

217/785-1705

CONSTRUCTION PERMIT  
NSPS/NESHAP SOURCE

PERMITTEE

Countryside Genco, L.L.C.  
d/b/a Illinois Electrical Generation Partners, L.L.C.  
Attn: Steve Laliberty, President  
40 Tower Lane  
Avon, CT 06001

Application No.: 11080061

I.D. No.: 097025AAR

Applicants Designation:

Date Received: August 15, 2011

Subject: Combustion Turbines

Date Issued:

Location: 31725 N. Route 83, Grayslake, Lake County

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of four combustion turbines with low-NO<sub>x</sub> combustors, as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. Introduction

- a. This permit authorizes installation of four combustion turbines equipped with low-NO<sub>x</sub> combustors at the existing gas-to-energy facility that uses landfill gas (LFG) collected at the Countryside landfill. The turbines would be Rolls-Royce Allison Model 501-KB5 turbines, each with a maximum rated electrical output of 2.5 MW. The turbines would increase the amount of LFG that this gas-to-energy facility could use, replacing all six reciprocating engines currently at this facility. The existing flares at the Countryside landfill will continue to be used to control collected LFG in circumstances when the amount of LFG is more than can be handled by this facility.

For purposes of this construction permit, the combustion turbines, the gas-to-energy facility, and the Countryside Landfill are referred to as the "affected turbines," the "affected facility," and the "affected landfill," respectively. The source is the combination of the affected facility and the affected landfill.

Note: The affected facility and the affected landfill, which is owned and operated by Waste Management of Illinois, Inc. (I.D. No. 097806AAG) are considered to be a single source pursuant to 40 CFR 52.21(b)(6), 35 IAC 203.112, 203.136, and 211.6130, and Section 39.5(1) of Illinois' Environmental Protection Act.

- b. This permit also authorizes certain future changes involving the affected turbines as part of the maintenance and repair of these turbines. (See Condition 13.)

2. Existing Requirements

- a. This permit does not relax or revise any regulatory requirements or conditions that apply to the existing engines at the affected facility including, applicable testing, monitoring, recordkeeping, and reporting

requirements established in the current CAAPP permit for the facility, Permit 02020063, which requirements shall continue to apply until these engines are permanently removed from service.

- b. This permit does not relax or revise any requirements or conditions that apply to the existing LFG treatment system at the affected facility including, applicable testing, monitoring, recordkeeping, and reporting requirements established in CAAPP Permit 02020063, which system will continue to be used to treat LFG for the affected turbines.

3. Applicable Federal Emission Standards

- a.
  - i. The affected turbines are subject to the federal New Source Performance Standards (NSPS) for Stationary Combustion Turbines, 40 CFR 60 Subpart KKKK (the Turbine NSPS) and related requirements in 40 CFR 60 Subpart A, General Provisions.
  - ii. Pursuant to this NSPS, for the affected turbines, which will each have a heat input less than 50 mmBtu/hr and fire biogas to generate electricity, the Permittee must comply with the following:
    - A. For emissions of nitrogen oxides (NO<sub>x</sub>), emissions shall not exceed 96 ppm at 15 percent oxygen or 700 ng/J (5.5.lb/MW-hr) useful output, as provided by 40 CFR 60.4320(a) and 60.4325 and Table 1 of the Turbine NSPS.
    - B. For emissions of sulfur dioxide (SO<sub>2</sub>), 65 ng SO<sub>2</sub>/J (0.15 lb SO<sub>2</sub>/mmBtu) heat input, as provided by 40 CFR 60.4330(a)(3).
- b. The affected facility 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 this NESHAP, 40 CFR 63.1960, the Permittee must develop and implement a written Startup, Shutdown, and Malfunction Plan for the affected facility, including the affected turbines, in accordance with 40 CFR 63.6(e)(3).

Note: Since the affected facility is a single source with the affected landfill, the affected facility is also subject to the Landfill NESHAP.

