

**Iowa Department of Natural Resources  
Title V Operating Permit**

**Name of Permitted Facility: MidAmerican Energy Company:  
Pleasant Hill Combustion Turbines /  
Greater Des Moines Energy Center**

**Facility Location: 4401 Carlisle Road  
Pleasant Hill, Iowa 50327**

**Air Quality Operating Permit Number: 97-TV-006R1**  
**Expiration Date: November 20, 2011**

**EIQ Number: 92-5848**  
**Facility File Number: 77-13-002**

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**Responsible Official**

**Name: Mr. Steven J. Brewer**  
**Title: Vice President Supply**  
**Mailing Address: 7215 Navajo Street  
Council Bluffs, Iowa 51501**  
**Phone #: (712) 366-5303**

**Permit Contact Person for the Facility**

**Name: Mr. Gary E. Kruempel**  
**Title: Manager, Combustion Turbines**  
**Mailing Address: 4299 Northwest Urbandale Drive  
Urbandale, Iowa 50322**  
**Phone #: (515) 281-2510**

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This permit is issued in accordance with 567 Iowa Administrative Code Chapter 22, and is issued subject to the terms and conditions contained in this permit.

**For the Director of the Department of Natural Resources**

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Douglas A. Campbell, Supervisor of Operating Permits Section

Date

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## Abbreviations

acfm.....	actual cubic feet per minute
AQD.....	Polk County Public Works- Air Quality Division
BACT.....	Best Available Control Technology
CAS.....	Chemical Abstract Service Registry
CE .....	Control Equipment
CEM.....	Continuous Emission Monitor
CFR.....	Code of Federal Regulation
CTs.....	Combustion Turbines
°F.....	degrees Fahrenheit
EIQ.....	Emissions Inventory Questionnaire
EP.....	Emission Point
EU.....	Emission Unit
gr./dscf .....	grains per dry standard cubic foot
GDMEC.....	Greater Des Moines Energy Center
IAC.....	Iowa Administrative Code
IDNR.....	Iowa Department of Natural Resources
ISCST.....	Industrial Source Complex Short Term Dispersion Model
MACT.....	Maximum Achievable Control Technology
µg/m <sup>3</sup> .....	Micrograms per Cubic Meter
MM BTU/ Hr.....	Million British Thermal Units per Hour
MSDS.....	Material Safety Data Sheet(s)
MVAC .....	Motor Vehicle Air Conditioner
MW.....	Mega-Watt
NAICS .....	North American Industry Classification System
NESHAP.....	National Emission Standards for Hazardous Air Pollutants
NSPS .....	New Source Performance Standard
ppmvd.....	parts per million by volume, dry
psia.....	pounds per square inch absolute
lb./hr.....	pounds per hour
lb./MMBtu .....	pounds per Million British thermal units
SCC.....	Source Classification Codes
scfm.....	standard cubic feet per minute
SIC.....	Standard Industrial Classification
TPY.....	Tons Per Year
USEPA.....	United States Environmental Protection Agency

### **Pollutants**

PM.....	Particulate Matter
PM <sub>10</sub> .....	Particulate Matter ten microns or less in diameter
SO <sub>2</sub> .....	Sulfur dioxide
NO <sub>x</sub> .....	Nitrogen Oxides
VOC(s).....	Volatile Organic Compound(s)
CO.....	Carbon Monoxide
HAP(s) .....	Hazardous Air Pollutant(s)

# I. Facility Description and Equipment List

Facility Name: **MidAmerican Energy Company: Pleasant Hill Combustion Turbines /  
Greater Des Moines Energy Center**

Permit Number: 97-TV-006R1

Facility Description: Electric Services

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## Equipment List

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<b>Emission Point Number</b>	<b>Associated Emission Unit(s) Number (s)</b>	<b>Associated Emission Unit Description</b>	<b>Construction Permit Number</b>
001	001	Unit 1 Turbine	IDNR 93-A-525-S3
002	002	Unit 2 Turbine	IDNR 93-A-526-S3
005	005	Unit 3 Turbine	IDNR 93-A-527-S5
006	006	Unit 1 Starting Diesel	IDNR 93-A-525-S3
007	007	Unit 2 Starting Diesel	IDNR 93-A-526-S3
GDMEC-EP 1	GDMEC-EU 1	Combustion Turbine #1- Dry Low NOx Combustor	IDNR 02-A-048-P2
GDMEC-EP 2	GDMEC-EU 2	Combustion Turbine #2- Dry Low NOx Combustor	IDNR 02-A-049-P2
GDMEC-EP 3	GDMEC-EU 3	Auxiliary Boiler	IDNR 02-A-050-P2
GDMEC-EP 6	GDMEC-EU 6	Emergency Generator	IDNR 02-A-054-P2
GDMEC-EP 7	GDMEC-EU 7	Dew Point Heater	IDNR 02-A-051-P2
GDMEC-EP 20	GDMEC-EU 20	Diesel Fire Pump	IDNR 02-A-055-P2

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**Insignificant Equipment List**

