

Iowa Department of Natural Resources

Draft Title V Operating Permit Fact Sheet

This document has been prepared to fulfill the public participation requirements of 40 CFR Part 70 and 567 Iowa Administrative Code (IAC) 22.107(6). 40 CFR Part 70 contains operating permit regulations pursuant to Title V of the Clean Air Act.

The Iowa Department of Natural Resources (IDNR) finds that:

1. Metro Park East Landfill, located at 12181 12th Avenue N.E., Mitchellville, Iowa 50169, has applied to renew their Title V Operating Permit. The designated responsible official of this facility is Mr. Thomas B. Hadden III, Executive Director.
2. Metro Park East Landfill is a Solid Waste Landfill, (SIC 4953). This facility consists of ten (10) significant emission units with potential emissions of:

Pollutant	Abbreviation	Potential Emissions (Tons per Year)
Particulate Matter ($\leq 10 \mu\text{m}$)	PM ₁₀	157.35
Particulate Matter	PM	655.16
Sulfur Dioxide	SO ₂	0.88
Nitrogen Oxides	NO _x	25.59
Volatile Organic Compounds	VOC	154.68
Carbon Monoxide	CO	29.20
Greenhouse Gases (mass basis)	GHG	6,743.21
Greenhouse Gases (CO ₂ e basis)	GHG	105,258.3
Hazardous Air Pollutants ⁽¹⁾	HAP	31.40

⁽¹⁾ May include the following: (For list of 34 HAPs, see Title V application).

3. Metro Park East Landfill submitted a Title V Operating Permit renewal application on September 4, 2007 and any additional information describing the facility on October 9, 2007, August 12, 2011, and November 1, 2011. Based on the information provided in these documents, IDNR has made an initial determination that the facility meets all the applicable criteria for the issuance of an operating permit specified in 567 IAC 22.107.
4. IDNR has complied with the procedures set forth in 567 IAC 22.107, including those regarding public notice, opportunity for public hearing, and notification of EPA and surrounding state and local air pollution programs.

IDNR procedures for reaching a final decision on the draft permit:

1. The public comment period for the draft permit will run from January 23, 2012 through February 21, 2012. The beginning date of this public comment period also serves as the beginning of the U.S. Environmental Protection Agency's (EPA) 45-day review period, provided the EPA does not seek a separate review period. During this time, anyone may submit written comments on the permit. Mail signed comments to Jeff Gabby at the Polk County address shown below.
2. Written requests for a public hearing concerning the permit may also be submitted during the comment period. Any hearing request must state the person's interest in the subject matter, and the nature of the issues proposed to be raised at the hearing. IDNR will hold a public hearing upon finding, on the basis of requests, a significant degree of relevant public interest in a draft permit. Mail hearing requests to Jeff Gabby at the Polk County address shown below.
3. IDNR will keep a record of the issues raised during the public participation process, and will prepare written responses to all comments received. The comments and responses will be compiled into a responsiveness summary document. After the close of the public comment period, IDNR will make a final decision on the renewal application. The responsiveness summary and the final permit will be available to the public upon request.

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IDNR concludes that:

1. IDNR has authority under 455B.133 Code of Iowa to promulgate rules contained in 567 IAC Chapters 20-31, including, but not limited to, rules containing emission limits, providing for compliance schedules, compliance determination methods and issuance of permits.
2. IDNR has the authority to issue operating permits for air contaminant sources and to include conditions in such permits under 455B.134 Code of Iowa.
3. The emission limits included in this permit are authorized by 455B.133 Code of Iowa and 567 IAC Chapters 20-31.
4. IDNR is required to comply with 567 IAC Chapter 22 in conjunction with issuing a Title V Operating Permit.
5. The issuance of this permit does not preclude the IDNR from pursuing enforcement action for any violation.