- c.
  - i. The affected facility is subject to the 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 Landfill NSPS, emissions of NMOC from any atmospheric vent from the LFG treatment system at the affected facility are subject to the requirements of 40 CFR 60.752(b)(2)(iii)(A) and (B).

Note: The affected facility is subject to the Landfill NSPS because it receives untreated LFG from the affected landfill, which is subject to the Landfill NSPS. For the purpose of the Landfill NSPS, this permit is issued based on the Permittee treating LFG (i.e., processing LFG with compression, de-watering and filtration, with a system designed and operated to remove nonmethane organic compounds (NMOC) from the LFG in accordance with 40 CFR 60.752(b)(2)(iii)(C)) prior to use in the affected turbines. Accordingly, the affected turbines are not subject to the emission standards of the Landfill NSPS pursuant to a determination for the affected facility made by the USEPA in a

letter dated March 03, 2004. Compliance with the Landfill NSPS is not dependent upon control of NMOC by the turbines and emission testing of the turbines is not required pursuant to this NSPS.

- ii. If the affected turbines are relied upon in the future to comply with the Landfill NSPS (e.g., the LFG treatment system is unable to treat all LFG being used as fuel in the turbines):
    - A. For purposes of compliance with the NSPS, the affected turbines 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 turbines shall be operated to reduce NMOC emissions by 98 weight percent or reduce the outlet NMOC concentration for each turbine 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 turbines so as to comply with the provisions of 40 CFR 60.753, including: 1) Operation of the affected turbines in compliance with 40 CFR 60.752(b)(2)(iii); 2) In the event the affected turbines 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)]; 3) Operation of the affected turbines at all times when the collected gas is routed to them [40 CFR 60.753(f)]; and 4) 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 turbines as required pursuant to the Landfill NSPS.
  - d. As the affected facility is subject to the NSPS and the NESHAP, the Permittee shall at all times, to the extent practicable, maintain and operate the affected facility, including the LFG treatment system and the affected turbines, in a manner consistent with good air pollution control practice for minimizing emissions, as required pursuant to 40 CFR 60.11(d), 60.4333(a), and 63.6(e)(3).
4. Applicable State Emission Standards
- a. The affected turbines and other emission units at the affected facility 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 (PM), with an opacity greater than 30 percent, into the atmosphere from any emission unit except as allowed by 35 IAC 212.123(b) and 212.124.
  - b. The affected turbines and other emission units at the affected facility are subject to 35 IAC 214.301, which provides that no person shall cause or allow the emissions of sulfur dioxide (SO<sub>2</sub>) into the atmosphere from any process emission unit to exceed 2000 ppm.
5. Non-Applicability Provisions
- a. This permit is issued based on this project, i.e., installation of affected turbines, not constituting a major modification for the purpose of Prevention of Significant Deterioration (PSD), 40 CFR 52.21, or Major Stationary Sources Construction and Modification (MSSCAM), 35 IAC Part

203. This is a consequence of the emission limits and other conditions in this permit that ensure that this project does not trigger the applicability of PSD or MSSCAM. (See Conditions 7(a) and (b) for future permitted emissions of the affected facility and the source, respectively.) In particular:

- i. For emissions of PM, PM<sub>10</sub> and NMOC, the source would continue to not be a major source of emissions under PSD. (The shutdown of the existing engines is also expected to reduce emissions of PM, PM<sub>10</sub> and NMOC from the affected facility, see Attachment 1.)
  - ii. For VOM emissions, the source would continue to not be a major source of emissions under MSSCAM. (The project is also expected to reduce VOM emissions from the affected facility, see Attachment 1.)
  - iii. For SO<sub>2</sub> emissions of, the source would continue to not be a major source of emissions under MSSCAM and PSD.
  - iv. For PM<sub>2.5</sub> emissions, the source would continue to not be a major source of emissions under MSSCAM. (The project is also expected to reduce PM<sub>2.5</sub> emissions from the affected facility, see Attachment 1.)
  - v. For NO<sub>x</sub> emissions, the net increase in emissions of NO<sub>x</sub> would not be significant under MSSCAM after considering the contemporaneous decrease in emissions provided by the permanent shutdown of the six existing engines at the source, as required by Condition 5(d). (See Attachment 2 for further information on the net change in NO<sub>x</sub> emissions.)
  - vi. For CO emissions, the source would continue to not be a major source of emissions under PSD.
  - vii. For GHG emissions, the increase in emissions of GHG excluding emissions of biogenic carbon dioxide (CO<sub>2</sub>) would not be significant under PSD, as provided by the "Greenhouse Gas Tailoring Rule" (75 FR 31514, June 3, 2010), excluding emissions of biogenic CO<sub>2</sub>, consistent with the waiver issued by USEPA on July 1, 2011 for CO<sub>2</sub> emissions from bio-energy and other biogenic sources, e.g., CO<sub>2</sub> from combustion of the biological fraction of municipal solid waste or bio-solids.
- b. Pursuant to 40 CFR 60.4305(b), the affected turbines are not subject to the requirements of the NSPS for Stationary Gas Turbines, 40 CFR 60 Subpart GG, because they are subject to the requirements of the Turbine NSPS, 40 CFR 60 Subpart KKKK.
  - c. This permit is issued based on affected turbines not being subject to the emission standards of the NESHAP for Stationary Combustion Turbines, 40 CFR 63 Subpart YYYY. As provided by 40 CFR 63.6085, this is because, the affected turbines are located at a source that is not a major source for HAP emissions, i.e., a source whose potential emissions of HAPs are less than 10 tons/year of any individual HAP and less than 25 tons per year of combined HAPs.
  - d. The affected turbines are not subject to the NO<sub>x</sub> Trading Program for Electrical Generating Units 35 IAC Part 217 Subpart W, because the capacity of the each turbine is less than 25 Mw.

6. Operating Requirements and Limitations

- a. LFG shall be the only fuel fired in the affected turbines.
- b. The nominal rated heat input capacity of each affected turbine shall not exceed 31 million Btu per hour, based on a low heating value for LFG of 400 Btu/scf.
- c.
  - i. This permit is issued based on LFG treatment system being a closed system with no emissions of NMOC directly to the atmosphere.
  - ii. The affected facility shall not have any bypass vents, which would send LFG directly to the atmosphere bypassing the affected turbines.
- d. The six existing engines at the affected facility shall be permanently removed from service no later than six months after initial startup of an affected turbine.

7. Emission Limits

- a.
  - i. The emissions of the affected turbines and the affected facility shall not exceed the following limits. The hourly limits for NOx and CO shall not apply during startup of a turbine.

Pollutant	Limits		
	Lbs/hour for Each Turbine	Tons/year	
		Each Turbine	Facility
Nitrogen Oxides (NO <sub>x</sub> )	4.4	19.0	76.0
Carbon Monoxide (CO)	13.6	54.6	239.0
Sulfur Dioxide (SO <sub>2</sub> )	4.5	19.8	78.9
Particulate Matter (PM/PM <sub>10</sub> )	0.7	3.1	12.5
Volatile Organic Material(VOM)/ Nonmethane Organic Compounds (NMOC)	0.4	1.8	7.1
Individual Hazardous Air Pollutant (HAP)	0.1	0.44	1.7

Note: The above limits do not represent the potential emissions of the source since collected LFG is combusted at both the affected facility and in the flares at the affected landfill.