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<b>Insignificant Emission Unit Number</b>	<b>Insignificant Emission Unit Description</b>
<b>004</b>	<b>Parts Washer</b>
<b>009</b>	<b>Fuel Storage Day Tank for Turbines, (6,440 Gallon Capacity)</b>
<b>010</b>	<b>Glycol Expansion Tank for Unit 1, (85 Gallon Capacity)</b>
<b>011</b>	<b>Glycol Expansion Tank for Unit 2, (85 Gallon Capacity)</b>
<b>012</b>	<b>Glycol Expansion Tank for Unit 3, (96 Gallon Capacity)</b>
<b>013</b>	<b>Lube Oil System for Unit 1, (3,300 Gallon Capacity)</b>
<b>014</b>	<b>Lube Oil System for Unit 2, (3,300 Gallon Capacity)</b>
<b>015</b>	<b>Lube Oil System for Unit 3, (3,300 Gallon Capacity)</b>
<b>016</b>	<b>Day Tank for Unit 1 Diesel Starting Engine, (200 Gallon Capacity)</b>
<b>017</b>	<b>Day Tank for Unit 2 Diesel Starting Engine, (200 Gallon Capacity)</b>
<b>110</b>	<b>Dew Point Heater, (6.0317 MM BTU/ Hr. Natural Gas Fired)</b>
<b>GDMEC-EU 22</b>	<b>Fuel Tank for Emergency Generator, (600 Gallon Capacity)</b>
<b>GDMEC-EU 23</b>	<b>Fuel Tank for Fire Pump, (300 Gallon Capacity)</b>
<b>GDMEC-EU 24</b>	<b>GDMEC Unit 1 Lube Oil Tank, (3,600 Gallon Capacity)</b>
<b>GDMEC-EU 25</b>	<b>GDMEC Unit 2 Lube Oil Tank, (3,600 Gallon Capacity)</b>
<b>GDMEC-EU 26</b>	<b>Steam Turbine Lube Oil System, (3,857 Gallon Capacity)</b>

## II. Plant-Wide Conditions

Facility Name: **MidAmerican Energy Company: Pleasant Hill Combustion Turbines / Greater Des Moines Energy Center**  
Permit Number: 97-TV-006R1

Permit conditions are established in accord with 567 Iowa Administrative Code Rule 22.108

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### **Permit Duration**

The term of this permit is: Five (5) Years  
Commencing on: November 20, 2006  
Ending on: November 20, 2011

Amendments, modifications and reopenings of the permit shall be obtained in accordance with 567 Iowa Administrative Code Rules 22.110 - 22.114. Permits may be suspended, terminated, or revoked as specified in 567 Iowa Administrative Code Rules 22.115.

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### **Emission Limits:**

*Unless specified otherwise in the Source Specific Conditions, the following limitations and supporting regulations apply to all emission points at this plant:*

Opacity (visible emissions): <20% opacity

Authority for Requirement: Polk County Board of Health Rules and Regulations: Chapter V, Article IV, Section 5-9

Sulfur Dioxide (SO<sub>2</sub>): 500 parts per million by volume

Authority for Requirement: 40 CFR 60.333(b)  
567 IAC 23.3(3)"e"  
Polk County Board of Health Rules and Regulations: Chapter V, Article IX, Section 5-27 (5)

Particulate Matter: If the Polk County Health Officer determines that a process complying with the emission rates specified in Table 1 of Section 5-15 of Polk County Board of Health Rules and Regulations Chapter V is causing or will cause air pollution, the Polk County Health Officer will notify the source of such determination. Upon notification, the source shall not emit particulates in amounts greater than 0.10 grain per standard cubic foot of exhaust gas.

Authority for Requirement: Polk County Board of Health Rules and Regulations Chapter V, Article VI, Section 5-14(b)

Particulate Matter (state enforceable only)<sup>1</sup>:

No person shall cause or allow the emission of particulate matter from any source in excess of the emission standards specified in this chapter, except as provided in 567 – Chapter 24. For sources constructed, modified or reconstructed after July 21, 1999, the emission of particulate matter from any process shall not exceed an emission standard of 0.1 grain per dry standard cubic foot of exhaust gas, except as provided in 567 – 21.2(455B), 23.1(455B), 23.4(455B) and 567 – Chapter 24.

For sources constructed, modified or reconstructed prior to July 21, 1999, the emission of particulate matter from any process shall not exceed the amount determined from Table I, or amount specified in a permit if based on an emission standard of 0.1 grain per standard cubic foot of exhaust gas or established from standards provided in 23.1(455B) and 23.4(455B).

Authority for Requirement: 567 IAC 23.3(2)"a" (as revised 7/21/1999)

Particulate Matter<sup>2</sup>:

The emission of particulate matter from any process shall not exceed the amount determined from Table I, except as provided in 567 — 21.2(455B), 23.1(455B), 23.4(455B) and 567 — Chapter 24. If the director determines that a process complying with the emission rates specified in Table I is causing or will cause air pollution in a specific area of the state, an emission standard of 0.1 grain per standard cubic foot of exhaust gas may be imposed.

Authority for Requirement: 567 IAC 23.3(2)"a" (prior to 7/21/1999)

*Combustion for indirect heating:* Inside any metropolitan statistical area, the maximum allowable emission from each stack, irrespective of stack height, shall be 0.6 pounds of particulates per million Btu input.

Authority for Requirement: 567 IAC 23.3(2)"b"(2)

Polk County Board of Health Rules and Regulations Chapter V,  
Article VI, Section 5-15(b)

Fugitive Dust: It shall be unlawful for any person handling, loading, unloading, reloading, storing, transferring, transporting, placing, depositing, throwing, discarding, or scattering any ashes, fly ash, cinders, slag or dust collected from any combination process, any dust, dirt, chaff, wastepaper, trash, rubbish, waste or refuse matter of any kind, or any other substance or material whatever, which is likely to be scattered by the wind, or is susceptible to being wind-borne, to do so without taking reasonable precautions or measures to prevent particulate matter from becoming airborne so as to minimize atmospheric pollution.

Authority for Requirement: Polk County Board of Health Rules and Regulations Chapter V,  
Article IX, Section 5-24

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<sup>1</sup> Pending approval into Iowa's State Implementation Plan (SIP), paragraph 567 IAC 23.3(2)"a" (as revised 7/21/1999) is considered *state enforceable only*.

<sup>2</sup> Paragraph 567 IAC 23.3(2)"a" (prior to 7/21/1999) is the general particulate matter emission standard currently in the Iowa SIP.

Fugitive Dust: Attainment and Unclassified Areas - No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved public roads, without taking reasonable precautions to prevent particulate matter in quantities sufficient to create a nuisance, as defined in Iowa Code section 657.1, from becoming airborne. All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. The highway authority shall be responsible for taking corrective action in those cases where said authority has received complaints of or has actual knowledge of dust conditions which require abatement pursuant to this subrule. Reasonable precautions may include, but not limited to, the following procedures.