Applicant: Metro Park East Landfill**Review Engineer:**

EIQ Number: 92-6849

Jeff Gabby

Facility File Number: 77-14-003

Application Evaluation

A. Project Briefing:

This project regards a Part 70 Title V permit application to operate the following significant emission units: Municipal Waste Decomposition (EU 1 / EP 1); Activities Generating Fugitive Dust (EU 2 / EP 2); Degradation of Petroleum Contaminated Soil (EU 3 / EP 3); Kohler Model 150ROZJ 250 hp Stationary Diesel Generator (EU 4 / EP 4); Caterpillar Model D100P1 166 hp Diesel Generator (EU 5/ EP 5); Caterpillar Model D60P1 60 kW Stationary Diesel Generator (EU 6/ EP 6); Shingle Grinding Operation, including grinding operation, screening operation, transfer to screen deck, transfer to stockpile, and truck loading, with Water Mist System (EU 26 / CE 26 / EP 26f); Yard Waste Grinding Operation (EU 26B / EP 26f); 700 bhp Caterpillar Diesel Engine (EU 27 / EP 27); and Vehicle Travel Emissions (EU 28 / EP 28f).

Metro Park East Sanitary Landfill, (MPEL), is co-located with Metro Methane Recovery Facility, (MMRF), EIQ #92-6791, IDNR # 77-14-002. MMRF acts as control for landfill gas generated by MPEL, and keeps MPEL in compliance with NSPS Subpart WWW and NESHAP Subpart AAAA. MMRF buys landfill gas from MPEL, converts the gas into electricity through eight combustion engines, and then sells the electricity it produces to MidAmerican Energy Company. Since the two facilities do not have common control, (the owners of the facilities are separate entities), it was determined that the sources are separate stationary sources. This decision was determined in previous discussions with Ward Burns, USEPA, IDNR, and Polk County staff.

The following are insignificant emission units, per 567 IAC 22.103: Two (2) Diesel Storage Tanks, 6,000 gallon capacity (each), (EU 3i & 4i); one (1) Gasoline Storage Tank, 500 gallon capacity, (EU 5i); four (4) oil storage tanks, 500 gallon capacity (each), (EU 6i, 7i, 8i, and 9i); Oil Tank, 650 Gallon Capacity, (EU 10i); one (1) Propane Fired Hotsy Truck Pressure Washer, 0.000720450 MMBTU/ Hr., (EU 13i); one (1) oil storage tank, 120 gallon capacity, (EU 15i); one (1) passive odor control flare, (EU 16i); and Tub Grinder – Duratech HD-12, (EU 23i).

