

- iv. For the purpose of this permit, the landfill with expansion is referred to as the "affected landfill." The revised LFG collection system for the affected landfill, i.e., the landfill with expansion, is referred to as the "affected gas collection system." The revised LFG collection and control system for the affected landfill is referred to as the "affected collection and control system" (affected GCCS). The new gas-to-energy facility is referred to as the "affected new engine facility." The engines in the affected new facility are referred to as the "affected new engines". The additional flare is referred to as the "affected new flare."
- b. In issuing this permit, the Illinois EPA has also determined that the revised Gas Collection and Control System Design Plan (GCCS Design Plan) for the affected landfill, submitted by the Permittee with this application, is acceptable and meets the requirements of 40 CFR 60.752(b)(2)(i)(A), (B), and (C).

Note: This revised GCCS Design Plan addresses the planned changes to the Gas Collection and Control System to address the expansion of the landfill and replaces the previously approved GCCS Design Plan dated June 2006. The Permittee must get approval from the Illinois EPA for any future revisions to the GCCS Design Plan.

2. Other Requirements

- a. This permit does not excuse the Permittee from its responsibility to comply with the applicable testing, monitoring, recordkeeping, and reporting requirements for the affected GCCS established in the current CAAPP permit issued for the source, i.e., the existing landfill and existing gas-to-energy facility.
- b.
 - i. This permit does not relieve the Permittee of the responsibility to comply with all Local, State and Federal Regulations which are part of the applicable Illinois State Implementation Plan, as well as all other applicable Federal, State and Local requirements.
 - ii. In particular, this permit does not excuse the Permittee from the obligation to undertake further actions at the source as may be needed to eliminate air pollution, including nuisance due to odors, such as implementation of additional work practices for handling of waste or enhancements to the gas collection system.
- c. This permit is issued based on this project not being a major project for purposes of the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21. This is because the existing source, i.e., the existing landfill and associated gas-to-energy facility operated by the Winnebago Energy, is not a major source of emissions for regulated NSR pollutants for purposes of PSD. (See Condition 7(c).) This project, i.e., the

expansion of the landfill, the new gas-to-energy facility, and the additional flare, is also not a major source for emissions of regulated NSR pollutants for purposes of PSD. (See Condition 7(b).)

- d. This permit is also issued based on this source not being a major source for emissions of hazardous air pollutants (HAPs).

3-1. Applicable Federal Emission Standards for Municipal Solid Waste (MSW) Landfills

- a. The affected landfill is subject to the New Source Performance Standards (NSPS) for Municipal Solid Waste Landfills, 40 CFR 60 Subpart WWW (the Landfill NSPS) and related requirements in 40 CFR 60 Subpart A, General Provisions. Pursuant to the NSPS:
 - i. The Permittee shall route all LFG collected from the affected landfill to a control system that complies with the applicable NSPS requirements in either 40 CFR 60.752(b)(2)(iii)(A), (B), or (C).
 - ii. The affected GCCS shall be operated in accordance with the applicable requirements of 40 CFR 60.753, 60.755, and 60.756, as required by 40 CFR 60.752(b)(2)(ii).
 - iii. The Permittee is allowed to cap and remove the affected GCCS, provided that all the conditions of 40 CFR 60.752(b)(2)(v)(A), (B), and (C) are met.
- b. The affected landfill is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Municipal Solid Waste Landfills, 40 CFR 63, Subpart AAAA (the Landfill NESHAP) and related requirements in 40 CFR 63 Subpart A, General Provisions. Pursuant to the NESHAP, 40 CFR 63.1960, the Permittee must develop and implement a written Startup, Shutdown, and Malfunction Plan for the landfill in accordance with 40 CFR 63.6(e)(3).
- c. As the affected landfill is subject to the Landfill NSPS and Landfill NESHAP, at all times, the Permittee shall, to the extent practicable, maintain and operate the landfill, landfill gas collection system, and air pollution control systems in a manner consistent with good air pollution control practice for minimizing emissions, as required pursuant to 40 CFR 60.11(d) and 63.6(e)(3).

