

217/782-2113

TITLE V - CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT
and
TITLE I PERMIT¹

PERMITTEE

Waste Management of Illinois, Inc.
Attn: Ernest Dennison
601 Madison Road
East St. Louis, Illinois 62201

Application No.: 95090088

I.D. No.: 163050AAD

Applicant's Designation:

Date Received: September 7, 1995

Operation of: MSW Landfill

Date Issued: November 20, 2002

Expiration Date²: November 20, 2007

Source Location: 601 Madison Road, East St. Louis, St. Clair County

Responsible Official: Joe Durako, Division Vice President

This permit is hereby granted to the above-designated Permittee to OPERATE a municipal solid waste landfill, landfill gas to energy facility, aggregate crushing, solidification process, soil bioremediation process and yard waste processing pursuant to the above referenced permit application. This permit is subject to the conditions contained herein.

If you have any questions concerning this permit, please contact Michael Haggitt at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:MVH:jar

cc: Illinois EPA, FOS, Region 3
USEPA

¹ This permit may contain terms and conditions which address the applicability, and compliance if determined applicable, of Title I of the CAA and regulations promulgated thereunder, including 40 CFR 52.21 - federal PSD and 35 IAC Part 203 - Major Stationary Sources Construction and Modification. Any such terms and conditions are identified within this permit.

² Except as provided in Condition 8.7 of this permit.

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1.0 SOURCE IDENTIFICATION

1.1 Source

Milam Recycling and Disposal Facility
601 Madison Road
East St. Louis, Illinois 62201
618/271-6788

I.D. No.: 163050AAD
Standard Industrial Classification: 4953, Refuse Systems
4911, Electric Services

1.2 Owner/Parent Company

WMI - Waste Management of Illinois, Inc.
601 Madison Road
East St. Louis, Illinois 62201

1.3 Operator

Waste Management of Illinois, Inc.
720 Butterfield Road
Oak Brook, Illinois 60153

Ernest Dennison
618/271-6788

1.4 General Source Description

The Milam Recycling and Disposal Facility is located at 601 Madison Road, East St. Louis. The source is a MSW Landfill. A MSW landfill is defined as 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 (40 CFR 257.2) such as commercial solid waste, non-hazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. In addition, to land filling activities the source operates landfill gas to energy facility, a yard waste composting facility, solidification of non-hazardous wastes, aggregate crushing and a soil bioremediation process for petroleum contaminated soils.

2.0 LIST OF ABBREVIATIONS/ACRONYMS USED IN THIS PERMIT

Act	Illinois Environmental Protection Act [415 ILCS 5/1 et seq.]
AP-42	Compilation of Air Pollutant Emission Factors, Volume 1, Stationary Point and Other Sources (and Supplements A through F), USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711
ATU	Allotment Trading Unit
Btu	British thermal unit
CAA	Clean Air Act [42 U.S.C. Section 7401 et seq.]
CAAPP	Clean Air Act Permit Program
CAM	Compliance Assurance Monitoring
CAS	Chemical Abstract Service
CO	Carbon Monoxide
CFR	Code of Federal Regulations
ERMS	Emissions Reduction Market System
Ft ³	Cubic Feet
Gal	Gallon
HAP	Hazardous Air Pollutant
hr	hour
IAC	Illinois Administrative Code
I.D. No.	Identification Number of Source, assigned by Illinois EPA
Illinois EPA	Illinois Environmental Protection Agency
°K	Degrees Kelvin
kPa	Kilopascals
kg	Kilograms
kW	Kilowatts
l	liters
lb	Pound
ILCS	Illinois Compiled Statutes
MBtu	Million British thermal units
Mg	Megagrams
MW	Megawatts
mmHg	Millimeters of Mercury
mmscf	Million standard cubic feet
mo	Month
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO _x	Nitrogen Oxides
NSPS	New Source Performance Standards
psia	pounds per square inch absolute
PM	Particulate Matter
PM ₁₀	Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 microns as measured by applicable test or monitoring methods
ppm	parts per million
PSD	Prevention of Significant Deterioration
RMP	Risk Management Plan
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
T1	Title I - identifies Title I conditions that have been carried over from an existing permit

T1N	Title I New - identifies Title I conditions that are being established in this permit
T1R	Title I Revised - identifies Title I conditions that have been carried over from an existing permit and subsequently revised in this permit
USEPA	United States Environmental Protection Agency
VOL	Volatile Organic Liquid
VOM	Volatile Organic Material
yr	Year

3.0 INSIGNIFICANT ACTIVITIES

3.1 Identification of Insignificant Activities

The following activities at the source constitute insignificant activities as specified in 35 IAC 201.210:

- 3.1.1 Activities determined by the Illinois EPA to be insignificant activities, pursuant to 35 IAC 201.210(a)(1) and 201.211, as follows:

Alternative Daily Cover
19,000 - Gallon Leachate Storage Tank

- 3.1.2 Activities that are insignificant activities based upon maximum emissions, pursuant to 35 IAC 201.210(a)(2) or (a)(3), as follows:

Yard Waste Composting
Crankcase Breather Vent

- 3.1.3 Activities that are insignificant activities based upon their type or character, pursuant to 35 IAC 201.210(a)(4) through (18), as follows:

Direct combustion units designed and used for comfort heating purposes and fuel combustion emission units as follows: (A) Units with a rated heat input capacity of less than 2.5 MBtu/hr that fire only natural gas, propane, or liquefied petroleum gas; (B) Units with a rated heat input capacity of less than 1.0 MBtu/hr that fire only oil or oil in combination with only natural gas, propane, or liquefied petroleum gas; and (C) Units with a rated heat input capacity of less than 200,000 Btu/hr which never burn refuse, or treated or chemically contaminated wood [35 IAC 201.210(a)(4)].

Storage tanks of organic liquids with a capacity of less than 10,000 gallons and an annual throughput of less than 100,000 gallons per year, provided the storage tank is not used for the storage of gasoline or any material listed as a HAP pursuant to Section 112(b) of the CAA [35 IAC 201.210(a)(10)].

Storage tanks of any size containing virgin or re-refined distillate oil, hydrocarbon condensate from natural gas pipeline or storage systems, lubricating oil, or residual fuel oils [35 IAC 201.210(a)(11)].

Gas turbines and stationary reciprocating internal combustion engines of less than 112 kW (150 horsepower) power output [35 IAC 201.210(a)(15)].

3.1.4 Activities that are considered insignificant activities pursuant to 35 IAC 201.210(b).

3.2 Compliance with Applicable Requirements

Insignificant activities are subject to applicable requirements notwithstanding status as insignificant activities. In particular, in addition to regulations of general applicability, such as 35 IAC 212.301 and 212.123 (Condition 5.2.2), the Permittee shall comply with the following requirements, as applicable:

3.2.1 For each cold cleaning degreaser, the Permittee shall comply with the applicable equipment and operating requirements of 35 IAC 215.182, 218.182, or 219.182.

3.2.2 For each particulate matter process emission unit, the Permittee shall comply with the applicable particulate matter emission limit of 35 IAC 212.321 or 212.322. For example, the particulate matter emissions from a process emission unit shall not exceed 0.55 pounds per hour if the emission unit's process weight rate is 100 pounds per hour or less, pursuant to 35 IAC 266.110.

3.2.3 For each organic material emission unit that uses organic material, e.g., a mixer or printing line, the Permittee shall comply with the applicable VOM emission limit of 35 IAC 215.301, 218.301, or 219.301, which requires that organic material emissions not exceed 8.0 pounds per hour or do not qualify as photochemically reactive material as defined in 35 IAC 211.4690.

3.3 Addition of Insignificant Activities

3.3.1 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type that is identified in Condition 3.1, until the renewal application for this permit is submitted, pursuant to 35 IAC 201.212(a).

3.3.2 The Permittee must notify the Illinois EPA of any proposed addition of a new insignificant activity of a type addressed by 35 IAC 201.210(a) and 201.211 other than those identified in Condition 3.1, pursuant to Section 39.5(12)(b) of the Act.

3.3.3 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type identified in 35 IAC 201.210(b).

4.0 SIGNIFICANT EMISSION UNITS AT THIS SOURCE

Emission Unit	Description	Date Constructed	Emission Control Equipment
MSW Landfill	Municipal Solid Waste Landfill Consisting of Two Areas, Old Milam and New Milam	<u>Opened:</u> 1965 <u>Latest Expansion:</u> March 1993	Engines, Passive Flares and Backup Utility Flare
Engine/Generator 1	Landfill Gas Fired Internal Combustion Engine Used to Produce Electricity	1990	None
Engine/Generator 2	Landfill Gas Fired Internal Combustion Engine Used to Produce Electricity	1990	None
Engine/Generator 3	Landfill Gas Fired Internal Combustion Engine Used to Produce Electricity	1993	None
Tub Grinder Engine	Engine Used to Drive Tub Grinder for Waste Composting	1994	None
Solidification Process	Solidification of Wastes by Addition and Mixing of a Reagent.	August 1995	None

5.0 OVERALL SOURCE CONDITIONS

5.1 Source Description

- 5.1.1 This permit is issued based on the source requiring a CAAPP permit as a major source of PM and NO_x emissions.
- 5.1.2 This permit is issued based on the source requiring a CAAPP permit because the source is subject to a standard, limitation, or other requirement under Section 111 (NSPS) or Section 112 (HAPs) of the CAA for which USEPA requires a CAAPP permit, or because the source is in a source category designated by the USEPA, pursuant to 40 CFR 70.3(a)(2), (3), and (5) (40 CFR 70.3 Applicability) [Section 39.5(2)(a)(ii) and (iv) of the Act].
- 5.1.3 This permit is issued based on the source not being a major source of HAPs.

5.2 Applicable Regulations

- 5.2.1 Specific emission units at this source are subject to particular regulations as set forth in Section 7 (Unit-Specific Conditions) of this permit.
- 5.2.2 In addition, emission units at this source are subject to the following regulations of general applicability:
 - a. No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally overhead at a point beyond the property line of the source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 IAC 212.301 and 212.314.
 - b. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 IAC 212.122, pursuant to 35 IAC 212.123(a), except as allowed by 35 IAC 212.123(b) and 212.124.
- 5.2.3 Fugitive Particulate Matter Operating Program
 - a. This source shall be operated under the provisions of an operating program prepared by the Permittee and submitted to the Illinois EPA for its review. Such operating program shall be designed to significantly reduce fugitive particulate matter emissions [35 IAC 212.309(a)].

- b. The operating program shall be amended from time to time by the Permittee so that the operating program is current. Such amendments shall be consistent with the requirements set forth by this Condition and shall be submitted to the Illinois EPA [35 IAC 212.312].
- c. All normal traffic pattern roads and parking facilities located at this source shall be paved or treated with water, oils, or chemical dust suppressants. All paved areas shall be cleaned on a regular basis. All areas treated with water, oils, or chemical dust suppressants shall have the treatment applied on a regular basis, as needed, in accordance with the operating program [35 IAC 212.306].

5.2.4 Ozone Depleting Substances

The Permittee shall comply with the standards for recycling and emissions reduction of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

5.2.5 Risk Management Plan

Should this stationary source, as defined in 40 CFR Section 68.3, become subject to the Accidental Release Prevention regulations in 40 CFR Part 68, then the owner or operator shall submit [40 CFR 68.215(a)(2)(i) and (ii)]:

- a. A compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR 68.10(a); or
- b. A certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of the Risk

Management Plan (RMP), as part of the annual compliance certification required by 40 CFR Part 70 or 71.

- 5.2.6 a. Should this stationary source become subject to a regulation under 40 CFR Parts 60, 61, or 63, or 35 IAC after the date issued of this permit, then the owner or operator shall, in accordance with the applicable regulation(s), comply with the applicable requirements by the date(s) specified and shall certify compliance with the applicable requirements of such regulation(s) as part of the annual compliance certification, as required by 40 CFR Part 70 or 71.
- b. No later than upon the submittal for renewal of this permit, the owner or operator shall submit, as part of an application, the necessary information to address either the non-applicability of, or demonstrate compliance with all applicable requirements of any potentially applicable regulation which was promulgated after the date issued of this permit.
- c. This stationary source will be subject to 40 CFR 63, Subpart AAAAA – National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills when such rule becomes final and effective. The Permittee shall comply with the applicable requirements of such regulation by the date(s) specified in such regulation and shall certify compliance with the applicable requirements of such regulation as part of the annual compliance certification required by 40 CFR Part 70 or 71 beginning in the year that compliance is required under a final and effective rule.

5.2.7 Episode Action Plan

- a. If the source is required to have an episode action plan pursuant to 35 IAC 244.142, the Permittee shall maintain at the source and have on file with the Illinois EPA a written episode action plan (plan) for reducing the levels of emissions during yellow alerts, red alerts, and emergencies, consistent with safe operating procedures. The plan shall contain the information specified in 35 IAC 244.144.
- b. The Permittee shall immediately implement the appropriate steps described in this plan should an air pollution alert or emergency be declared.
- c. If a change occurs at the source which requires a revision of the plan (e.g., operational change,

change in the source contact person), a copy of the revised plan shall be submitted to the Illinois EPA for review within 30 days of the change. Such plans shall be further revised if disapproved by the Illinois EPA.

- d. For sources required to have a plan pursuant to 35 IAC 244.142, a copy of the original plan and any subsequent revisions shall be sent to:
 - i. Illinois EPA, Compliance Section; and
 - ii. For sources located in Cook County and outside of the city of Chicago: Cook County Department of Environmental Control; or
 - iii. For sources located within the city of Chicago: Chicago Department of Environmental Control.

5.3 Non-Applicability of Regulations of Concern

- 5.3.1 This permit is issued based on the source not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the source is subject to a NSPS proposed after November 15, 1990, pursuant to 40 CFR 64.2(b)(1)(i).

5.4 Source-Wide Operational and Production Limits and Work Practices

In addition to the source-wide requirements in the Standard Permit Conditions in Section 9, the Permittee shall fulfill the following source-wide operational and production limitations and/or work practice requirements:

- a. The Permittee shall implement a program to monitor and control wind erosion on the landfill surfaces, reentrainment during landfill activities and fugitive particulate matter emissions from any roadway or parking area on a weekly basis.

