the beneficial use or reuse and recycling of material is prohibited.

(4) Compliance with federal laws. Facility operations shall be conducted in accordance with all applicable federal laws and regulations.

(5) Compliance with state laws. Facility operations shall be conducted in accordance with all applicable laws and regulations of the State of Texas.

(6) Facility operations. Facility operations shall not be conducted in a manner which causes endangerment of human health and welfare, or the environment.

(7) Operations on a municipal solid waste landfill unit. No composting activities shall be conducted within the permitted boundaries of a municipal solid waste landfill without prior approval by the executive director as required by §305.70 of this title (relating to Municipal Solid Waste Permit and Registration Modifications).

(8) Operational requirement. Operations shall be conducted in such a manner to ensure that no unauthorized or prohibited materials are processed at the facility. All unauthorized or prohibited materials received by the facility shall be disposed of at an authorized facility in a timely manner.

(9) Leachate. Leachate from landfills and mixed municipal solid waste composting operations shall not be used on any composting process, except mixed municipal solid waste composting, and shall not be added after the designation of an end-product grade unless the product is reanalyzed to determine end-product quality.

(10) Nonhazardous industrial solid waste. This chapter applies to the composting, mulching, and land application of only the following nonhazardous industrial solid waste when the composting occurs on property that does not qualify for the exemption from the requirement of an industrial solid waste permit pursuant to §335.2(d) of this title (relating to Permit Required):

(A) dead animal carcasses;

(B) clean wood material;

(C) vegetative material;

(D) paper;

(E) manure (including paunch manure);

(F) meat feedstocks;

(G) fish feedstocks;

(H) dairy material feedstocks;

(I) yard trimmings; and

(J) oils and greases.

(11) Industrial and hazardous waste. Any of the materials listed in paragraph (10) of this section that are not managed in accordance with the requirements of this chapter, all hazardous wastes, and any nonhazardous industrial solid wastes not listed in paragraph (10) of this section shall be managed in accordance with Chapter 335 of this title (relating to Industrial Solid Waste and Municipal Hazardous Waste).

(12) Chemicals of concern. The operator of a compost facility shall address the release of a chemical of concern from a compost facility to any environmental media under the requirements of Chapter 350 of this title (relating to Texas Risk Reduction Program) to perform the corrective action.

Source Note: The provisions of this §332.4 adopted to be effective November 29, 1995, 20 TexReg 9717; amended to be effective September 23, 1999, 24 TexReg 7417; amended to be effective September 12, 2002, 27 TexReg 8593

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PART 1	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
CHAPTER 332	COMPOSTING
SUBCHAPTER A	GENERAL INFORMATION
RULE §332.8	**Air Quality Requirements**

(a) General requirements.

(1) Any composting or mulching operation which has existing authority under the Texas Clean Air Act does not have to meet the air quality criteria of this subchapter. Under Texas Clean Air Act, §382.051, any new composting or mulching operation which meets all of the applicable requirements of this subchapter is entitled to an air quality standard permit authorization under this subchapter in lieu of the requirement to obtain an air quality permit under Chapter 116 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification).

(2) Those composting or mulching operations which would otherwise be required to obtain air quality authorization under Chapter 116 of this title, which cannot satisfy all of the requirements of this subchapter, shall apply for and obtain air quality authorization under Chapter 116 of this title in addition to any notification, registration, or permit required in this subchapter.

(3) Any composting or mulching operation authorized under this chapter which is a new major source or any modification which constitutes a major modification under nonattainment review or prevention of significant deterioration review as amended by the Federal Clean Air Act amendments of 1990, and regulations promulgation thereunder, is subject to the requirements of Chapter 116 of this title, in addition to any notification, registration, or permit required in this chapter.

(4) Composting facilities that do not wish to comply with the requirements of this section, are required to apply for and obtain air quality authorization under Chapter 116 of this title. Once a person has applied for and obtained air quality authorization under Chapter 116 of this title, the person is exempt from the air quality requirements of this chapter.

(5) No person may concurrently hold an air quality permit issued under Chapter 116 of this title and an air quality standard permit authorized under this chapter for composting or mulching operations at the same site.

(6) Composting or mulching operations which have authorization under this chapter shall comply with the general requirements in §332.4 of this title (relating to General Requirements), and subsections (b), (c), (d), or (e) of this section.

(7) The operator of a composting or mulching operation operating under an air quality standard permit shall maintain on file at all times and make immediately available documentation which shows compliance with this section.

(b) Exempt operations. Composting and mulching operations that are considered exempt operations under §332.3(d) of this title (relating to Applicability), and that meet the following requirements are entitled to an air quality standard permit.

(1) If the total volume of materials to be mulched and/or composted, including in-process and processed materials at any time is greater than 2,000 cubic yards, the setback distance from all property boundaries to the edge of the area receiving, processing, or storing feedstock or finished product must be at least 50 feet.

(2) All permanent in-plant roads and vehicle work areas shall be watered, treated with dust-suppressant chemicals, or paved and cleaned as necessary to achieve maximum control of dust emissions. Vehicular speeds on non-paved roads shall not exceed ten miles per hour.

(3) Except for initial start-up and shut-down, the receiving chamber on all grinders shall be adequately filled prior to commencement of grinding and remain filled during grinding operations to minimize emissions from the

receiving chamber or grinding operations shall occur inside an enclosed structure. In addition, all grinders not enclosed inside a building shall be equipped with low-velocity fog nozzles spaced to create a continuous fog curtain or the operator shall have portable watering equipment available during the grinding operation. These controls shall be utilized as necessary for maximum control of dust when stockpiling ground material.

(4) All conveyors which off-load materials from grinders at a point which is not enclosed inside a building shall have available a water or mechanical dust suppression system. These controls shall be utilized as necessary for maximum control of dust when stockpiling ground material.

(5) If there are any changes to the composting or mulching operation that would reclassify it from an exempt operation to a notification, registration, or permit facility as authorized under §332.3 of this title, the operation shall obtain an air quality standard permit for a notification, registered, or permitted composting operation.

(c) Notification operations. Composting operations required to notify under §332.3(c) of this title which meet the following requirements are entitled to an air quality standard permit.

(1) The setback distance from all property boundaries to the edge of the area receiving, processing, or storing feedstock or finished product must be at least 50 feet.

(2) All permanent in-plant roads and vehicle work areas shall be watered, treated with dust-suppressant chemicals, or paved and cleaned as necessary to achieve maximum control of dust emissions. Vehicular speeds on non-paved roads shall not exceed ten miles per hour.

(3) Prior to receiving any material with a high odor potential such as, but not limited to, dairy material feedstocks, meat, fish, and oil and grease feedstocks, the operator shall insure that there is an adequate volume of bulking material to blend with/cover the material, and shall begin processing the material in a manner that prevents nuisances.

(4) Except for initial start-up and shut-down, the receiving chamber on all grinders shall be adequately filled prior to commencement of grinding and remain filled during grinding operations to minimize emissions from the receiving chamber or grinding operations shall occur inside an enclosed structure. In addition, all grinders not enclosed inside a building shall be equipped with low-velocity fog nozzles spaced to create a continuous fog curtain or the operator shall have portable watering equipment available during the grinding operation. These controls shall be utilized as necessary for maximum control of dust when stockpiling ground material.

(5) All conveyors which off-load materials from grinders at a point which is not enclosed inside a building shall have available a water or mechanical dust suppression system. These controls shall be utilized as necessary for maximum control of dust when stockpiling ground material.

(6) If there are any changes to the composting or mulching operation that would reclassify it from a notification operation to a registration or permit operation as authorized under §332.3 of this title, the operation shall obtain an air quality standard permit for a registered or permitted composting operation.

(d) Registered operations. Composting operations required to obtain a registration under §332.3(b) of this title that meet the following requirements are entitled to an air quality standard permit.

(1) All permanent in-plant roads and vehicle work areas shall be watered, treated with dust-suppressant chemicals, or paved and cleaned as necessary to achieve maximum control of dust emissions. Vehicular speeds on non-paved roads shall not exceed ten miles per hour.

(2) Prior to receiving any material with a high odor potential such as, but not limited to, dairy material feedstocks, sewage sludge, meat, fish, and oil and grease feedstocks, the operator shall insure that there is an adequate volume of bulking material to blend with or cover the material, and shall begin processing the material in a manner that prevents nuisances.

(3) All material shall be conveyed mechanically, or if conveyed pneumatically, the conveying air shall be vented to the atmosphere through a fabric filter(s) having a maximum filtering velocity of 4.0 ft/min with mechanical cleaning or 7.0 ft/min with air cleaning.

(4) Except for initial start-up and shut-down, the receiving chamber on all grinders shall be adequately filled

prior to commencement of grinding and remain filled during grinding operations to minimize emissions from the receiving chamber or grinding operations shall occur inside an enclosed structure. In addition, all grinders not enclosed inside a building shall be equipped with low-velocity fog nozzles spaced to create a continuous fog curtain or the operator shall have portable watering equipment available during the grinding operation. These controls shall be utilized as necessary for maximum control of dust when stockpiling ground material.

(5) All conveyors which off-load materials from grinders at a point which is not enclosed inside a building shall have available a water or mechanical dust suppression system. These controls shall be utilized as necessary for maximum control of dust when stockpiling ground material.

(6) If there are any changes to the composting or mulching operation that would reclassify it from a registration operation to a permit operation as authorized under §332.3 of this title, the operation shall obtain an air quality standard permit for a permitted composting operation.

(e) Permit operations. Composting operations required to obtain a permit under §332.3(a) of this title that meet the following requirements are entitled to an air quality standard permit.

(1) All permanent in-plant roads and vehicle work areas shall be watered, treated with dust-suppressant chemicals, or paved and cleaned as necessary to achieve maximum control of dust emissions. Vehicular speeds on non-paved roads shall not exceed ten miles per hour.

(2) Prior to receiving any material with a high odor potential such as, but not limited to, dairy material feedstocks, sewage sludge, meat, fish, oil and grease feedstocks, grease trap waste, and municipal solid waste, the operator shall insure that there is an adequate volume of bulking material to blend with or cover the material, and shall begin processing the material in a manner that prevents nuisances.

(3) All material shall be conveyed mechanically, or if conveyed pneumatically, the conveying air shall be vented to the atmosphere through a fabric filter(s) having a maximum filtering velocity of 4.0 ft/min with mechanical cleaning or 7.0 ft/min with air cleaning.

(4) Except for initial start-up and shut-down, the receiving chamber on all grinders shall be adequately filled prior to commencement of grinding and remain filled during grinding operations to minimize emissions from the receiving chamber or grinding operations shall occur inside an enclosed structure. In addition, all grinders not enclosed inside a building shall be equipped with low-velocity fog nozzles spaced to create a continuous fog curtain or the operator shall have portable watering equipment available during the grinding operation. These controls shall be utilized as necessary for maximum control of dust when stockpiling ground material.

(5) All conveyors which off-load materials from grinders at a point which is not enclosed inside a building shall have available a water or mechanical dust suppression system. These controls shall be utilized as necessary for maximum control of dust when stockpiling ground material.

(6) All activities which could result in increased odor emissions such as turning of compost piles shall be conducted in a manner that does not create nuisance conditions or shall only be conducted inside a building maintained under negative pressure and controlled with a chemical oxidation scrubbing system or bio filter system.

Source Note: The provisions of this §332.8 adopted to be effective November 29, 1995, 20 TexReg 9717; amended to be effective January 8, 2004, 29 TexReg 140

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Subpart WWW—Standards of Performance for Municipal Solid Waste Landfills

Source: 61 FR 9919, Mar. 12, 1996, unless otherwise noted.

§ 60.750 Applicability, designation of affected facility, and delegation of authority.

(a) The provisions of this subpart apply to each municipal solid waste landfill that commenced construction, reconstruction or modification on or after May 30, 1991. Physical or operational changes made to an existing MSW landfill solely to comply with subpart Cc of this part are not considered construction, reconstruction, or modification for the purposes of this section.

(b) The following authorities shall be retained by the Administrator and not transferred to the State: §60.754(a)(5).

(c) Activities required by or conducted pursuant to a CERCLA, RCRA, or State remedial action are not considered construction, reconstruction, or modification for purposes of this subpart.

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32750, June 16, 1998]

§ 60.751 Definitions.

As used in this subpart, all terms not defined herein shall 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 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 §60.752 (b)(2)(i).

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.

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).

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 title. 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.

Modification means an increase in the permitted volume design capacity of the landfill by either horizontal or vertical expansion based on its permitted design capacity as of May 30, 1991. Modification does not occur until the owner or operator commences construction on the horizontal 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 §60.754.

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.

Sludge means any solid, semisolid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility, exclusive of the treated effluent from a wastewater treatment plant.

Solid waste means any garbage, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permits under 33 U.S.C. 1342, or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (42 U.S.C 2011 et seq.).

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.

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32750, June 16, 1998; 64 FR 9262, Feb. 24, 1999]

§ 60.752 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 shall submit an initial design capacity report to the Administrator as provided in §60.757(a). The landfill may calculate design capacity in either megagrams or cubic meters for comparison with the exemption values. Any density conversions shall be documented and submitted with the report. Submittal of the initial design capacity report shall fulfill the requirements of this subpart except as provided for in paragraphs (a)(1) and (a)(2) of this section.

(1) The owner or operator shall submit to the Administrator an amended design capacity report, as provided for in §60.757(a)(3).

(2) When an increase in the maximum design capacity of a landfill exempted from the provisions of §60.752(b) through §60.759 of this subpart 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 shall comply with the provision 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, shall either comply with paragraph (b)(2) of this section or calculate an NMOC emission rate for the landfill using the procedures specified in §60.754. The NMOC emission rate shall be recalculated annually, except as provided in §60.757(b)(1)(ii) of this subpart. 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 50 megagrams per year, the owner or operator shall:

(i) Submit an annual emission report to the Administrator, except as provided for in §60.757(b)(1)(ii); and

(ii) Recalculate the NMOC emission rate annually using the procedures specified in §60.754(a)(1) until such time as the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, or the landfill is closed.

(A) If the NMOC emission rate, upon recalculation required in paragraph (b)(1)(ii) of this section, is equal to or greater than 50 megagrams per year, the owner or operator shall install a collection and control system in compliance with paragraph (b)(2) of this section.

(B) If the landfill is permanently closed, a closure notification shall be submitted to the Administrator as provided for in §60.757(d).

(2) If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, the owner or operator shall:

(i) Submit a collection and control system design plan prepared by a professional engineer to the Administrator within 1 year:

(A) The collection and control system as described in the plan shall meet the design requirements of paragraph (b)(2)(ii) of this section.

(B) The collection and control system design plan shall include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of §§60.753 through 60.758 proposed by the owner or operator.

(C) The collection and control system design plan shall either conform with specifications for active collection systems in §60.759 or include a demonstration to the Administrator's satisfaction of the sufficiency of the alternative provisions to §60.759.

(D) The Administrator shall review the information submitted under paragraphs (b)(2)(i) (A),(B) and (C) 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.

(ii) Install a collection and control system that captures the gas generated within the landfill as required by

paragraphs (b)(2)(ii)(A) or (B) and (b)(2)(iii) of this section within 30 months after the first annual report in which the emission rate equals or exceeds 50 megagrams per year, unless Tier 2 or Tier 3 sampling demonstrates that the emission rate is less than 50 megagrams per year, as specified in §60.757(c)(1) or (2).

(A) An active collection system shall:

(*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 or treatment 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:

(*i*) 5 years or more if active; or

(*ii*) 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.

(B) A passive collection system shall:

(*1*) Comply with the provisions specified in paragraphs (b)(2)(ii)(A)(*1*), (*2*), and (2)(ii)(A)(*4*) 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 shall be installed as required under §258.40.

(iii) 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) An open flare designed and operated in accordance with §60.18 except as noted in §60.754(e);

(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 shall 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 §60.754(d).