- ii. This permit is issued based on this project, i.e., the installation of the affected turbines, having negligible GHG emissions other than biogenic CO<sub>2</sub>. For this purpose, emissions of GHG other than biogenic CO<sub>2</sub> from the affected turbines shall not exceed 500 tons of CO<sub>2</sub>e per year.
- b. The emissions of the source shall not exceed the following limits. These limits take affect upon the initial startup of an affected turbine at the affected facility:

Pollutant	Limit
Nitrogen Oxides (NO <sub>x</sub> )	200
Carbon Monoxide (CO)	245
Sulfur Dioxide (SO <sub>2</sub> )	97.5
Particulate Matter (PM/PM <sub>10</sub> )	80
Volatile Organic Material(VOM)/ Nonmethane Organic Compounds (NMOC)	80
Individual HAP	8
Total HAPs	20

- c. i. Compliance with the annual limits in this permit 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).
8. Testing Requirements for the Affected Turbines
- a. i. For NO<sub>x</sub> emissions from each affected turbine, the Permittee shall comply with the applicable performance testing requirements of the Turbine NSPS, including 40 CFR 60.4400.
    - A. In accordance with 40 CFR 60.8, the initial performance tests shall be conducted, within 180 days of initial startup of the turbines or within 90 day of operation of the turbines at the maximum load at which they will be operated, whichever is later.
    - B. Subsequent performance tests shall be conducted as required by the NSPS.
    - C. Notwithstanding the above, if USEPA approves any alternate performance testing requirement for the affected turbines, then Permittee may comply with such alternate testing requirements.
  - ii. Testing for VOM/NMOC emissions shall be conducted within 60 days of the date that the turbine(s) are first relied upon as a control system for compliance with the Landfill NSPS or if the turbine(s) are relied upon periodically for compliance with the Landfill NSPS within 60 days of relying on turbine(s) for compliance for more than 15 days in a calendar year.
  - iii. The Permittee shall fulfill all applicable requirements of the NSPS for these performance tests, including submittal of the final reports, in accordance with 40 CFR 60.7, for the emission testing required in Condition 8(a)(i) to the Illinois EPA no later than 60 days after the testing is conducted.
- b. i. The Permittee shall have performance tests conducted for the

affected turbines for CO, VOM/NMOC and/or PM by a qualified independent testing service within 90 days of a written request from the Illinois EPA, or such later date agreed upon by the Illinois EPA. This testing shall during conditions that are representative of maximum emissions using USEPA approved methods and procedures as specified under NSPS, 40 CFR 60, Appendix A:

- ii. The Illinois EPA shall be notified prior to these tests to enable the Illinois EPA to observe these tests. Written notification for the expected date of testing shall be submitted a minimum of 30 days prior to the expected date. Written notification of the actual date and expected time of testing shall be submitted a minimum of five working days prior to the actual date of the test. The Illinois EPA may at its discretion accept notifications with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe testing.

9-1. Monitoring Requirements.

- a. For the affected turbines, the Permittee shall comply with the applicable monitoring requirements of the Turbine NSPS, by either conducting periodic performance tests for NOx emissions in accordance with 40 CFR 60.4340(a), conducting emissions monitoring in accordance with 40 CFR 60.4340(b)(1), or conducting continuous parameter monitoring in accordance with 40 CFR 60.4340(b)(2)(i). For this purpose, if the Permittee conducts parameter monitoring, such monitoring shall be conducted pursuant to a written monitoring plan developed and maintained in accordance with the applicable requirements for such plans in 40 CFR 60.4355, with a copy of such plan submitted to the Illinois EPA.
- b. The Permittee shall calibrate, maintain, and operate according to the manufacturer's specifications a continuous gas flow rate measuring device for the flow of LFG to the affected turbines, which shall record this information at least every 15 minutes.

9-2. Requirements for Sampling and Analysis of LFG

- a. For the affected turbines, the Permittee shall comply with the applicable requirements for measurement of total sulfur content of the fuel combusted in the turbines in accordance with the applicable requirements of the Turbine NSPS, 40 CFR 60.4360 and 60.4415, including:
  - i. Conducting initial performance testing for the sulfur content of LFG, in accordance with 40 CFR 60.4415(a)(1).
  - ii. Determining and recording the total sulfur content of the fuel combusted in the turbines once per unit operating day, in accordance with 40 CFR 60.4370(b) using methods described in 40 CFR 60.4415 or in accordance with the USEPA approved custom schedule prepared pursuant to 40 CFR 60.4370(c)(1) and (c)(2), until and unless the Permittee satisfies the requirements of 40 CFR 60.4365(b), i.e., demonstrates that the potential SO<sub>2</sub> emissions from the turbines will not exceed 0.06 lb/mmBtu.
- b. i. In conjunction with the above sampling and analysis of LFG for its sulfur content, The Permittee shall conduct sampling and analysis at least on a semi-annual basis for the composition of LFG arriving at the facility and produced by the LFG treatment system. The samples shall be analyzed for methane and NMOC content