No inspection shall be necessary for wind erosion from the surface the landfill when the landfill is covered with snow and/or ice and for any landfill activity if precipitation has occurred that is sufficient for that day to ensure compliance with the requirements of Condition 5.2.2(a). Any required inspection that is not performed due to any of the above identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.

Corrective action shall be implemented pursuant to a course of action outlined in the program. Such corrective action may include but is not limited to the application

of a protective cover on landfill surfaces, the spraying of surfactant solution or water on a regular basis, or other equivalent treatment methods.

If the fugitive particulate matter program fails to address or inadequately addresses an event that meets the characteristics of a wind erosion, reentrainment, or fugitive event but was not included in the program at the time the Permittee developed the plan, the Permittee shall revise the program within 45 days after the event to include detailed procedures for operating, monitoring, and maintaining the source during similar events and a program of corrective action for similar events. The Illinois EPA may require the Permittee to make changes to the program if the Illinois EPA finds that the program does not adequately address a wind erosion, reentrainment, or fugitive event.

5.5 Source-Wide Emission Limitations

5.5.1 Permitted Emissions for Fees

The annual emissions from the source, not considering insignificant activities as addressed by Section 3.0 of this permit, shall not exceed the following limitations. The overall source emissions shall be determined by adding emissions from all emission units. Compliance with these limits shall be determined on a calendar year basis. These limitations (Condition 5.5.1) are set for the purpose of establishing fees and are not federally enforceable.

Permitted Emissions of Regulated Pollutants

Pollutant	Tons/Year
Volatile Organic Material (VOM)	27.66
Sulfur Dioxide (SO ₂)	24.16
Particulate Matter (PM)	137.94
Nitrogen Oxides (NO _x)	156.50
HAP, not included in VOM or PM	-----
Total	346.26

5.5.2 Emissions of Hazardous Air Pollutants

This permit is issued based on the emissions of HAPs as listed in Section 112(b) of the CAA not being equal to or exceeding 10 tons per year of a single HAP or 25 tons per year of any combination of such HAPs, so that this source is considered a minor source for HAPs.

5.5.3 Other Source-Wide Emission Limitations

- a. The volume of waste deposited in MSW Landfill shall not exceed the maximum design capacity set in the

latest Developmental Permit(s), issued by the Illinois EPA's Bureau of Land (BOL), for the source. The capacity of the landfill shall not exceed 24,172,000 cubic yards, which is the basis for determining potential emissions for the landfill.

5.6 General Recordkeeping Requirements

5.6.1 Emission Records

The Permittee shall maintain records of the following items for the source to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

Total annual emissions on a calendar year basis for the emission units covered by Section 7 (Unit Specific Conditions) of this permit.

5.6.2 Records for Operating Scenarios

N/A

5.6.3 Retention and Availability of Records

- a. All records and logs required by this permit shall be retained for at least five years from the date of entry (unless a longer retention period is specified by the particular recordkeeping provision herein), shall be kept at a location at the source that is readily accessible to the Illinois EPA or USEPA, and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request.
- b. The Permittee shall retrieve and print, on paper during normal source office hours, any records retained in an electronic format (e.g., computer) in response to an Illinois EPA or USEPA request for records during the course of a source inspection.

5.7 General Reporting Requirements

5.7.1 General Source-Wide Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of deviations with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

5.7.2 Annual Emissions Report

The annual emissions report required pursuant to Condition 9.7 shall contain emissions information for the previous calendar year.

5.8 General Operational Flexibility/Anticipated Operating Scenarios

N/A

5.9 General Compliance Procedures

5.9.1 General Procedures for Calculating Emissions

Compliance with the source-wide emission limits specified in Condition 5.5 shall be based on the recordkeeping and reporting requirements of Conditions 5.6 and 5.7, and Compliance Procedures in Section 7 (Unit Specific Conditions) of this permit.

- a. For the purpose of estimating fugitive PM emissions from the paved and unpaved roadways at the source, the emission factors and formulas in the latest version of Sections 13.2.1 and 13.2.2 respectively of AP-42, are acceptable.

6.0 NOT APPLICABLE TO THIS PERMIT

7.0 UNIT SPECIFIC CONDITIONS

7.1 Unit: MSW Landfill
Control: Engines, passive flares and backup utility flare

7.1.1 Description

Municipal Solid Waste Landfill consisting of two areas, Old Milam and New Milam.

7.1.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
MSW Landfill	Municipal Solid Waste Landfill Consisting of Two Areas, Old Milam and New Milam	Engines, Passive Flares and Backup Utility Flare

7.1.3 Applicability Provisions and Applicable Regulations

- a. The "affected landfill" for the purpose of these unit-specific conditions, is the MSW Landfill described in Conditions 7.1.1 and 7.1.2.
- b. The affected landfill is subject to the emission limits identified in Condition 5.2.2.
- c. The affected landfill is subject to 40 CFR 60 Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills, because the landfill commenced construction, reconstruction or modification or began accepting waste on or after May 30, 1991 [40 CFR 60.750 (a)]. The facility is subject to the provisions of 40 CFR 60 Subpart WWW unless otherwise specified in the Design Plan approved in Permit 99010018 (See also Condition 7.1.3(g) and (h)).

NSPS 40 CFR 60 Subpart WWW: Standards of Performance for Municipal Solid Waste Landfills:

The Permittee shall either comply with Condition 7.1.3(c)(ii) or calculate an NMOC emission rate for the landfill using the procedures specified in Condition 7.1.7. The NMOC emission rate shall be recalculated annually, except as provided in Condition 7.1.10(b)(i)(A)(2). [40 CFR 60.752(b)]

- i. If the calculated NMOC emission rate is less than 50 megagrams per year, the Permittee shall comply with the requirements of 40 CFR 60.752(b)(1) (Below).

- A. Submit an annual emission report to the Administrator, except as provided for in Condition 7.1.10(b)(i)(A)(2); and [40 CFR 60.752(b)(1)(i)]
 - B. Recalculate the NMOC emission rate annually using the procedures specified in Condition 7.1.7(a) until such time as the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, or the landfill is closed. [40 CFR 60.752(b)(1)(ii)]
 - C. If the NMOC emission rate, upon recalculation required in Condition 7.1.3(c)(i)(B), is equal to or greater than 50 megagrams per year, the owner or operator shall install a collection and control system in compliance with Condition 7.1.3(c)(ii). [40 CFR 60.752(b)(1)(ii)(A)]
 - D. If the landfill is permanently closed, a closure notification shall be submitted to the Administrator as provided for in Condition 7.1.10(b)(iii). [40 CFR 60.752(b)(1)(ii)(B)]
- ii. If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, the Permittee shall comply with the requirements of 40 CFR 60.752(b)(2). These requirements include but are not limited to the following:
- A. Submittal of a NMOC collection and control system design plan prepared by a professional engineer to the Illinois EPA, Division of Air Pollution Control within 1 year. The NMOC collection and control system design plan shall include the information required under 40 CFR 60.752(b)(2)(i)(A), (B) and (C). [40 CFR 60.752(b)(2)(i)]:
 - B. Installation of a collection and control system that captures the gas generated within the landfill, as required by 40 CFR 60.752(b)(2)(ii)(A) or (B) and 40 CFR 60.752(b)(2)(iii), 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* NMOC sampling and analysis, as provided in 40 CFR 60.754(a)(3) and (4),

respectively, demonstrates that the emission rate is less than 50 Megagrams per year, as specified in 40 CFR 60.757(c)(1) or (2). [40 CFR 60.752(b)(2)(ii)]

- C. Routing of all collected landfill gas to a control system that complies with the requirements in either paragraph 40 CFR 60.752(b)(2)(iii)(A), (B) or (C). [40 CFR 60.752(b)(2)(iii)]
 - D. Operation of the collection and control device installed to comply with 40 CFR 60 Subpart WWW in accordance with the provisions of 40 CFR 60.753, 60.755 and 60.756. [40 CFR 60.752(b)(2)(iv)]
- d. Upon installation of a gas collection and control system used to comply with the provisions of Condition 7.1.3(c)(ii)(B), the Permittee shall operate the collection system in accordance with the provisions of 40 CFR 60.753 (Below).
- i. 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: [40 CFR 60.753(a)]
 - A. 5 years or more if active; or [40 CFR 60.753(a)(1)]
 - B. 2 years or more if closed or at final grade; [40 CFR 60.753(a)(2)]
 - ii. Operate the collection system with negative pressure at each wellhead except under the conditions shown 40 CFR 60.753(b);
 - A. 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 40 CFR 60.757(f)(1); [40 CFR 60.753(b)(1)]
 - B. Use of a geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan; [40 CFR 60.753(b)(2)]
 - C. 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; [40 CFR 60.753(b)(3)]

iii. 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 Permittee 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. Nitrogen or oxygen levels shall be determined based upon the applicable methods and or procedures shown in 40 CFR 60.753(c)(1) or (2). (Below) [40 CFR 60.753(c)]

A. The nitrogen level shall be determined using Method 3C, unless an alternative test method is established as allowed by Condition 7.1.3(c)(ii)(A). [40 CFR 60.753(c)(1)]

B. Unless an alternative test method is established as allowed by Condition 7.1.3(c)(ii)(A), the oxygen shall be determined by an oxygen meter using Method 3A or 3C except that: [40 CFR 60.753(c)(2)]

1. The span shall be set so that the regulatory limit is between 20 and 50 percent of the span. [40 CFR 60.753(c)(2)(i)]

2. A data recorder is not required; [40 CFR 60.753(c)(2)(ii)]

3. Only two calibration gases are required, a zero and span, and ambient air may be used as the span; [40 CFR 60.753(c)(2)(iii)]

4. A calibration error check is not required; [40 CFR 60.753(c)(2)(iv)]

5. The allowable sample bias, zero drift, and calibration drift are

±10 percent. [40 CFR
60.753(c)(2)(v)]

- iv. 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 Permittee 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 Permittee 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. [40 CFR 60.753(d)]
 - v. Operate the system such that all collected gases are vented to a control system designed and operated in compliance with Condition 7.1.3(c)(ii)(C). 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; [40 CFR 60.753(e)] and
 - vi. Operate the control or treatment system at all times when the collected gas is routed to the system. [40 CFR 60.753(f)]
 - vii. If monitoring demonstrates that the operational requirements in Condition 7.1.3(c)(ii), (iii) or (iv) are not met, corrective action shall be taken as specified in Condition 7.1.12(d)(iii), (iv) and (v) or Condition 7.1.8(b). If corrective actions are taken as specified in Condition 7.1.12(d), the monitored exceedance is not a violation of the operational requirements in Condition 7.1.3(c). [40 CFR 60.753(g)]
- e. The affected landfill is subject to the NESHAP for Asbestos, 40 CFR 61 Subparts A and M, because the

affected landfill is a source that is listed in the NESHAP. [40 CFR 61.140]

The affected landfill meets the definition of an active waste disposal site as defined in 40 CFR 61.141, i.e., the landfill receives or has received asbestos-containing waste material.

- i. For any active waste disposal site that receives asbestos-containing waste material from a source covered under 40 CFR 61.149, 61.150, or 61.155, the Permittee must comply with the requirements of 40 CFR 61.154.
 - ii. For any closed active waste disposal site previously subject to the requirements of 40 CFR 61.154, the Permittee shall comply with the requirements of 40 CFR 61.151 [40 CFR 61.154(g)].
- f. The affected landfill's open flares are subject to 40 CFR 60.18 - General control device requirements [40 CFR 60.18(a)].

NSPS 40 CFR Subpart A 60.18 - Flares:

The open flare(s) shall be designed and operated in accordance with 40 CFR 60.18. This includes the following:

- i. The open flare(s) shall be designed for and operated with no visible emissions as determined by the methods specified in 40 CFR 60.18(f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. [40 CFR 60.18(c)(1)]
- ii. The open flare(s) shall be operated with a flame present at all times while landfill gasses are being vented to it, as determined by the methods specified in 40 CFR 60.18(f). [40 CFR 60.18(c)(2)]
- iii. The open flare(s) shall be used only with the net heating value of the gas being combusted being 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted being 7.45 MJ/scf (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in 40 CFR 60.18(f)(3) or by other Methods approved by the USEPA. [40 CFR 60.18(c)(3)(ii)]

- iv. The open flare(s) shall be designed and operated with an exit velocity less than the velocity, V_{max} , as determined by the method specified in 40 CFR 60.18(f)(6). [40 CFR 60.18(c)(5)]
- v. The Permittee shall monitor the open flare(s) to ensure that they are operated and maintained in conformance with their designs.
- vi. The open flare(s) shall be operated at all times when landfill gasses may be vented to them. [40 CFR 60.18(e)]
- vii. Reference Method 22 shall be used to determine the compliance of open flare(s) with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22. [40 CFR 60.18(f)(1)]
- viii. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame. [40 CFR 60.18(f)(2)]
- ix. The net heating value of the gas being combusted in the open flare(s) shall be calculated using the following equation or by other Methods approved by the USEPA: [40 CFR 60.18(f)(3)]

$$H_T = K \sum_{i=1}^n C_i H_i$$

Where:

H_T = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25°C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20°C;

K = Constant,

$$1.740 \times 10^7 \left(\frac{1}{\text{ppm}} \right) \left(\frac{\text{g - mole}}{\text{scm}} \right) \left(\frac{\text{MJ}}{\text{Kcal}} \right)$$

Where the Standard Temperature for $\left(\frac{\text{g - mole}}{\text{scm}} \right)$ is 20°C

C_i = Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-77 (Incorporated by reference as specified in 40 CFR 60.17); and

H_i = Net heat of combustion of sample component i , kcal/g mole at 25°C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 (incorporated by reference as specified in 40 CFR 60.17) if published values are not available or cannot be calculated.

- xi. The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip. [40 CFR 60.18(f)(4)]
- xii. The maximum permitted velocity, V_{\max} , for a flare shall be determined by the following equation or by other Methods approved by the USEPA. [40 CFR 60.18(f)(6)]

$$V_{\max} = 8.706 + 0.7084 (H_T)$$

V_{\max} = Maximum permitted velocity, m/sec

8.706 = Constant

0.7084 = Constant

H_T = The net heating value as determined in accordance with 40 CFR 60.18(f)(3).