3-2. Applicable Federal Standards for the Affected New Engine Facility

- a. i. As the affected landfill is subject to the Landfill NSPS, emissions from any atmospheric vent from a LFG treatment system at the affected new engine facility is subject to the requirements of 40 CFR 60.752(b)(2)(iii)(A) and (B).

Note: The affected new facility is subject to the Landfill NSPS because the affected landfill is subject to this NSPS and the facility receives untreated LFG collected from the landfill. For the purpose of the Landfill NSPS, this permit is issued based on the Permittee treating the LFG that is combusted at the affected new facility (i.e., processing the LFG with compression, de-watering and filtration, with a system designed and operated to remove nonmethane organic compounds (NMOC) from the collected LFG in accordance with 40 CFR 60.752(b)(iii)(C)). As a consequence, the affected new engines would not be subject to the emission standards of the Landfill NSPS, pursuant to a site-specific determination made by the USEPA for a landfill gas-to-energy facility. Compliance with the Landfill NSPS would not be dependent upon the control efficiency for NMOC achieved by the engines and emission testing of the engines is not required pursuant to this NSPS.

- ii. If the affected new engines are relied upon to comply with the requirements of the Landfill NSPS (e.g., the LFG treatment system is unable to treat all LFG being used as fuel in the engines):
 - A. For purposes of compliance with the NSPS, the affected engines are considered to be enclosed combustor type control devices, as defined under 40 CFR 60.751.
 - B. Pursuant to 40 CFR 60.752(b)(2)(iii)(B), the affected engines shall be operated to reduce NMOC emissions by 98 weight percent or reduce the outlet NMOC concentration for each engine to less than 20 parts per million by volume (ppmv), dry basis as hexane at 3 percent oxygen.
 - C. The Permittee shall operate the affected engines so as to comply with the provisions of 40 CFR 60.753. Specifically, these include:
 - I. Operation of the affected engines in compliance with 40 CFR 60.752(b)(2)(iii). In the event the affected engines are inoperable, the gas mover system shall be shut down and all valves in the control system contributing to venting off the gas to the atmosphere shall be closed within one hour. [40 CFR 60.753(e)]
 - II. Operation of the affected engines at all times when the collected gas is routed to them. [40 CFR 60.753(f)]

III. Fulfillment of all applicable operating, monitoring, testing, recordkeeping, and reporting requirements of the Landfill NSPS.

- D. The Permittee shall conduct timely performance tests for the affected engines as required pursuant to the Landfill NSPS.
 - b. Pursuant to 40 CFR 60.4230(a)(4), the affected new engines are subject to the applicable requirements of the NSPS for Spark Ignition Combustion Engines, 40 CFR 60 Subpart JJJJ (the Engine NSPS) and related requirements in 40 CFR 60 Subpart A, General Provisions. Pursuant to the NSPS, each engine shall comply with the applicable standards in Table 1 of 40 CFR 60 Subpart JJJJ.
 - c. The affected new engines are subject to th the applicable requirements of the NESHAP for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63 Subpart ZZZZ (the Engine NESHAP) and related requirements in 40 CFR 63 Subpart A, General Provisions. Pursuant to 40 CFR 63.6590(c), for each affected new engine, the Permittee shall comply with the applicable requirements of the NSPS, 40 CFR 60 Subpart JJJJ. Different limits do not apply to the affected new engines under the Engine NESHAP.
 - d. As the affected new engines are subject to the Engine NESHAP and Landfill NESHAP. Pursuant to the NESHAP, 40 CFR 63.1960, the Permittee must develop and implement a written Startup, Shutdown, and Malfunction Plan for the engines, including LFG treatment system, in accordance with 40 CFR 63.6(e)(3).
 - e. As the affected new engines are subject to the NSPS and NESHAP, at all times, the Permittee shall, to the extent practicable, maintain and operate the engines and LFG treatment system, in a manner consistent with good air pollution control practice for minimizing emissions, as required pursuant to 40 CFR 60.11(d) and 63.6(e)(3).
- 3-3. Applicable Federal Emission Standards for the Affected New Flare
- a. The affected new flare is subject to the Landfill NSPS and related requirements in 40 CFR 60 Subpart A, General Provisions. Pursuant to the NSPS:
 - i. The affected new flare shall be designed and operated in accordance with 40 CFR 60.18. This includes but is not limited to:
 - A. There shall not be visible emissions from the flare, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours, pursuant to 40 CFR 60.18(f)(1).