(percent by volume) and heat content (Btu/cubic foot) of the LFG, as well as sulfur content. If USEPA Method 18 is used to determine NMOC content, the minimum list of compounds to be tested shall be those published in the most recent version of AP-42. These analyses may be performed by the operator of the affected landfill or an independent company. Written notification of testing or submittal of a formal testing protocol is not required for these tests.

- ii. The Permittee shall keep records for this activity, including both collected data and documentation for the sampling and analysis.

10. Recordkeeping Requirements

- a.
  - i. For the affected turbines, the Permittee shall comply with the applicable recordkeeping requirements of the Turbine NSPS, 40 CFR 60 Subpart KKKK, including recordkeeping for required emissions or operational monitoring for NO<sub>x</sub>, fuel sampling and analysis for the sulfur content of fuel, and the occurrence of any excess emissions of NO<sub>x</sub> or SO<sub>2</sub>.
  - ii. For the affected facility, the Permittee shall comply with the applicable recordkeeping requirements of the Landfill NESHAP, 40 CFR 63.1965 and 63.1980, including records for the affected turbines related to the implementation of the Startup, Shutdown and Malfunction Plan for the affected facility.
- b. The Permittee shall maintain the following records for the operation of the affected facility:
  - i.
    - A. 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(d), which procedure may incorporate procedures provided by the manufacturer and be combined with other procedures maintained for the turbines by the Permittee.
    - B. Manufacturer's data for each affected turbine including emissions guarantees, horsepower rating or rated heat input capacity (mmBtu/hour), and operating and maintenance procedures recommended by the manufacturer.
    - C. A file containing the maximum hourly emission rates (lbs/hour) for NO<sub>x</sub>, CO, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, VOM/NMOC, HAPs, N<sub>2</sub>O and methane, with supporting data and engineering calculations.
  - ii.
    - A. A demonstration of compliance with the Landfill NSPS, including records for actions taken by the Permittee to verify that the LFG supply to the affected turbines has been properly treated and any period when turbines 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 turbine that at a minimum includes:



- A. The operating schedule of the turbine.
  - B. Identification of any period when the turbine operated with LFG that was not properly treated, with date, time, duration and description.
  - C. Identification of any period when the turbine continued to operate after a malfunction or breakdown of the turbine's combustion system, with date, time, duration and description.
- iv. The Permittee shall maintain an operating log or other records for each affected turbine that at a minimum includes the following records related to startup of the turbine:
- A. Date, time and duration of each startup; and
  - B. Description of the startup, if written operating procedures are not followed during the startup or a significant problem occurs during the startup including detailed explanation.
- v. Inspection, maintenance and repair logs with dates and the nature of such activities for the LFG treatment system and each affected turbine
- c. The Permittee shall maintain following records related to the emissions of the affected facility:
- i. LFG usage by the affected turbines (scf/month and scf/year).
  - ii. A file identifying the maximum level(s) of sulfur in LFG combusted at the affected facility at which compliance with 35 IAC 214.301 is maintained, with supporting documentation and analysis.
  - iii. A file containing: 1) The emission factors for NOx, CO, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, VOM/NMOC, HAPs, N<sub>2</sub>O, and methane used by the Permittee for calculating emissions from the affected turbines; and 2) Engineering calculations for the maximum hourly emission rates from the affected turbines, with supporting documentation.
  - iv. Records of the actual emissions of NOx, SO<sub>2</sub>, CO, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, VOM/NMOC, HAPs, N<sub>2</sub>O, methane and any non-biogenic CO<sub>2</sub> (tons/month and tons/year), based on the operation of the facility, the composition of the LFG and the appropriate emission factors, with supporting data and calculations.
  - v. Records of the emissions of NOx, SO<sub>2</sub>, CO, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, VOM/NMOC, and HAPs from the source (tons/month and tons/year) with supporting documentation and calculations, compiled at least on a quarterly basis. For this purpose, for the emissions from the associated landfill, the Permittee may on a routine basis obtain a copy of the emission data from the operator of the landfill, with supporting documentation and calculations.
- d. 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 turbines that the Permittee conducts or that are conducted on its behest 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.