(*1*) If a boiler or process heater is used as the control device, the landfill gas stream shall be introduced into the flame zone.

(*2*) The control device shall be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in §60.756;

(C) Route the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of paragraph (b)(2)(iii) (A) or (B) of this section.

(iv) Operate the collection and control device installed to comply with this subpart in accordance with the provisions of §§60.753, 60.755 and 60.756.

(v) The collection and control system may be capped or removed provided that all the conditions of paragraphs (b)(2)(v) (A), (B), and (C) of this section are met:

(A) The landfill shall be a closed landfill as defined in §60.751 of this subpart. A closure report shall be submitted to the Administrator as provided in §60.757(d);

(B) The collection and control system shall have been in operation a minimum of 15 years; and

(C) Following the procedures specified in §60.754(b) of this subpart, the calculated NMOC gas produced by the landfill shall be less than 50 megagrams per year on three successive test dates. The test dates shall 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 Act, the owner or operator of a 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 a 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) June 10, 1996 for MSW landfills that commenced construction, modification, or reconstruction on or after May 30, 1991 but before March 12, 1996;

(2) Ninety days after the date of commenced construction, modification, or reconstruction for MSW landfills that commence construction, modification, or reconstruction on or after March 12, 1996.

(d) When a MSW landfill subject to this subpart is closed, 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.

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32751, June 16, 1998; 65 FR 18908, Apr. 10, 2000; 71 FR 55127, Sept. 21, 2006]

§ 60.753 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 §60.752(b)(2)(ii) of this subpart shall:

(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 shall record instances when positive

pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in §60.757(f)(1);

(2) Use of a geomembrane or synthetic cover. The owner or operator shall 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 shall be approved by the Administrator;

(c) Operate each interior wellhead in the collection system with a landfill gas temperature less than 55 °C and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

(1) The nitrogen level shall be determined using Method 3C, unless an alternative test method is established as allowed by §60.752(b)(2)(i) of this subpart.

(2) Unless an alternative test method is established as allowed by §60.752(b)(2)(i) of this subpart, the oxygen shall be determined by an oxygen meter using Method 3A or 3C except that:

(i) The span shall be set so that the regulatory limit is between 20 and 50 percent of the span;

(ii) A data recorder is not required;

(iii) Only two calibration gases are required, a zero and span, and ambient air may be used as the span;

(iv) A calibration error check is not required;

(v) The allowable sample bias, zero drift, and calibration drift are ±10 percent.

(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 shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 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 shall 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 §60.752(b)(2)(iii). In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour; and

(f) Operate the control or treatment 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 shall be taken as specified in §60.755(a)(3) through (5) or §60.755 (c) of this subpart. If corrective actions are taken as specified in §60.755, the monitored exceedance is not a violation of the operational requirements in this section.

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32751, June 16, 1998; 65 FR 61778, Oct. 17, 2000]

§ 60.754 Test methods and procedures.

(a)(1) The landfill owner or operator shall calculate the NMOC emission rate using either the equation provided in paragraph (a)(1)(i) of this section or the equation provided in paragraph (a)(1)(ii) of this section. Both equations may be used if the actual year-to-year solid waste acceptance rate is known, as specified in paragraph (a)(1)(i), 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), for part of the life of the landfill. The values to be used in both equations 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 thirty 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) The following equation shall be used if the actual year-to-year solid waste acceptance rate is known.

$$M_{NMOC} = \sum_{i=1}^{n} 2\,k\,L_o M_i \left(e^{-kt_i}\right)\left(C_{NMOC}\right)\left(3.6\times10^{-9}\right)$$

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

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) The following equation shall be used if the actual year-to-year solid waste acceptance rate is unknown.

$M_{NMOC}= 2L_oR\ (e^{-kc}-e^{-kt})\ C_{NMOC}(3.6 \times 10^{-9})$

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=O and $e^{-kc}1$

3.6×10^{-9}=conversion factor

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 shall compare the calculated NMOC mass emission rate to the standard of 50 megagrams per year.

(i) If the NMOC emission rate calculated in paragraph (a)(1) of this section is less than 50 megagrams per year, then the landfill owner shall submit an emission rate report as provided in §60.757(b)(1), and shall recalculate the NMOC mass emission rate annually as required under §60.752(b)(1).

(ii) If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, then the landfill owner shall either comply with §60.752(b)(2), or determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the procedures provided in paragraph (a)(3) of this section.

(3) *Tier 2.* The landfill owner or operator shall determine the NMOC concentration using the following sampling procedure. The landfill owner or operator shall install at least two sample probes per hectare of 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 sample probes should be located to avoid known areas of nondegradable solid waste. The owner or operator shall 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. Method 18 of appendix A of this part may be used to analyze the samples collected by the Method 25 or 25C sampling procedure. 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 using Method 18, the owner or operator must identify all compounds in the sample and, as a minimum, test for those compounds published in the most recent Compilation of Air Pollutant Emission Factors (AP–42), minus carbon monoxide, hydrogen sulfide, and mercury. As a minimum, the instrument must be calibrated for each of the compounds on the list. Convert the concentration of each Method 18 compound to C_{NMOC}as hexane by multiplying by the ratio of its carbon atoms divided by six. 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 before the gas moving or condensate removal equipment. For these systems, a minimum of three samples must be collected from the header pipe.

(i) The landfill owner or operator shall recalculate the NMOC mass emission rate using the equations provided in paragraph (a)(1)(i) or (a)(1)(ii) of this section and using the average NMOC concentration from the collected samples instead of the default value in the equation provided in paragraph (a)(1) of this section.

(ii) If the resulting mass emission rate calculated using the site-specific NMOC concentration is equal to or greater than 50 megagrams per year, then the landfill owner or operator shall either comply with §60.752 (b)(2), or determine the site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the procedure specified in paragraph (a)(4) of this section.

(iii) If the resulting NMOC mass emission rate is less than 50 megagrams per year, the owner or operator shall submit a periodic estimate of the emission rate report as provided in §60.757(b)(1) and retest the site-specific NMOC concentration every 5 years using the methods specified in this section.

(4) *Tier 3.* The site-specific methane generation rate constant shall be determined using the procedures provided in Method 2E of appendix A of this part. The landfill owner or operator shall estimate the NMOC mass emission rate using equations in paragraph (a)(1)(i) or (a)(1)(ii) of this section and using a site-specific methane generation rate constant k, 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 shall compare the resulting NMOC mass emission rate to the standard of 50 megagrams per year.

(i) If the NMOC mass emission rate as calculated using the site-specific methane generation rate and concentration of NMOC is equal to or greater than 50 megagrams per year, the owner or operator shall comply with §60.752(b)(2).

(ii) If the NMOC mass emission rate is less than 50 megagrams per year, then the owner or operator shall submit a periodic emission rate report as provided in §60.757(b)(1) and shall recalculate the NMOC mass emission rate annually, as provided in §60.757(b)(1) using the equations in paragraph (a)(1) of this section and using the site-specific methane generation rate constant and NMOC concentration obtained in paragraph (a)(3) of this section. The calculation of the methane generation rate constant is performed only once, and the value obtained from this test shall be used in all subsequent annual NMOC emission rate calculations.

(5) The owner or operator may use other methods to determine the NMOC concentration or a site-specific k as an alternative to the methods required in paragraphs (a)(3) and (a)(4) of this section if the method has been approved by the Administrator.

(b) After the installation of a collection and control system in compliance with §60.755, the owner or operator shall calculate the NMOC emission rate for purposes of determining when the system can be removed as provided in §60.752(b)(2)(v), using the following equation:

$$M_{NMOC} = 1.89 \times 10^{-3} Q_{LFG} C_{NMOC}$$

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}, shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of section 4 of Method 2E of appendix A of this part.

(2) The average NMOC concentration, C_{NMOC}, shall 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 25C or Method 18 of appendix A of this part. If using Method 18 of appendix A of this part, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP–42). The sample location on the common header pipe shall be before any condensate removal or other gas refining units. The landfill owner or operator shall divide the NMOC concentration from 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.

(c) When calculating emissions for PSD purposes, the owner or operator of each MSW landfill subject to the provisions of this subpart shall estimate the NMOC emission rate for comparison to the PSD major source and significance levels in §§51.166 or 52.21 of this chapter using AP–42 or other approved measurement procedures.

(d) For the performance test required in §60.752(b)(2)(iii)(B), Method 25, 25C, or Method 18 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 §60.752(b)(2)(i)(B). Method 3 or 3A shall 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. If using Method 18 of appendix A of this part, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP–42). The following equation shall be used to calculate efficiency:

Control Efficiency = $(NMOC_{in} - NMOC_{out})/(NMOC_{in})$

where,

$NMOC_{in}$= mass of NMOC entering control device

$NMOC_{out}$= mass of NMOC exiting control device

(e) For the performance test required in §60.752(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).

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32751, June 16, 1998; 65 FR 18908, Apr. 10, 2000; 65 FR 61778, Oct. 17, 2000; 71 FR 55127, Sept. 21, 2006]

§ 60.755 Compliance provisions.

(a) Except as provided in §60.752(b)(2)(i)(B), the specified methods in paragraphs (a)(1) through (a)(6) of this section shall be used to determine whether the gas collection system is in compliance with §60.752(b)(2)(ii).

(1) For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with §60.752(b)(2)(ii)(A)(*1*), one of the following equations shall be used. The k and $L_o$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 §60.754(a)(4), the value of k determined from the test shall be used. A value of no more than 15 years shall 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:

$Q_m = 2L_oR\ (e^{-kc} - e^{-kt})$

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 = O and e^{-kc}= 1)

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

$$Q_M = \sum_{i=1}^{n} 2\,k\,L_o\,M_i\left(e^{-kt_i}\right)$$

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, the equations 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 the equations in paragraphs (a)(1) (i) or (ii) or other methods shall 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 §60.752(b)(2)(ii)(A)(*2*), the owner or operator shall 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 §60.752(b)(2)(ii)(A)(*3*), the owner or operator shall measure gauge pressure in the gas collection header at each individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under §60.753(b). If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval.

(4) Owners or operators are not required to expand the system as required in paragraph (a)(3) of this section during the first 180 days after gas collection system startup.

(5) For the purpose of identifying whether excess air infiltration into the landfill is occurring, the owner or operator shall monitor each well monthly for temperature and nitrogen or oxygen as provided in §60.753 (c). If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within 5 calendar days. If correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval.

(6) An owner or operator seeking to demonstrate compliance with §60.752(b)(2)(ii)(A)(*4*) through the use of a collection system not conforming to the specifications provided in §60.759 shall provide information satisfactory to the Administrator as specified in §60.752(b)(2)(i)(C) demonstrating that off-site migration is being controlled.

(b) For purposes of compliance with §60.753(a), each owner or operator of a controlled landfill shall place each well or design component as specified in the approved design plan as provided in §60.752(b)(2)(i). Each well shall 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 shall be used for compliance with the surface methane operational standard as provided in §60.753(d).

(1) After installation of the collection system, the owner or operator shall 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 shall 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 shall be performed in accordance with section 4.3.1 of Method 21 of appendix A of this part, except that the probe inlet shall be placed within 5 to 10 centimeters of the ground. Monitoring shall be performed during typical meteorological conditions.

(4) Any reading of 500 parts per million or more above background at any location shall be recorded as a monitored exceedance and the actions specified in paragraphs (c)(4) (i) through (v) of this section shall be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational

requirements of §60.753(d).

(i) The location of each monitored exceedance shall be marked and the location recorded.

(ii) Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall 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 shall be taken and the location shall 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 shall be taken, and no further monitoring of that location is required until the action specified in paragraph (c)(4)(v) 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 shall be re-monitored 1 month from the initial exceedance. If the 1-month remonitoring 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 remonitoring shows an exceedance, the actions specified in paragraph (c)(4) (iii) or (v) shall 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 shall 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 shall 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 shall comply with the following instrumentation specifications and procedures for surface emission monitoring devices:

(1) The portable analyzer shall meet the instrument specifications provided in section 3 of Method 21 of appendix A of this part, except that “methane” shall replace all references to VOC.

(2) The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air.

(3) To meet the performance evaluation requirements in section 3.1.3 of Method 21 of appendix A of this part, the instrument evaluation procedures of section 4.4 of Method 21 of appendix A of this part shall be used.

(4) The calibration procedures provided in section 4.2 of Method 21 of appendix A of this part shall be followed immediately before commencing a surface monitoring survey.

(e) The provisions of this subpart apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for treatment or control devices.

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32752, June 16, 1998]

§ 60.756 Monitoring of operations.

Except as provided in §60.752(b)(2)(i)(B),

(a) Each owner or operator seeking to comply with §60.752(b)(2)(ii)(A) for an active gas collection system shall 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 §60.755(a)(3); and

(2) Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as provided in §60.755(a)(5); and

(3) Monitor temperature of the landfill gas on a monthly basis as provided in §60.755(a)(5).

(b) Each owner or operator seeking to comply with §60.752(b)(2)(iii) using an enclosed combustor shall 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 or bypass of the control device. The owner or operator shall either:

(i) Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or

(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 shall 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 §60.752(b)(2)(iii) using an open flare shall 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 or bypass of the flare. The owner or operator shall either:

(i) Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or

(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 shall 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 §60.752(b)(2)(iii) using a device other than an open flare or an enclosed combustor shall provide information satisfactory to the Administrator as provided in §60.752(b)(2)(i)(B) describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Administrator shall 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 §60.759 or seeking to monitor alternative parameters to those required by §60.753 through §60.756 shall provide information satisfactory to the Administrator as provided in §60.752(b)(2)(i) (B) and (C) 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 §60.755(c), shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in §60.755 (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.

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32752, June 16, 1998; 65 FR 18909, Apr. 10, 2000]

§ 60.757 Reporting requirements.

Except as provided in §60.752(b)(2)(i)(B),

(a) Each owner or operator subject to the requirements of this subpart shall submit an initial design capacity report to the Administrator.

(1) The initial design capacity report shall fulfill the requirements of the notification of the date construction is commenced as required by §60.7(a)(1) and shall be submitted no later than:

(i) June 10, 1996, for landfills that commenced construction, modification, or reconstruction on or after May 30, 1991 but before March 12, 1996 or

(ii) Ninety days after the date of commenced construction, modification, or reconstruction for landfills that commence construction, modification, or reconstruction on or after March 12, 1996.

(2) The initial design capacity report shall 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 shall be calculated using good engineering practices. The calculations shall be provided, along with the relevant parameters as part of the 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) An amended design capacity report shall 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 or above 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 §60.758(f).

(b) Each owner or operator subject to the requirements of this subpart shall submit an NMOC emission rate report to the Administrator initially and annually thereafter, except as provided for in paragraphs (b)(1)(ii) or (b)(3) 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 shall contain an annual or 5-year estimate of the NMOC emission rate calculated using the formula and procedures provided in §60.754(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 shall be submitted no later than indicated in paragraphs (b)(1)(i)(A) and (B) of this section. Subsequent NMOC emission rate reports shall be submitted annually thereafter, except as provided for in paragraphs (b)(1)(ii) and (b)(3) of this section.

(A) June 10, 1996, for landfills that commenced construction, modification, or reconstruction on or after May 30, 1991, but before March 12, 1996, or

(B) Ninety 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) If the estimated NMOC emission rate as reported in the annual report to the Administrator is less than 50 megagrams per year 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 shall 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 shall be provided to the Administrator. This estimate shall 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 shall be submitted to the Administrator. The revised estimate shall 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 shall 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 of paragraphs (b)(1) and (2) of this section, after the installation of a collection and control system in compliance with §60.752(b)(2), during such time as the collection and control system is in operation and in compliance with §§60.753 and 60.755.