- B. The flare shall be used only with the net heating value of the gas being combusted being 7.45 MJ/scm (200 Btu/scf) or greater. The net heating value of the gas being combusted shall be determined by the methods specified in 40 CFR 60.18(f)(3) and 60.754(e).
 - C. The flare shall be designed and operated with an exit velocity less than the maximum allowable velocity, V_{max} , as determined by the method specified in 40 CFR 60.18(f)(6).
 - D. The flare shall be operated at all times when landfill gases may be vented to it. [40 CFR 60.18(e)]
 - E. The Permittee shall monitor the flare to ensure that it is operated and maintained in conformance with the manufacturer's design specifications.
- ii. Pursuant to 40 CFR 60.756(c)(1), the Permittee shall install, calibrate, maintain, and operate a heat sensing device for the affected new flare, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame, in accordance with the manufacturing specifications.
 - iii. Pursuant to 40 CFR 60.756(c)(2), the Permittee shall install, calibrate, maintain, and operate equipment to record landfill gas flow to the affected new flare.
- b. As the affected new flare is subject to the Landfill NESHAP, the flare must comply with the startup, shutdown, and malfunction (SSM) plan requirements of the NESHAP, 40 CFR 63 Subpart A.
 - c. As the affected new flare is subject to the NSPS and NESHAP, at all times, the Permittee shall, to the extent practicable, maintain and operate this flare in a manner consistent with good air pollution control practice for minimizing emissions, as required pursuant to 40 CFR 60.11(d) and 63.6(e)(3).
4. Applicable State Emission Standards
- a. The source is subject to 35 IAC 212.301, which provides that 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 toward the zenith (i.e., overhead) 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), as provided by 35 IAC 212.314.
 - b. The flares, engines, and other emission units at the source are subject to 35 IAC 212.123(a), which provides that 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 an emission unit, except as allowed by 35 IAC 212.123(b) and 212.124.

- c. The flares, engines, and other emission units at the source are subject to 35 IAC 214.301, which provides that no person shall cause or allow the emissions of sulfur dioxide (SO₂) into the atmosphere from any process emission unit to exceed 2000 ppm.

5. Design and Operation of the Affected Landfill to Comply with the NSPS

- a. i. This permit authorizes the following flexibility in the design and operation of the affected GCCS for the expansion, as requested by the Permittee in the GCCS Design Plan:

As an alternative to measurement of oxygen in accordance with 40 CFR 60.753(c)(2), the Permittee may use a portable meter as described in the application, consistent with USEPA's general approval of such monitoring methodology. (See Section 4.6.2.5 of the GCCS Design Plan.)

- ii. A. Notwithstanding other conditions in this permit, the Permittee may design and operate the affected GCCS in accordance with alternatives to the operational standards, test procedures, procedures for compliance measures, monitoring, recordkeeping, and reporting provisions of the NSPS, 40 CFR 60.753 through 60.758, if formally approved by the USEPA on a source-specific basis.
- B. The Permittee shall promptly submit a copy of any such approval by USEPA to the Illinois EPA.
- iii. Until such time as USEPA acts to approve an alternative to an adopted provision of the NSPS, the Permittee shall comply with the relevant provisions of the NSPS.