11. Retention of Records

- a. 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.

12. Notification and Reporting Requirements

- a. For the affected turbines, the Permittee shall comply with the applicable notification and reporting requirements of the Turbine NSPS, including submittal of reports for any excess emissions of NO<sub>x</sub> or SO<sub>2</sub>.
- b. for the affected facility, the Permittee shall comply with the applicable notification and reporting requirements of the Landfill NSPS and the Landfill NESHAP.
- c.
  - i. The Permittee shall notify the Illinois EPA within 10 days if an affected turbine is being relied upon for routine compliance with the Landfill NSPS (rather than treatment of LFG), with explanation.
  - ii. If affected turbine(s) is being relied upon for routine compliance with the Landfill NSPS, the Permittee shall notify the Permittee for the associated landfill (i.e., Countryside Landfill) and the Illinois EPA as soon as it becomes aware that the affected facility will not or is not controlling collected LFG so as to comply with applicable requirements for control of LFG.
- d. 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.
- e. The Permittee shall notify the Illinois EPA within 10 days of the following events:
  - i. When installation of the each affected turbine is commenced, with the anticipated date for initial start of operation.
  - ii. When all six existing engines at the affected facility have been permanently removed from service.

ii. When a turbine is permanently removed from service. This notification shall include a demonstration that the remaining units at the source are sufficient for controlling LFG collected from the affected landfill.

f. Two copies of all reports, notifications, and correspondence required by this permit shall be sent to:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Compliance Section (#40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276

Tel: 217/782-5811

Fax: 217/782-6348

And one copy shall be sent to the Regional Office:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
9511 West Harrison  
Des Plaines, Illinois 60016

Tel: 847-294-4000

Fax: 847-294-40188

13. Provisions for Maintenance, Repair, and Replacement of Affected Turbines

- a. This permit authorizes installation of manufacturer supplied replacement turbine or turbine components for the affected turbines that takes place either as part of scheduled maintenance of the turbines or in the event of malfunction or unscheduled outage and subsequent repairs. This authorization does not address activities for which a construction permit is not required, such as routine preventive maintenance, minor replacement of turbine components or assemblies, or activities that do not involve, either directly or indirectly, emission-related components or activities that do not involve, either directly or indirectly, emission-related components or assemblies of the turbines.
- b. This authorization is limited to activities that can be accommodated by the original installation of the affected turbines and that are performed in conjunction with an ongoing program of maintenance, repair, and replacement, so as to not constitute a modification of the turbines with respect to the MSSCAM or PSD rules. The replacement turbine or turbine component must be in good operating condition and come from either a manufacturer or dealer/service provider. This authorization does not extend to installation of a replacement turbine that is a different make and model than the original turbine, or to activities that are intended to, or would have the result of, increasing the design capacity of an turbine.
- c. This authorization does not relax or otherwise revise any requirements and conditions that apply to the operation of the affected turbines, including applicable emission limits, monitoring, testing, recordkeeping, and reporting requirements of the current CAAPP permit or the construction permit issued for the affected facility that are yet to be addressed in the CAAPP permit, which shall continue to apply to the affected turbines.
- d. This authorization also does not excuse the Permittee from any new regulatory requirements that are adopted and applicable to the affected

turbines.