B. Applicable rules and regulations:

1. Polk County Air Quality Construction Permit Number 1527 for Kohler Model 150ROZJ 250 hp diesel generator (EU 4 / EP 4): <20% opacity, PM₁₀ & PM (0.55lb/hr, 0.14 TPY), SO₂ (0.51 lb/hr, 0.13 TPY), NO_x (4.38 lb/hr, 1.09 TPY), VOC (0.22 lb/hr, 0.06 TPY) and CO (1.34 lb/hr, 0.34 TPY). Operation limited to 500 hours per 12 month period rolled monthly. Hour meter and monthly recordkeeping required.
2. Polk County Air Quality Construction Permit Number 2350 for Caterpillar Model D100P1 166 hp Diesel Generator, (EU 5/ EP5): <20% Opacity, PM₁₀ & PM (0.37 lb/hr, 0.09 TPY, 0.10 gr./ dscf), SO₂ (0.34 lb/hr, 0.09 TPY), NO_x (5.15 lb/hr, 1.29 TPY), VOC (0.42 lb/hr, 0.11 TPY), CO (1.11 lb/hr, 0.28 TPY). PM is also limited to 0.10 gr./ dscf by 567 IAC 23.3(2)"b"(2) and Polk County Board of Health Rules and Regulations Chapter V, Article V, Section 5-14 (b). Operation limited to 500 hours per 12 month period rolled monthly. Hour meter and monthly recordkeeping required.
3. Polk County Air Quality Construction Permit Number 1528 for Caterpillar Model D60P1 60 kW Diesel Generator (EU 6 / EP 6): <20% Opacity, PM₁₀ & PM (0.28 lb/hr, 0.07 TPY), SO₂ (0.16 lb/hr, 0.04 TPY), NO_x (1.65 lb/hr, 0.41 TPY), VOC (0.13lb/hr, 0.03 TPY), CO (0.30 lb/hr, 0.08 TPY). PM is also limited to 0.10 gr./ dscf by 567 IAC 23.3(2)"b"(2) and Polk County Board of Health Rules and Regulations Chapter V, Article V, Section 5-14 (b). Operation limited to 500 hours per 12 month period rolled monthly. Hour meter and monthly recordkeeping required.
4. Polk County Air Quality Construction Permit Number 2167 Modified #2 for Shingle Grinding Operation, including grinding operation, screening operation, transfer to screen deck, transfer to stockpile, and truck loading, with Water Mist System (EU 26 / CE 26 / EP 26f): <20% Opacity, PM (0.12 lb/hr, 0.231 TPY, 0.10 gr/dscf) PM₁₀ (0.04 lb/hr, 0.086 TPY, 0.10 gr/dscf); 700 bhp Caterpillar Diesel Engine (EU 27 / EP 27): <15% Opacity, PM₁₀ & PM (0.63 lb/hr, 1.38 TPY, 0.54 gram/kW-hr), SO₂ (0.28 lb/hr, 0.62 TPY, 0.5 lb/MMBtu), NMHC + NO_x (10.44 lb/hr, 22.80 TPY, 9.2 gram/kW-hr), VOC (1.50 lb/hr, 3.27 TPY, 1.3 gram/kW-hr), CO (13.05 lb/hr, 28.50 TPY, 11.4 gram/kW-hr) and Vehicle Travel Emissions (EU 28 / EP 28f): <20% Opacity, PM (14.492 TPY), PM₁₀ (2.827 TPY).
5. Polk County Air Quality Construction Permit Number 2374 for Yard Waste Grinding Operation (EU 26B / EP 26f): <20% Opacity, PM (5.80 lb/hr, 1.45 TPY, 0.10 gr/dscf), and PM₁₀ (3.60 lb/hr, 0.90 TPY, 0.10 gr/dscf).
6. Emission limits and conditions: The Permittee is subject to the requirements of Solid Waste Permit No. 77-SDP-01-72P.

The Permittee shall comply with all applicable requirements of 40 CFR 60 Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills (567 IAC 23.1(2)"rrr"). The requirements listed under emission unit 1 are based on the fact that the Tier 2 testing has shown that the calculated NMOC emission rate is greater than 50 megagrams per year. All the applicable requirements listed under emission unit 1 are from 40 CFR Part 60 Subpart WWW Standards of Performance for Municipal Solid Waste Landfills.

7. Opacity for the facility: Less than 20% opacity- Polk County Board of Health Rules and Regulations: Chapter V, Article IV, Section 5-9.

8. NSPS: The source is subject to NSPS Subpart WWW and is controlled for NMOC emissions by Metro Methane Recovery Facility, (MMRF). Applicable NSPS requirements from Subpart WWW will be placed in MMRF's and MPEL's Title V permits.
9. NESHAP:

National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart AAAA - Municipal Solid Waste Landfills

This facility is also an affected source under Subparts A (General Provisions, 40 CFR §63.1 – 40 CFR §63.15) and 40 CFR Part 63, Subpart AAAA – National Emission Standards for Hazardous Air Pollutants (NESHAP) for Municipal Solid Waste Landfills. This landfill is a major source landfill that has a design capacity equal to or greater than 2.5 million Mg and has estimated uncontrolled emissions equal to or greater than 50 Megagrams per year NMOC as calculated according to §60.754(a) of the MSW landfills new source performance standards in 40 CFR part 60, subpart WWW. According to §63.1940, an affected source is existing if it has not commenced construction or reconstruction after November 7, 2000. This landfill is considered existing. Existing landfills that are a major source meeting the criteria from §63.1935(a)(3) listed above must install a collection and control system. The collection and control system is permitted as a separate Title V facility. See Metro Methane Recovery Facility, Title V Permit Number 03-TV-005R1. The Permittee shall comply with all applicable requirements of 40 CFR 63 Subpart AAAA National Emission Standards for Hazardous Air Pollutants for Municipal Solid Waste Landfills - 567 IAC 23.1(4)"ca", including those summarized below:

§63.1955(b) Requirements

If you are required by 40 CFR §60.752(b)(2) of subpart WWW to install a collection and control system, you must comply with the requirements in §63.1960 through §63.1985 and with the general provisions to Part 63.

§63.1960 Compliance Requirements

Compliance is determined in the same way it is determined for 40 CFR Part 60, Subpart WWW with the addition of developing and implementing a written start-up, shut-down and maintenance plan according to the provisions in 40 CFR §63.6(e)(3). A copy of the SSM plan must be maintained on site.

§63.1980 Notifications, Records and Reports

(a) Keep records and reports as specified in 40 CFR 60, Subpart WWW with the addition of the annual report described in 40 CFR §60.757(f) being submitted every 6 months.

10. PSD: Source is currently major (PSD) for PM and CO₂e. If the facility makes any future qualifying changes, then they will need to submit a PSD permit application, i.e., applying for a significant increase of any criteria pollutant.
11. NAAQS: Facility is located in an attainment area. Air modeling is not required at this time.
12. Title IV: Not applicable. MPEL sells landfill gas to MMRF, which has a 4.7 MW capacity, is a non-cogen facility, and sells electricity to the grid. Landfill gas is not defined as a fossil fuel in Title IV regulations. It is exempt under 40 CFR 72.6 (b).

(EU 5 / EP 5) is subject to 40 CFR 60 Subpart III –Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. Requirements are found in Polk County AQD Construction Permit # 2350, and listed here:

- Fuel sulfur content shall be no greater than 0.5% by weight.
- A non-resettable totalizing hour meter shall be installed on the unit.
- The generator shall be operated in a manner consistent with the definition of an emergency stationary non-fire pump internal combustion engine as defined by 40 CFR 60 Subpart III.
- This equipment is of the source category affected by the following federal regulations for air toxic emissions: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE) [40 CFR Part 63, Subpart ZZZZ (4Z)].
- As of 8/8/2011, the State of Iowa does not have full delegated authority for Subpart 4Z. EPA is the Administrator for 4Z and is implementing and enforcing these regulations. The owner or operator of this equipment is responsible for complying with all 4Z requirements.
- The owner or operator shall:
 - a) Change oil and filter every 500 hours of operation or annually, whichever comes first.
 - b) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first.
 - c) Inspect all hose and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary

Reporting & Record keeping:

- Monthly (*hour meter*) readings shall be taken and logged on site. Logs shall be kept on site for a period of five years. Logs shall be made available to representatives of Polk County AQD upon request.
 - Records showing the above engine services shall be kept on site for a period of five years.
 - Records shall be kept for five years and be made available to representatives of this department upon request.
13. Stratospheric ozone: the only ozone depleting chemicals (regulated by 40 CFR 82) at the facility are those used for air conditioning. A certified contractor is used to remove all appliances off site for disposal and recovery of all ozone depleting chemicals. 40 CFR 82, Subpart F, applies to the disposal of appliances containing Class I or Class II substances (i.e. air conditioners).
14. CAM: The NMOC emission standard is exempted from CAM requirements because NSPS Subpart WWW (proposed May 30, 1991) was proposed after November 15, 1990. See 40 CFR 64.2(b). Therefore, a CAM plan for the NMOC collection and control equipment is not required. There is a Water Mist System (CE 26), but it is not a typical control device, rather it is a dust suppression system using a water spray. The uncontrolled PTE for this emission group (EU 26 / CE 26 / EP 26f) is a PM PTE of 0.565 TPY, (uncontrolled minor), and an uncontrolled PM₁₀ PTE of 0.21 TPY, (uncontrolled minor). This further demonstrates that CAM does not apply.
15. PM-10: For purposes of reporting, regulating, and fee payment, it is being assumed that all PM is PM₁₀ or smaller from these EPs.