(c) Each owner or operator subject to the provisions of §60.752(b)(2)(i) shall submit a collection and control system design plan to the Administrator within 1 year of the first report required under paragraph (b) of this section in which the emission rate equals or exceeds 50 megagrams per year, except as follows:

(1) If the owner or operator elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis as provided in §60.754(a)(3) and the resulting rate is less than 50 megagrams per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 50 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, shall be submitted within 180 days of the first calculated exceedance of 50 megagrams per year.

(2) 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 §60.754(a)(4), and the resulting NMOC emission rate is less than 50 Mg/yr, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant (k) shall 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 §60.754(a)(4) and the resulting site-specific methane generation rate constant (k) shall be submitted to the Administrator within 1 year of the first calculated emission rate exceeding 50 megagrams per year.

(d) Each owner or operator of a controlled landfill shall 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).

(e) Each owner or operator of a controlled landfill shall 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 shall contain all of the following items:

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

(ii) A copy of the initial performance test report demonstrating that the 15 year minimum control period has expired; and

(iii) Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year.

(2) The Administrator may request such additional information as may be necessary to verify that all of the conditions for removal in §60.752(b)(2)(v) have been met.

(f) Each owner or operator of a landfill seeking to comply with §60.752(b)(2) using an active collection system designed in accordance with §60.752(b)(2)(ii) shall submit to the Administrator annual reports of the recorded information in (f)(1) through (f)(6) of this paragraph. The initial annual report shall be submitted within 180 days of installation and start-up of the collection and control system, and shall include the initial performance test report required under §60.8. For enclosed combustion devices and flares, reportable exceedances are defined under §60.758(c).

(1) Value and length of time for exceedance of applicable parameters monitored under §60.756(a), (b), (c), and (d).

(2) Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under §60.756.

(3) Description and duration of all periods when the control device was not operating for a period exceeding 1 hour and length of time the control device was not operating.

(4) All periods when the collection system was not operating in excess of 5 days.

(5) The location of each exceedance of the 500 parts per million methane concentration as provided in §60.753(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month.

(6) The date of installation and the location of each well or collection system expansion added pursuant to paragraphs (a)(3), (b), and (c)(4) of §60.755.

(g) Each owner or operator seeking to comply with §60.752(b)(2)(iii) shall 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.

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32752, June 16, 1998; 65 FR 18909, Apr. 10, 2000]

§ 60.758 Recordkeeping requirements.

(a) Except as provided in §60.752(b)(2)(i)(B), each owner or operator of an MSW landfill subject to the provisions of §60.752(b) shall keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report which triggered §60.752(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 §60.752(b)(2)(i)(B), each owner or operator of a controlled landfill shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed in paragraphs (b)(1) through (b)(4) of this section as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. Records of the control device vendor specifications shall be maintained until removal.

(1) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with §60.752(b)(2)(ii):

(i) The maximum expected gas generation flow rate as calculated in §60.755(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 §60.759(a)(1).

(2) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with §60.752(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 combustion 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 §60.752(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 §60.752(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 §60.752(b)(2)(iii)(A) through use of an open 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.

(c) Except as provided in §60.752(b)(2)(i)(B), each owner or operator of a controlled landfill subject to the provisions of this subpart shall keep for 5 years up-to-date, readily accessible continuous records of the

equipment operating parameters specified to be monitored in §60.756 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 shall be recorded and reported under §60.757(f):

(i) For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million British thermal unit per hour) or greater, all 3-hour periods of operation during which the average combustion temperature was more than 28 oC below the average combustion temperature during the most recent performance test at which compliance with §60.752(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 shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or 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 §60.756.

(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 §60.752(b)(2)(iii) shall 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 an open flare shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under §60.756(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.

(d) Except as provided in §60.752(b)(2)(i)(B), each owner or operator subject to the provisions of this subpart shall 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 shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under §60.755(b).

(2) Each owner or operator subject to the provisions of this subpart shall 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 §60.759(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in §60.759(a)(3)(ii).

(e) Except as provided in §60.752(b)(2)(i)(B), each owner or operator subject to the provisions of this subpart shall keep for at least 5 years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in §60.753, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.

(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”, shall 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.

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32752, June 16, 1998; 65 FR 18909, Apr. 10, 2000]

§ 60.759 Specifications for active collection systems.

(a) Each owner or operator seeking to comply with §60.752(b)(2)(i) shall 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 §60.752(b)(2)(i)(C) and (D):

(1) The collection devices within the interior and along the perimeter areas shall be certified to achieve comprehensive control of surface gas emissions by a professional engineer. The following issues shall be addressed in the design: depths of refuse, refuse gas generation rates and flow characteristics, cover properties, gas system expandibility, leachate and condensate management, accessibility, compatibility with filling operations, integration with closure end use, air intrusion control, corrosion resistance, fill settlement, and resistance to the refuse decomposition heat.

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

(i) Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under §60.758(d). The documentation shall provide the nature, date of deposition, location and amount of asbestos or nondegradable material deposited in the area, and shall 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 shall be documented and provided to the Administrator upon request. A separate NMOC emissions estimate shall be made for each section proposed for exclusion, and the sum of all such sections shall be compared to the NMOC emissions estimate for the entire landfill. Emissions from each section shall be computed using the following equation:

$$Q_i = 2\ k\ L_o M_i (e^{-kt_i})\ (C_{NMOC})\ (3.6 \times 10^{-9})$$

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

(iii) The values for k and C_{NMOC}determined in field testing shall 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 §60.754(a)(1) or the alternative values from §60.754(a)(5) shall 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 §60.752(b)(2)(i)(A) shall construct the gas collection devices using the following equipment or procedures:

(1) The landfill gas extraction components shall 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 shall extend as necessary to comply with emission and migration standards. Collection devices such as wells and horizontal collectors shall be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations shall be situated with regard to the need to prevent excessive air infiltration.

(2) Vertical wells shall be placed so as not to endanger underlying liners and shall address the occurrence of water within the landfill. Holes and trenches constructed for piped wells and horizontal collectors shall 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 shall 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 shall include a positive closing throttle valve, any necessary seals and couplings, access couplings and at least one sampling port. The collection devices shall be constructed of PVC, HDPE, fiberglass, stainless steel, or other nonporous material of suitable thickness.

(c) Each owner or operator seeking to comply with §60.752(b)(2)(i)(A) shall convey the landfill gas to a control system in compliance with §60.752(b)(2)(iii) through the collection header pipe(s). The gas mover equipment shall 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 shall be used to project the maximum flow rate. If no flow data exists, the procedures in paragraph (c)(2) of this section shall be used.

(2) For new collection systems, the maximum flow rate shall be in accordance with §60.755(a)(1).

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32753, June 16, 1998; 64 FR 9262, Feb. 24, 1999; 65 FR 18909, Apr. 10, 2000]

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Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

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Subpart AAAA—National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills

Source: 68 FR 2238, Jan. 16, 2003, 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. This subpart requires all landfills described in §63.1935 to meet the requirements of 40 CFR part 60, subpart Cc or WWW and requires timely control of bioreactors. This subpart also requires such landfills to meet the startup, shutdown, and malfunction (SSM) requirements of the general provisions of this part and provides that compliance with the operating conditions shall be demonstrated by parameter monitoring results that are within the specified ranges. It also includes additional reporting requirements.

§ 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 a 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 40 CFR 63.2 of subpart A.

(2) Your MSW landfill is collocated with a major source as defined in 40 CFR 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 §60.754(a) of the MSW landfills new source performance standards in 40 CFR part 60, subpart WWW, the Federal plan, or an EPA approved and effective State or tribal plan that applies to your landfill.

(b) You are subject to this subpart if you own or operate a 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 40 CFR 63.2 of subpart A.

(2) Your MSW landfill is collocated with a major source as defined in 40 CFR 63.2 of subpart A.

(3) Your MSW landfill is an area source landfill that has a design capacity equal to our 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 a 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 40 CFR 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 last.

(b) If your landfill is an existing affected source, you must comply with this subpart by January 16, 2004.

(c) If your landfill is a new affected source and is a major source or is collocated with a major source, you must comply with the requirements in §§63.1955(b) and 63.1960 through 63.1980 by the date your landfill is required to install a collection and control system by 40 CFR 60.752(b)(2) of subpart WWW.

(d) If your landfill is an existing affected source and is a major source or is collocated with a major source, you must comply with the requirements in §§63.1955(b) and 63.1960 through 63.1980 by the date your landfill is required to install a collection and control system by 40 CFR 60.752(b)(2) of subpart WWW, the Federal plan, or EPA approved and effective State or tribal plan that applies to your landfill or by January 13, 2004, whichever occurs later.

(e) If your landfill is a new affected source and is an area source meeting the criteria in §63.1935(a)(3), you must comply with the requirements of §§63.1955(b) and 63.1960 through 63.1980 by the date your landfill is required to install a collection and control system by 40 CFR 60.752(b)(2) of subpart WWW.

(f) If your landfill is an existing affected source and is an area source meeting the criteria in §63.1935(a)(3), you must comply with the requirements in §§63.1955(b) and 63.1960 through 63.1980 by the date your landfill is required to install a collection and control system by 40 CFR 60.752(b)(2) of subpart WWW, the Federal plan, or EPA approved and effective State or tribal plan that applies to your landfill or by January 16, 2004, whichever occurs later.

§ 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) of this subpart. 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 40 CFR 60.752(b)(2)(v) of part 60, subpart WWW, the Federal plan, or EPA approved and effective State plan 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 §63.1980(g) and (h) 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, the Federal plan, or 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 §63.1980(g) and (h) to determine when the bioreactor moisture content reaches 40 percent.

§ 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 you are no longer required to apply controls as specified in 40 CFR 60.752(b)(2)(v) of subpart WWW, or the Federal plan or EPA approved and effective State plan or tribal plan that implements 40 CFR part 60, subpart Cc, whichever applies to your landfill.

§ 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 paragraphs (a) or (b).

(a) Your affected source meets the control system removal criteria in 40 CFR 60.752(b)(2)(v) of part 60, subpart WWW or the bioreactor meets the criteria for a nonproductive area of the landfill in 40 CFR 60.759(a)(3)(ii) of part 60, subpart WWW.

(b) The bioreactor portion of the landfill is a closed landfill as defined in 40 CFR 60.751, subpart WWW, 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 40 CFR 60.757(d) of subpart WWW.

(c) Compliance with the bioreactor control removal provisions in this section constitutes compliance with 40 CFR part 60, subpart WWW or the Federal plan, whichever applies to your bioreactor.

Standards

§ 63.1955 What requirements must I meet?

(a) You must fulfill one of the requirements in paragraph (a)(1) or (2) of this section, whichever is applicable:

(1) Comply with the requirements of 40 CFR part 60, subpart WWW.

(2) Comply with the requirements of the Federal plan or EPA approved and effective State plan or tribal plan that implements 40 CFR part 60, subpart Cc.

(b) If you are required by 40 CFR 60.752(b)(2) of subpart WWW, the Federal plan, or an EPA approved and effective State or tribal plan to install a collection and control system, you must comply with the requirements in §§63.1960 through 63.1985 and with the general provisions of this part specified in table 1 of this subpart.

(c) For approval of collection and control systems that include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions, you must follow the procedures in 40 CFR 60.752(b)(2). If alternatives have already been approved under 40 CFR part 60 subpart WWW or the Federal plan, or 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 §63.1980(a) and (b), 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.

(d) If you own or operate a bioreactor that is located at a 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 paragraph (a) and the additional requirements in paragraphs (d)(1) and (2) of this section.

(1) You must comply with the general provisions specified in Table 1 of this subpart and §§63.1960 through 63.1985 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, instead of the schedule in 40 CFR 60.752(b)(2)(ii)(A)(*2*).

General and Continuing Compliance Requirements

§ 63.1960 How is compliance determined?

Compliance is determined in the same way it is determined for 40 CFR part 60, subpart WWW, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence. In addition, continuous parameter monitoring data, collected under 40 CFR 60.756(b)(1), (c)(1), and (d) of subpart WWW, are used to demonstrate compliance with the operating conditions for control systems. If a deviation occurs, you have failed to meet the control device operating conditions described in this subpart and have deviated from the requirements of this subpart. Finally, you must

develop a written SSM plan according to the provisions in 40 CFR 63.6(e)(3). 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.

[68 FR 2238, Jan. 16, 2003, as amended at 71 FR 20462, Apr. 20, 2006]

§ 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 40 CFR 60.758(c)(1) of subpart WWW 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) A deviation occurs when a SSM plan is not developed or maintained on site.

[68 FR 2238, Jan. 16, 2003, as amended at 71 FR 20462, Apr. 20, 2006]

§ 63.1975 How do I calculate the 3-hour block average used to demonstrate compliance?

Averages are calculated in the same way as they are calculated in 40 CFR part 60, subpart WWW, except that the data collected during the events listed in paragraphs (a), (b), (c), and (d) 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.

Notifications, Records, and Reports

§ 63.1980 What records and reports must I keep and submit?

(a) Keep records and reports as specified in 40 CFR part 60, subpart WWW, or in the Federal plan, EPA approved State plan or tribal plan that implements 40 CFR part 60, subpart Cc, whichever applies to your landfill, with one exception: You must submit the annual report described in 40 CFR 60.757(f) every 6 months.

(b) You must also keep records and reports as specified in the general provisions of 40 CFR part 60 and this part as shown in Table 1 of this subpart. Applicable records in the general provisions include items such as SSM plans and the SSM plan reports.

(c) For bioreactors at new affected sources you must submit the initial semiannual compliance report and performance test results described in 40 CFR 60.757(f) within 180 days after the date you are required to begin operating the gas collection and control system by §63.1947(a)(2) of this subpart.

(d) For bioreactors at existing affected sources, you must submit the initial semiannual compliance report and performance test results described in 40 CFR 60.757(f) within 180 days after the compliance date specified in §63.1947(b) of this subpart, unless you have previously submitted a compliance report for the bioreactor required by 40 CFR part 60, subpart WWW, the Federal plan, or an EPA approved and effective State plan or tribal plan.

(e) For bioreactors that are located at existing affected sources, but do not initiate liquids addition until later than the compliance date in §63.1947(b) of this subpart, you must submit the initial semiannual compliance report and performance tests results described in 40 CFR 60.757(f) within 180 days after the date you are required to begin operating the gas collection and control system by §63.1947(c) of this subpart.

(f) If you must submit a semiannual compliance report for a bioreactor as well as a semiannual compliance report for a conventional portion of the same landfill, you may delay submittal of a subsequent semiannual compliance report for the bioreactor according to paragraphs (f)(1) through (3) of this section so that the reports may be submitted on the same schedule.

(1) After submittal of your initial semiannual compliance report and performance test results for the bioreactor, you may delay submittal of the subsequent semiannual compliance report for the bioreactor until the date the initial or subsequent semiannual compliance report is due for the conventional portion of your landfill.

(2) You may delay submittal of your subsequent semiannual compliance report by no more than 12 months after the due date for submitting the initial semiannual compliance report and performance test results described in 40 CFR 60.757(f) for the bioreactor. The report shall cover the time period since the previous semiannual report for the bioreactor, which would be a period of at least 6 months and no more than 12 months.

(3) After the delayed semiannual report, all subsequent semiannual reports for the bioreactor must be submitted every 6 months on the same date the semiannual report for the conventional portion of the landfill is due.

(g) 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(c) and 63.1980(c) through (f) of this subpart, 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.

(h) 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 (g) 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.

Other Requirements and Information

§ 63.1985 Who 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 EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency as well as the U.S. 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 standards in §63.1955. Where these standards reference another subpart, the cited provisions will be delegated according to the delegation provisions of the referenced subpart.

§ 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, and WWW; 40 CFR part 62, subpart GGG, and subpart A of this part, and this section that follows:

Bioreactor means a MSW landfill or portion of a 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.