- b. The Permittee, as the owner or operator of the affected landfill, has the responsibility for compliance with all applicable requirements of the NSPS and the NESHAP. However, for the LFG treatment systems and the engines at the associated gas-to-energy facility, the Permittee may rely upon the operator of that facility (Winnebago Energy Center) for compliance with the applicable NSPS and the NESHAP requirements, provided that the Permittee takes appropriate measures to assure that applicable recordkeeping and reporting requirements of the NSPS and the NESHAP are met, including:

- i. Having reasonable access to the records required for the various control devices in the LFG control system.

- ii. Maintaining copies of the records of test reports for all required emission testing conducted for the associated gas-to-energy facility.

6. Requirements for Control of Emissions of Fugitive Dust

- a. The Permittee shall follow good air pollution control practices to prevent nuisance fugitive dust from roadways, parking areas, and other open areas of the affected landfill. These practices may provide for pavement on all regularly traveled entrances and exits to the landfill and treatment (sweeping, application of water, use of dust suppressant, etc., when necessary) of paved and unpaved roads that are routinely subject to vehicle traffic.
- b.
 - i. The Permittee shall carry out its control measures for fugitive dust in accordance with a written control program maintained by the Permittee. This program shall set forth the measures being implemented to control fugitive dust in areas of the landfill with the potential to generate significant quantities of fugitive dust. This program shall include: (i) a map or diagram showing the location of fugitive emission units controlled, including the identification, and volume and nature of expected traffic or other activity; (ii) estimated dust emissions control technique (e.g., water spray, surfactant spray, or water flushing); (iii) triggers for additional control, e.g., observation of extended dust plumes following passage of vehicles.
 - ii. The Permittee shall submit a copy of a revised fugitive dust control program to the Illinois EPA for review within 90 days of a request from the Illinois EPA for a revision to the program to address observed deficiencies in the control program.
- c. The Permittee shall perform compliance inspections on at least a quarterly basis to verify proper implementation of the fugitive dust control program.

7. Operational Requirements and Emission Limitations

- a.
 - i. LFG shall be the only fuel fired in the affected new engines.
 - ii. The rated design heat input capacity of each affected engine shall not exceed 18.2 million Btu per hour, based on a nominal LFG flow rate of 550 scfm with a heat content of 550 Btu per scf.
 - iii. The rated capacity of the affected new flare shall not exceed 4000 scfm of LFG.
- b. Emissions from the expansion of the landfill shall not exceed the following limits:

- i. A. The emissions from the affected new engines shall not exceed the following limits. These limits are based on information in the application, including maximum firing rate, and continuous operation.

Pollutant	Hourly Limits for Each Engine (Lbs/hour)	Annual Limits (Tons/year)	
		Each Engine	Total
Nitrogen Oxides (NO _x)	2.45	10.7	42.9
Carbon Monoxide (CO)	12.3*	53.9	215.5
Particulate Matter (PM/PM10)	0.3	1.3	5.2
Volatile Organic Material (VOM) Nonmethane Organic Compounds (NMOC)	1.0	4.4	17.5

* During startup of an engine, CO emissions shall not exceed 21.5 lbs/hour.

- B. This permit is issued based on negligible HAP emissions from the affected new engines. For this purpose, emissions of total HAPs from each affected engine shall not exceed 0.1 pounds per hour and 0.44 tons per year.
- ii. Emissions from flaring of LFG collected from the expansion, including emissions from the affected new flare, shall not exceed the following limits. These limits are based on information provided in the application including maximum LFG flow capacity of the flares and continuous operation.