1. Use, where practical, of water or chemicals for control of dusts in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
2. Application of suitable materials, such as but not limited to asphalt, oil, water or chemicals on unpaved roads, material stockpiles, race tracks and other surfaces which can give rise to airborne dusts.
3. Installation and use of containment or control equipment, to enclose or otherwise limit the emissions resulting from the handling and transfer of dusty materials, such as but not limited to grain, fertilizers or limestone.
4. Covering at all times when in motion, open-bodied vehicles transporting materials likely to give rise to airborne dusts.
5. Prompt removal of earth or other material from paved streets or to which earth or other material has been transported by trucking or earth-moving equipment, erosion by water or other means.

Authority for Requirement: 567 IAC 23.3(2)"c"

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### **Compliance Plan**

*The owner/operator shall comply with the applicable requirements listed below. The compliance status is based on information provided by the applicant.*

Unless otherwise noted in Section III of this permit, MidAmerican Energy Company: Pleasant Hill Combustion Turbines / Greater Des Moines Energy Center is in compliance with all applicable requirements and shall continue to comply with all such requirements. For those applicable requirements which become effective during the permit term, MidAmerican Energy Company: Pleasant Hill Combustion Turbines / Greater Des Moines Energy Center shall comply with such requirements in a timely manner.

Authority for Requirement: 567 IAC 22.108(15)

### III. Emission Point-Specific Conditions

Facility Name: **MidAmerican Energy Company: Pleasant Hill Combustion Turbines /  
Greater Des Moines Energy Center**

Permit Number: 97-TV-006R1

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#### **Emission Point ID Number: 001**

##### Associated Equipment

Associated Emission Unit ID Number: 001

Emissions Control Equipment ID Number: 001

Emissions Control Equipment Description: Becon 336A241P001 Water Injection

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Emission Unit vented through this Emission Point: 001

Emission Unit Description: Unit 1 Combustion Turbine, 45 MW, General Electric PG-6541 (B)

Raw Material/Fuel: #2 Fuel Oil or Natural Gas

Rated Capacity: 3,800 gallons/ hr or 560,000 cu. ft./ hr

#### **Applicable Requirements**

##### **Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limits: 20%

Authority for Requirement: Iowa DNR Construction Permit Number: 93-A-525-S3  
Polk County Board of Health Rules and Regulations: Chapter V,  
Article IV, Section 5-9

Pollutant: PM

Emission Limit: 0.6 lb./ MMBTU

Authority for Requirement: 567 IAC 23.3 (2)"b"(2)  
Iowa DNR Construction Permit Number: 93-A-525-S3  
Polk County Board of Health Rules and Regulations: Chapter V,  
Article V, Section 5-12 (1)

Pollutant: SO<sub>2</sub>

Emission Limit: 150 ppmvd

Authority for Requirement: 40 CFR 60.333"a"

567 IAC 23.1 (2) (aa)

Iowa DNR Construction Permit Number: 93-A-525-S3

Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n) (27)

Pollutant: SO<sub>2</sub>

Emission Limit: 0.5 lb./MMBTU

Authority for Requirement: Polk County Board of Health Rules and Regulations: Chapter V,  
Article IX, Section 5-27 (2) (b)

Pollutant: NO<sub>x</sub>

Emission Limits: 173.0 lb./hr; 125 TPY (combined total for Unit 1 & Unit 2); and 75 ppmvd  
Distillate fuel; 0.03% fuel-bound nitrogen, peak loading. NO<sub>x</sub> emission rates  
are corrected to 15% O<sub>2</sub> and include the heat rate correction and fuel bound  
nitrogen correction found in NSPS, Subpart GG. Allowable concentrations  
found in NSPS; Subpart GG are ISO standard day conditions.

Authority for Requirement: 40 CFR 60.332 (a) (1)

567 IAC 23.1 (2)"aa"

Iowa DNR Construction Permit Number 93-A-525-S3

Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n) (27)

### **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

Hours of operation: Unit 1 and Unit 2 (permitted as 93-A-525-S3 and 93-A-526-S3) are limited to a combined total of 1,445 turbine operating hours of operation per twelve month rolling period. One turbine operating hour is defined as one turbine operating for one hour. For PSD applicability purposes only, this results in a total "potential-to-emit" for NO<sub>x</sub> from the two units of 125 TPY. The total number of hours for both units shall be summed up each twelve month period and each month a new twelve month total calculated.

Process throughput: Pipeline quality natural gas or # 2 fuel oil. Fuel oil shall contain no more than no more than 0.03% fuel-bound nitrogen or 0.05% sulfur by weight.

Authority for Requirement: Iowa DNR Construction Permit Number 93-A-525-S3

## NSPS Requirements:

The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. 40 CFR 60.7(b)

The permittee shall submit an excess emissions and monitoring systems performance report to the Department and Administrator in accordance with 40 CFR 60.7(c). The summary report form shall contain the information and format required in 40 CFR 60.7(d).

Notwithstanding the frequency of reporting requirements in the prior permit conditions, the permittee may reduce the frequency of reporting of excess emissions and monitoring system performance reports pursuant to 40 CFR 60.7(e).

At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. 40 CFR 60.11(d)

The permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere. 40 CFR 60.12

Authority for Requirement: 567 IAC 23.1(2)

Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n)

## **Reporting & Record keeping:**

### A) Record keeping:

The following records shall be maintained on site for five (5) years and be made available for inspection by representatives of AQD.

1) The total number of hours for Unit 1 and Unit 2 shall be summed up each twelve month period and each month a new twelve month total calculated.