Deviation 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 standard;

(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 standard in this subpart during SSM, regardless of whether or not such failure is permitted by this subpart.

Emissions limitation means any emission limit, opacity limit, operating limit, or visible emissions limit.

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, subpart Cc. An approved State plan becomes effective on the date specified in the notice published in theFederal Registerannouncing EPA's approval.

Federal plan means the EPA plan to implement 40 CFR part 60, subpart Cc 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 is found at 40 CFR part 62, subpart GGG.

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. A municipal solid waste landfill may also receive other types of RCRA Subtitle D wastes (see §257.2 of this chapter) such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. Portions of a municipal solid waste landfill may be separated by access roads. A municipal solid waste landfill may be publicly or privately owned. A municipal solid waste landfill may be a new municipal solid waste landfill, an existing municipal solid waste landfill, or a lateral expansion.

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.

Work practice standard 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.

As stated in §§63.1955 and 63.1980, you must meet each requirement in the following table that applies to you.

Table 1 to Subpart AAAA of Part 63—Applicability of NESHAP General Provisions to Subpart AAAA

Part 63 Citation	Description	Explanation
63.1(a)	Applicability: general applicability of NESHAP in this part	Affected sources are already subject to the provisions of paragraphs (a)(10)–(12) through the same provisions under 40 CFR, part 60 subpart A.
63.1(b)	Applicability determination for stationary sources	
63.1(e)	Title V permitting	
63.2	Definitions	
63.4	Prohibited activities and circumvention	Affected sources are already subject to the provisions of paragraph (b) through the same provisions under 40 CFR, part 60 subpart A.
63.5(b)	Requirements for existing, newly constructed, and reconstructed sources	
63.6(e)	Operation and maintenance requirements, startup, shutdown and malfunction plan provisions	
63.6(f)	Compliance with nonopacity emission standards	Affected sources are already subject to the provisions of paragraphs (f)(1) and (2)(i) through the same provisions under 40 CFR, part 60 subpart A.
63.10(b)(2)(i)–(b)(2)(v)	General recordkeeping requirements	
63.10(d)(5)	If actions taken during a startup, shutdown and malfunction plan are consistent with the procedures in the startup, shutdown and malfunction plan, this information shall be included in a semi-annual startup, shutdown and malfunction plan report. Any time an action taken during a startup, shutdown and malfunction plan is not consistent with the startup,	

	shutdown and malfunction plan, the source shall report actions taken within 2 working days after commencing such actions, followed by a letter 7 days after the event
63.12(a)	These provisions do not preclude the State from adopting and enforcing any standard, limitation, etc., requiring permits, or requiring emissions reductions in excess of those specified
63.15	Availability of information and confidentiality

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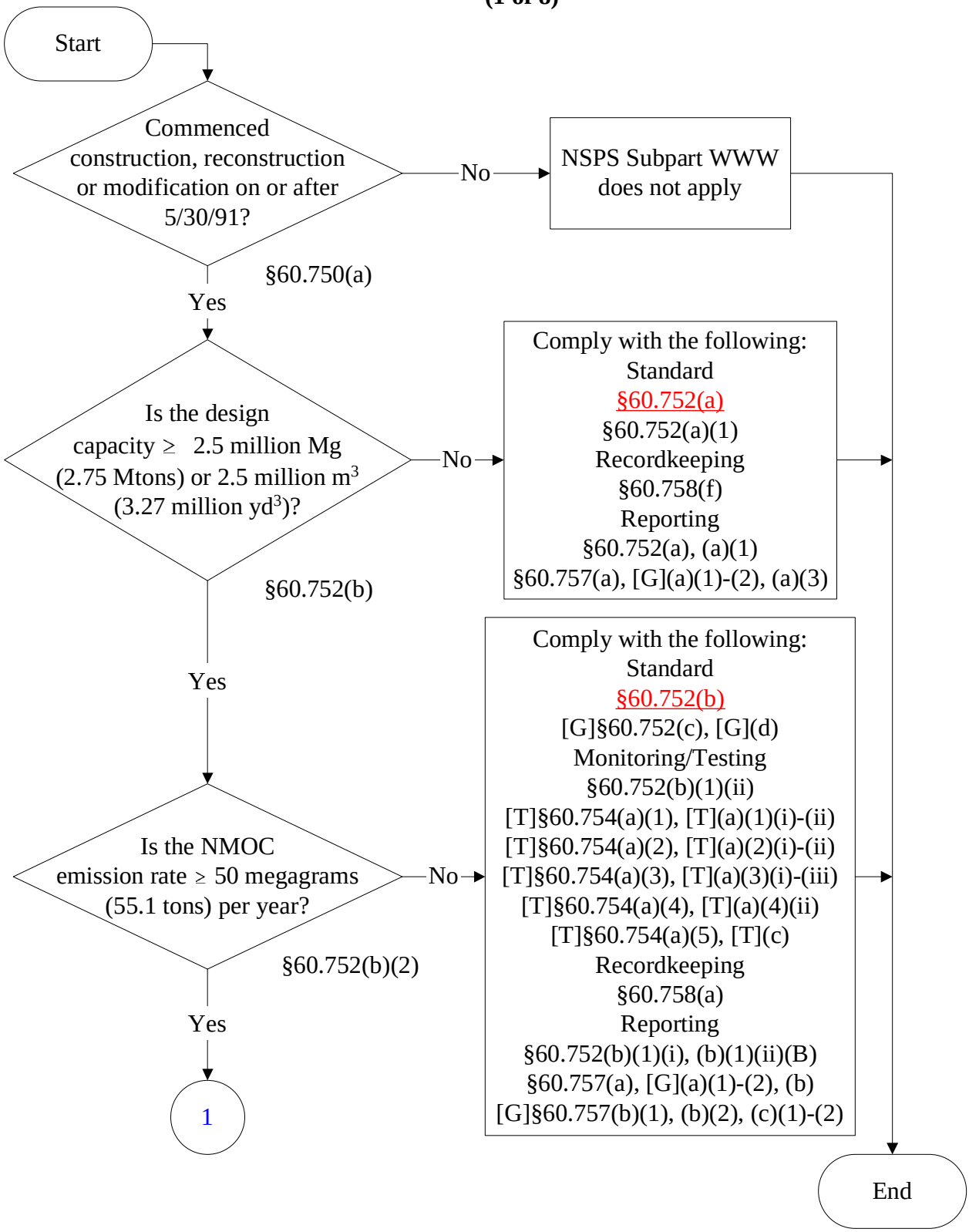
Section 508 / Accessibility

Below is a flowchart describing 40 CFR Part 60, Subpart WWW. It will likely not be accessible using a screen reader. For the text of the statute/rule, please go to

40 CFR Part 60, Subpart WWW



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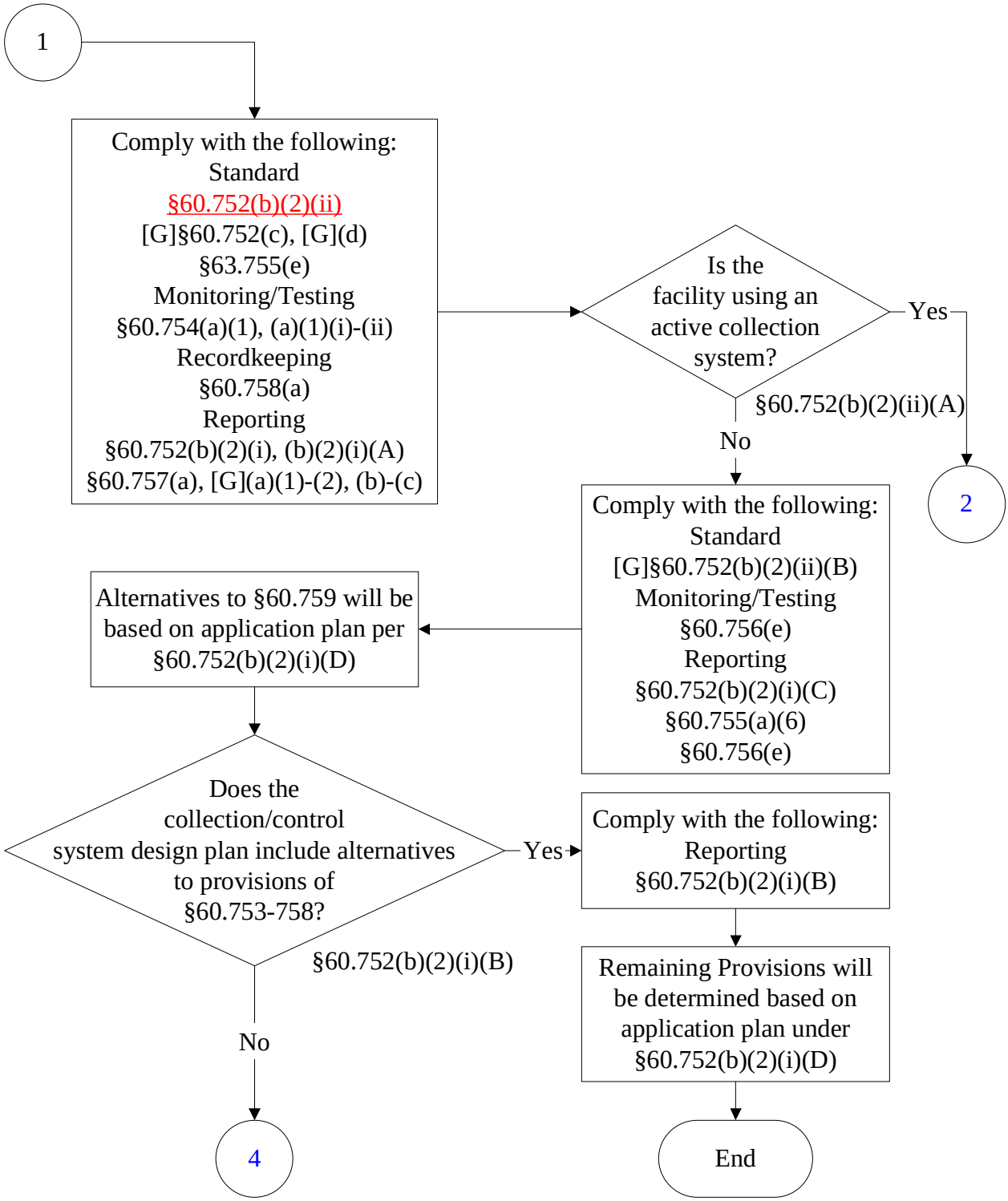

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40 CFR Part 60, Subpart WWW

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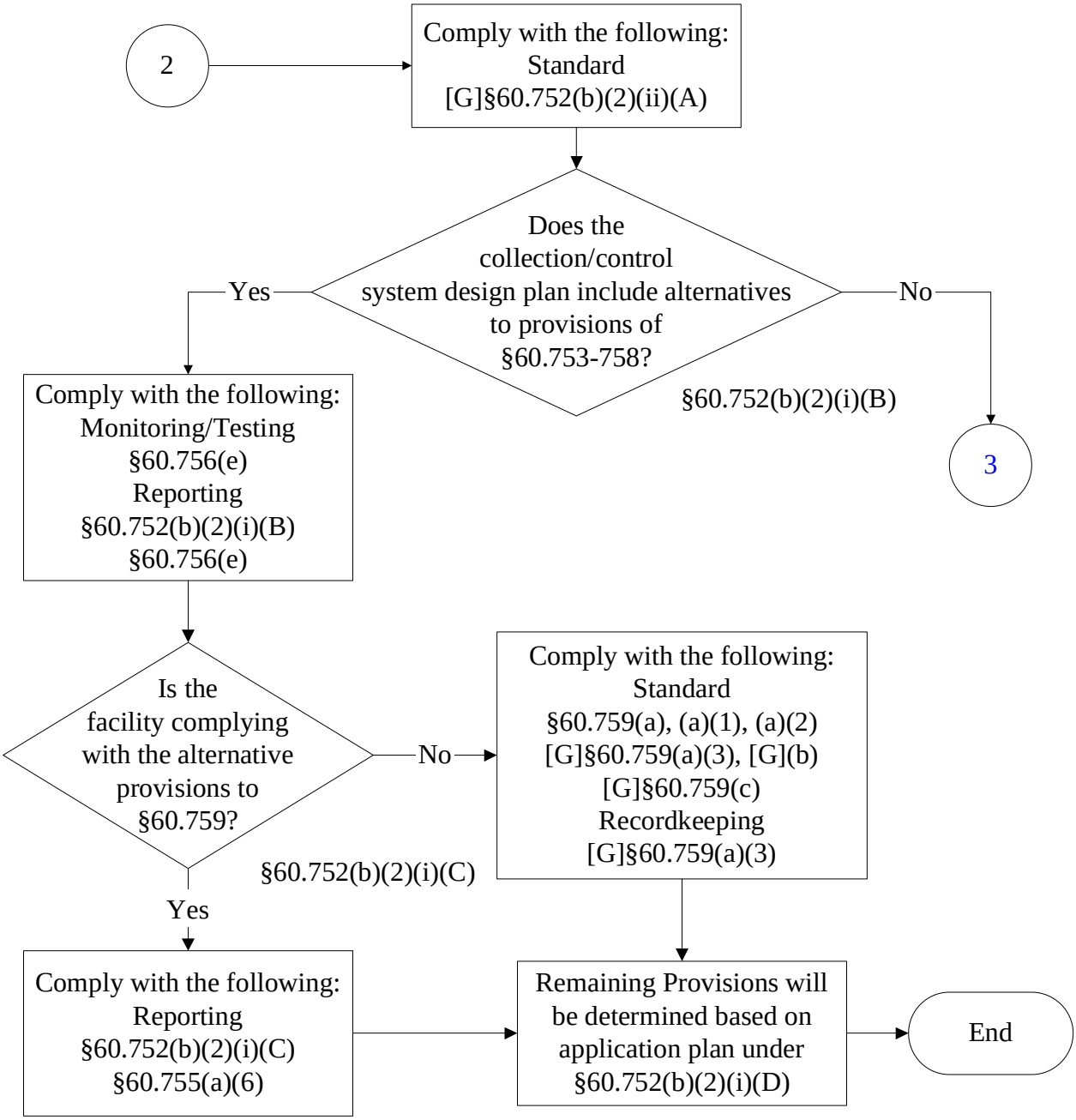