- g. This permit is issued based upon the following alternatives for the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of 40 CFR 60.753 through 60.758 proposed in the Landfill Gas Collection And Control System Design Plan pursuant to

40 CFR 60.752(b)(2)(i)(B), being approved by Illinois EPA. These alternatives will be addressed in subsequent Special Conditions:

- i. Exclusion of dangerous areas such as roads, the active area, truck traffic, and steep sloped areas with a grade equal to 5:1 from the surface monitoring plan. [40 CFR 60.753(d)]
- ii. Exclusion of the Caterpillar engines from the requirement to install a temperature monitoring device equipped with a continuous recorder. [40 CFR 60.756(b)(1)]
- iii. The proposal to monitor landfill gas flow on a continuous basis, to record an hourly flow average within the flow meter software, and to report flow to the engines on a monthly basis using a monthly average of the hourly data. [40 CFR 60.756(b)(2)(i)]
- iv. The proposal to modify the requirements to continuously monitor and record the backup flare flame temperature and landfill gas flow monitoring. [40 CFR 60.756(c)]

The approved changes include:

- A. Recording and maintain a log of flare startup and shutdown times (date and time);
 - B. Shutdown of the landfill gas collection system if the flare shutdowns and the engines are unavailable;
 - C. Recording and maintain a log of the flare landfill gas usage, using the orifice plate installed on the flare, each time the flare is activated and shutdown and on a monthly basis during extended run times (> 120 days);
 - D. Use of the automatic temperature activated electro-hydraulic landfill gas flow shut-off valve installed on the flare to stop landfill gas venting through the flare; and
 - E. Recording flare run times on a monthly, based upon the flare blower hour meter.
- v. Submittal of the annual report required by the 40 CFR 60.757(f) within 180 days of approval of the gas collection and control design plan.

- vi. The recording and maintaining a log of control system downtime based upon those periods when no flow is recorder on the continuous flow recorder. Those periods that indicate no flow for more than 1 hour will be included on the annual report. [40 CFR 60.757(f)(3)]
 - vii. Exclusion from the requirement to keep and maintain records of Caterpillar engine combustion temperatures. [40 CFR 60.758(b)(2)(i)]
 - viii. Exclusion from the requirement to keep and maintain records exceedances of Caterpillar engine based upon all 3-hour periods of operation during which the average combustion temperature was more than 28°C below the average combustion temperature during the most recent performance test. [40 CFR 60.758(c)(1)(i)]
 - ix. Exclusion of the from the requirement to keep and maintain records of flare pilot or flare flame monitoring records. [40 CFR 60.758(c)(4)]
- h. This permit is issued based upon the following alternatives for the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of 40 CFR 60.753 through 60.758 proposed in the Landfill Gas Collection And Control System Design Plan pursuant to 40 CFR 60.752(b)(2)(i)(B), **not being approved**:
- i. The request for waiver of the performance testing requirement shown in 40 CFR 60.8 and 60.752(b)(2)(iii)(B);
 - ii. The proposal to install landfill gas collection wells in areas, cell, or group of cells once the site has reached final grade; [40 CFR 60.753(a)]
 - iii. The proposal to use the alternative surface monitoring interval of 60 meters as opposed to 30 meters; [40 CFR 60.753(d)]
 - iv. The proposal to use Method TO-14 as opposed to USEPA Method 18; [40 CFR 60.754(b)(2) and (3)]
 - v. The proposal to use the alternative surface monitoring procedure regarding the placement

of the flame ionization detector probe; [40 CFR 60.755(c)(3)]

- vi. The proposal to do surface monitoring only between April 1 through November 1; [40 CFR 60.756(f)]
- vii. The proposal to waive the initial performance test reporting requirement; and [40 CFR 60.757(g)]
- viii. The proposal to waive the NMOC recordkeeping requirement. [40 CFR 60.758(b)(2)(ii)]

7.1.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected landfill not being subject to 35 IAC 220, Nonmethane Organic Compounds because the affected landfill is subject to 40 CFR 60 Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills, pursuant to 35 IAC 220.200(b).
- b. This permit is issued based on the affected landfill not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected landfill is subject to an emission limitation or standard for which this CAAPP permit specifies a continuous compliance determination method, pursuant to 40 CFR 64.2(b)(1)(vi).
- c. This permit is issued based on the affected landfill not being subject to the requirements of 35 IAC 212.321, Emissions of Particulate Matter from Process Emission Units, because due to the unique nature of this process, such rules cannot reasonably be applied.

7.1.5 Operational and Production Work Practices

- a. NESHAP 40 CFR 61 Subpart M: Handling Procedures and Control Measures for the Disposal of ACWM

As applicable for each site, the Permittee shall comply with one of the following:

- i. Inactive Waste Disposal Sites [40 CFR 61.151]:
 - A. The Permittee must comply with one of the following:

1. Either discharge no visible emissions to the outside air from an inactive waste disposal site where ACWM has been deposited [40 CFR 61.151(a)(1)]; or
2. The ACWM shall be covered with at least 15 centimeters (6 inches) of compacted nonasbestos-containing material, and the Permittee shall grow and maintain a cover of vegetation on the area adequate to prevent exposure of the ACWM [40 CFR 61.151(a)(2)]; or
3. The Permittee shall cover the asbestos-containing waste material with at least 60 centimeters (2 feet) of compacted nonasbestos-containing material, and maintain it to prevent exposure of the asbestos-containing waste. [40 CFR 61.151(a)(3)]

B. Unless a natural barrier adequately deters access by the general public, install and maintain warning signs and fencing as required in 40 CFR 61.151(b), or comply with 40 CFR 61.151(a)(2) or (a)(3). (Condition 7.1.5(a)(i)(A) [40 CFR 61.151(b)]

C. The Permittee may use an alternative control method that has received prior approval of the Illinois EPA rather than comply with the requirements of 40 CFR 61.151(a) or (b). [40 CFR 61.151(c)]

ii. Active Waste Disposal Sites [40 CFR 61.154]:

A. For any active waste disposal site that receives asbestos-containing waste material from a source covered under 40 CFR 61.149, 61.150, or 61.155, the Permittee must comply with the following requirements (See previous Condition 7.1.5(a)):

1. Either there must be no visible emissions to the outside air from any active waste disposal site where asbestos-containing waste material has been deposited, or the requirements of 40 CFR 61.154(c) or

(d) must be met. [40 CFR 61.154(a)]

2. Unless a natural barrier adequately deters access by the general public, either warning signs and fencing must be installed and maintained as shown in 40 CFR 61.154(b), or the requirements of 40 CFR 61.154(c)(1) must be met. [40 CFR 61.154(b)]

If applicable, upon Illinois EPA request, the Permittee shall supply appropriate information that will allow the Illinois EPA to determine whether a fence or a natural barrier adequately deters access by the general public. [40 CFR 61.154(b)(3)]

3. Rather than meet the no visible emission requirement of 40 CFR 61.154(a), at the end of each operating day, or at least once every 24-hour period while the site is in continuous operation, the asbestos-containing waste material that has been deposited at the site during the operating day or previous 24-hour period shall be covered as shown in 40 CFR 61.154(c): [40 CFR 61.154(c)]
4. Rather than meet the no visible emission requirement of 40 CFR 61.154(a), use an alternative emissions control method that has received prior written approval by the Illinois EPA according to the procedures described in 40 CFR 61.149(c)(2). [40 CFR 61.154(d)]

- B. Upon closure of an affected active waste disposal site, the Permittee shall comply with the requirements of 40 CFR 61.151. [40 CFR 61.154(g)]

7.1.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected landfill is subject to the following:

- a. Controlled emissions from the affected landfill's utility flares shall not exceed the following limits:

Pollutant	Emissions	
	(Lb/hr)	(Ton/yr)
CO	13.32	58.34
NO _x	2.45	10.72
SO ₂	2.39	10.47
PM	0.10	0.45
VOM	0.09	0.41

These limits are based on AP-42 emission factors Table 13.5-1 and 15.5-2, maximum hours of operation and average gas flow rate as submitted in the application. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1R].

The above limitations contain revisions to previously issued Permit 90040036. The Illinois EPA is establishing conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits continue to ensure that the construction and/or modification addressed in this permit does not constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. Specifically, AP-42 factors were used instead of mass balance equations as previously permitted. [T1R].

- b. Controlled emissions from the affected landfill's passive flares shall not exceed the following limits:

Pollutant	Emissions	
	(Lb/hr)	(Ton/yr)
CO	2.1	9.1
NO _x	0.6	2.8

These limits are based on the constituents present in landfill gas and engineering estimates and maximum operating hours. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1].

The above limitations were established in Permit 99080069, pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].

- c. Uncontrolled emissions from the affected landfill, not considering insignificant activities as addressed by Section 3.0 of this permit, shall not exceed the following limitations:

Pollutant	Emissions (Tons/yr)
VOM	8.0

These limits are based on the maximum MSW landfill design capacity, as limited in Condition 5.5.3(b), calculated gas generation rate, and the minimum landfill gas collection system collection efficiency of 75% as indicated in the application [T1N].

The above limitations are being established in this permit pursuant to Title I of the CAA 40 CFR 52.21, Prevention of Significant Deterioration (PSD). The Illinois EPA is establishing emission limitations and other appropriate terms and conditions in this permit that limit the VOM emissions from the affected landfill below the levels that would trigger the applicability of these rules, consistent with the information provided in the CAAPP application [T1N].

7.1.7 Testing Requirements

NSPS 40 CFR 60 Subpart WWW: Standards of Performance for Municipal Solid Waste Landfills:

- a. The Permittee shall calculate the NMOC emission rate, as required under Condition 7.1.3(c), using either the equation provided in Condition 7.1.7(a)(i) or the equation provided in Condition 7.1.7(a)(ii). Both equations may be used if the actual year-to-year solid waste acceptance rate is known, as specified in Condition 7.1.7(a)(i), for part of the life of the landfill and the actual year-to-year solid waste acceptance rate is unknown, as specified in Condition 7.1.7(a)(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 mega-gram for L_0 , 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 meteorological site, the k value to be used is 0.02 per year. [40 CFR 60.754(a)(1)]

- i. The following equation shall be used if the actual year-to-year solid waste acceptance rate is known [40 CFR 60.754(a)(1)(i)].

$$M_{\text{NMOC}} = \sum_{i=1}^n 2 k L_o M_i (e^{-kt_i}) (C_{\text{NMOC}}) (3.6 \times 10^{-9})$$

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. [40 CFR 60.754(a)(1)(i)]

- ii. The following equation shall be used if the actual year-to-year solid waste acceptance rate is unknown. [40 CFR 60.754(a)(1)(ii)]

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

Where:

M_{NMOC} = Mass emission rate of NMOC, megagrams per year

- L_0 = Methane generation potential, cubic meters per megagram solid waste
- R = Average annual acceptance rate, megagrams per year
- k = Methane generation rate constant, year⁻¹
- t = Age of landfill, years
- C_{NMOC} = Concentration of NMOC, parts per million by volume as hexane
- c = Time since closure, years; for active landfill $c = 0$ and $e^{-kc} = 1$

3.6×10^{-9} = Conversion factor

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. [40 CFR 60.754(a)(1)(ii)]

Tier 1. The Permittee shall compare the calculated NMOC mass emission rate to the standard of 50 megagrams per year. [40 CFR 60.754(a)(2)]

- A. If the NMOC emission rate calculated in Condition 7.1.7(a) is less than 50 megagrams per year, then the Permittee shall submit an emission rate report as provided in Condition 7.1.10(b)(i)(A), and shall recalculate the NMOC mass emission rate annually as required under Condition 7.1.10(b)(i)(A)(1). [40 CFR 60.754(a)(2)(i)]
- B. If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, then the Permittee shall either comply with Condition 7.1.3(c)(ii), or determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the procedures provided in *Tier 2*. [40 CFR 60.754(a)(2)(ii)]

Tier 2. The Permittee shall determine the NMOC concentration using the following sampling procedure. The Permittee 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 Permittee shall collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using Method 25C of Appendix A of 40 CFR Part 60 or Method 18 of Appendix A of 40 CFR Part 60. If using Method 18 of Appendix A of 40 CFR Part 60, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). If composite sampling is used, equal volumes shall be taken from each sample probe. If more than the required number of samples are taken, all samples shall be used in the analysis. The Permittee shall divide the NMOC concentration from Method 25C of Appendix A of 40 CFR Part 60 by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane. [40 CFR 60.754(a)(3)]

- A. The Permittee shall recalculate the NMOC mass emission rate using the equations provided in *Tier 1* and using the average NMOC concentration from the collected samples instead of the default value in the equation provided in Condition 7.1.7(a). [40 CFR 60.754(a)(3)(i)]
- B. 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 Permittee shall either comply with Condition 7.1.3(c), 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 *Tier 3*. [40 CFR 60.754(a)(3)(ii)]
- C. If the resulting NMOC mass emission rate is less than 50 megagrams per year, the Permittee shall submit a periodic estimate of the emission rate report as provided in Condition 7.1.10(b)(i)(A) and retest the site-specific NMOC concentration every 5 years using the

methods specified in 40 CFR 60.754. [40 CFR 60.754(a)(3)(iii)]

Tier 3. The site-specific methane generation rate constant shall be determined using the procedures provided in Method 2E of Appendix A of 40 CFR Part 60. The Permittee shall estimate the NMOC mass emission rate using equations in Condition 7.1.7(a)(i) or (ii) and using a site-specific methane generation rate constant *k*, and the site-specific NMOC concentration as determined in *Tier 2* instead of the default values provided in Condition 7.1.7(a). The Permittee shall compare the resulting NMOC mass emission rate to the standard of 50 megagrams per year. [40 CFR 60.754(a)(4)]