Pollutant	Limits	
	Lbs/Hour	Tons/Year
NO _x	5.2	22.6
CO	14.7	64.4
PM/PM ₁₀	2.0	8.7
VOM/NMOC	4.9	21.5
Total HAPS	0.7	3.1

- iii. The combined emissions from the expansion of the landfill (i.e., emissions from the affected new engines and from flaring LFG) shall not exceed the following limits:

- A. Limits for annual emissions:

Pollutant	Limit (Tons/Year)
NO _x	75.5
CO	242.1
SO ₂	245.0
PM/PM ₁₀ *	13.9
VOM/NMOC	39.0

Total HAPS	4.9
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* Excluding emissions of fugitive dust.

B. Emissions of SO₂ shall not exceed 30 tons/month.

c. Emissions from the existing units at the source, i.e., the existing flares at the landfill, and the engines at the existing associated gas-to-energy facility operated by the Winnebago Energy, shall not exceed the following limits. (See also limits in Construction Permits 04120073, 02040025, and 07030094, respectively.)

Pollutant	Limits (Tons/Year)
NO _x	225
CO	235
SO ₂	245
PM/PM ₁₀ *	80
VOM/NMOC	80

* Excluding emissions of fugitive dust.

d. This permit is also issued based on the source, i.e., the combination of the affected landfill, flares, affected new engine facility, and existing gas-to-energy operated by Winnebago Energy Center, not being a major source of emissions of hazardous air pollutants (HAPs). For this purpose, emissions of the source shall not exceed 8 tons per year for any individual HAP and 20 tons per year of any combination of HAPs.

e. i. Compliance with annual limits shall be determined from a running total of 12 months of data.

ii. Emissions shall be determined using appropriate emission factors, which in order of preference shall be factors from on-site emission testing, manufacturer's emission data, and emission factors from USEPA's *Compilation of Air Pollutant Emission Factors* (AP-42), with appropriate adjustments to reflect any deficiencies in the operation of a unit.

8. Monitoring Requirements

a. The Permittee shall comply with applicable monitoring requirements of the Landfill NSPS and NESHAP for the source, including 40 CFR 60.755, 60.756 and 63.1960.

b. The Permittee shall operate instrumentation to measure the flow rate or amount of LFG collected from the expansion of the landfill.

c. For the affected new engines, the Permittee shall comply with the applicable monitoring requirements of the Engine NSPS.

9. Requirements for Observations of Visible Emissions

- a. i. Within 90 days of the initial startup of the affected new flare, the Permittee shall conduct observation for visible emissions from the flare using USEPA Method 22, to verify compliance with the requirement of 40 CFR 60.18(c)(1).
- ii. Thereafter, the Permittee shall conduct observations for visible emissions from the flare on at least an annual basis.

10. Sampling and Analysis of Landfill Gas

- a. i. The Permittee shall conduct sampling for the composition of the different streams of LFG collected at the affected landfill. The samples of LFG shall be analyzed for sulfur and NMOC content (pound/cubic foot) and net heat content (Btu/cubic foot). This sampling and analysis shall be conducted using appropriate ASTM Methods or other established methods for analysis of LFG. Written notification of testing or submittal of a formal testing protocol is not required for these activities.
- ii. Sampling and analysis for NMOC content and heat content of LFG shall be conducted on at least an annual basis.
- iii. Sampling and analysis for sulfur content of LFG shall be conducted on at least the following schedule, with the calculations for the sulfur content of collected LFG in pounds per hour made using representative hourly values for the for the volumes of different streams of collected LFG:
 - A. Samples shall be taken at least on a monthly basis, until five required samples in a row indicate the overall sulfur content of the LFG collected at the landfill on an hourly basis is no more than 22.4 pounds (equivalent to SO₂ emissions of 44.8 pounds per hour), at which time sampling and analysis shall be conducted on at least quarterly basis.
 - B. Thereafter, samples shall be taken at least on a quarterly basis, until either: (1) five required samples in a row indicate the overall sulfur content of the collected LFG on an hourly basis is no more than 14.0 pounds (equivalent to SO₂ emissions of 28.0 pounds per hour), at which time sampling and analysis shall be conducted on at least an annual basis; or (2) Sampling indicates that the sulfur content of collected LFG is 22.4 pounds per hour, in which case sampling and analysis on a monthly basis shall be resumed.
 - C. If annual sampling shows that the overall sulfur content of the LFG collected at the landfill on an hourly basis is more than 14.0 or 22.4 pounds,

sampling and analysis shall be resumed on a quarterly or monthly basis in accordance with the requirements of Condition 6(b)(ii)(A) or (B), respectively.