C. Monitoring Consideration:

(EP 1 / EU 1): NMOC emissions from the municipal waste decomposition are controlled by Metro Methane Recovery Facility. The monitoring requirements, including stack testing, contained in Title V Permit 03-TV-005R1 issued to Metro Methane Recovery is sufficient to ensure compliance with all applicable regulations, therefore, these requirements will not be listed in this permit.

The required record keeping for the Title V Permit and for Subpart WWW is adequate to demonstrate compliance with all applicable regulations and eliminates the need for an Agency or Facility O&M plan.

(EP 2 / EU 2 and EP 3 / EU 3): Both of these sources are fugitive sources with no controls and no emission limits; therefore no stack testing or O&M plans are required.

(EP 4 / EU 4, EP 5 / EU 5, and EP 6 / EU 6): These 3 units are each emergency generators. Each generator is limited to 500 hours of operation per 12 month period rolled monthly. Emission factors for the generators have a high reliability rating. A non-resettable totalizing hour meter and monthly record keeping are required. These conditions are adequate to ensure compliance; therefore no stack testing or O&M Plans are required.

Each generator has an opacity limit of <20%. To ensure compliance, visible emission readings are required to be taken and logged whenever a generator is operated. Corrective action is required if any visible emissions are observed. If corrective action doesn't return the generator to non-detect opacity, then a Method 9 reading is required by a certified reader. If an opacity greater than or equal to 20 % is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions.

Shingle Grinding Operation, including grinding operation, screening operation, transfer to screen deck, transfer to stockpile, and truck loading, with Water Mist System (EU 26 / CE 26 / EP 26f): <20% Opacity, PM (0.12 lb/hr, 0.231 TPY, 0.10 gr/dscf) PM₁₀ (0.04 lb/hr, 0.086 TPY, 0.10 gr/dscf). Permitted PTEs above are controlled PTE. The Water Mist System (CE 26) is not a typical control device, but rather a dust suppression system using a water spray. IDNR's Control Efficiency Policy, dated 6/16/1998, rates this type of control at 40% for both PM and PM₁₀. This equates to an uncontrolled PM PTE of 0.578 TPY, (uncontrolled minor), and an uncontrolled PM₁₀ PTE of 0.215 TPY, (uncontrolled minor). IDNRs Monitoring Guidance Policy dated 6/18/2001 indicates no O&M Plan, and no tests required. 40 CFR 61 Subpart M-National Emission Standards for Asbestos and Polk County Air Quality Construction Permit # 2167 Modified#2 requires a one-time, air quality test for asbestos to be conducted in the area of the operators of the shingle grinding equipment to demonstrate that all OSHA asbestos standards are met. This air quality asbestos test shall be conducted by a certified, independent laboratory. (*A NIOSH 7400 analytical method test was performed on October 26, 2009. All of the air samples collected were below the permissible OSHA exposure level.*) Visible Emissions (VE) shall be observed once every 30 days, when the Shingle Grinding Operation (EU 26) is operating to ensure none occur during the operation of the unit. This will determine compliance with the <20% opacity limit.

Yard Waste Grinding Operation (EU 26B / EP 26f): <20% Opacity, PM (5.80 lb/hr, 1.45 TPY, 0.10 gr/dscf), and PM₁₀ (3.60 lb/hr, 0.90 TPY, 0.10 gr/dscf). Permitted PTEs above are uncontrolled PTE. IDNRs Monitoring Guidance Policy dated 6/18/2001 indicates no O&M Plan, and no tests required. Visible Emissions (VE) shall be observed once every 30 days, when the Yard Waste Grinding Operation (EU 26B) is operating to ensure none occur during the operation of the unit. This will determine compliance with the <20% opacity limit.