- A. 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 Permittee shall comply with Condition 7.1.3(c)(ii). [40 CFR 60.754(a)(4)(i)]
- B. If the NMOC mass emission rate is less than 50 megagrams per year, then the Permittee shall submit a periodic emission rate report as provided in Condition 7.1.10(b)(i)(A) and shall recalculate the NMOC mass emission rate annually, as provided in Condition 7.1.10(b)(i)(A)(1) using the equations in Condition 7.1.7(a) and using the site-specific methane generation rate constant and NMOC concentration obtained in *Tier 2*. 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. [40 CFR 60.754(a)(4)(ii)]

As per 40 CFR 60.750(b), the Permittee may use other methods to determine the NMOC concentration or a site-specific *k* as an alternative to the methods required in *Tier 2* and *Tier 3* if the method has been approved by the USEPA. [40 CFR 60.754(a)(5)]

- b. After the installation of a collection and control system in compliance with Condition 7.1.8(b), the Permittee shall calculate the NMOC emission rate for

purposes of determining when the system can be removed as provided in 40 CFR 60.752(b)(2)(v), using the equation in 40 CFR 60.754(b) (See below). [40 CFR 60.754(b)]:

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

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

- i. 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 40 CFR Part 60. [40 CFR 60.754(b)(1)]
 - ii. 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 40 CFR Part 60. If using Method 18 of Appendix A of 40 CFR Part 60, 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 Permittee shall divide the NMOC concentration, from Method 25C of Appendix A of 40 CFR Part 60, by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane. [40 CFR 60.754(b)(2)]
 - iii. The Permittee may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the USEPA. [40 CFR 60.754(b)(3)]
- c. When calculating emissions for PSD purposes, the Permittee of each MSW landfill subject to the provisions of 40 CFR 60 Subpart WWW shall estimate the NMOC emission rate for comparison to the PSD

major source and significance levels in 35 IAC 203 (40 CFR 51.166) or 40 CFR 52.21 using AP-42 or other approved measurement procedures. [40 CFR 60.754(c)]

- d. For the performance test required in 40 CFR 60.752(b)(2)(iii)(B), Method 25C or Method 18 of Appendix A of 40 CFR Part 60 shall be used to determine compliance with 98 weight-percent efficiency or the 20 ppmv outlet concentration level, unless another method to demonstrate compliance has been approved by the USEPA or Illinois EPA as provided by 40 CFR 60.752(b)(2)(i)(B). If using Method 18 of Appendix A of 40 CFR Part 60, 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: [40 CFR 60.754(d)]

$$\text{Control Efficiency} = (\text{NMOC}_{\text{in}} - \text{NMOC}_{\text{out}})$$

Where:

NMOC_{in} = Mass of NMOC entering control device

NMOC_{out} = Mass of NMOC exiting control device

7.1.8 Monitoring Requirements

a. General Requirements

- i. The Permittee shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment, pursuant to 35 IAC 201.281:
- A. A gas flow rate measuring device that shall record the flow to the control system(s) (e.g., the gas flow to utility (open) flare and/or turbines) at least every 15 minutes [35 IAC 201.281];
 - B. A gas flow rate measuring device that provides a measurement of gas flow to or bypass of the control system. The owner or operator shall either [35 IAC 201.281]:
 - 1. Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control system at least every 15 minutes; or

2. Secure the bypass line valve(s) 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(s) are maintained in the closed position and that the gas flow is not diverted through the bypass line(s).
- b. Upon being subject to the control requirements of 40 CFR 60 Subpart WWW, the Permittee shall comply with the following as applicable:
- i. The following procedures shall be used for compliance with the surface methane operational standard as provided in Condition 7.1.3(e)(iv). [40 CFR 60.755(c)]
 - A. After installation of the collection system, the Permittee 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. [40 CFR 60.755(c)(1)]
 - B. 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. [40 CFR 60.755(c)(2)]
 - C. Surface emission monitoring shall be performed in accordance with section 4.3.1 of Method 21 of Appendix A of 40 CFR Part 60, except that the probe inlet shall be placed within 5 to 10 centimeters of the ground. Monitoring shall be performed during typical meteorological conditions. [40 CFR 60.755(c)(3)]
 - D. 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 Condition 7.1.9(b)(vi) shall be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of 40 CFR 60.753(d). [40 CFR 60.755(c)(4)]

E. The Permittee shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis. [40 CFR 60.755(c)(5)]

ii. Each Permittee seeking to comply with the provisions in Condition 7.1.8(b) shall comply with the instrumentation specifications and procedures for surface emission monitoring devices in 40 CFR 60.755(d) (See below). [40 CFR 60.755(d)]

A. 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. [40 CFR 60.755(d)(1)]

B. The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air. [40 CFR 60.755(d)(2)]

C. 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. [40 CFR 60.755(d)(3)]

D. 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. [40 CFR 60.755(d)(4)]

iii. The gas collection and control requirements of 40 CFR 60 Subpart WWW shall 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. [40 CFR 60.755(e)]

- iv. Except as provided in 40 CFR 60.752(b)(2)(i)(B),
 - A. Each Permittee seeking to comply with 40 CFR 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: [40 CFR 60.756(a)]
 - 1. Measure the gauge pressure in the gas collection header on a monthly basis as provided in Condition 7.1.12(d)(iii); and [40 CFR 60.756(a)(1)]
 - 2. Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as provided in Condition 7.1.12(d)(v); and [40 CFR 60.756(a)(2)]
 - 3. Monitor temperature of the landfill gas on a monthly basis as provided in Condition 7.1.12(d)(v). [40 CFR 60.756(a)(3)]
 - B. Each Permittee seeking to comply with Condition 7.1.3(c)(ii)(C) using an enclosed combustor shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment. [40 CFR 60.756(b)]
 - 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. [40 CFR 60.756(b)(1)]
 - 2. A device that records flow to or bypass of the control device. The Permittee shall either: [40 CFR 60.756(b)(2)]

- 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 [40 CFR 60.756(b)(2)(i)]
 - 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. [40 CFR 60.756(b)(2)(ii)]
- C. If the Permittee seeks to demonstrate compliance with Condition 7.1.3(c)(ii)(C) using an open flare shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment: [40 CFR 60.756(c)]
- 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. [40 CFR 60.756(c)(1)]
 - 2. A device that records flow to or bypass of the flare. The Permittee shall either: [40 CFR 60.756(c)(2)]
 - 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 [40 CFR 60.756(c)(2)(i)]
 - 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. [40 CFR 60.756(c)(2)(ii)]

- D. If the Permittee seeks to demonstrate compliance with Condition 7.1.3 (c)(ii)(C) using a device other than an open flare or an enclosed combustor, the Permittee shall provide information satisfactory to the Illinois EPA or USEPA as provided in 40 CFR 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 Illinois EPA or USEPA shall review the information and either approve it, or request that additional information be submitted. The Illinois EPA or USEPA may specify additional appropriate monitoring procedures. [40 CFR 60.756(d)]
- E. If the Permittee seeks to install a collection system that does not meet the specifications in 40 CFR 60.759 or seeking to monitor alternative parameters to those required by 40 CFR 60.753 through 40 CFR 60.756, the Permittee shall provide information satisfactory to the Illinois EPA or USEPA as provided in 40 CFR 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 Illinois EPA or USEPA may specify additional appropriate monitoring procedures. [40 CFR 60.756(e)]
- F. If the Permittee seeks to demonstrate compliance with Condition 7.1.8(b)(i), the Permittee shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in Condition 7.1.8(b)(ii). 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. [40 CFR 60.756(f)]

7.1.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected landfill to demonstrate compliance with Conditions 5.5.1, 5.5.3, 7.1.3 and 7.1.6, pursuant to Section 39.5(7)(b) of the Act:

- a. The Permittee shall maintain and retain the following general records:
 - i. Site-specific NMOC emission rate(s) and/or methane generation rate constant(s) (k) used to determine MSW landfill emissions (megagrams/yr);
 - ii. Records of the monthly and aggregate annual CO, VOM, PM, NO_x and SO₂ emissions from the affected landfills associated control system (i.e. flares and turbines), calculated based on procedures in Condition 7.1.12, with supporting calculations (tons/mo and ton/yr);
 - iii. Inspections:
 - A. The date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;
 - B. The date of each inspection where it was determined by the Permittee that it was necessary to implement the control measures;
 - C. The dates the control measures were implemented.
- b. The Permittee shall fulfill the recordkeeping requirements pursuant to NSPS 40 CFR 60 Subpart WWW: Standards of Performance for Municipal Solid Waste Landfills:

i. Except as provided in 40 CFR 60.752(b)(2)(i)(B), if the MSW landfill becomes subject to the provisions of Condition 7.1.3(c), the Permittee shall keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report which triggered Condition 7.1.3(c), 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. [40 CFR 60.758(a)]

ii. Except as provided in 40 CFR 60.752(b)(2)(i)(B), if the MSW landfill becomes subject to the control requirements under Condition 7.1.3(c)(ii), the Permittee shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed in 40 CFR 60.758(b)(1) through (b)(4) (See below) 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. [40 CFR 60.758(b)]

A. Records to demonstrate compliance with Condition 7.1.3(c)(ii)(B) shall include:
[40 CFR 60.758(b)(1)]

1. The maximum expected gas generation flow rate as calculated in Condition 7.1.12(d)(i). The Permittee may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Illinois EPA or USEPA. [40 CFR 60.758(b)(1)(i)]

2. The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in 40 CFR 60.759(a)(1).
[40 CFR 60.758(b)(1)(ii)]

B. Records to demonstrate compliance with Condition 7.1.3(c)(ii)(C) through the 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 shall include:
[40 CFR 60.758(b)(2)]

1. The average combustion temperature measured at least every 15 minutes and averaged over the same time period of the performance test.
[40 CFR 60.758(b)(2)(i)]

2. The percent reduction of NMOC determined as specified in 40 CFR 60.752(b)(2)(iii)(B) achieved by the control device. [40 CFR 60.758(b)(2)(ii)]

C. Records to demonstrate compliance with compliance with 40 CFR 60.752(b)(2)(iii) (A) through use of an open flare shall include: 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 40 CFR 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. [40 CFR 60.758(b)(4)]

iii. Except as provided in 40 CFR 60.752(b)(2)(i)(B), if the MSW landfill becomes subject to the control requirements under 40 CFR 60 Subpart WWW, the Permittee shall keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in Condition 7.1.8(b)(iv) 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. [40 CFR 60.758(c)]

A. The following constitute exceedances that shall be recorded and reported under 40 CFR 60.757(f): [40 CFR 60.758(c)(1)]

1. 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 °C below the average combustion temperature during the most recent performance test at which compliance with Condition 7.1.3(c)(ii)(C) was determined. [40 CFR 60.758(c)(1)(i)]

B. If the MSW landfill becomes subject to the control requirements under 40 CFR 60 Subpart WWW, the Permittee 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 Condition 7.1.8(b)(iv). [40 CFR 60.758(c)(2)]

C. If the MSW landfill becomes subject to the control requirements under 40 CFR 60 Subpart WWW and the Permittee seeks to comply through the use of an open flare, the Permittee shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under Condition 7.1.8(b)(iv)(B)(3), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent. [40 CFR 60.758(c)(4)]

iv. Except as provided in 40 CFR 60.752(b)(2)(i)(B), if the MSW landfill becomes subject to the control requirements under 40 CFR 60 Subpart WWW, the Permittee 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. These shall include: [40 CFR 60.758(d)]

A. Up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under Condition 7.1.12(e). [40 CFR 60.758(d)(1)]

- B. Readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in 40 CFR 60.759(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in 40 CFR 60.759(a)(3)(ii). [40 CFR 60.758(d)(2)]
- v. Except as provided in 40 CFR 60.752(b)(2)(i)(B), if the MSW landfill becomes subject to the control requirements under 40 CFR 60 Subpart WWW, the Permittee 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 40 CFR 60.753, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance. [40 CFR 60.758(e)]
- vi. 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 40 CFR 60.753(d). [40 CFR 60.755(c)(4)]
 - A. The location of each monitored exceedance shall be marked and the location recorded. [40 CFR 60.755(c)(4)(i)]
 - B. 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. [40 CFR 60.755(c)(4)(ii)]
 - C. 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 Condition 7.1.9(b)(vi)(E)

shall be taken, and no further monitoring of that location is required until the action specified in paragraph Condition 7.1.9(b)(vi)(E) has been taken. [40 CFR 60.755(c)(4)(iii)]

D. 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 Condition 7.1.9(b)(iv)(B) and (C) 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 Condition 7.1.9(b)(iv)(C) or (E) shall be taken. [40 CFR 60.755(c)(4)(iv)]

E. 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. [40 CFR 60.755(c)(4)(v)]

c. NESHAP 40 CFR 61 Subpart M: Handling Procedures and Control Measures for the Disposal of ACWM

Active Waste Disposal Sites [40 CFR 61.154]:

i. For all asbestos-containing waste material received, the Permittee shall: [40 CFR 61.154(e)]

A. Maintain waste shipment records, using a form similar to that shown in Figure 4 of 40 CFR 61 Subpart M, and include the following information: [40 CFR 61.154(e)(1)]

1. The name, address, and telephone number of the waste generator. [40 CFR 61.154(e)(1)(i)]
2. The name, address, and telephone number of the transporter(s). [40 CFR 61.154(e)(1)(ii)]
3. The quantity of the asbestos-containing waste material in cubic meters (cubic yards). [40 CFR 61.154(e)(1)(iii)]
4. The presence of improperly enclosed or uncovered waste, or any asbestos-containing waste material not sealed in leak-tight containers. [40 CFR 61.154(e)(1)(iv)]
5. The date of the receipt. [40 CFR 61.154(e)(1)(v)]

- B. Maintain, until closure, records of the location, depth and area, and quantity in cubic meters (cubic yards) of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area. [40 CFR 61.154(f)]

7.1.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected landfill with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

- a. Report of any deviation from the applicable permit requirements of shall be reported to the Illinois EPA within 30 days of such occurrence. The report shall include the identity of the requirements for which a deviation occurred, a description of the deviation, its probable cause, and any corrective actions or preventive measures taken [39.5(7)(f)(ii) of the Act].
- b. The Permittee shall fulfill the reporting requirements pursuant to NSPS 40 CFR 60 Subpart WWW: Standards of Performance for Municipal Solid Waste Landfills:

Except as provided in 40 CFR 60.752(b)(2)(i)(B),

i. The Permittee shall submit an NMOC emission rate report to the Illinois EPA initially and annually thereafter, except as provided for in 40 CFR 60.757(b)(1)(ii) or (b)(3) (See below). The Illinois EPA may request such additional information as may be necessary to verify the reported NMOC emission rate. [40 CFR 60.757(b)]

A. 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 Condition 7.1.7(a) or (b), as applicable. [40 CFR 60.757(b)(1)]

1. The NMOC emission rate reports shall be submitted as part of the annually emission report, as required by 35 IAC Part 254 (See Condition 9.7, except as provided for in 60.757(b)(1)(ii) and (b)(3). [40 CFR 60.757(b)(1)(i)]

2. If the estimated NMOC emission rate as reported in the annual report to the Illinois EPA is less than 50 megagrams per year in each of the next 5 consecutive years, the Permittee 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 Illinois EPA. 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 Illinois EPA. 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.
[40 CFR 60.757(b)(1)(ii)]

- B. The NMOC emission rate report shall include all the data, calculations, sample reports and measurements used to estimate the annual or 5-year emissions.
[40 CFR 60.757(b)(2)]
 - C. The Permittee is exempted from the requirements of 40 CFR 60.757(b)(1) and (2), after the installation of a collection and control system in compliance with Condition 7.1.3(c)(ii), during such time as the collection and control system is in operation and in compliance with 40 CFR 60.753 and 60.755.
[40 CFR 60.757(b)(3)]
- ii. Upon becoming subject to the provisions of Condition 7.1.3(c)(ii)(A), the Permittee shall submit a collection and control system design plan to the Illinois EPA, Division of Air Pollution Control, Permit Section within 1 year of the first report required under 40 CFR 60.757(b) in which the emission rate equals or exceeds 50 megagrams per year, except as follows: [40 CFR 60.757(c)]
- A. If the Permittee elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis as provided in 40 CFR 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. [40 CFR 60.757(c)(1)]
 - B. If the Permittee elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in 40 CFR 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 40 CFR 60.754(a)(4) (Tier 3) and the resulting site-specific methane generation rate constant (k) shall be submitted to the Illinois EPA, Division of Air Pollution Control within 1 year of the first calculated emission rate exceeding 50 megagrams per year. [40 CFR 60.757(c)(2)]

The collection and control system design plan shall contain the information required under Condition 7.1.3(c)(ii) and such other additional information outlined in the USEPA guidance document *Municipal Solid Waste Landfills, Volume 1: Summary of the Requirements for New Source Performance Standards and Emission Guidelines for Municipal Solid Waste Landfills* (See <http://www.epa.gov/ttn/oarpg>). The collection and control system design plan shall be submitted as part of a construction permit application for a CAAPP source and a request for "Administrative Amendment" or "Minor Permit Modification" of the CAAPP permit (See Attachment 3 (Section 10.3 of this permit)).

- iii. The Permittee shall submit a closure report to the Illinois EPA, Compliance Section within 30 days of waste acceptance cessation. The Illinois EPA, Compliance Section 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 Illinois EPA, Compliance Section no additional wastes may be placed into the landfill without filing a notification of modification as described under 40 CFR 60.7(a)(4). [40 CFR 60.757(d)]
- c. The Permittee shall notify the Illinois EPA within 30 days of an exceedance of the limits in Conditions 7.1.3, 7.1.5, or 7.1.6. The notification shall include:
 - i. Identification of the limit that may have been exceeded.

- ii. Duration of the possible exceedance.
 - iii. An estimate of the amount of emissions in excess of the applicable standard.
 - iv. A description of the cause of the possible exceedance.
 - v. When compliance was reestablished.
- d. The Permittee shall submit the following information along with its annual emission report:
- i. A summary of exceedances of the limits in Conditions 7.1.3 and 7.1.6, if any, which require notification to the Compliance Section in accordance with Condition 7.1.10.

7.1.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to the affected landfill without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

N/A

7.1.12 Compliance Procedures

- a. For the purpose of estimating controlled methane, NMOC, and speciated emissions can be calculated from the MSW landfill operating data and the *USEPA Landfill Gas Emissions Model* (See <http://www.epa.gov/ttn/chief> and AP-42, Chapter 2.4).
- b. Flare emissions shall be calculated based on landfill gas flow and emission factors from the most updated version of AP-42, or approved alternative methodology:

Pollutant	Emission Factor (Lb/MBtu)
CO	0.37
NO _x	0.068
VOM	0.14

These emission factors are based on AP-42 Section 13.5, Table 13.5-1 and 13.5-2.

Pollutant	Emission Factor (Lb/hr)
SO ₂	2.39
PM	0.10

Particulate emission factor based upon nominal values of 0.01 grains/dscf @ 1,200 scfm with 896 Btu/scf LHV. Sulfur dioxide emission factor is based upon nominal values 200 ppmv H₂S as indicated in the application.

- c. Landfill Operations PM emissions shall be calculated based upon the following emission factors and operating data:
 - i. Landfill operation PM emissions shall be calculated based on operating data and the emission factors from the most updated version of AP-42, or approved alternative methodology.

- d. Compliance with 40 CFR 60 Subpart WWW - Standards of Performance for Municipal Solid Waste Landfills:
 - i. Except as provided in 40 CFR 60.752(b)(2)(i)(B) or the approved Design Plan, the specified methods in Condition 7.1.12(d) shall be used to determine whether the gas collection system is in compliance with 40 CFR 60.752(b)(2)(ii). [40 CFR 60.755(a)]
 - A. For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with 40 CFR 60.752(b)(2)(ii)(A) (1), one of the following equations shall be used. The k and Lo kinetic factors should be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42) or other site specific values demonstrated to be appropriate and approved by the Administrator. If k has been determined as specified in 40 CFR 60.754(a)(4) (Tier 3), 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. [40 CFR 60.755(a)(1)]

1. For sites with unknown year-to-year solid waste acceptance rate: [40 CFR 60.755(a)(1)(i)]

$$Q_m = 2L_o R (e^{-kc} - e^{-kt})$$

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 $c = 0$ and $e^{-kc} = 1$)

2. For sites with known year-to-year solid waste acceptance rate: [40 CFR 60.755(a)(1)(ii)]

$$Q_m = \sum_{i=1}^n 2 k L_o M_i (e^{-kt_i})$$

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

3. 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. [40 CFR 60.755(a)(1)(iii)]
- ii. For the purposes of determining sufficient density of gas collectors for compliance with 40 CFR 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 Illinois EPA, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards. [40 CFR 60.755(a)(2)]
 - iii. For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with 40 CFR 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 Condition 7.1.3(c)(ii). 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 Illinois EPA and/or USEPA for approval. [40 CFR 60.755(a)(3)]

- iv. Owners or operators are not required to expand the system as required in Condition 7.1.12(d)(iv) during the first 180 days after gas collection system startup. [40 CFR 60.755(a)(4)]
- v. 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 Condition 7.1.3(d)(iii). 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 Illinois EPA and/or USEPA for approval. [40 CFR 60.755(a)(5)]
- vi. An owner or operator seeking to demonstrate compliance with 40 CFR 60.752(b)(2)(ii)(A)(4) through the use of a collection system not conforming to the specifications provided in 40 CFR 60.759 shall provide information satisfactory to the Illinois EPA and/or USEPA as specified in 40 CFR 60.752(b)(2)(i)(C) demonstrating that off-site migration is being controlled. [40 CFR 60.755(a)(6)]
- e. For purposes of compliance with Condition 7.1.3(d)(i), 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 Condition 7.1.3(c)(ii)(A). 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: [40 CFR 60.755(b)]

- i. 5 years or more if active; or [40 CFR 60.755(b)(1)]
 - ii. 2 years or more if closed or at final grade. [40 CFR 60.755(b)(2)]
- f. The following equation shall be used for the purposes of calculating uncontrolled NMOC and VOM emissions and determine compliance with the emission limitations in Condition 7.1.6(c) if emissions are uncontrolled. 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 Illinois EPA. If NMOC or k has been determined as specified in Condition 7.1.7 (Tier 2 and Tier 3), respectively, the value of k determined from the test(s) shall be used. If the VOM content of the landfill gas has been determined, the percent VOM determined from the test shall be used. The active life of the landfill is the age of the landfill plus the estimated number of years until closure.

$$M_{\text{NMOC}} = \sum_{i=1}^n 2k L_o M_i (e^{kt_i}) (C_{\text{NMOC}}) (3.6 \times 10^{-9})$$

$$M_{\text{VOM}} = M_{\text{NMOC}} \times F$$

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 ith section, megagrams
- t_i = Age of the ith section, years
- C_{NMOC} = Concentration of NMOC, parts per million by volume as hexane
- 3.6×10⁻⁹ = Conversion factor

M_{VOM} = Total VOM emission rate from the landfill, megagrams per year.

F = Fraction of VOM in the NMOC emitted, e.g., 0.39 per AP-42.

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.

7.2 Unit: Engine/Generators

7.2.1 Description

Three landfill gas fired internal combustion engines (Model 3516 SITA) rated at 1138 bhp used to generate electricity.

7.2.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Engine/Generator 1	Landfill Gas Fired Internal Combustion Engine Used to Produce Electricity	None
Engine/Generator 2	Landfill Gas Fired Internal Combustion Engine Used to Produce Electricity	None
Engine/Generator 3	Landfill Gas Fired Internal Combustion Engine Used to Produce Electricity	None

7.2.3 Applicability Provisions and Applicable Regulations

- a. The "affected engines" for the purpose of these unit-specific conditions, are the reciprocating engines described in Condition 7.2.1 and 7.2.2.
- b. The affected engines are subject to the emission limits identified in Condition 5.2.2.
- c. The affected engines are subject to the New Source Performance Standard (NSPS) for air emissions from Municipal Solid Waste Landfills, 40 CFR 60, Subparts A and WWW. Illinois EPA is administrating NSPS in Illinois on behalf of the United States EPA under a delegation agreement and through Section 9.1 of the Illinois Environmental Protection Act.
 - i. The Permittee shall comply with the control requirements of the NSPS, 40 CFR 60.752(b)(2)(iii), until such time as the Permittee or owner/operator of the associated landfill demonstrates that the associated landfill is not subject to the control requirements, in accordance with applicable provisions of the NSPS.
 - ii. For purposes of compliance with the NSPS, the internal combustion engines are considered to be a control system utilizing enclosed combustor type control devices, as defined under 40 CFR 60.751.

- iii. This permit is issued based upon the internal combustion engines, covered under this permit, either alone or in combination, reducing NMOC emissions by 98 weight percent or reducing the outlet NMOC concentration of all control vents to less than 20 parts per million by volume (ppmv), dry basis as hexane at 3 percent oxygen. [40 CFR 60.752(b)(2)(iii)(B)]
- iv. The Permittee shall operate the NMOC control system so as to comply with the provisions of 40 CFR 60.753. Specifically, these include:
 - A. Design and operation of the control system in compliance with 40 CFR 60.752(b)(2)(iii).
 - B. In the event that this control system is inoperable, the necessary steps will be taken within 1 hour to shut down the gas mover system and close all valves at this control system that contribute to venting the gas into atmosphere; [40 CFR 60.753(e)] and
 - C. Operation of the control system at all times when the collected gas is routed to the system. [40 CFR 60.753(f)]
- d. The affected engines are subject to 35 IAC 214.301, which provides that:

No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to exceed 2000 ppm [35 IAC 214.301].
- e. The affected engines are subject to 35 IAC 219.301, which provides that:

No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from any emission unit, except as provided in the following exception: If no odor nuisance exists the limitation of this Condition shall apply only to photochemically reactive material [35 IAC 219.301].

7.2.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected engines not being subject to the requirements of 35 IAC 212.321 or 212.322 because they do not have a process weight rate as defined in 35 IAC 211.5250.

- b. This permit is issued based on the affected engines not being subject to 40 CFR Part 72, Acid Rain Program, because each of the affected engines serve one or more generators with the total nameplate capacity of 25 MWe or less, pursuant to 40 CFR 72.7(a)(1).

7.2.5 Operational and Production Limits and Work Practices

- a. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate any affected engines in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Illinois EPA or the USEPA which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source [40 CFR 60.11(d)].
- b. Landfill gas, supplemented as needed with natural gas shall be the only fuels fired in the affected engines.

7.2.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected engines are subject to the following:

Emissions from the affected engines shall not exceed the following limits:

Pollutant	Emissions (Each Engine)		Total Emissions (3 Engines)	
	(Lb/hr)	(Ton/yr)	(Lb/hr)	(Ton/yr)
NO _x	7.77	34.0	23.31	102.0
CO	5.77	25.2	17.31	75.6
VOM	1.15	5.04	3.45	15.12
PM	0.11	0.48	0.33	1.44
SO ₂	0.71	3.12	2.13	9.36

These limits are based on standard emission factors and emission calculation procedures and the maximum engine capacity, and maximum hours of operation as indicated in the application. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1R].

The above limitations contain revisions to previously issued Permit 91110025. The Illinois EPA is establishing

conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits continue to ensure that the construction and/or modification addressed in this permit does not constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. Specifically, SO₂ emission limits were lowered to reflect site-specific measurements of sulfur concentration in landfill gas as indicated in the application. NO_x emission limits were lowered and CO limits were increased based on the manufacturer's (Caterpillar, Inc.) performance chart for CO vs. NO_x. [T1R].

7.2.7 Testing Requirements

- a. Within 90 days of a written request from the Illinois EPA, the Permittee shall perform such other emissions and/or performance tests specified by the Illinois EPA. [40 CFR 60.8(a) and 35 IAC 201.282] The 90 day time period will automatically be extended for an additional 60 days upon written request by the Permittee. The Illinois EPA may provide additional time for the performance of these tests upon written request by the Permittee.