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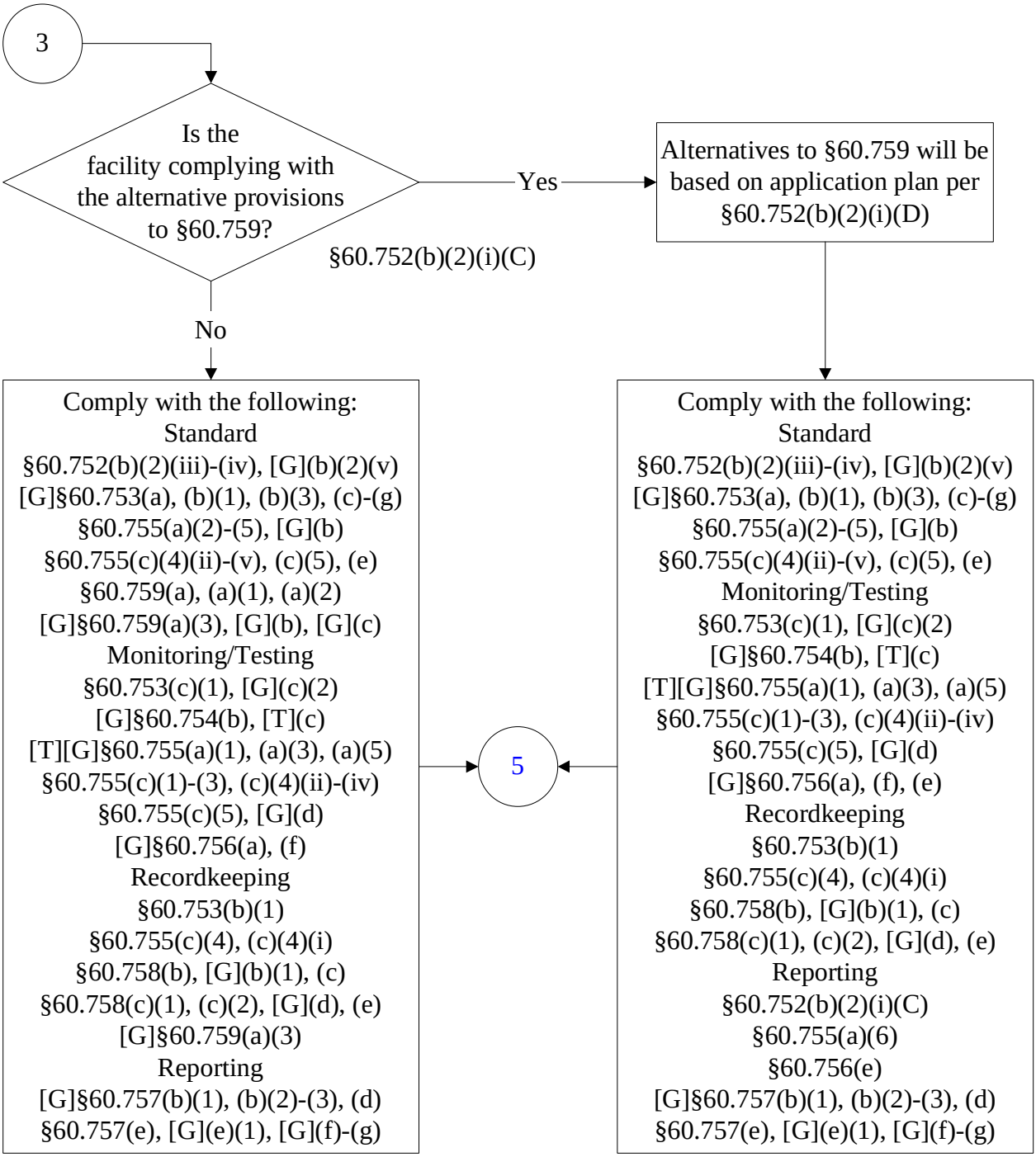

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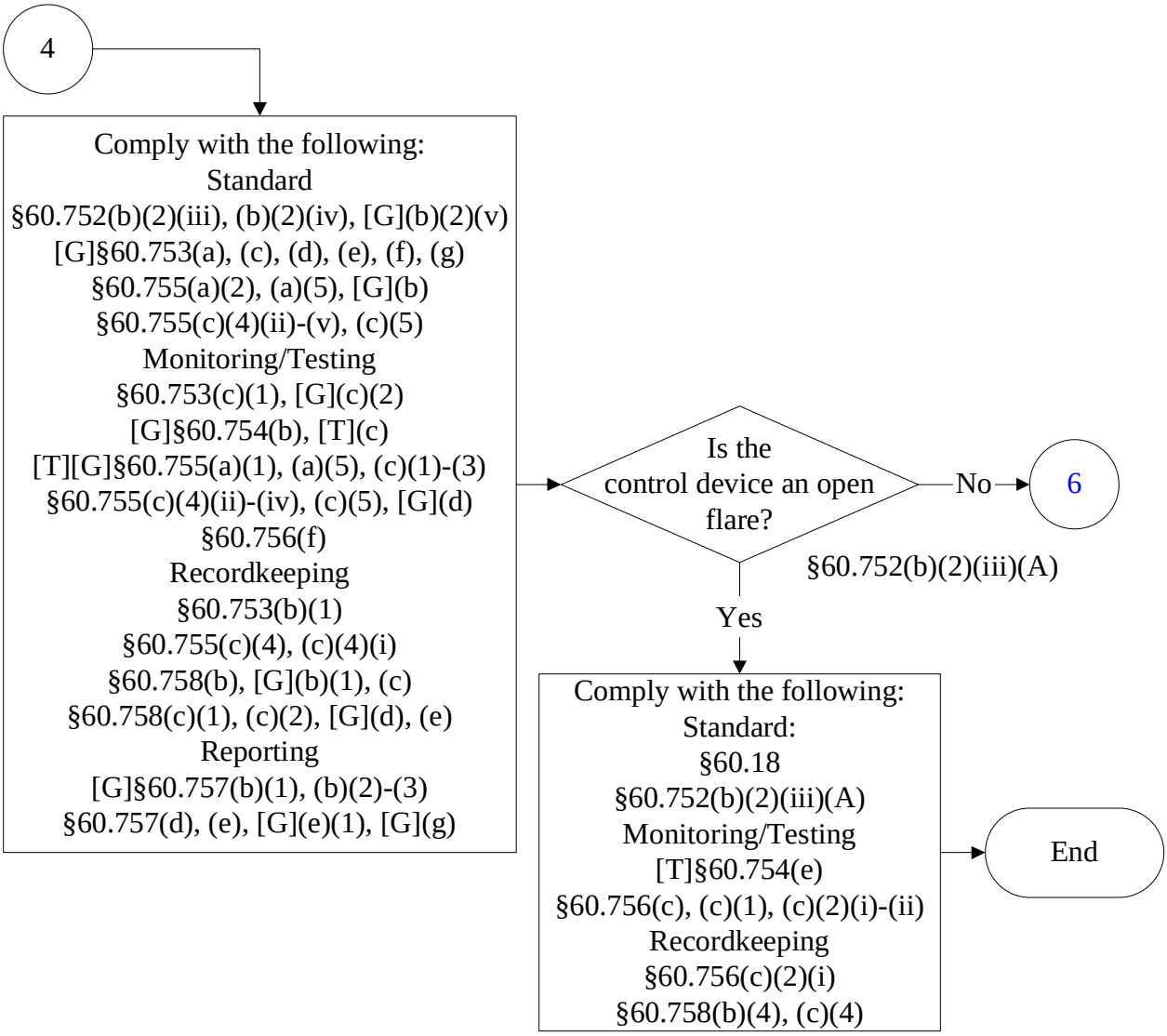

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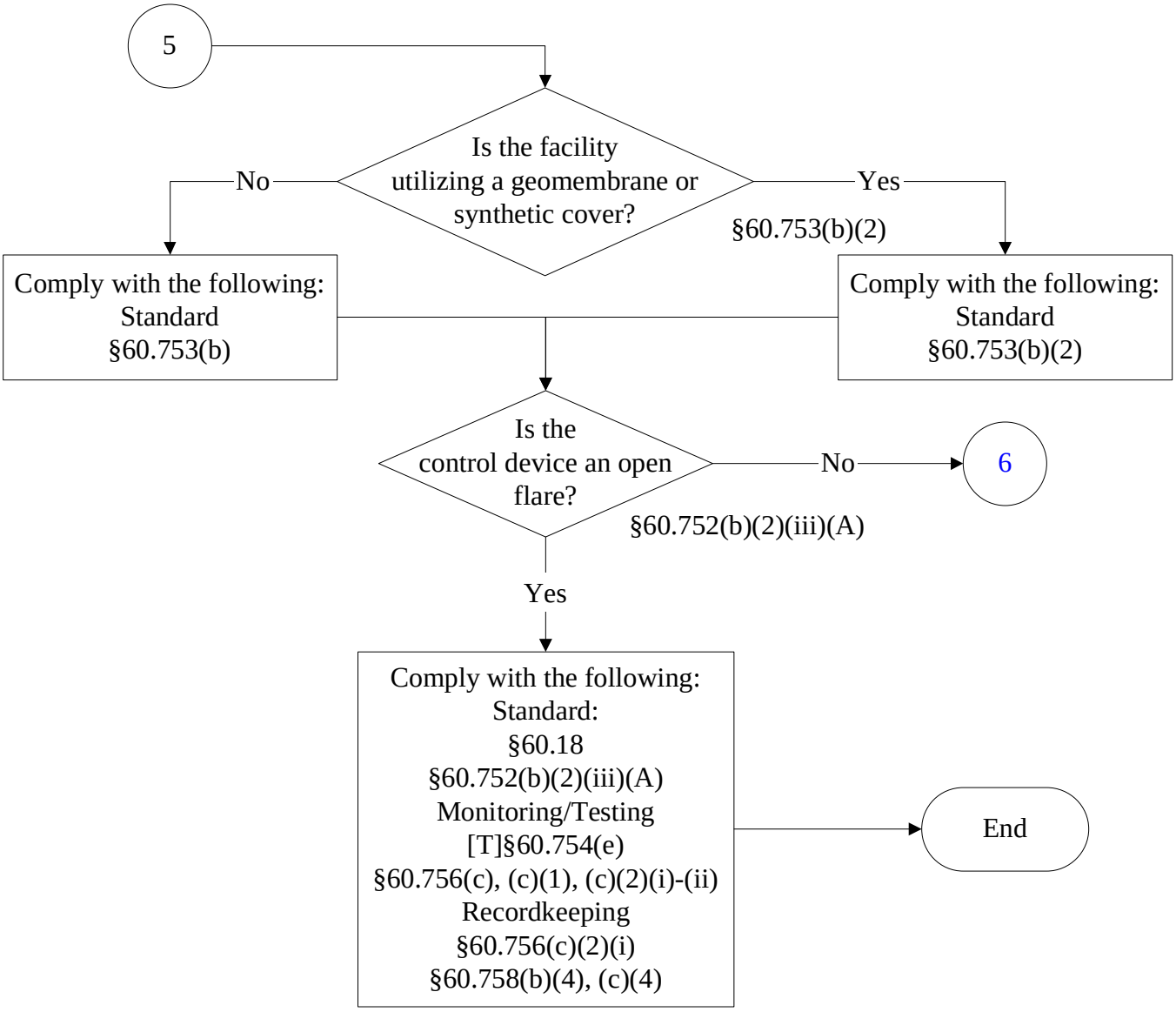

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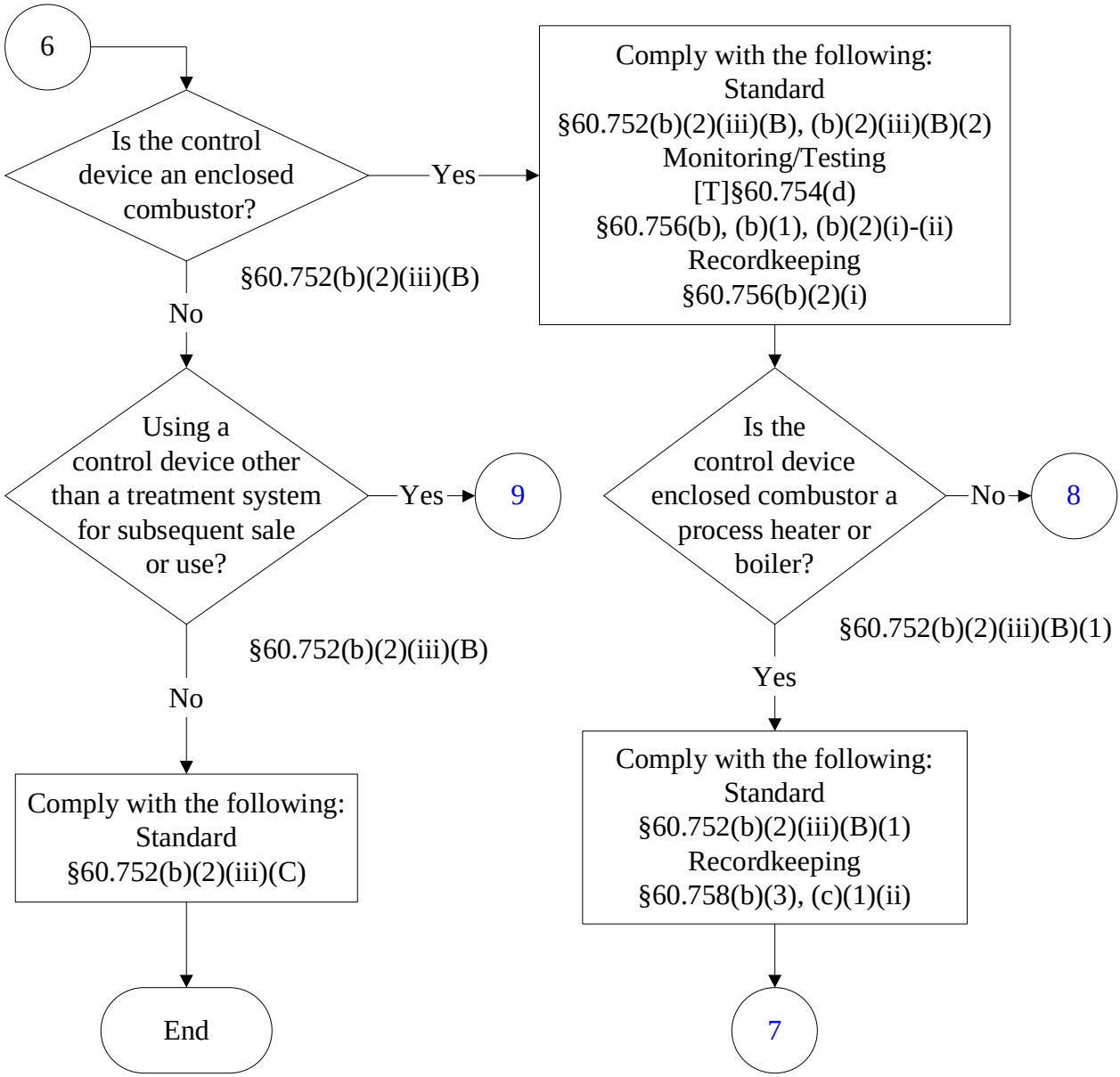

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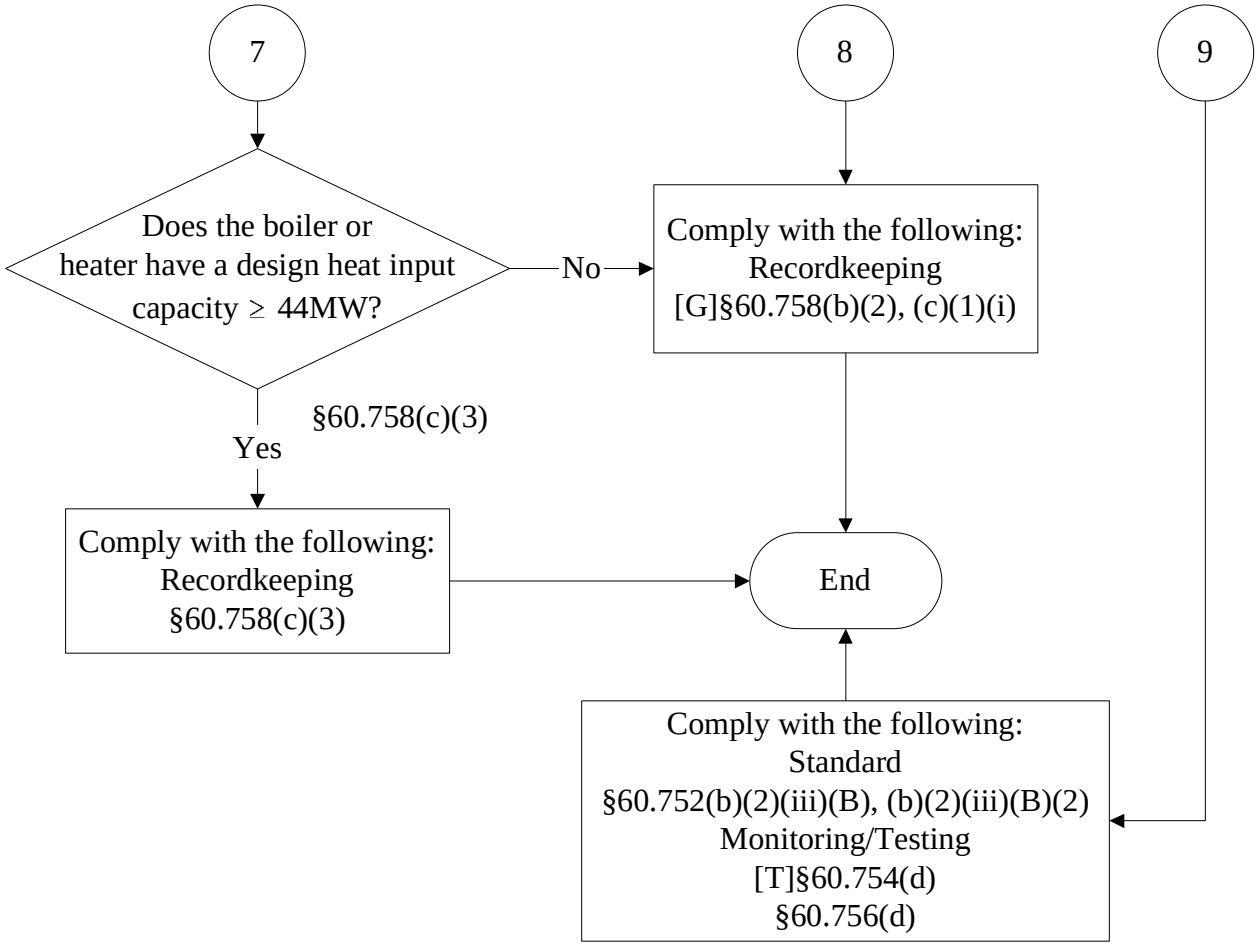