Authority for Requirement: Iowa DNR Construction Permit Number: 93-A-525-S3

- 2). Sulfur and nitrogen contents of the fuel being fired shall be monitored in compliance with 40 CFR 60.334(b) and 60.335(d) and (e).
- 3). The frequency of determining the sulfur and nitrogen content of the fuel shall be in compliance with 40 CFR 60.334(i).
- 4). Excess emissions of NO<sub>x</sub> shall be reported in compliance with 40 CFR 60.334(j)(1).
- 5). Excess emissions of SO<sub>2</sub> shall be reported in compliance with 40 CFR 60.334(j)(2).
- 6). Periods of excess ice fog shall be reported in compliance with 40 CFR 60.334(j)(3).
- 7). Periods of emergency fuel shall be reported in compliance with 40 CFR 60.334(j)(4).

Authority for Requirement: 40 CFR 60 Subpart GG

567 IAC 23.1(2)"aa"

Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16(n)(27)

- 8) A written log showing hours of operation, by month and by unit, shall be maintained and be made available to representatives of the EPA, Iowa DNR, or Polk County upon request.

Authority for Requirement: 40 CFR 60.7(b)

567 IAC 23.1 (2) "aa"

Iowa DNR Construction Permit Number: 93-A-525-S3

Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n)

- 9) Measurements shall be recorded in a suitable form for inspection.

Authority for Requirement: 40 CFR 60.7(f)

567 IAC 23.1 (2) "aa"

Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n)

- 10) A continuous monitoring system shall be installed and operated to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine, as required in 40 CFR 60.334(a).

Authority for Requirement: 40 CFR 60.334(a)

567 IAC 23.1 (2) "aa"

Iowa DNR Construction Permit Number: 93-A-525-S3

Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n) (27)

### **Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

Stack Height (feet): 35.5

Stack Dimensions (inches): 162 by 126

Stack Exhaust Flow Rate (acfm): 716,000

Stack Temperature (°F): 1,071

Vertical, Unobstructed Discharge: Yes-  No

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.  
Authority for Requirement: Iowa DNR Construction Permit Number: 93-A-525-S3

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the Monitoring requirements listed below.*

**Visible Emissions Monitoring:**

Visible Emissions (VE) shall be observed from EP 001 at least once per week when the Unit 1 Turbine (EU 001) is operated on #2 Fuel Oil, to ensure none occur during the operation of the unit. If visible emissions are observed, corrective action will be taken as soon as possible, but no later than eight (8) hours from the observation of visible emissions. If corrective action does not return the observation to no visible emissions, then a Method 9 observation will be required. If an opacity greater than 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. If weather conditions prevent the observer from conducting a VE observation, the observer shall note such conditions on the data observation sheet. At least three attempts shall be made to retake VE readings at approximately 2-hour intervals throughout the day. If all observation attempts for a week have been unsuccessful due to weather, a VE observation shall be made during the next operating day where weather permits. No VE readings are required when the Unit 1 Turbine combusts natural gas only.

Reporting & Record keeping: Maintain a written record of the observation and any action resulting from the observation. Records required shall be maintained on-site for five (5) years and be made available to representatives of Polk County AQD upon request.

**Agency Approved Operation & Maintenance Plan Required? Yes  No**

**Facility Maintained Operation & Maintenance Plan Required? Yes  No**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes  No**

Authority for Requirement: 567 IAC 22.108(3)

**Compliance Assurance Monitoring Plan for Emission Unit 001 –  
MidAmerican Energy: Pleasant Hill/ GDMEC CTs**

**I. Background**

- A. Emission Unit Description: Unit 1 Combustion Turbine, 45 MW,  
General Electric PG-6541 (B)  
(EU 001 / CE 001 / EP 001)

Associated Emission Unit ID Number: 001

Emissions Control Equipment ID Number: CE001

- B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation: 40 CFR 60 Subpart GG  
IDNR Permit # 93-A-525-S3

NO<sub>x</sub> emission limit: 173.0 lb./ hr; 125 TPY (combined total for Unit 1 & Unit 2); and 75 ppmvd. Distillate fuel; 0.03% fuel-bound nitrogen, peak loading. NO<sub>x</sub> emission rates are corrected to 15% O<sub>2</sub> and include the heat rate correction and fuel bound nitrogen correction found in NSPS, Subpart GG. Allowable concentrations found in NSPS; Subpart GG are ISO standard day conditions.

Monitoring requirements: The water-to-fuel ratio shall be monitored according to 40 CFR 60.334(a).

- C. Control Technology: Water Injection NO<sub>x</sub> control

**II. Monitoring Approach**

- A. Continuous Emissions Monitoring:  
None.

B. General

- Monitoring will be completed during unit operation.

C. Water Injection Ratio

- The water injection ratio will be continuously monitored via the plant control system. The control system monitors the fuel flow and the water injection flow to the unit. The water injection rate is automatically adjusted to maintain the proper water injection ratio. The required water injection rates were determined by NO<sub>x</sub> emissions testing. Corrective action measures will be implemented when the water injection ratio is less than the ratio established with the compliance test. Corrective action measures include an alarm indicating a problem with the water injection system, and automatic load reduction. The automatic load reduction will reduce the fuel input to the turbine until the proper water injection ratio is attained. If water flow is not sensed by the control system, unit load will be reduced to a level below the level at which water injection is required to maintain compliance with the applicable NO<sub>x</sub> emission limit.

#### D. Record Keeping and Reporting

- Water injection ratio during operation
- Maintain a written or electronic record of all inspections and any action resulting from the inspection.
- Maintenance and inspection records will be kept for five (5) years and available upon request.

#### E. Quality Control

- All instruments and control equipment will be calibrated, maintained, and operated according to the manufactures specifications.
- A spare parts inventory is maintained by a computerized inventory management system.

#### F. Rationale for the Proposed Elements of the Monitoring:

- MidAmerican will use the water injection ratio to continuously monitor the combustion turbine equipment.
- Proper operation of the water injection is essential to maintaining effective NO<sub>x</sub> control. The water injection ratio established during initial compliance testing is monitored and alarmed when the minimum water injection ratio is not being met.
- Compliance with the NO<sub>x</sub> limits during periods of proper operation of the water injection system has been demonstrated via compliance testing. There have been no changes to the unit or to the water injection system that would cause significant changes in performance to the turbine.