7.2.8 Monitoring Requirements

- a. The Permittee shall calibrate, maintain, and operate according to the manufacturer's specifications, equipment that will enable the continuous monitoring of each engine's hours of operation. [40 CFR 60.13(i), 60.752(e), and 35 IAC 201.281]
- b. The Permittee shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment: [40 CFR 60.756(b) and 35 IAC 201.281]
 - i. A gas flow rate measuring device that shall record the flow to the control system (e.g., the total combined gas flow to all the engines) at least every 15 minutes;
 - ii. A gas flow rate measuring device that provides a measurement of gas flow to or bypass of the

control system. The owner or operator shall either:

- A. Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control system at least every 15 minutes; or
- B. Secure the bypass line valve(s) 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(s) are maintained in the closed position and that the gas flow is not diverted through the bypass line(s).

7.2.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected engines to demonstrate compliance with Condition 5.5.1, 6.1.3 and 6.1.6 pursuant to Section 39.5(7)(b) of the Act:

- a. Monthly landfill gas volumetric throughput through the active gas collection system to the affected engines.
- b. Landfill gas methane content and net heating content (Btu/cubic foot) determined on at least an annual basis.
- c. Operating hours for each affected engine per month.
- d. Engine timing and percent oxygen in the exhaust, whenever a timing change is made.
- e. Any additional landfill gas analyses that may be conducted during the normal operation of the gas collection system.
- f. The Permittee keep up-to-date, readily accessible records for the life of the control system of the data listed in 40 CFR 60.758(b)(2) 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 engine specifications shall be maintained until removal.

- i. Any operating parameters that are continuously monitored and recorded that are associated with proper operation of the engines.
 - ii. The NMOC reduction efficiency or parts per million by volume emission rate determined as specified in 40 CFR 60.752(b)(2)(iii)(B).
- g. The Permittee shall keep records of the equipment operating parameters specified to be monitored in 40 CFR 60.756(b) and (d) 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.
- h. The Permittee shall keep records of any periods of operation during which any engine exceed the operating parameters preset by the engine manufacture or those established by the most recent performance test at which compliance with 40 CFR 60.752(b)(2)(iii) was determined. These incidents shall also be reported under 40 CFR 60.757(f).
- i. The Permittee shall keep up-to-date, records of the indication of flow to the control system or the monitoring conducted pursuant to Condition 7.2.8(c). This includes but is not limited to an indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under 40 CFR 60.756. [40 CFR 60.758(c)(2)]
- j. The Permittee shall maintain records of the following items for the control system in order to demonstrate compliance with Conditions 5.5, 7.2.5 and 7.2.6;
- i. Annual landfill gas usage determined each month based on the current month of records usage plus the usage for the preceding 11 months;
 - ii. Total hours of operation per year for the control system (e.g., the total combined hours of operation of all the engines) determined each month based on the current month of records hours of operation for the control system plus the hours of operation for the control system for the preceding 11 months;
 - iii. Total annual NO_x, PM, SO₂, CO, and VOM emissions from the engines, based on the current month of records months landfill gas usage plus the usage for the preceding 11 and

the applicable emission factors, with supporting calculations;

- vi. Total annual NO_x, PM, SO₂, CO, and VOM emissions from the engines, based on the current month of records months landfill gas usage plus the usage for the preceding 11 and the applicable emission factors, with supporting calculations;
- k. Records shall be retained for five years and shall be readily available for inspection and copying by the Illinois EPA upon request. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.

7.2.10 Reporting Requirements

- a. The Permittee shall promptly notify the Illinois EPA, Compliance Section of deviations of the affected engines with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:
 - i. Emissions of HAP, VOM, PM, CO, SO₂ or NO_x in excess of the limits in Condition 5.5 or 7.2.6, calculated by using emission factors and equation from Condition 7.2.12 based on the current month's records plus the preceding 11 months within 30 days of such an occurrence.
 - ii. Notification within 60 days of operation of an affected engine that may not have been in compliance with the opacity limitations of Condition 5.2.2, as determined from the records required by Condition 7.2.9(e), with a copy of such record for each incident.
 - iii. If there is any other exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA within 30 days after the exceedance. The report shall include the emissions released in accordance with recordkeeping requirements, a copy of the relevant records, and a description of the exceedances or violation and efforts to reduce emissions and future occurrences.

- b. The Permittee shall submit to the Illinois EPA annual reports of the following information. The initial annual report shall be submitted within 180 days of installation and start-up of the control system, and shall include the initial performance test report required under 40 CFR 60.8. Thereafter, these reports shall be submitted with the annual emissions report, as required under 35 IAC Part 254. [40 CFR 60.757(f)]
- i. Description and duration of all periods when the gas stream is diverted from the control system through a bypass line or the indication of bypass flow as specified under 40 CFR 60.756 [40 CFR 60.757(f)(2)].
 - ii. Description and duration of all periods when the control system was not operating for a period exceeding 1 hour and length of time the control system was not operating [40 CFR 60.757(f)(3)].
 - iii. Other reportable exceedances as shown in Condition 7.2.9(c) and (d) and defined under 40 CFR 60.758(c).
 - iv. Annual engines VOM, PM, CO, SO₂ and NO_x emissions, with calculations, based upon the compliance procedures in Condition 7.2.12.
 - v. If applicable, the annual NO_x, PM, SO₂, CO, and VOM emissions which exceeded the annual limitations in Conditions 5.5 and 7.2.6, if any.

If there have been no exceedances during the prior calendar year the Annual Emissions Report shall include a statement to that effect.

7.2.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.2.12 Compliance Procedures

- a. Compliance with the emission limits in Condition 7.2.6 and 5.5 shall be based on the recordkeeping requirements in Condition 7.2.9 and calculated based on the representative emission factors listed below:

NO_x and CO emissions shall be calculated based upon engine timing, oxygen concentration in the exhaust

and the equipment manufacturers (Caterpillar) performance chart for NO_x vs. O₂% and CO vs. NO_x.

Pollutant	Emissions Factors (Lb/hr)
VOM	0.28
PM	0.046
SO ₂	0.71

Emission factors are based on site specific data as indicated in the application.

7.3 Unit: Solidification Process

7.3.1 Description

Liquid wastes are solidified in a solidification box. The final product is then suitable for placing in the landfill.

7.3.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Solidification Process	Solidification of Wastes by Addition and Mixing of a Reagent.	None

7.3.3 Applicability Provisions and Applicable Regulations

a. The "affected solidification process" for the purpose of these unit-specific conditions, is the solidification mixing described in Condition 7.3.1 and 7.3.2.

b. The affected solidification process is subject to the emission limits identified in Condition 5.2.2.

c. The affected solidification process is subject to 35 IAC 212.321(a), which provides that:

No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 (see also Attachment 10.1) [35 IAC 212.321(a)].

d. The affected solidification process is subject to 35 IAC 219.301 - Use of Organic Material:

No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from any emission unit, except as provided in 35 IAC 219.302, 219.303, or 219.304 and the following exception: If no odor nuisance exists the limitation of 35 IAC 219.301 shall only apply to photochemically reactive material [35 IAC 219.301].

7.3.4 Non-Applicability of Regulations of Concern

N/A

7.3.5 Operational and Production Limits and Work Practices

None

7.3.6 Emission Limitations

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.3.7 Testing Requirements

None

7.3.8 Monitoring Requirements

None

7.3.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected solidification process to demonstrate compliance with Conditions 5.5.1, 7.3.3 and 7.3.6 pursuant to Section 39.5(7)(b) of the Act:

- a. The amount of waste solidified (ton/mo)

7.3.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected solidification process with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

- a. Emissions from the affected solidification process in excess of the limits specified in Condition 7.3.3 within 30 days of such occurrence.

7.3.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to the affected solidification process without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

- a. Location of the affected solidification process on the sources property.

7.3.12 Compliance Procedures

Compliance with Conditions 5.5.1, 5.5.3 and 7.3.3(c) and (d) shall be determined using the recordkeeping requirements of Condition 7.3.9 and the formulas listed below:

- a. For the purpose of estimating VOM emissions from the affected solidification process the appropriate AP-42 Emission Factors is acceptable.
- b. Solidification Emissions PM (lb) = Material through the Solidification Process (ton) x Emission Factor (1.5 lb/ton)
- c. Solidification Emissions PM₁₀ (lb) = Material through the Solidification Process (ton) x Emission Factor (1 lb/ton)

The PM and PM₁₀ emission factors are based on standard AP-42, Section 13.2.1 and 13.2.2.

7.4 Unit: Engine

7.4.1 Description

One engine rated at 300 hp used to drive tub grinder for waste composting.

7.4.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Tub Grinder Engine	Engine Used to Drive Tub Grinder for Waste Composting	None

7.4.3 Applicability Provisions and Applicable Regulations

- a. The "affected engine" for the purpose of these unit-specific conditions is the tub grinder described in Condition 7.4.1 and 7.4.2.
- b. The affected engine is subject to the emission limits identified in Condition 5.2.2.
- c. The affected engine is subject to 35 IAC 214.301, which provides that:

No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to exceed 2000 ppm [35 IAC 214.301].

- d. The affected engine is subject to 35 IAC 219.301, which provides that:

No person shall cause or allow the discharge of more than 3.6 Kg/Hr (8 Lb/Hr) of organic material into the atmosphere from any emission unit, except as provided in the following exception: If no odor nuisance exists the limitation of this Condition shall apply only to photochemically reactive material [35 IAC 219.301].

7.4.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected engine not being subject to the requirements of 35 IAC 212.321 or 212.322 because due to the unique nature of this unit, a process weight rate weight cannot be set so that such rules cannot reasonably be applied.

7.4.5 Operational and Production Limits and Work Practices

- a. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate the affected engine

in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Illinois EPA or the USEPA which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source [40 CFR 60.11(d)].

7.4.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected engine is subject to the following:

- a. Emissions from the affected tub grinder engine shall not exceed the following limits:

Pollutant	Emissions	
	(Lb/hr)	(Ton/yr)
PM	0.65	2.85
NO _x	9.26	40.56
SO ₂	0.61	2.67
CO	2.00	8.74
VOC	0.90	3.96

These limits are based on the maximum hours of operation (8760 hours), maximum rate of firing of 2.1 MBtu/hr and AP-42 emission factors in Table 3.3-1, as indicated in the application. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1N].

The above limitations are being established in this permit pursuant to Title I of the CAA, specifically 35 IAC Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (PSD). The Illinois EPA is establishing emission limitations and other appropriate terms and conditions in this permit that limit the emissions from the affected engine below the levels that would trigger the applicability of these rules, consistent with the information provided in the CAAPP application [T1N].

7.4.7 Testing Requirements

None

7.4.8 Monitoring Requirements

None

7.4.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected engine to demonstrate compliance with Conditions 5.5.1, 7.4.3 and 7.4.6 pursuant to Section 39.5(7)(b) of the Act:

- a. Operating hours of the affected engine.
- b. Total annual emissions of VOM, PM, CO, SO₂ and NO_x emissions from each of the affected engine.
- c. A maintenance and repair log for the affected engine, listing each activity performed with date.

7.4.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of deviations of the affected engine with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

- a. Emissions of VOM, PM, CO, SO₂ or NO_x in excess of the limits in Condition 5.5.1, calculated by using emission factors and equation from Condition 7.4.12 based on the current month's records plus the preceding 11 months within 30 days of such an occurrence.

7.4.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.4.12 Compliance Procedures

- a. Compliance with the limits in Conditions 5.5.1 and shall be based on the monitoring and recordkeeping requirements in Condition 7.4.8 and 7.4.9, respectively and the emission factors and formulas listed below:

Pollutant	Emission Rates (Lb/MBtu)
PM	0.31
NO _x	4.41
SO ₂	0.29
VOM	0.43
CO	0.95

Emission factors are based upon AP-42, Section 3.3 Table 3.3-1, for engines using distillate fuel oil.

- b. Compliance with Condition 7.4.3(c) (35 IAC 214.301) and 7.4.3(d) (35 IAC 219.301) is considered to be assured based on historical operation along with the Permittee meeting the requirements of Condition 7.4.5.

8.0 GENERAL PERMIT CONDITIONS

8.1 Permit Shield

Pursuant to Section 39.5(7)(j) of the Act, the Permittee has requested and has been granted a permit shield. This permit shield provides that compliance with the conditions of this permit shall be deemed compliance with applicable requirements which were applicable as of the date the proposed permit for this source was issued, provided that either the applicable requirements are specifically identified within this permit, or the Illinois EPA, in acting on this permit application, has determined that other requirements specifically identified are not applicable to this source and this determination (or a concise summary thereof) is included in this permit.

This permit shield does not extend to applicable requirements which are promulgated after October 2, 2002 (the date of issuance of the draft permit) unless this permit has been modified to reflect such new requirements.

8.2 Applicability of Title IV Requirements (Acid Deposition Control)

This source is not an affected source under Title IV of the CAA and is not subject to requirements pursuant to Title IV of the CAA.

8.3 Emissions Trading Programs

No permit revision shall be required for increases in emissions allowed under any USEPA approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for elsewhere in this permit and that are authorized by the applicable requirement [Section 39.5(7)(o)(vii) of the Act].

As of the date of issuance of this permit, there are no such economic incentive, marketable permit or emission trading programs that have been approved by USEPA.

8.4 Operational Flexibility/Anticipated Operating Scenarios

8.4.1 Changes Specifically Addressed by Permit

Physical or operational changes specifically addressed by the Conditions of this permit that have been identified as not requiring Illinois EPA notification may be implemented without prior notice to the Illinois EPA.

8.4.2 Changes Requiring Prior Notification

The Permittee is authorized to make physical or operational changes that contravene express permit terms without

applying for or obtaining an amendment to this permit, provided that [Section 39.5(12)(a)(i) of the Act]:

- a. The changes do not violate applicable requirements;
- b. The changes do not contravene federally enforceable permit terms or conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements;
- c. The changes do not constitute a modification under Title I of the CAA;
- d. Emissions will not exceed the emissions allowed under this permit following implementation of the physical or operational change; and
- e. The Permittee provides written notice to the Illinois EPA, Division of Air Pollution Control, Permit Section, at least 7 days before commencement of the change. This notice shall:
 - i. Describe the physical or operational change;
 - ii. Identify the schedule for implementing the physical or operational change;
 - iii. Provide a statement of whether or not any New Source Performance Standard (NSPS) is applicable to the physical or operational change and the reason why the NSPS does or does not apply;
 - iv. Provide emission calculations which demonstrate that the physical or operational change will not result in a modification; and
 - v. Provide a certification that the physical or operational change will not result in emissions greater than authorized under the Conditions of this permit.