- e. The Permittee shall expeditiously have performance testing conducted on an affected turbine following replacement of the turbine or the turbine components, as required pursuant to the NSPS, 40 CFR 60 Subpart A and KKKK, if requested by the Illinois EPA or USEPA.
  - f.
    - i. The Permittee shall maintain following records at the affected facility for the replacement activities authorized by this permit:
      - A. A file containing the paperwork for original and replacement turbine components or turbines, including documentation for turbine model numbers and serial numbers and copies of the specifications for the turbines.
      - B. Details of activities performed pursuant to this permit including the date that the turbine is removed from the service and the date the turbine is returned to service.
    - ii. Notwithstanding the provisions of this permit, the records required by Condition 13(f)(i) shall be retained for at least five years after the date that the turbine is permanently removed from the service.
  - g. The Permittee shall notify the Illinois EPA prior to carrying out activities pursuant to this Condition 13. This notification shall be submitted at least 15 days in advance or as soon as it is practicable to do so, e.g., in the event of turbine failure. This notification shall include:
    - i. A description of the activities that are to be performed and the expected schedule for the activities.
    - ii. A confirmation that the activities fall within the authorization provided by this permit, the replacement turbine or turbine component is in good operating conditions and the outage of a turbine will not interfere with compliance with applicable requirements, with supporting information.
  - h. The authorization provided for the affected turbines pursuant to this Condition 13 will terminate when a turbine is permanently removed from service or 30 days after notification from the Illinois EPA that this authorization is being terminated, whichever occurs first. As related to the replacement activities authorized by this permit, this condition supersedes Standard Condition 1.
14. The Permittee shall take appropriate measures to allow the Permittee for the affected landfill to assure applicable requirements related to control of LFG are being met, including:
- a. Keeping all required records.
  - b. Keeping copies of the required reports and notifications.
  - c. Allowing access to such records.
15. Effect of This Permit
- a. 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. In particular, this permit does not excuse the Permittee from the obligation to undertake further actions at the affected facility as may be needed to eliminate air pollution, including nuisance due to odors, such as implementation of additional work practices for handling of LFG at this facility.

16. Authorization to Operate

The Permittee may operate the affected turbines pursuant to this construction permit until the CAAPP permit for the affected facility is revised to address the affected turbines provided that the initial performance testing for NOx required by the Turbine NSPS is completed in a timely manner and the Permittee submits a timely and complete application for revisions of the CAAPP permit for the affected facility to address the affected turbines. This condition supersedes Standard Condition 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:

cc: IEPA, FOS Region 1  
Christopher Rubek, Countryside Landfill

**Attachment 1:**Change in the Permitted Emissions of the Affected Facility (tons/year)

Pollutant	Previous Limit	Current Limit	Change
Nitrogen Oxides (NO <sub>x</sub> )	155	76	-79.0
Carbon Monoxide (CO)	146	239	+93.0
Sulfur Dioxide (SO <sub>2</sub> )	13.7	79.0	+65.3*
Particulate Matter (PM/PM <sub>10</sub> )	17.6	12.5	-5.1
Volatile Organic Material(VOM)/ Nonmethane Organic Compounds (NMOC)	10.5	7.1	-3.4

\* The increase in SO<sub>2</sub> emissions compared to the actual SO<sub>2</sub> emissions of the affected facility is smaller than the increase in permitted emissions, since actual SO<sub>2</sub> emissions exceeded the previous permit limit. Compared to the actual SO<sub>2</sub> emissions of the affected facility in 2010, i.e., 58.4 tons/year, the increase in SO<sub>2</sub> emissions would only be 20.6 tons/year.

**Attachment 2:**

Net Change in the NOx Emissions of the Source (tons/year)

Table A: Contemporaneous NOx Emissions Decreases

Activity	Emissions Decrease
Shutdown of Existing Engines	119.5*
Total	119.5

\* Actual NOx emission based on the average of 2009 and 2010.

Table B: Overall Net Change in NOx Emissions

	Emissions
Project Emissions	76.0
Contemporaneous Emission Decreases	-119.5
Net Change	-43.5