Authority for Requirement: 567 IAC 22.108(3)

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**Emission Point ID Number: 002**

Associated Equipment

Associated Emission Unit ID Number: 002

Emissions Control Equipment ID Number: 002

Emissions Control Equipment Description: Becon 336A241P001 Water Injection

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Emission Unit vented through this Emission Point: 002

Emission Unit Description: Unit 2 Combustion Turbine, 45 MW, General Electric PG-6541 (B)

Raw Material/Fuel: #2 Fuel Oil or Natural Gas

Rated Capacity: 3,800 gallons/ hr or 510,000 cu. ft./ hr

**Applicable Requirements**

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limits: 20%

Authority for Requirement: Iowa DNR Construction Permit Number 93-A-526-S3  
Polk County Board of Health Rules and Regulations: Chapter V,  
Article IV, Section 5-9

Pollutant: PM

Emission Limit: 0.6 lb./ MMBTU

Authority for Requirement: 567 IAC 23.3 (2) "b" (2)  
Iowa DNR Construction Permit Number 93-A-526-S3  
Polk County Board of Health Rules and Regulations: Chapter V,  
Article V, Section 5-12 (1)

Pollutant: SO<sub>2</sub>

Emission Limit: 150 ppmvd

Authority for Requirement: 40 CFR 60.333 (a)  
567 IAC 23.1 (2) "aa"  
Iowa DNR Construction Permit Number 93-A-526-S3  
Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n) (27)

Pollutant: SO<sub>2</sub>

Emission Limit: 0.5 lb./ MMBTU

Authority for Requirement: Polk County Board of Health Rules and Regulations: Chapter V, Article IX, Section 5-27 (2) (b)

Pollutant: NO<sub>x</sub>

Emission Limits: 173.0 lb./ hr; 125 TPY (combined total for Unit 1 & Unit 2); and 75 ppmvd Distillate fuel; 0.03% fuel-bound nitrogen, peak loading. NO<sub>x</sub> emission rates are corrected to 15% O<sub>2</sub> and include the heat rate correction and fuel bound nitrogen correction found in NSPS, Subpart GG. Allowable concentrations found in NSPS; Subpart GG are ISO standard day conditions.

Authority for Requirement: 40 CFR 60.332 (a) (1)

567 IAC 23.1 (2) "aa"

Iowa DNR Construction Permit Number 93-A-526-S3

Polk County Board of Health Rules and Regulations: Chapter V, Article VI, Section 5-16 (n) (27)

### **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

Hours of operation: Unit 1 and Unit 2 (permitted as 93-A-525-S3 and 93-A-526-S3) are limited to a combined total of 1,445 turbine operating hours of operation per twelve month rolling period. One turbine operating hour is defined as one turbine operating for one hour. For PSD applicability purposes only, this results in a total "potential-to-emit" for NO<sub>x</sub> from the two units of 125 TPY. The total number of hours for both units shall be summed up each twelve month period and each month a new twelve month total calculated.

Process throughput: Pipeline quality natural gas or # 2 fuel oil. Fuel oil shall contain no more than no more than 0.03% fuel-bound nitrogen or 0.05% sulfur by weight.

Authority for Requirement: Iowa DNR Construction Permit Number: 93-A-526-S3

## NSPS Requirements:

The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. 40 CFR 60.7(b)

The permittee shall submit an excess emissions and monitoring systems performance report to the Department and Administrator in accordance with 40 CFR 60.7(c). The summary report form shall contain the information and format required in 40 CFR 60.7(d).

Notwithstanding the frequency of reporting requirements in the prior permit conditions, the permittee may reduce the frequency of reporting of excess emissions and monitoring system performance reports pursuant to 40 CFR 60.7(e).

At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. 40 CFR 60.11(d)

The permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere. 40 CFR 60.12

Authority for Requirement: 567 IAC 23.1(2)

Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n)

## **Reporting & Record keeping:**

### A) Record keeping:

The following records shall be maintained on site for five (5) years and be made available for inspection by representatives of AQD.

1) The total number of hours for Unit 1 and Unit 2 shall be summed up each twelve month period and each month a new twelve month total calculated.

Authority for Requirement: Iowa DNR Construction Permit Number: 93-A-526-S3

- 2). Sulfur and nitrogen contents of the fuel being fired shall be monitored in compliance with 40 CFR 60.334(b) and 60.335(d) and (e).
- 3). The frequency of determining the sulfur and nitrogen content of the fuel shall be in compliance with 40 CFR 60.334(i).
- 4). Excess emissions of NOx shall be reported in compliance with 40 CFR 60.334(j)(1).
- 5). Excess emissions of SO2 shall be reported in compliance with 40 CFR 60.334(j)(2).
- 6). Periods of excess ice fog shall be reported in compliance with 40 CFR 60.334(j)(3).
- 7). Periods of emergency fuel shall be reported in compliance with 40 CFR 60.334(j)(4).

Authority for Requirement: 40 CFR 60 Subpart GG

567 IAC 23.1(2)"aa"

Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16(n)(27)

- 8) A written log showing hours of operation, by month and by unit, shall be maintained and be made available to representatives of the EPA, Iowa DNR, or Polk County upon request.

Authority for Requirement: 40 CFR 60.7(b)

567 IAC 23.1 (2) "aa"

Iowa DNR Construction Permit Number: 93-A-526-S3

Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n)

- 9) Measurements shall be recorded in a suitable form for inspection.

Authority for Requirement: 40 CFR 60.7(f)

567 IAC 23.1 (2) "aa"

Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n)

- 10) A continuous monitoring system shall be installed and operated to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine, as required in 40 CFR 60.334(a).