8.5 Testing Procedures

Tests conducted to measure composition of materials, efficiency of pollution control devices, emissions from process or control equipment, or other parameters shall be conducted using standard test methods. Documentation of the test date, conditions, methodologies, calculations, and test results shall be retained pursuant to the recordkeeping procedures of this permit. Reports of any tests conducted as required by this permit or as the result of a request by the Illinois EPA shall be submitted as specified in Condition 8.6.

8.6 Reporting Requirements

8.6.1 Monitoring Reports

If monitoring is required by any applicable requirements or conditions of this permit, a report summarizing the required monitoring results, as specified in the conditions of this permit, shall be submitted to the Air Compliance Section of the Illinois EPA every six months as follows [Section 39.5(7)(f) of the Act]:

<u>Monitoring Period</u>	<u>Report Due Date</u>
January - June	September 1
July - December	March 1

All instances of deviations from permit requirements must be clearly identified in such reports. All such reports shall be certified in accordance with Condition 9.9.

8.6.2 Test Notifications

Unless otherwise specified elsewhere in this permit, a written test plan for any test required by this permit shall be submitted to the Illinois EPA for review at least 60 days prior to the testing pursuant to Section 39.5(7)(a) of the Act. The notification shall include at a minimum:

- a. The name and identification of the affected unit(s);
- b. The person(s) who will be performing sampling and analysis and their experience with similar tests;
- c. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating parameters for the source and any control equipment will be determined;
- d. The specific determination of emissions and operation which are intended to be made, including sampling and monitoring locations;
- e. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods;
- f. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification; and

- g. Any proposed use of an alternative test method, with detailed justification.

8.6.3 Test Reports

Unless otherwise specified elsewhere in this permit, the results of any test required by this permit shall be submitted to the Illinois EPA within 60 days of completion of the testing. The test report shall include at a minimum [Section 39.5(7)(e)(i) of the Act]:

- a. The name and identification of the affected unit(s);
- b. The date and time of the sampling or measurements;
- c. The date any analyses were performed;
- d. The name of the company that performed the tests and/or analyses;
- e. The test and analytical methodologies used;
- f. The results of the tests including raw data, and/or analyses including sample calculations;
- g. The operating conditions at the time of the sampling or measurements; and
- h. The name of any relevant observers present including the testing company's representatives, any Illinois EPA or USEPA representatives, and the representatives of the source.

8.6.4 Reporting Addresses

- a. The following addresses should be utilized for the submittal of reports, notifications, and renewals:
 - i. Illinois EPA - Air Compliance Section

Illinois Environmental Protection Agency
Bureau of Air
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276
 - ii. Illinois EPA - Air Regional Field Office

Illinois Environmental Protection Agency
Division of Air Pollution Control
2009 Mall Street
Collinsville, Illinois 62234

iii. Illinois EPA - Air Permit Section (MC 11)

Illinois Environmental Protection Agency
Division of Air Pollution Control
Permit Section
P.O. Box 19506
Springfield, Illinois 62794-9506

iv. USEPA Region 5 - Air Branch

USEPA (AE - 17J)
Air & Radiation Division
77 West Jackson Boulevard
Chicago, Illinois 60604

- b. Unless otherwise specified in the particular provision of this permit, reports shall be sent to the Illinois EPA - Air Compliance Section with a copy sent to the Illinois EPA - Air Regional Field Office.

8.7 Obligation to Comply with Title I Requirements

Any term, condition, or requirement identified in this permit by T1, T1R, or T1N is established or revised pursuant to 35 IAC Part 203 or 40 CFR 52.21 ("Title I provisions") and incorporated into this permit pursuant to both Section 39.5 and Title I provisions. Notwithstanding the expiration date on the first page of this permit, the Title I conditions remain in effect pursuant to Title I provisions until the Illinois EPA deletes or revises them in accordance with Title I procedures.

9.0 STANDARD PERMIT CONDITIONS

9.1 Effect of Permit

9.1.1 The issuance of this permit does not release the Permittee from compliance with State and Federal regulations which are part of the Illinois State Implementation Plan, as well as with other applicable statutes and regulations of the United States or the State of Illinois or applicable ordinances, except as specifically stated in this permit and as allowed by law and rule [Section 39.5(7)(j)(iv) of the Act].

9.1.2 In particular, this permit does not alter or affect the following:

- a. The provisions of Section 303 (emergency powers) of the CAA, including USEPA's authority under that Section;
- b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
- c. The applicable requirements of the acid rain program consistent with Section 408(a) of the CAA; and
- d. The ability of USEPA to obtain information from a source pursuant to Section 114 (inspections, monitoring, and entry) of the CAA.

9.1.3 Notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

9.2 General Obligations of Permittee

9.2.1 Duty to Comply

The Permittee must comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the CAA and the Act, and is grounds for any or all of the following: enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application [Section 39.5(7)(o)(i) of the Act].

The Permittee shall meet applicable requirements that become effective during the permit term in a timely manner unless an alternate schedule for compliance with the applicable requirement is established.

9.2.2 Duty to Maintain Equipment

The Permittee shall maintain all equipment covered under this permit in such a manner that the performance or operation of such equipment shall not cause a violation of applicable requirements.

9.2.3 Duty to Cease Operation

No person shall cause, threaten or allow the continued operation of any emission unit during malfunction or breakdown of the emission unit or related air pollution control equipment if such operation would cause a violation of an applicable emission standard, regulatory requirement, ambient air quality standard or permit limitation unless such malfunction or breakdown is allowed by a permit condition [Section 39.5(6)(c) of the Act].

9.2.4 Disposal Operations

The source shall be operated in such a manner that the disposal of air contaminants collected by the equipment operations, or activities shall not cause a violation of the Act or regulations promulgated thereunder.

9.2.5 Duty to Pay Fees

The Permittee must pay fees to the Illinois EPA consistent with the fee schedule approved pursuant to Section 39.5(18) of the Act, and submit any information relevant thereto [Section 39.5(7)(o)(vi) of the Act]. The check should be payable to "Treasurer, State of Illinois" and sent to: Fiscal Services Section, Illinois Environmental Protection Agency, P.O. Box 19276, Springfield, Illinois 62794-9276.

9.3 Obligation to Allow Illinois EPA Surveillance

Upon presentation of proper credentials and other documents, the Permittee shall allow the Illinois EPA, or an authorized representative to perform the following [Section 39.5(7)(a) and (p)(ii) of the Act and 415 ILCS 5/4]:

- a. Enter upon the Permittee's premises where an actual or potential emission unit is located; where any regulated equipment, operation, or activity is located or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect during hours of operation any sources, equipment (including monitoring and air pollution control

equipment), practices, or operations regulated or required under this permit;

- d. Sample or monitor any substances or parameters at any location:
 - i. At reasonable times, for the purposes of assuring permit compliance; or
 - ii. As otherwise authorized by the CAA, or the Act.
- e. Obtain and remove samples of any discharge or emission of pollutants authorized by this permit; and
- f. Enter and utilize any photographic, recording, testing, monitoring, or other equipment for the purposes of preserving, testing, monitoring, or recording any activity, discharge or emission at the source authorized by this permit.

9.4 Obligation to Comply With Other Requirements

The issuance of this permit does not release the Permittee from applicable State and Federal laws and regulations, and applicable local ordinances addressing subjects other than air pollution control.

9.5 Liability

9.5.1 Title

This permit shall not be considered as in any manner affecting the title of the premises upon which the permitted source is located.

9.5.2 Liability of Permittee

This permit does not release the Permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the sources.

9.5.3 Structural Stability

This permit does not take into consideration or attest to the structural stability of any unit or part of the source.

9.5.4 Illinois EPA Liability

This permit in no manner implies or suggests that the Illinois EPA (or its officers, agents or employees) assumes any liability, directly or indirectly, for any

loss due to damage, installation, maintenance, or operation of the source.

9.5.5 Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege [Section 39.5(7)(o)(iv) of the Act].

9.6 Recordkeeping

9.6.1 Control Equipment Maintenance Records

A maintenance record shall be kept on the premises for each item of air pollution control equipment. As a minimum, this record shall show the dates of performance and nature of preventative maintenance activities.

9.6.2 Records of Changes in Operation

A record shall be kept describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under this permit, and the emissions resulting from those changes [Section 39.5(12)(b)(iv) of the Act].

9.6.3 Retention of Records

- a. Records of all monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit [Section 39.5(7)(e)(ii) of the Act].
- b. Other records required by this permit shall be retained for a period of at least 5 years from the date of entry unless a longer period is specified by a particular permit provision.

9.7 Annual Emissions Report

The Permittee shall submit an annual emissions report to the Illinois EPA, Compliance Section no later than May 1 of the following year, as required by 35 IAC Part 254.

9.8 Requirements for Compliance Certification

Pursuant to Section 39.5(7)(p)(v) of the Act, the Permittee shall submit annual compliance certifications. The compliance

certifications shall be submitted no later than May 1 or more frequently as specified in the applicable requirements or by permit condition. The compliance certifications shall be submitted to the Air Compliance Section, Air Regional Field Office, and USEPA Region 5 - Air Branch. The addresses for the submittal of the compliance certifications are provided in Condition 8.6.4 of this permit.

- a. The certification shall include the identification of each term or condition of this permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, both currently and over the reporting period consistent with the conditions of this permit.
- b. All compliance certifications shall be submitted to USEPA Region 5 in Chicago as well as to the Illinois EPA.
- c. All compliance reports required to be submitted shall include a certification in accordance with Condition 9.9.

9.9 Certification

Any document (including reports) required to be submitted by this permit shall contain a certification by a responsible official of the Permittee that meets the requirements of Section 39.5(5) of the Act [Section 39.5(7)(p)(i) of the Act]. An example Certification by a Responsible Official is included as an attachment to this permit.

9.10 Defense to Enforcement Actions

9.10.1 Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit [Section 39.5(7)(o)(ii) of the Act].

9.10.2 Emergency Provision

- a. An emergency shall be an affirmative defense to an action brought for noncompliance with the technology-based emission limitations under this permit if the following conditions are met through properly signed, contemporaneous operating logs, or other relevant evidence:
 - i. An emergency occurred as provided in Section 39.5(7)(k) of the Act and the Permittee can identify the cause(s) of the emergency.

Normally, an act of God such as lightning or flood is considered an emergency;

- ii. The permitted source was at the time being properly operated;
 - iii. The Permittee submitted notice of the emergency to the Illinois EPA within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken; and
 - iv. During the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission limitations, standards, or regulations in this permit.
- b. This provision is in addition to any emergency or upset provision contained in any applicable requirement. This provision does not relieve a Permittee of any reporting obligations under existing federal or state laws or regulations.

9.11 Permanent Shutdown

This permit only covers emission units and control equipment while physically present at the indicated source location(s). Unless this permit specifically provides for equipment relocation, this permit is void for the operation or activity of any item of equipment on the date it is removed from the permitted location(s) or permanently shut down. This permit expires if all equipment is removed from the permitted location(s), notwithstanding the expiration date specified on this permit.

9.12 Reopening and Reissuing Permit for Cause

9.12.1 Permit Actions

This permit may be modified, reopened, and reissued, for cause pursuant to Section 39.5(15) of the Act. The filing of a request by the Permittee for a permit modification, revocation, and reissuance, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition [Section 39.5(7)(o)(iii) of the Act].

9.12.2 Reopening and Revision

This permit must be reopened and revised if any of the following occur [Section 39.5(15)(a) of the Act]:

- a. Additional requirements become applicable to the equipment covered by this permit and three or more years remain before expiration of this permit;
- b. Additional requirements become applicable to an affected source for acid deposition under the acid rain program;
- c. The Illinois EPA or USEPA determines that this permit contains a material mistake or inaccurate statement when establishing the emission standards or limitations, or other terms or conditions of this permit; and
- d. The Illinois EPA or USEPA determines that this permit must be revised to ensure compliance with the applicable requirements of the Act.

9.12.3 Inaccurate Application

The Illinois EPA has issued this permit based upon the information submitted by the Permittee in the permit application. Any misinformation, false statement or misrepresentation in the application shall be grounds for revocation under Section 39.5(15)(b) of the Act.

9.12.4 Duty to Provide Information

The Permittee shall furnish to the Illinois EPA, within a reasonable time specified by the Illinois EPA any information that the Illinois EPA may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to the Illinois EPA copies of records required to be kept by this permit, or for information claimed to be confidential, the Permittee may furnish such records directly to USEPA along with a claim of confidentiality [Section 39.5(7)(o)(v) of the Act].

9.13 Severability Clause

The provisions of this permit are severable, and should any one or more be determined to be illegal or unenforceable, the validity of the other provisions shall not be affected. The rights and obligations of the Permittee shall be construed and enforced as if this permit did not contain the particular provisions held to be invalid and the applicable requirements

underlying these provisions shall remain in force [Section 39.5(7)(i) of the Act].

9.14 Permit Expiration and Renewal

The right to operate terminates on the expiration date unless the Permittee has submitted a timely and complete renewal application. For a renewal to be timely it must be submitted no later than 9 and no sooner than 12 months prior to expiration. The equipment may continue to operate during the renewal period until final action is taken by the Illinois EPA, in accordance with the original permit conditions [Section 39.5(5)(1), (n), and (o) of the Act].