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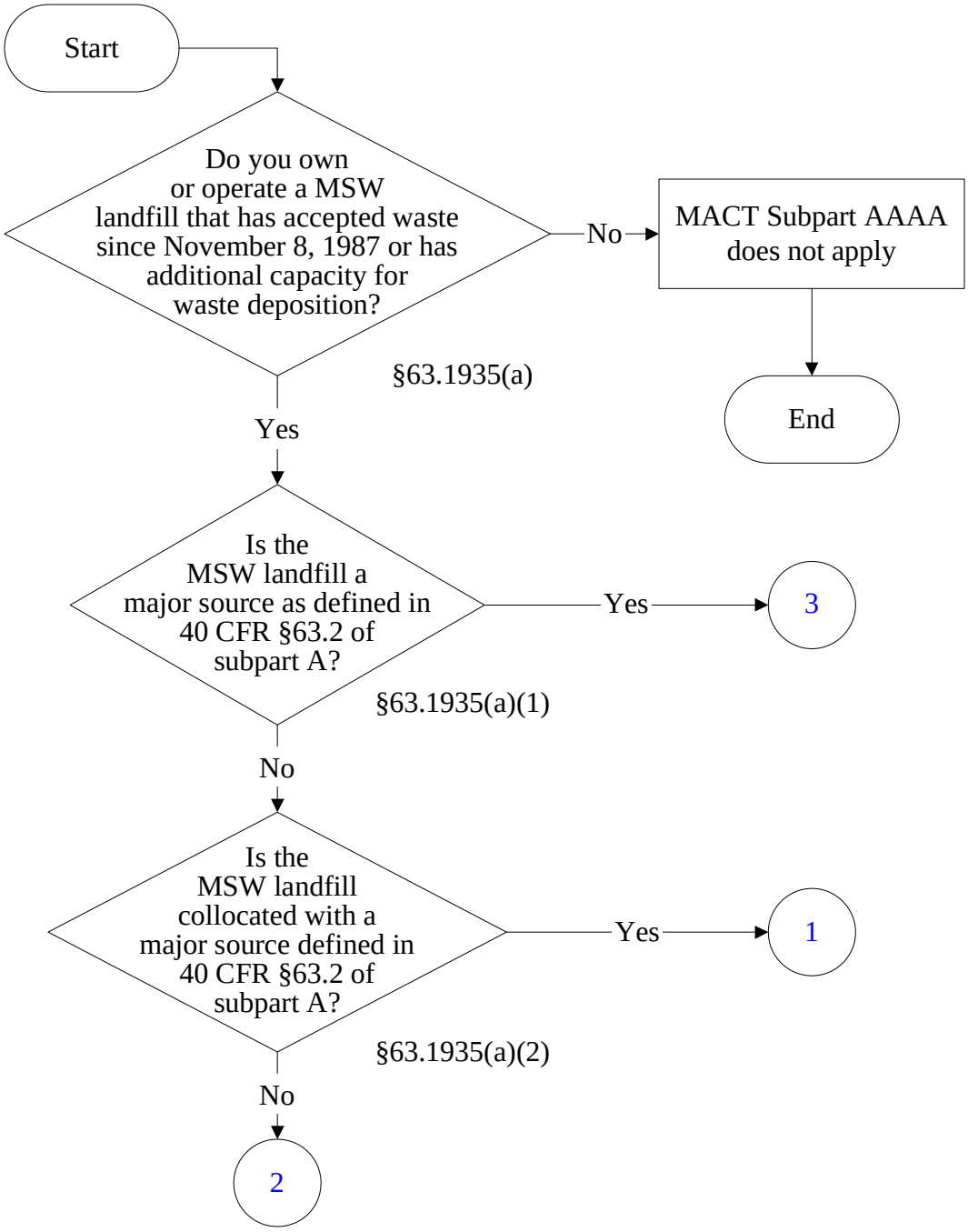

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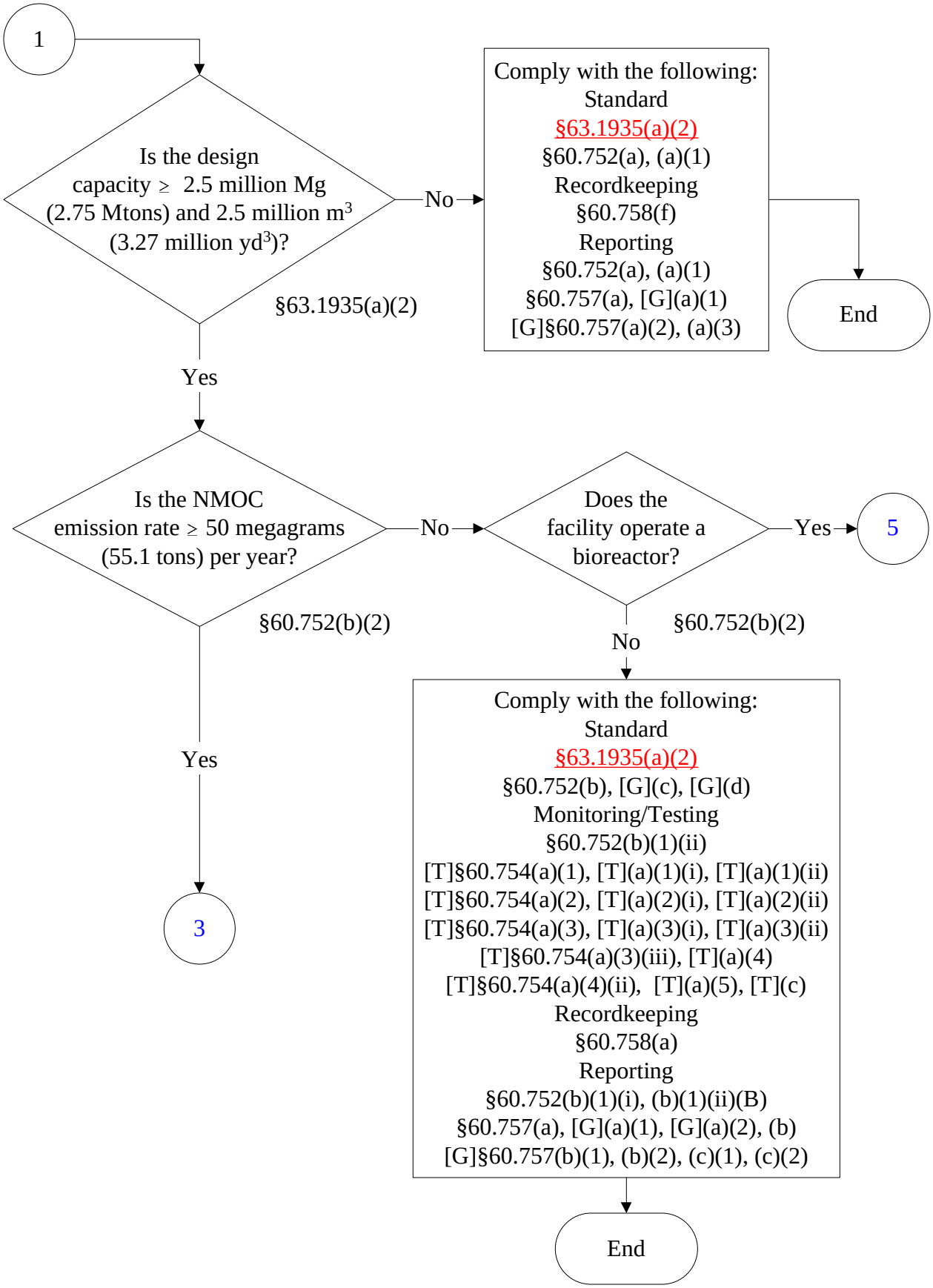

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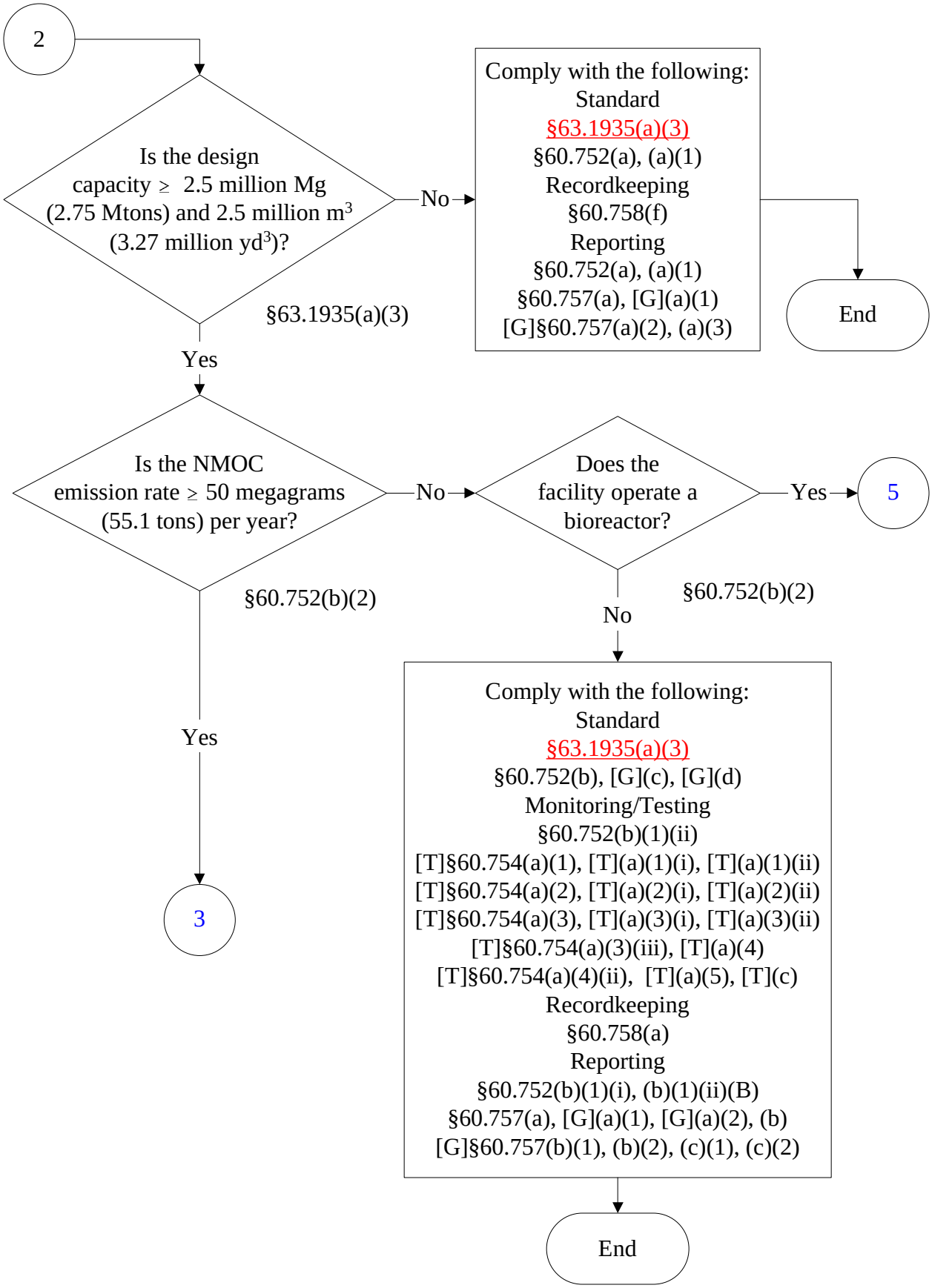

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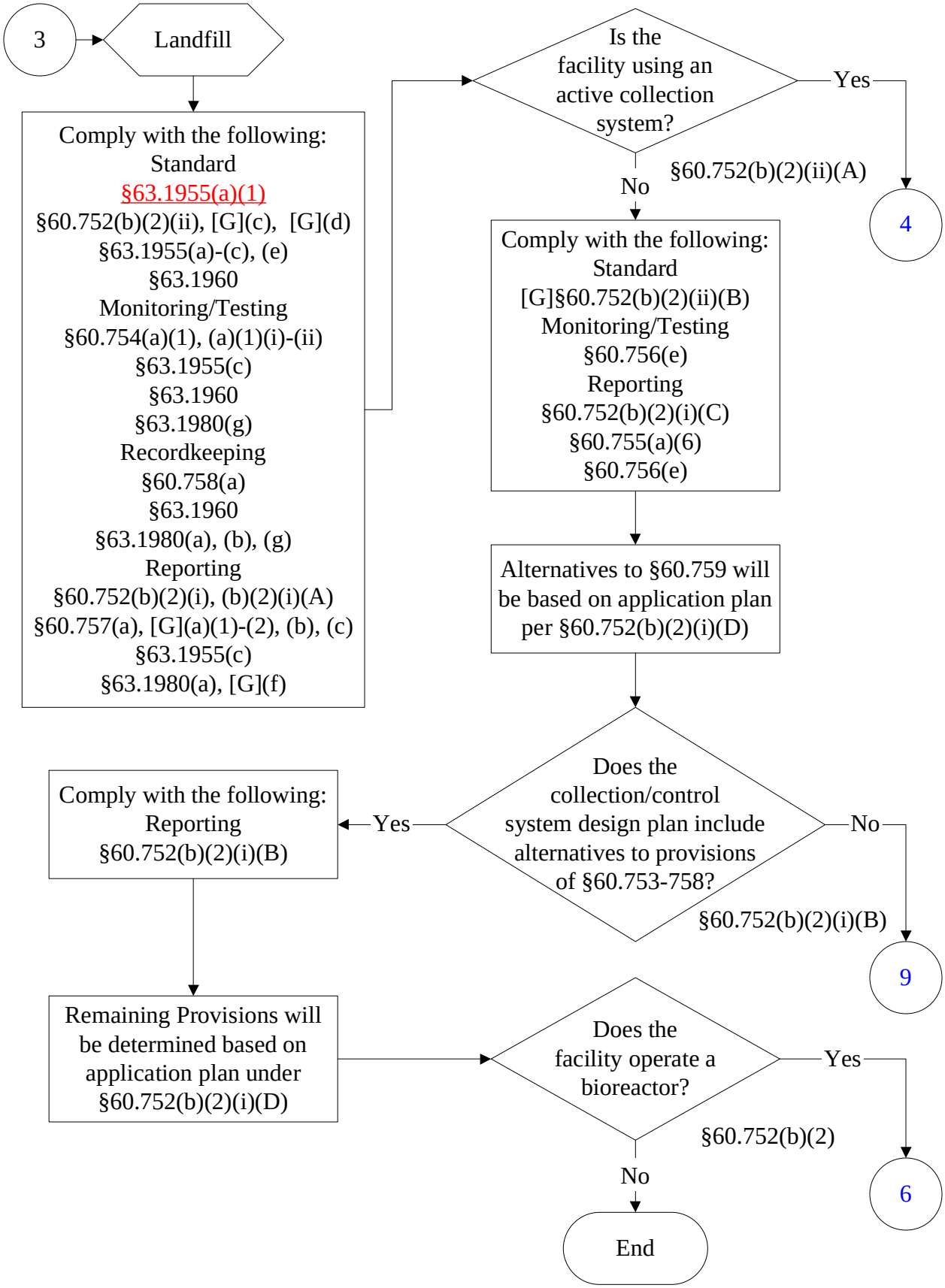