Authority for Requirement: 40 CFR 60.334(a)

567 IAC 23.1 (2) "aa"

Iowa DNR Construction Permit Number: 93-A-526-S3

Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n) (27)

### **Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

Stack Height (feet): 35.5

Stack Dimensions (inches): 162 by 126

Stack Exhaust Flow Rate (acfm): 716,000

Stack Temperature (°F): 1,071

Vertical, Unobstructed Discharge: Yes-  No

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.  
Authority for Requirement: Iowa DNR Construction Permit Number: 93-A-526-S3

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the Monitoring requirements listed below.*

**Visible Emissions Monitoring:**

Visible Emissions (VE) shall be observed from EP 002 at least once per week when the Unit 2 Turbine (EU 002) is operated on #2 Fuel Oil, to ensure none occur during the operation of the unit. If visible emissions are observed, corrective action will be taken as soon as possible, but no later than eight (8) hours from the observation of visible emissions. If corrective action does not return the observation to no visible emissions, then a Method 9 observation will be required. If an opacity greater than 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. If weather conditions prevent the observer from conducting a VE observation, the observer shall note such conditions on the data observation sheet. At least three attempts shall be made to retake VE readings at approximately 2-hour intervals throughout the day. If all observation attempts for a week have been unsuccessful due to weather, a VE observation shall be made during the next operating day where weather permits. No VE readings are required when the Unit 2 Turbine combusts natural gas only.

Reporting & Record keeping: Maintain a written record of the observation and any action resulting from the observation. Records required shall be maintained on-site for five (5) years and be made available to representatives of Polk County AQD upon request.

**Agency Approved Operation & Maintenance Plan Required? Yes  No**

**Facility Maintained Operation & Maintenance Plan Required? Yes  No**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes  No**

Authority for Requirement: 567 IAC 22.108(3)

**Compliance Assurance Monitoring Plan for Emission Unit 002 –  
MidAmerican Energy: Pleasant Hill/ GDMEC CTs**

**I. Background**

- A. Emission Unit Description: Unit 2 Combustion Turbine, 45 MW,  
General Electric PG-6541 (B)  
(EU 002 / CE 002 / EP 002)

Associated Emission Unit ID Number: 002

Emissions Control Equipment ID Number: CE 002

- B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation: 40 CFR 60 Subpart GG  
IDNR Permit # 93-A-526-S3

NO<sub>x</sub> emission limit: 173.0 lb./ hr; 125 TPY (combined total for Unit 1 & Unit 2); and 75 ppmvd. Distillate fuel; 0.03% fuel-bound nitrogen, peak loading. NO<sub>x</sub> emission rates are corrected to 15% O<sub>2</sub> and include the heat rate correction and fuel bound nitrogen correction found in NSPS, Subpart GG. Allowable concentrations found in NSPS; Subpart GG are ISO standard day conditions.

Monitoring requirements: The water-to-fuel ratio shall be monitored according to 40 CFR 60.334(a).

- C. Control Technology: Water Injection NO<sub>x</sub> control

**II. Monitoring Approach**

- A. Continuous Emissions Monitoring:

None.

- B. General

- Monitoring will be completed during unit operation.

- C. Water Injection Ratio

- The water injection ratio will be continuously monitored via the plant control system. The control system monitors the fuel flow and the water injection flow to the unit. The water injection rate is automatically adjusted to maintain the proper water injection ratio. The required water injection rates were determined by NO<sub>x</sub> emissions testing. Corrective action measures will be implemented when the water injection ratio is less than the ratio established with the compliance test. Corrective action measures include an alarm indicating a problem with the water injection system, and automatic load reduction. The automatic load reduction will reduce the fuel input to the turbine until the proper water injection ratio is attained. If water flow is not sensed by the control system, unit load will be reduced to a level below the level at which water injection is required to maintain compliance with the applicable NO<sub>x</sub> emission limit.

#### D. Record Keeping and Reporting

- Water injection ratio during operation
- Maintain a written or electronic record of all inspections and any action resulting from the inspection.
- Maintenance and inspection records will be kept for five (5) years and available upon request.

#### E. Quality Control

- All instruments and control equipment will be calibrated, maintained, and operated according to the manufactures specifications.
- A spare parts inventory is maintained by a computerized inventory management system.

#### F. Rationale for the Proposed Elements of the Monitoring:

- MidAmerican will use the water injection ratio to continuously monitor the combustion turbine equipment.
- Proper operation of the water injection is essential to maintaining effective NOx control. The water injection ratio established during initial compliance testing is monitored and alarmed when the minimum water injection ratio is not being met.
- Compliance with the NOx limits during periods of proper operation of the water injection system has been demonstrated via compliance testing. There have been no changes to the unit or to the water injection system that would cause significant changes in performance to the turbine.

Authority for Requirement: 567 IAC 22.108(3)

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**Emission Point ID Number: 005**

Associated Equipment

Associated Emission Unit ID Number: 005

Emissions Control Equipment ID Number: 003

Emissions Control Equipment Description: Hebeler Welding Co. Model WI-299 Water Injection

Monitoring Equipment Numbers: ME001- Fuel Oil Flow,  
ME001B - Natural Gas Fuel Flow

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Emission Unit vented through this Emission Point: 005

Emission Unit Description: Unit 3 Combustion Turbine, 90.1 MW  
General Electric PG-7111(EA)

Raw Material/Fuel: #2 Fuel Oil or Natural Gas

Rated Capacity: 6,970 gallons/ hr or 1,020,000 cu. ft./ hr

**Applicable Requirements**

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limits: 20%

Authority for Requirement: Iowa DNR Construction Permit Number 93-A-527-S5  
Polk County Board of Health Rules and Regulations: Chapter V,  
Article IV, Section 5-9

Pollutant: PM

Emission Limit: 0.6 lb./ MMBTU

Authority for Requirement: 567 IAC 23.3 (2) "b" (2)  
Iowa DNR Construction Permit Number 93-A-527-S5  
Polk County Board of Health Rules and Regulations: Chapter V,  
Article V, Section 5-12 (1)

Pollutant: SO<sub>2</sub>

Emission Limits: 150 ppmvd

Sulfur Dioxide Allowances

Authority for Requirement: 40 CFR 60.333 (a)

(Attached Phase II Acid Rain Permit)

567 IAC 22.108 (7)

567 IAC 23.1 (2) "aa"

Iowa DNR Construction Permit Number 93-A-527-S5

Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n) (27)

Pollutant: SO<sub>2</sub>

Emission Limit: 0.5 lb./ MMBTU

Authority for Requirement: Polk County Board of Health Rules and Regulations: Chapter V,  
Article IX, Section 5-27 (2) (b)

Pollutant: NO<sub>x</sub>

Emission Limits: 289.0 lb./ hr; 123.7 TPY; and 75 ppmvd

Distillate fuel; 0.03% fuel-bound nitrogen, peak loading. NO<sub>x</sub> emission rates are corrected to 15% O<sub>2</sub> and include the heat rate correction and fuel bound nitrogen correction found in NSPS, Subpart GG. Allowable concentrations found in NSPS; Subpart GG are ISO standard day conditions.