700 bhp Caterpillar Diesel Engine (EU 27 / EP 27): <15% Opacity, PM₁₀ & PM (0.63 lb/hr, 1.38 TPY, 0.54 gram/kW-hr), SO₂ (0.28 lb/hr, 0.62 TPY, 0.5 lb/MMBtu), NMHC + NO_x (10.44 lb/hr, 22.80 TPY, 9.2 gram/kW-hr), VOC (1.50 lb/hr, 3.27 TPY, 1.3 gram/kW-hr), and CO (13.05 lb/hr, 28.50 TPY, 11.4 gram/kW-hr). All pollutants are uncontrolled minor. IDNRs Monitoring Guidance Policy dated 6/18/2001 indicates no O&M Plan, and no tests required. Compliance with 40 CFR 60 Subpart IIII will ensure compliance with permitted levels. Visible Emissions (VE) shall be observed once every 30 days, when the Caterpillar Engine (EU 27) is operating to ensure none occur during the operation of the unit.

Vehicle Travel Emissions (EU 28 / EP 28f): <20% Opacity, PM (14.492 TPY), PM₁₀ (2.827 TPY). These permitted levels are uncontrolled minor. IDNRs Monitoring Guidance Policy dated 6/18/2001 indicates no O&M Plan, and no tests required. Polk County AQD Construction Permit #2167 Modified #2 includes the following requirements, which will ensure compliance with permitted values:

- The facility shall comply with Polk County Board of Health Rules and Regulations Chapter V, Article IX, Division 1 Fugitive Dust requirements.
- Truck traffic on the haul roads shall not exceed 25 mph. The speed limit shall be posted.
- Truck loads shall be covered on property or when leaving the property when covers are available.

- Haul roads shall be broom swept weekly or equivalent method employing some combination of sweeping, vacuuming, and road washing.

Visible Emissions (VE) shall be observed once every 30 days, when the Vehicle Travel Emissions (EU 28) is operating to ensure none occur during the operation of the unit.

CO2e Landfill PTE:

Landfill (EU 1) GHG PTEs were calculated by the applicant using IDNR's GHG Emissions Guide. CO2 was calculated, but will not be factored into the CO2e PTE, because EPA deferred CO2 from GHG calculations for 3 years through their 7/20/2011 rule making titled, "Deferral for CO2 emissions from Bioenergy and other Biogenic sources under the PSD and Title V Programs". (*GHG PTE shown on the Fact Sheet and Public Notice do not include biogenic GHG PTE, i.e. no CO2 PTE from EU 1- Landfill*) PTE of the remaining EU 1 GHGs are: Methane: 19,579 TPY, HFC-134a: 1.89 TPY, and N2O: 0.004 TPY. Total landfill CO2e PTE is calculated by taking these PTEs times the GHGs' Global Warming Weighting Factor times (1- the collection efficiency, expressed as a decimal). A default collection efficiency of 75% will be used for the landfill, (*it is assumed that Metro Methane Recovery Facility is capturing 75% of Landfill gases, with the remaining amount being emitted by MPEL*).

Methane:

$(19,579 \text{ TPY}) (1-0.75) (21) = 102,789.75 \text{ TPY CO}_2\text{e}$

HFC-134a:

$(1.89 \text{ TPY}) (1-0.75) (1300) = 614.25 \text{ TPY CO}_2\text{e}$

N2O:

$(0.004 \text{ TPY}) (1-0.75) (310) = 0.31 \text{ TPY CO}_2\text{e}$

Total (EU 1 / EP 1) CO2e PTE= $102,789.75 + 614.25 + 0.31 = \underline{103,404.31 \text{ TPY CO}_2\text{e}}$

D. Responsible Official:

Thomas Hadden III, Executive Director of Metro Waste Authority satisfies the definition, since he is in charge of the principle business functions of the facility.