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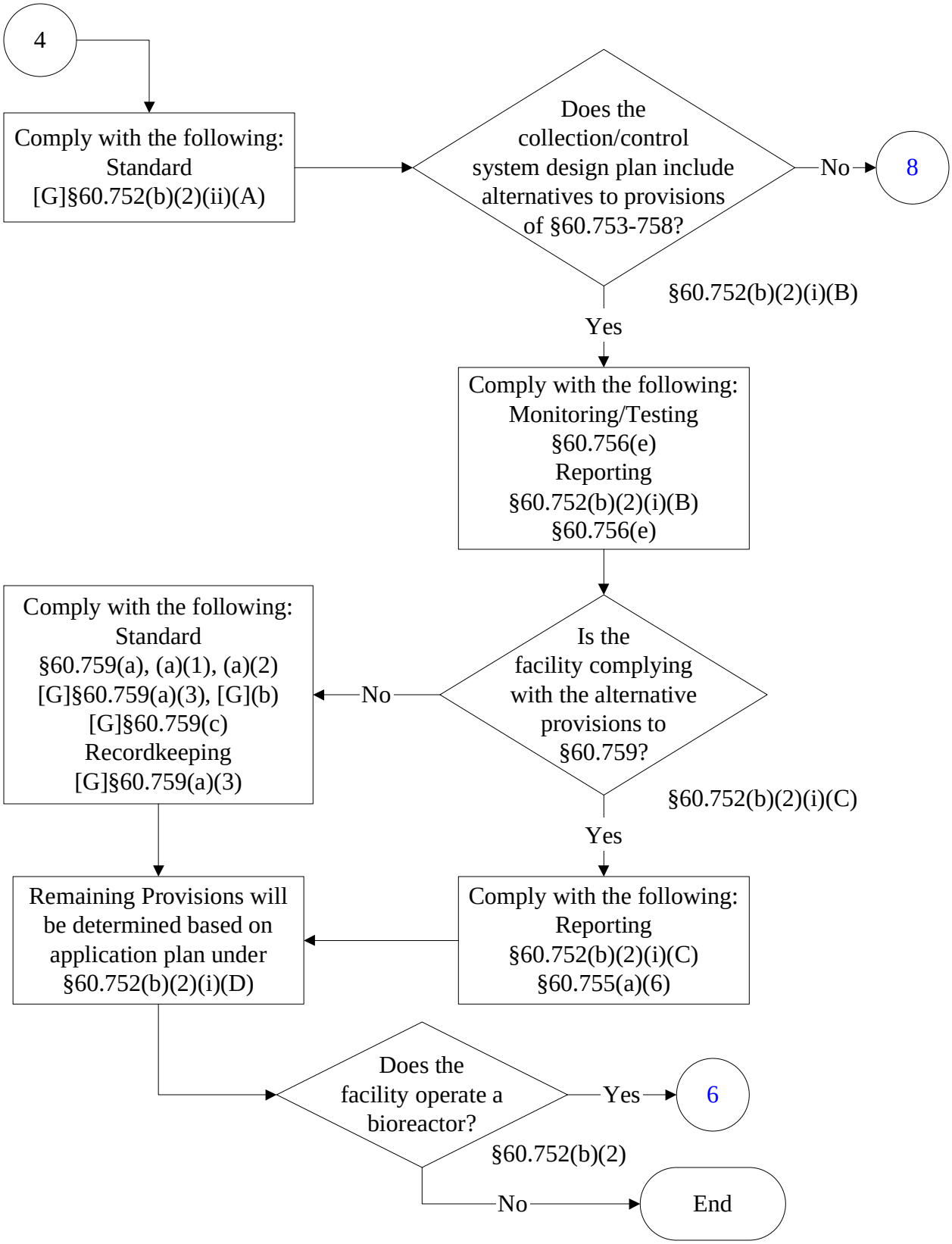

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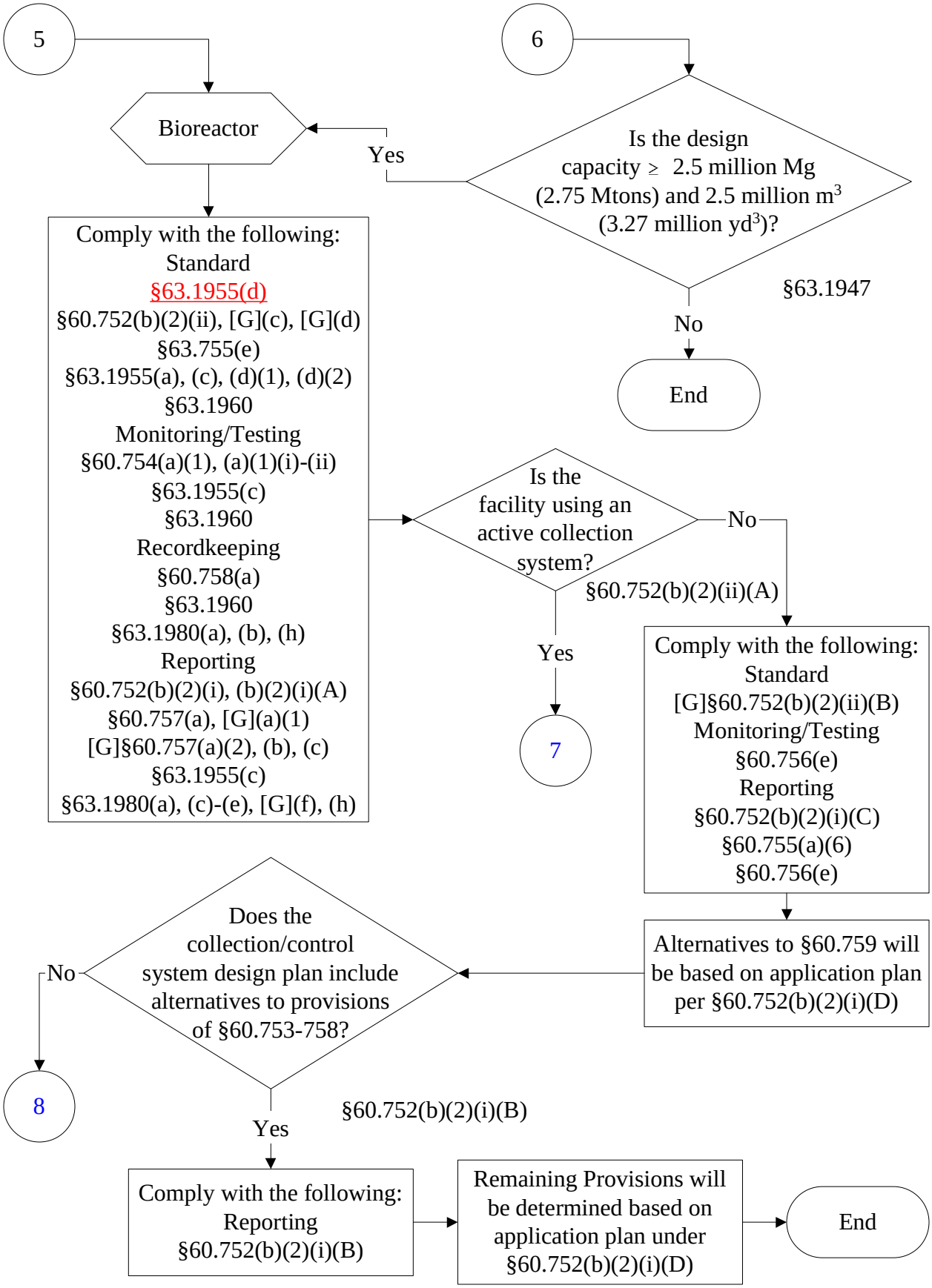

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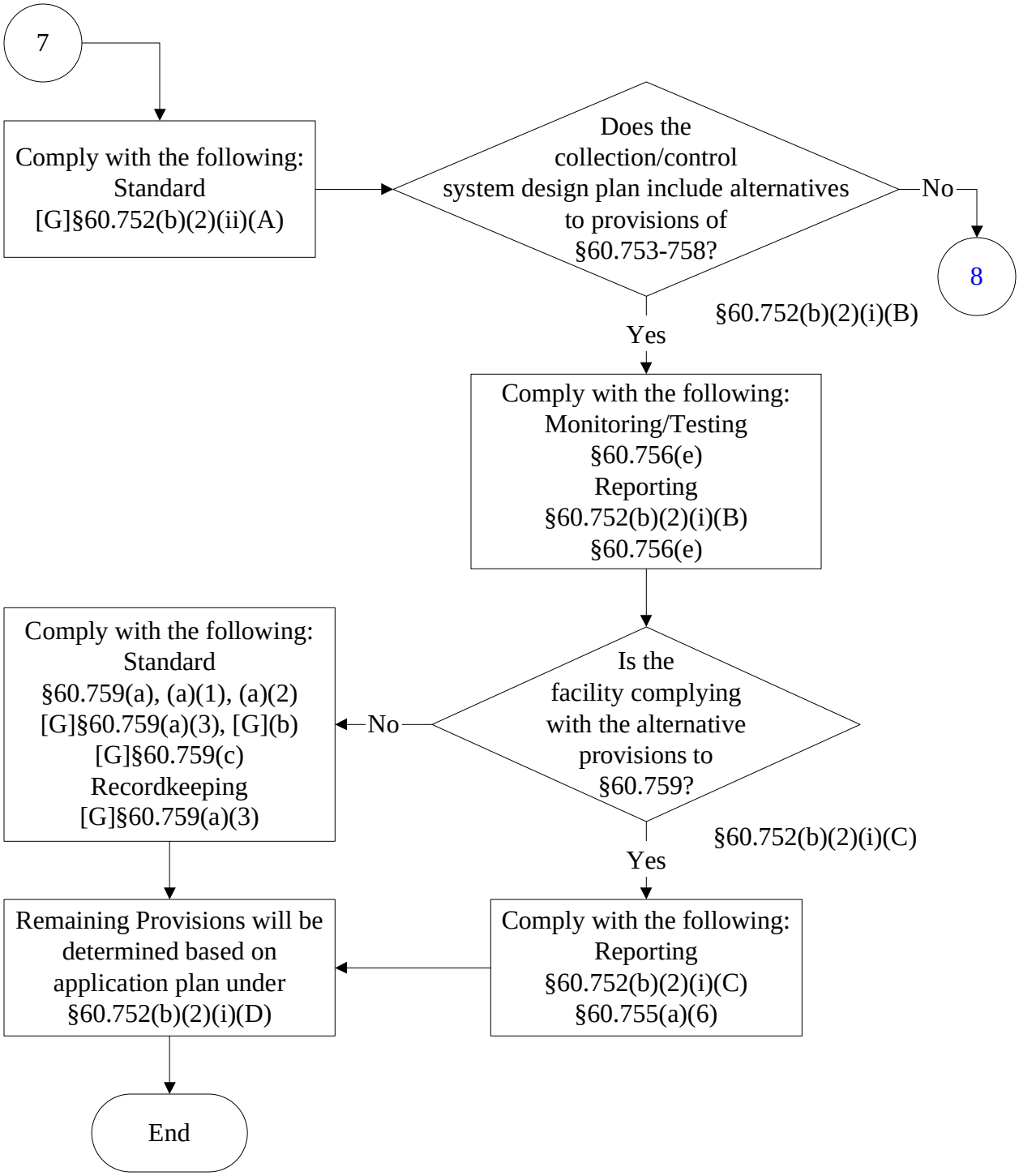

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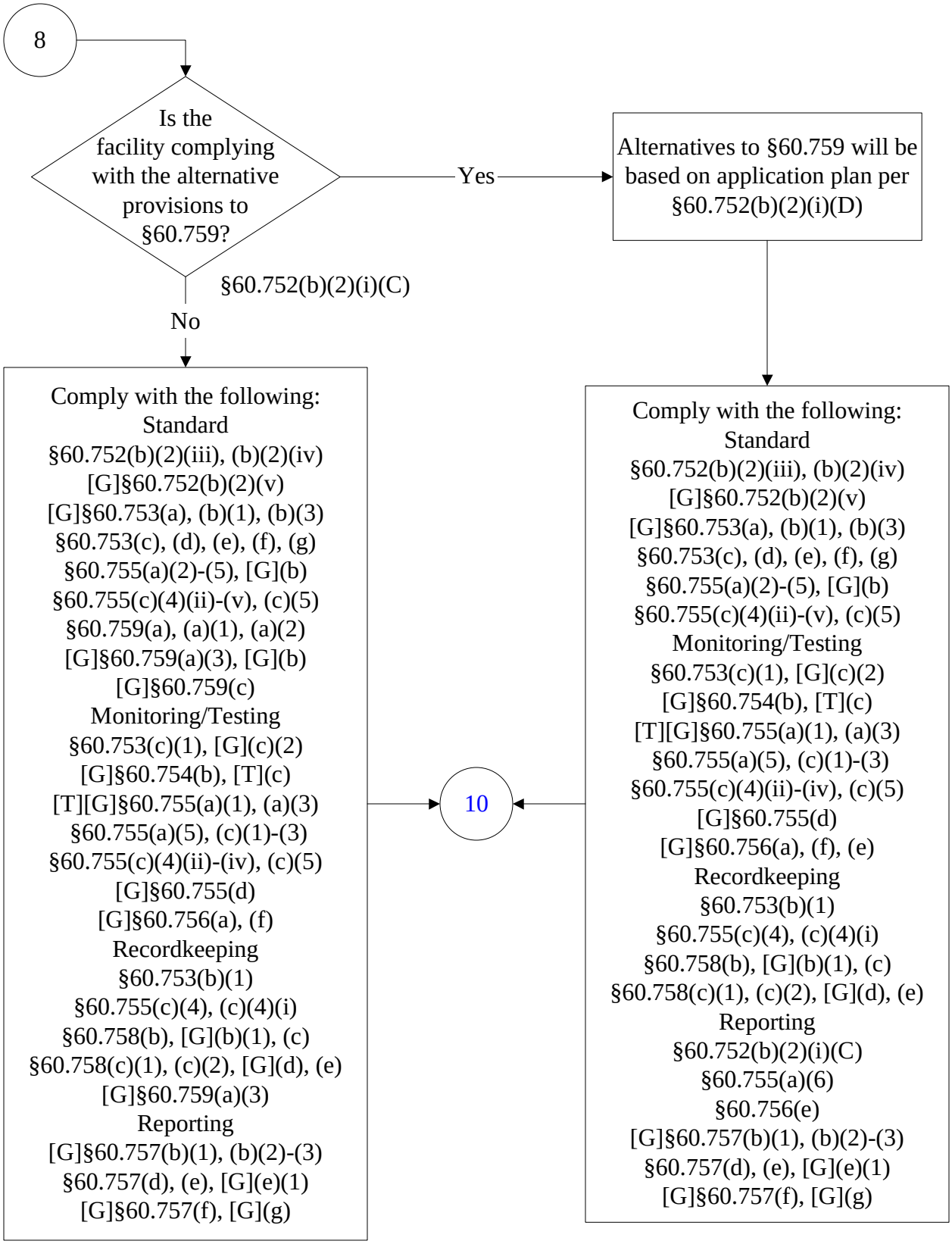