Authority for Requirement: 40 CFR 60.332 (a) (1)

567 IAC 23.1 (2) "aa"

Iowa DNR Construction Permit Number 93-A-527-S5

Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n) (27)

### **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

Hours of operation: Unit 3 is limited to 856 hours of operation per twelve month rolling period. For PSD applicability purposes only, this results in a total "potential-to-emit" for NO<sub>x</sub> from the unit of 123.7 TPY. The number of hours operated for this unit shall be summed up each twelve month period and each month a new twelve month total calculated.

Process throughput: Pipeline quality natural gas or # 2 fuel oil. Fuel oil shall contain no more than no more than 0.03% fuel-bound nitrogen or 0.05% sulfur by weight.

Authority for Requirement: Iowa DNR Construction Permit Number 93-A-527-S5

NSPS Requirements:

The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. 40 CFR 60.7(b)

The permittee shall submit an excess emissions and monitoring systems performance report to the Department and Administrator in accordance with 40 CFR 60.7(c). The summary report form shall contain the information and format required in 40 CFR 60.7(d).

Notwithstanding the frequency of reporting requirements in the prior permit conditions, the permittee may reduce the frequency of reporting of excess emissions and monitoring system performance reports personate to 40 CFR 60.7(e).

At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. 40 CFR 60.11(d)

The permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere. 40 CFR 60.12

Authority for Requirement: 567 IAC 23.1(2)

Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n)

### **Reporting & Record keeping:**

#### **A) Record keeping:**

The following records shall be maintained on site for five (5) years and be made available for inspection by representatives of AQD.

1) The total number of hours for Unit 3 shall be summed up each twelve month period and each month a new twelve month total calculated.

Authority for Requirement: Iowa DNR Construction Permit Number: 93-A-527-S5

- 2). Sulfur and nitrogen contents of the fuel being fired shall be monitored in compliance with 40 CFR 60.334(b) and 60.335(d) and (e).
- 3). The frequency of determining the sulfur and nitrogen content of the fuel shall be in compliance with 40 CFR 60.334(i).
- 4). Excess emissions of NO<sub>x</sub> shall be reported in compliance with 40 CFR 60.334(j)(1).
- 5). Excess emissions of SO<sub>2</sub> shall be reported in compliance with 40 CFR 60.334(j)(2).
- 6). Periods of excess ice fog shall be reported in compliance with 40 CFR 60.334(j)(3).

7). Periods of emergency fuel shall be reported in compliance with 40 CFR 60.334(j)(4).

Authority for Requirement: 40 CFR 60 Subpart GG

567 IAC 23.1(2)"aa"

Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16(n)(27)

8) A written log showing hours of operation, by month and by unit, shall be maintained and be made available to representatives of the EPA, Iowa DNR, or Polk County upon request.

Authority for Requirement: 40 CFR 60.7(b)

567 IAC 23.1 (2)"aa"

Iowa DNR Construction Permit Number: 93-A-527-S5

Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n)

9) Measurements shall be recorded in a suitable form for inspection.

Authority for Requirement: 40 CFR 60.7(f)

567 IAC 23.1 (2) "aa"

Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n)

10) A continuous monitoring system shall be installed and operated to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine, as required in 40 CFR 60.334(a).

Authority for Requirement: 40 CFR 60.334(a)

567 IAC 23.1 (2) "aa"

Iowa DNR Construction Permit Number: 93-A-527-S5

Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n) (27)

### **Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

Stack Height (feet): 52.0

Stack Diameter (inches): 104 x 208

Stack Exhaust Flow Rate (scfm): 500,409

Stack Temperature (°F): 1,052

Vertical, Unobstructed Discharge: Yes-  No

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Authority for Requirement: Iowa DNR Construction Permit Number: 93-A-527-S5

## **Monitoring Requirements**

*The owner/operator of this equipment shall comply with the Monitoring requirements listed below.*

### **Visible Emissions Monitoring:**

Visible Emissions (VE) shall be observed from EP 005 at least once per week when the Unit 3 Turbine (EU 005) is operated on #2 Fuel Oil, to ensure none occur during the operation of the unit. If visible emissions are observed, corrective action will be taken as soon as possible, but no later than eight (8) hours from the observation of visible emissions. If corrective action does not return the observation to no visible emissions, then a Method 9 observation will be required. If an opacity greater than 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. If weather conditions prevent the observer from conducting a VE observation, the observer shall note such conditions on the data observation sheet. At least three attempts shall be made to retake VE readings at approximately 2-hour intervals throughout the day. If all observation attempts for a week have been unsuccessful due to weather, a VE observation shall be made during the next operating day where weather permits. No VE readings are required when the Unit 3 Turbine combusts natural gas only.

Reporting & Record keeping: Maintain a written record of the observation and any action resulting from the observation. Records required shall be maintained on-site for five (5) years and be made available to representatives of Polk County AQD upon request.