- iv. The Permittee shall keep records for this sampling and analysis activity, including measured data, documentation for the sampling and analysis activities, and supporting documentation and calculations for the sulfur content of LFG on an hourly basis.

11. Emission Testing Requirements for Affected New Engines

- a. Upon written request from the Illinois EPA, the Permittee shall conduct observations of operation and opacity of the affected new engines. The Permittee may schedule these observations to take place during normal operation of the affected new engines.
- b. For the affected engine(s), if emission testing is required pursuant to the Engine NSPS (for example, if affected new engine(s) are not certified by the manufacturer or, although certified, the engine(s) are not operated and maintained in accordance with the manufacturer's emissions-related written instructions), the Permittee shall comply with the applicable testing requirements of the NSPS, 40 CFR 60.8 and 60.4243(b)(2)(ii).
- c. The Permittee shall have performance tests conducted for the affected new engines for by an approved independent testing service during conditions that are representative of maximum emissions:
 - i. Testing for VOM/NMOC emissions shall be conducted within 60 days of the date that the engines are first relied upon as a control system for compliance with the Landfill NSPS, (40 CFR 60 Subpart WWW) or if the engines are relied upon periodically for compliance with the Landfill NSPS within 60 days of relying on engines for compliance for more than 15 days in a calendar year.
 - ii. Testing for NO_x, CO, SO₂ and VOM/NMOC within 90 days of a written request from the Illinois EPA, or such later date agreed upon by the Illinois EPA.

12. Recordkeeping Requirements

- a. The Permittee shall fulfill applicable recordkeeping requirements of the Landfill NSPS and Landfill NESHAP for the source, including 40 CFR 60.757 and 63.1980.
- b. For the affected new engines, the Permittee shall comply with the applicable recordkeeping requirements of the Engine NSPS.
- c. The Permittee shall maintain following records for the operation of the affected landfill:

- i. The Permittee shall keep records for the amount of waste deposited in the affected landfill, the amount of LFG collected from the existing landfill and the disposition of this LFG (i.e., percent used by the gas-to-energy facility and percent flared), and the amount of LFG collected from the expansion of the landfill and the disposition of this LFG.
 - ii. The Permittee shall maintain a file documenting assumptions about the quantity and nature of vehicle traffic and earthmoving activities at the source as related to the landfill operation.
 - iii. The Permittee shall maintain records documenting implementation of the fugitive dust control program, including.
 - A. Records documenting implementation of dust control measures;
 - B. Records of the quarterly dust inspections pursuant to Condition 6(c).
 - C. Records for incidents when control measures were not carried out as scheduled or were not fully implemented and incidents when additional control measures were carried out, with description of each such incident and explanation. This log shall address any adjustments to the scheduling of control measures made by the Permittee due to weather conditions that either acted to reduce or increase the level of potential dust, such as precipitation or extended periods of dry weather.
 - iv. The Permittee shall maintain a file containing data for the maximum emissions of fugitive PM from landfill operations (tons/year), based on engineering calculation with supporting documentation. This information shall be updated if there is a significant change in the operation of the landfill or control measures for fugitive dust that would act to increase emissions.
- d. The Permittee shall maintain the following records for the operation of the affected new facility:
- i. A. A file for each affected new engine containing a demonstration that the engine is not subject to the testing requirements of the Engine NSPS, if the Permittee considers these requirements are not applicable to the engine and is not conducting periodic testing for such engine to comply with the NSPS.