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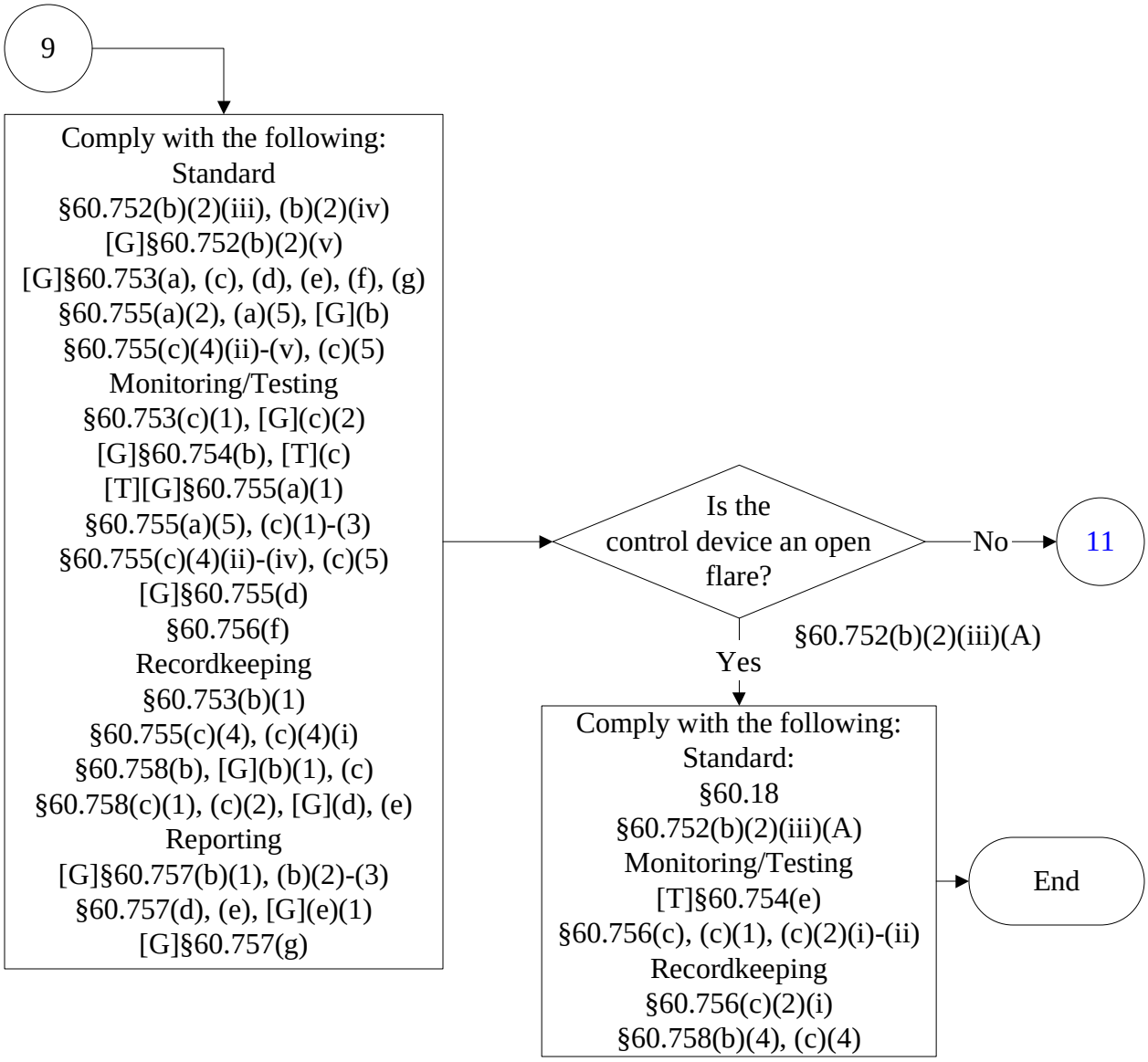

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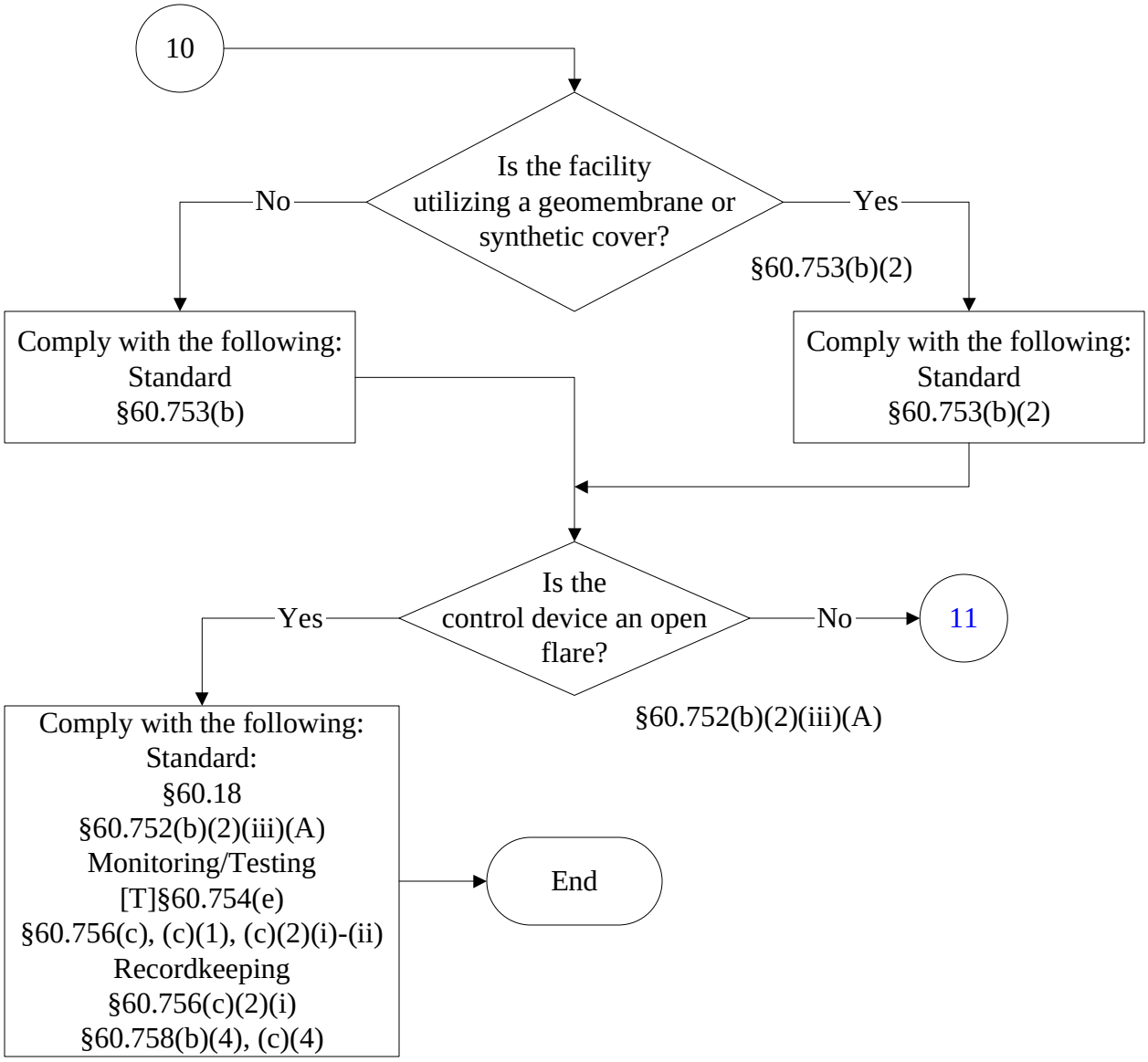

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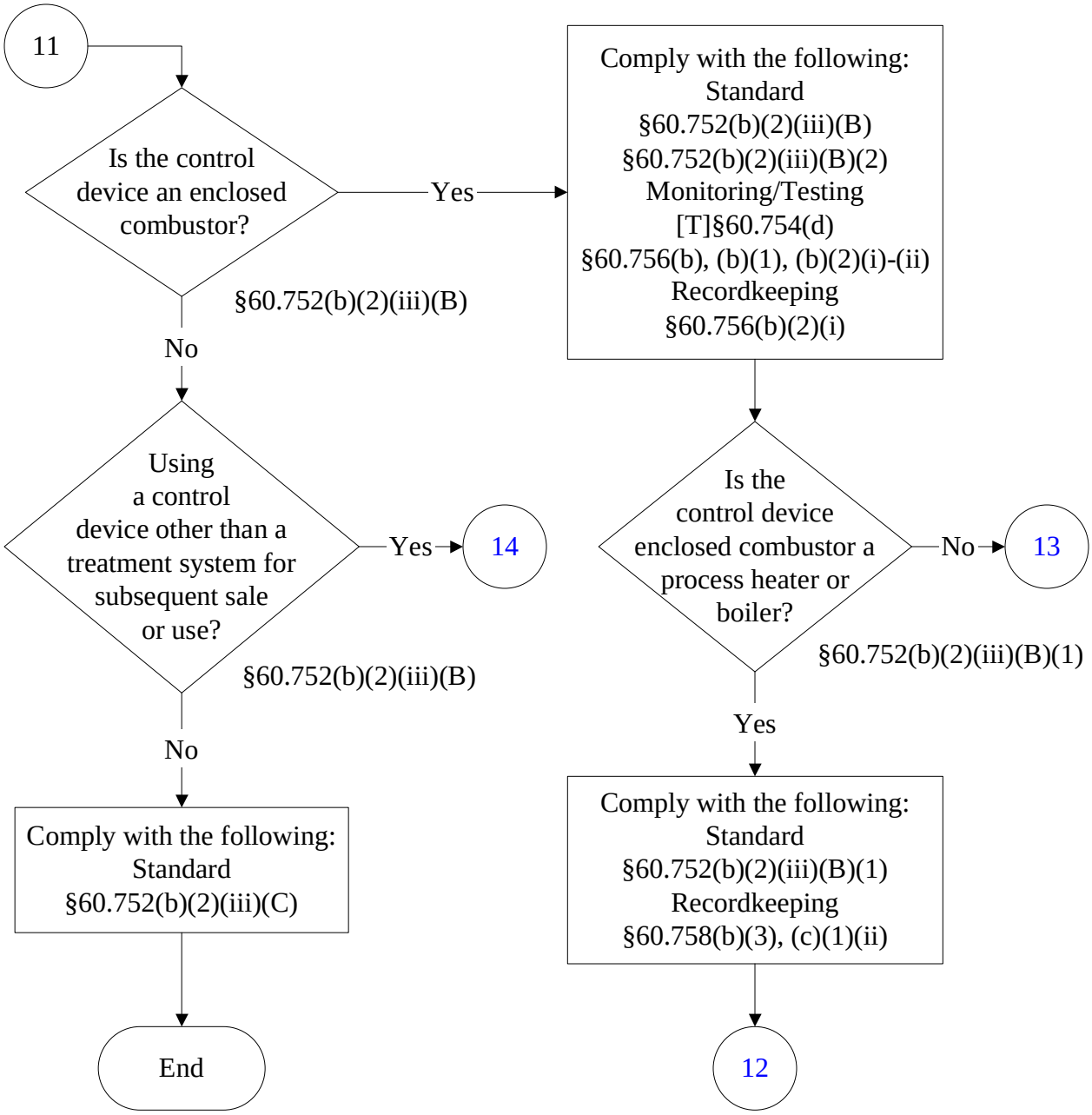
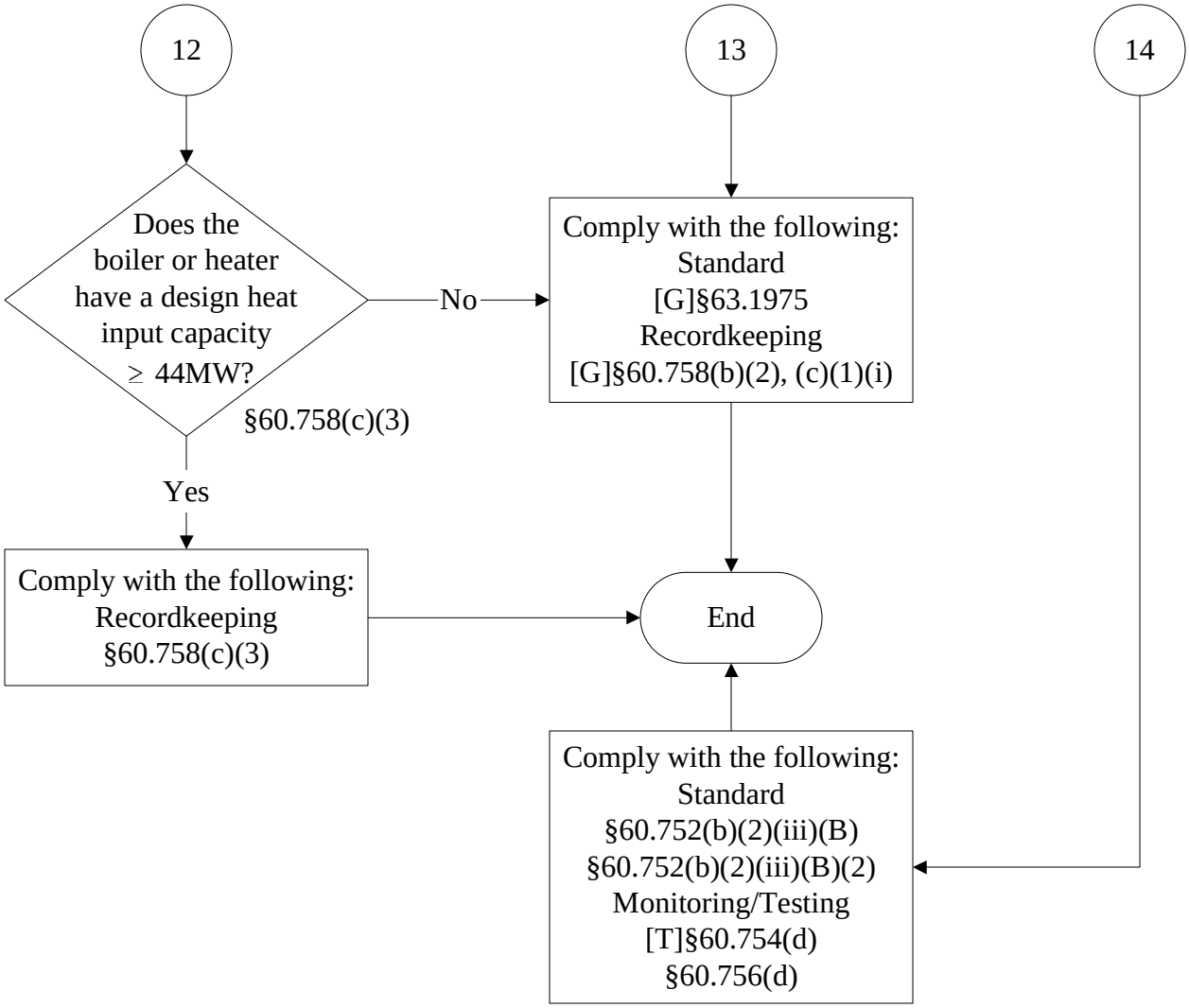
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