10.0 ATTACHMENTS

10.1 Attachment 1 - Summary of Emission Units

Emission Unit	Description	Date Constructed	Emission Control Equipment
MSW Landfill	Municipal Solid Waste Landfill Consisting of Two Areas, Old Milam and New Milam	<u>Opened:</u> 1965 <u>Latest Expansion:</u> March 1993	Engines, Passive Flares and Backup Utility Flare
Engine/Generator 1	Landfill Gas Fired Internal Combustion Engine Used to Produce Electricity	1990	None
Engine/Generator 2	Landfill Gas Fired Internal Combustion Engine Used to Produce Electricity	1990	None
Engine/Generator 3	Landfill Gas Fired Internal Combustion Engine Used to Produce Electricity	1993	None
Tub Grinder Engine	Engine Used to Drive Tub Grinder for Waste Composting	1994	None
Solidification Process	Solidification of Wastes by Addition and Mixing of a Reagent.	August 1995	None

10.2 Attachment 2 Emissions of Particulate Matter from New Process
Emission Units

10.2.1 Process Emission Units for Which Construction or
Modification Commenced On or After April 14, 1972

- a. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 [35 IAC 212.321(a)].
- b. Interpolated and extrapolated values of the data in subsection (c) of 35 IAC 212.321 shall be determined by using the equation [35 IAC 212.321(b)]:

$$E = A (P)^B$$

Where:

P = Process weight rate; and
E = Allowable emission rate; and,

- i. Up to process weight rates of 408 Mg/hr (450 ton/hr):

	Metric	English
P	Mg/hr	Ton/hr
E	kg/hr	lb/hr
A	1.214	2.54
B	0.534	0.534

- ii. For process weight rate greater than or equal to 408 Mg/hr (450 Ton/hr):

	Metric	English
P	Mg/hr	Ton/hr
E	kg/hr	lb/hr
A	11.42	24.8
B	0.16	0.16

- c. Limits for Process Emission Units For Which Construction or Modification Commenced On or After April 19, 1972 [35 IAC 212.321(c)]:

Metric		English	
P	E	P	E
Mg/hr	kg/hr	Ton/hr	lb/hr
0.05	0.25	0.05	0.55
0.1	0.29	0.10	0.77
0.2	0.42	0.2	1.10
0.3	0.64	0.30	1.35
0.4	0.74	0.40	1.58
0.5	0.84	0.50	1.75
0.7	1.00	0.75	2.40
0.9	1.15	1.00	2.60
1.8	1.66	2.00	3.70
2.7	2.1	3.00	4.60
3.6	2.4	4.00	5.35
4.5	2.7	5.00	6.00
9.0	3.9	10.00	8.70
13.0	4.8	15.00	10.80
18.0	5.7	20.00	12.50
23.0	6.5	25.00	14.00
27.0	7.1	30.00	15.60
32.0	7.7	35.00	17.00
36.0	8.2	40.00	18.20
41.0	8.8	45.00	19.20
45.0	9.3	50.00	20.50
90.0	13.4	100.00	29.50
140.0	17.0	150.00	37.00
180.0	19.4	200.00	43.00
230.0	22.0	250.00	48.50
270.0	24.0	300.00	53.00
320.0	26.0	350.00	58.00
360.0	28.0	400.00	62.00
408.0	30.1	450.00	66.00
454.0	30.4	500.00	67.00

10.3 Attachment 3 - Example Certification by a Responsible Official

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____

Name: _____

Official Title: _____

Telephone No.: _____

Date Signed: _____

10.4 Attachment 4 - Guidance on Revising This Permit

The Permittee must submit an application to the Illinois EPA using the appropriate revision classification in accordance with Sections 39.5(13) and (14) of the Act and 35 IAC 270.302. Specifically, there are currently three classifications for revisions to a CAAPP permit. These are:

1. Administrative Permit Amendment;
2. Minor Permit Modification; and
3. Significant Permit Modification.

The Permittee must determine, request, and submit the necessary information to allow the Illinois EPA to use the appropriate procedure to revise the CAAPP permit. A brief explanation of each of these classifications follows.

1. Administrative Permit Amendment
 - Corrects typographical errors;
 - Identifies a change in the name, address, or phone number of any person identified in the permit, or provides a similar minor administrative change at the source;
 - Requires more frequent monitoring or reporting by the Permittee;
 - Allows for a change in ownership or operational control of the source where no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new Permittees has been submitted to the Illinois EPA;
 - Incorporates into the CAAPP permit a construction permit, provided the conditions of the construction permit meet the requirements for the issuance of CAAPP permits; or
 - Incorporates into the CAAPP permit revised limitations or other requirements resulting from the application of an approved economic incentives rule, marketable permits rule, or generic emissions trading rule.
2. Minor Permit Modification
 - Do not violate any applicable requirement;

- Do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit;
- Do not require a case-by-case determination of an emission limitation or other standard, or a source-specific determination of ambient impacts, or a visibility or increment analysis;
- Do not seek to establish or change a permit term or condition for which there is no corresponding underlying requirement and which avoids an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
 - A federally enforceable emissions cap assumed to avoid classification as a modification under any provision of Title I of the CAA; and
 - An alternative emissions limit approved pursuant to regulations promulgated under Section 112(i)(5) of the CAA.
- Are not modifications under any provision of Title I of the CAA; and
- Are not required to be processed as a significant permit modification.

An application for a minor permit modification shall include the following:

- A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;
- The source's suggested draft permit/conditions;
- Certification by a responsible official that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used; and
- Information as contained on form 271-CAAPP for the Illinois EPA to use to notify USEPA and affected States.

3. Significant Permit Modification

- Applications that do not qualify as either minor permit modifications or as administrative permit amendments;
- Applications requesting a significant change in existing monitoring permit terms or conditions;
- Applications requesting a relaxation of reporting or recordkeeping requirements; and
- Cases in which, in the judgment of the Illinois EPA, action on an application for modification would require decisions to be made on technically complex issues.

An application for a significant permit modification shall include the following:

- A detailed description of the proposed change(s), including all physical changes to equipment, changes in the method of operation, changes in emissions of each pollutant, and any new applicable requirements which will apply as a result of the proposed change. Note that the Permittee need only submit revised forms for equipment and operations that will be modified.

The Illinois EPA requires the information on the following appropriate forms to be submitted in accordance with the proper classification:

- Form 273-CAAPP, REQUEST FOR ADMINISTRATIVE PERMIT AMENDMENT FOR CAAPP PERMIT; or
- Form 271-CAAPP, MINOR PERMIT MODIFICATION FOR CAAPP PERMIT; or
- Form 200-CAAPP, APPLICATION FOR CAAPP PERMIT (for significant modification).

Application forms can be obtained from the Illinois EPA website at <http://www.epa.state.il.us/air/forms>.

Note that the request to revise the permit must be certified for truth, accuracy, and completeness by a responsible official.

Note that failure to submit the required information may require the Illinois EPA to deny the application. The Illinois EPA reserves the right to require that additional information be submitted as needed to evaluate or take final action on applications pursuant to Section 39.5(5)(g) of the Act and 35 IAC 270.305.



Illinois Environmental Protection Agency
Division Of Air Pollution Control -- Permit Section
P.O. Box 19506
Springfield, Illinois 62794-9506

Application For Construction Permit (For CAAPP Sources Only)	For Illinois EPA use only
	I.D. number:
	Permit number:
	Date received:

This form is to be used by CAAPP sources to supply information necessary to obtain a construction permit. Please attach other necessary information and completed CAAPP forms regarding this construction/modification project.

Source Information		
1. Source name:		
2. Source street address:		
3. City:	4. Zip code:	
5. Is the source located within city limits? <input type="checkbox"/> Yes <input type="checkbox"/> No		
6. Township name:	7. County:	8. I.D. number:

Owner Information		
9. Name:		
10. Address:		
11. City:	12. State:	13. Zip code:

Operator Information (if different from owner)		
14. Name		
15. Address:		
16. City:	17. State:	18. Zip code:

Applicant Information	
19. Who is the applicant? <input type="checkbox"/> Owner <input type="checkbox"/> Operator	20. All correspondence to: (check one) <input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> Source
21. Attention name and/or title for written correspondence:	
22. Technical contact person for application:	23. Contact person's telephone number:

This Agency is authorized to require and you must disclose this information under 415 ILCS 5/39. Failure to do so could result in the application being denied and penalties under 415 ILCS 5 et seq. It is not necessary to use this form in providing this information. This form has been approved by the forms management center.

Summary Of Application Contents	
24. Does the application address whether the proposed project would constitute a new major source or major modification under each of the following programs: a) Non-attainment New Source Review – 35 IAC Part 203; b) Prevention of Significant Deterioration (PSD) – 40 CFR 52.21; c) Hazardous Air Pollutants: Regulations Governing Constructed or Reconstructed Major Sources – 40 CFR Part 63?	<input type="checkbox"/> Yes <input type="checkbox"/> No
25. Does the application identify and address all applicable emissions standards, including those found in the following: a) Board Emission Standards – 35 IAC Chapter I, Subtitle B; b) Federal New Source Performance Standards – 40 CFR Part 60; c) Federal Standards for Hazardous Air Pollutants – 40 CFR Parts 61 and 63?	<input type="checkbox"/> Yes <input type="checkbox"/> No
26. Does the application include a process flow diagram(s) showing all emission units and control equipment, and their relationship, for which a permit is being sought?	<input type="checkbox"/> Yes <input type="checkbox"/> No
27. Does the application include a complete process description for the emission units and control equipment for which a permit is being sought?	<input type="checkbox"/> Yes <input type="checkbox"/> No
28. Does the application include the information as contained in completed CAAPP forms for all appropriate emission units and air pollution control equipment, listing all applicable requirements and proposed exemptions from otherwise applicable requirements, and identifying and describing any outstanding legal actions by either the USEPA or the Illinois EPA? Note: The use of "APC" application forms is not appropriate for applications for CAAPP sources. CAAPP forms should be used to supply information.	<input type="checkbox"/> Yes <input type="checkbox"/> No
29. If the application contains TRADE SECRET information, has such information been properly marked and claimed, and have two separate copies of the application suitable for public inspection and notice been submitted, in accordance with applicable rules and regulations?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable, No TRADE SECRET information in this application

Note 1: Answering "No" to any of the above may result in the application being deemed incomplete.

Signature Block	
This certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete.	
30. I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in this application are true, accurate and complete. Authorized Signature: BY: _____ <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> _____ <small>AUTHORIZED SIGNATURE</small> </div> <div style="text-align: center;"> _____ <small>TITLE OF SIGNATORY</small> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> _____ <small>TYPED OR PRINTED NAME OF SIGNATORY</small> </div> <div style="text-align: center;"> _____ / _____ / _____ <small>DATE</small> </div> </div>	

Note 2: An operating permit for the construction/modification permitted in a construction permit must be obtained by applying for the appropriate revision to the source's CAAPP permit, if necessary.

10.6 Attachment 6 - Guidance on Renewing This Permit

Timeliness - Pursuant to Section 39.5(5)(n) of the Act and 35 IAC 270.301(d), a source must submit to the Illinois EPA a complete CAAPP application for the renewal of a CAAPP permit not later than 9 months before the date of permit expiration of the existing CAAPP permit in order for the submittal to be deemed timely. Note that the Illinois EPA typically sends out renewal notices approximately 18 months prior to the expiration of the CAAPP permit.

The CAAPP application must provide all of the following information in order for the renewal CAAPP application to be deemed complete by the Illinois EPA:

1. A completed renewal application form 200-CAAPP, APPLICATION FOR CAAPP PERMIT.
2. A completed compliance plan form 293-CAAPP, COMPLIANCE PLAN/SCHEDULE OF COMPLIANCE FOR CAAPP PERMIT.
3. A completed compliance certification form 296-CAAPP, COMPLIANCE CERTIFICATION, signed by the responsible official.
4. Any applicable requirements that became effective during the term of the permit and that were not included in the permit as a reopening or permit revision.
5. If this is the first time this permit is being renewed and this source has not yet addressed CAM, the application should contain the information on form 464-CAAPP, COMPLIANCE ASSURANCE MONITORING (CAM) PLAN.
6. Information addressing any outstanding transfer agreement pursuant to the ERMS.
7. a. If operations of an emission unit or group of emission units remain unchanged and are accurately depicted in previous submittals, the application may contain a letter signed by a responsible official that requests incorporation by reference of existing information previously submitted and on file with the Illinois EPA. This letter must also include a statement that information incorporated by reference is also being certified for truth and accuracy by the responsible official's signing of the form 200-CAAPP, APPLICATION FOR CAAPP PERMIT and the form 296-CAAPP, COMPLIANCE CERTIFICATION. The boxes should be marked yes on form 200-CAAPP, APPLICATION FOR CAAPP PERMIT, as existing information is being incorporated by reference.

- b. If portions of current operations are not as described in previous submittals, then in addition to the information above for operations that remain unchanged, the application must contain the necessary information on all changes, e.g., discussion of changes, new or revised CAAPP forms, and a revised fee form 292-CAAPP, FEE DETERMINATION FOR CAAPP PERMIT, if necessary.
8. Information about all off-permit changes that were not prohibited or addressed by the permit to occur without a permit revision and the information must be sufficient to identify all applicable requirements, including monitoring, recordkeeping, and reporting requirements, for such changes.
9. Information about all changes made under 40 CFR 70.4(b)(12)(i) and (ii) that require a 7-day notification prior to the change without requiring a permit revision.

The Illinois EPA will review all applications for completeness and timeliness. If the renewal application is deemed both timely and complete, the source shall continue to operate in accordance with the terms and conditions of its CAAPP permit until final action is taken on the renewal application.

Notwithstanding the completeness determination, the Illinois EPA may request additional information necessary to evaluate or take final action on the CAAPP renewal application. If such additional information affects your allowable emission limits, a revised form 292-CAAPP, FEE DETERMINATION FOR CAAPP PERMIT must be submitted with the requested information. The failure to submit to the Illinois EPA the requested information within the time frame specified by the Illinois EPA, may force the Illinois EPA to deny your CAAPP renewal application pursuant to Section 39.5 of the Act.

Application forms may be obtained from the Illinois EPA website at <http://www.epa.state.il.us/air/forms.html>.

If you have any questions regarding this matter, please contact a permit analyst at 217/782-2113.

Mail renewal applications to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Permit Section (MC 11)
P.O. Box 19506
Springfield, Illinois 62794-9506

MVH:psj