- B. A file containing the written procedures that are being followed as good combustion practices and good air pollution control practice to minimize emissions in accordance with Conditions 3-2(d), which procedure may incorporate procedures provided by the manufacturer and be combined with other procedures maintained for the engines by the Permittee.
 - C. Manufacturer's data for each affected engine including emissions guarantees, horsepower rating or rated heat input capacity (mmBtu/hour), and operating and maintenance procedures recommended by the manufacturer.
 - D. A file containing the maximum hourly emission rates (lbs/hour) for NO_x, CO, PM/PM₁₀ and VOM/NMOC, with supporting data and engineering calculations.
- ii.
 - A. A demonstration of compliance with the Landfill NSPS (40 CFR 60 Subpart WWW), including records for actions taken by the Permittee to verify that the LFG supply to the affected new engines has been properly treated and any period when engines were relied upon or should have been relied upon for compliance, with explanation.
 - B. Records for the heat content and composition of the LFG, based on representative sampling and analysis.
 - iii. An operating log or other records for each affected engine that at a minimum includes:
 - A. The operating schedule of the engine.
 - B. Identification of any period when the engine operated with LFG that was not properly treated, with date, time, duration and description.
 - C. Identification of any period when the engine continued to operate after a malfunction or breakdown of the engine's combustion system, with date, time, duration and description.
 - iv. Inspection, maintenance and repair logs with dates and the nature of such activities for the LFG treatment system and each affected engine.
- e. The Permittee shall maintain following records for the operations of the affected new flare:
 - i. A file containing the design specifications for the flare including capacity, scfm, and a demonstration that the flare complies with applicable operating requirements of 40 CFR 60.18 (e.g, maximum gas exit velocity).

- ii. The LFG consumption of the flare, on a daily basis.
- iii. An operating log, which shall include the following:
 - A. Status of the flare.
 - B. Adjustments of flare's operating parameters.
 - C. Identification of any period when the flare was to be in service but was out of service with a detailed explanation of the cause and an explanation of actions taken to prevent or reduce the likelihood of similar occurrences in the future.
- iv. An inspection/maintenance log, which shall include the following:
 - A. Date of inspection and observed condition of the flare.
 - B. Date and description of maintenance performed.
- f. The Permittee shall keep the following records related to the emissions of the source:
 - i. A file containing: 1) The emission factors for NO_x, CO, PM/PM₁₀ and VOM/NMOC used by the Permittee for calculating emissions of from the existing affected flares; and 2) Engineering calculations for the maximum hourly emissions from the affected new engines and the affected new flare, with supporting documentation.
 - ii. A. The total amount of LFG collected from the expansion of the landfill and the disposition of this LFG, i.e., percent flared and percent directed to the affected new facility.
 - B. The total amount of LFG collected from the existing landfill and the disposition of this LFG, i.e., percent flared and percent directed to the existing gas-to-energy facility.
 - iii. The following records for emissions associated with the expansion of the landfill, with supporting calculations:
 - A. Emissions of NO_x, CO, PM/PM₁₀, and VOM/NMOC from the affected new engines (tons/month and tons/year).
 - B. Emissions of NO_x, CO, PM/PM₁₀, and VOM/NMOC from flaring of LFG collected from the expansion (tons/month and tons/year).

- C. The combined emissions of NO_x, CO, PM/PM₁₀, and VOM/NMOC from the engines and flaring (tons/month and tons/year).
 - D. Emissions of SO₂ (tons/month and tons/year).
- iv. The following records for emissions associated with the existing landfill and associated existing gas-to-energy facility, with supporting calculations, which records shall be compiled on at least a quarterly basis:
- A. Emissions of NO_x, CO, PM/PM₁₀, and VOM/NMOC, and HAPs from flaring collected LFG (tons/month and tons/year).
 - B. Emissions of NO_x, CO, PM/PM₁₀, VOM/NMOC, and HAPs from the engines at the existing gas-to-energy facility (tons/month and tons/year).
- Note: For the existing gas-to-energy facility, the Permittee may obtain a copy of the emissions records from the operator of the gas-to-energy facility, i.e., Winnebago Energy Center, with supporting documentation and calculations, on a routine basis.
- C. The combined emissions of NO_x, CO, PM/PM₁₀, and VOM/NMOC from flaring and the gas-to-energy facility (tons/month and tons/year).
 - D. Emissions of SO₂ (tons/month and tons/year).
- g. The Permittee shall maintain records for all observations for visible emissions and opacity made in accordance with USEPA Method 22 or 9, respectively, for the affected flares and the affected new engines that the Permittee conducts or that are conducted on its behalf by individuals who are qualified to make such observations. For each occasion on which such observations are made, these records shall include the identity of the observer, a description of the various observations that were made, the observed opacity, and copies of the raw data sheets for the observations.

12. Retention of Records

Unless a longer retention period is specified by the NSPS or NESHAP for particular records, records and logs required by this permit shall be retained at a readily accessible location at the source for at least five years from the date of entry and shall be made available for inspection and copying by the Illinois EPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.

13. Notification and Reporting Requirements

- a. The Permittee shall fulfill the applicable notification and reporting requirements of the Landfill NSPS and NESHAP for the source, including 40 CFR 60.758 and 63.1980.
- b. If there is any deviation from the requirements of this permit, the Permittee shall submit a report to the Illinois EPA as follows. The report shall include a description of the deviation, the probable cause of the deviation, the corrective actions that were taken and any actions taken to reduce similar occurrences in the future.
 - i. Deviations from annual and monthly emission limits shall be reported within 30 days.
 - ii. Deviations from other requirements shall be reported in a semi-annual report unless more rapid reporting is required by the NSPS or NESHAP rules applicable to the unit(s) or by the CAAPP permit for the source.
- c. The Permittee shall notify the Illinois EPA within 10 days of the following events:
 - i. When installation of the affected new engine facility is commenced, with the anticipated date for initial start of operation.
 - ii. When installation of the affected new flare is commenced, with the anticipated date for initial start of operation.
 - iii. When an affected flare or affected new engine is permanently removed from service. This notification shall include a demonstration that the remaining units at the source are sufficient for the LFG collected from the affected landfill.
- d. Two copies of the required reports and notification shall be sent to the Illinois EPA at the following address:

Illinois Environmental Protection Agency
Bureau of Air
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276
217/782-5811

and one copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control/ Regional Office
5407 North University
Peoria, Illinois 61614

Telephone: 309/693-5461

Facsimile: 309/693-54675

14. Authorization to Construct And Operate

- a. i. The Permittee may expand and adapt the system for collection of gas from the affected landfill, as currently permitted, installing additional gas wells and piping during the life of the landfill as different areas become ready for collection of LFG.
- ii. The Permittee may construct and operate the affected new engine facility pursuant to this permit, provided that construction of this facility is commenced by December 31, 2014 and this facility is addressed in any application for revision or renewal of the landfill submitted by the Permittee.
- iii. The Permittee may construct and operate the affected new flare pursuant to this permit as part of its continuing program to control LFG from the expansion, provided that construction of the flare is commenced by December 31, 2015 and this flare is addressed in any application for revision or renewal of the landfill submitted by the Permittee.
- b. The Permittee may operate the landfill expansion and affected GCCS including the affected flares and the affected new facility, pursuant to this construction permit until the CAAPP permit for the affected landfill is revised or reissued to address them.
- c. These conditions supersede Standard Conditions 1 and 6.

If you have any questions regarding this permit, please contact Kunj Patel at 217/782-2113.

Edwin C. Bakowski, P.E.
Manager, Permit Section
Division of Air Pollution Control

Date Signed: _____

ECB:CPR:KMP:psj

cc: Region 2