### **Predictive Emission Monitoring**

Pollutant - NO<sub>x</sub>

Operational Specifications - 0.236 lb./ MMBTU

Initial System Calibration/Quality Assurance - 01/17-20/95

Ongoing System Calibration/Quality Assurance - 40 CFR 75, 40 CFR 60 Subpart A and Subpart D

Reporting & Record keeping - 40 CFR 75, 40 CFR 60 Subpart A and Subpart D

Authority for Requirement - 40 CFR 75, Appendix E, 40 CFR 60 Subpart A and Subpart D

567 IAC 25.2 and 567 IAC 23.1(2)

Pollutant - SO<sub>2</sub>

Operational Specifications - 40 CFR 75, 40 CFR 60 Subpart A and Subpart D

Initial System Calibration/Quality Assurance - 01/17-20/95

Ongoing System Calibration/Quality Assurance - 40 CFR 75, 40 CFR 60 Subpart A and Subpart D

Reporting & Record keeping - 40 CFR 75, 40 CFR 60 Subpart A and Subpart D

Authority for Requirement - 40 CFR 75, Appendix D, 40 CFR 60 Subpart A and Subpart D

567 IAC 25.2 and 567 IAC 23.1(2)

**Other Parameters**

Parameter - CO<sub>2</sub>

Operational Specifications - 40 CFR 75, 40 CFR 60 Subpart A and Subpart D

Initial System Calibration/Quality Assurance - 01/17-20/95

Ongoing System Calibration/Quality Assurance - 40 CFR 75, 40 CFR 60 Subpart A and Subpart D

Reporting & Record keeping - 40 CFR 75, 40 CFR 60 Subpart A and Subpart D

Authority for Requirement - 40 CFR 75 Appendix G, 40 CFR 60 Subpart A and Subpart D

567 IAC 25.2 and 567 IAC 23.1(2)

Parameter - Oil Flow

Operational Specifications - 40 CFR 75, 40 CFR 60 Subpart A and Subpart D

Initial System Calibration/ Quality Assurance - 2/24/94

Ongoing System Calibration/Quality Assurance - 40 CFR 75, 40 CFR 60 Subpart A and Subpart D

Reporting & Record keeping - 40 CFR 75, 40 CFR 60 Subpart A and Subpart D

Authority for Requirement - 40 CFR 75 Appendix D, 40 CFR 60 Subpart A and Subpart D

567 IAC 25.2 and 567 IAC 23.1(2)

**Agency Approved Operation & Maintenance Plan Required? Yes  No**

**Facility Maintained Operation & Maintenance Plan Required? Yes  No**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes  No**

Authority for Requirement: 567 IAC 22.108(3)

**Compliance Assurance Monitoring Plan for Emission Unit 005 –  
MidAmerican Energy: Pleasant Hill/ GDMEC CTs**

**I. Background**

- A. Emission Unit Description: Unit 3 Combustion Turbine, 90.1 MW  
General Electric PG-7111(EA)  
(EU 005 / CE 003 / EP 005)

Associated Emission Unit ID Number: 005

Emissions Control Equipment ID Number: CE 003

- B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation: 40 CFR 60 Subpart GG

IDNR Permit # 93-A-527-S5

NO<sub>x</sub> emission limit: 289.0 lb./ hr; 123.7 TPY; and 75 ppmvd  
Distillate fuel; 0.03% fuel-bound nitrogen, peak loading. NO<sub>x</sub> emission rates are corrected to 15% O<sub>2</sub> and include the heat rate correction and fuel bound nitrogen correction found in NSPS, Subpart GG. Allowable concentrations found in NSPS; Subpart GG are ISO standard day conditions.

Monitoring requirements: The water-to-fuel ratio shall be monitored according to 40 CFR 60.334(a).

- C. Control Technology: Water Injection NO<sub>x</sub> control

**II. Monitoring Approach**

- A. Continuous Emissions Monitoring:

None.

- B. General

- Monitoring will be completed during unit operation.

- C. Water Injection Ratio

- The water injection ratio will be continuously monitored via the plant control system. The control system monitors the fuel flow and the water injection flow to the unit. The water injection rate is automatically adjusted to maintain the proper water injection ratio. The required water injection rates were determined by NO<sub>x</sub> emissions testing. Corrective action measures will be implemented when the water injection ratio is less than the ratio established with the compliance test. Corrective action measures include an alarm indicating a problem with the water injection system, and automatic load reduction. The automatic load reduction will reduce the fuel input to the turbine until the proper water injection ratio is attained. If water flow is not sensed by the control system, unit load will be reduced to a level below the level at which water injection is required to maintain compliance with the applicable NO<sub>x</sub> emission limit.

#### D. Record Keeping and Reporting

- Water injection ratio during operation
- Maintain a written or electronic record of all inspections and any action resulting from the inspection.
- Maintenance and inspection records will be kept for five (5) years and available upon request.

#### E. Quality Control

- All instruments and control equipment will be calibrated, maintained, and operated according to the manufactures specifications.
- A spare parts inventory is maintained by a computerized inventory management system.

#### F. Rationale for the Proposed Elements of the Monitoring:

- MidAmerican will use the water injection ratio to continuously monitor the combustion turbine equipment.
- Proper operation of the water injection is essential to maintaining effective NOx control. The water injection ratio established during initial compliance testing is monitored and alarmed when the minimum water injection ratio is not being met.
- Compliance with the NOx limits during periods of proper operation of the water injection system has been demonstrated via compliance testing. There have been no changes to the unit or to the water injection system that would cause significant changes in performance to the turbine.

Authority for Requirement: 567 IAC 22.108(3)

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**Emission Point ID Number: 006**

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Associated Equipment

Emission Unit vented through this Emission Point: 006  
Emission Unit Description: Unit 1 Starting Diesel Engine  
Raw Material/Fuel: #2 Distillate Fuel Oil  
Rated Capacity: 40 gallons/ hr

**Applicable Requirements****Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limits: 20%

Authority for Requirement: Iowa DNR Construction Permit Number 93-A-525-S3  
Polk County Board of Health Rules and Regulations: Chapter V,  
Article IV, Section 5-9

Pollutant: PM

Emission Limit: 0.6 lb./ MMBTU

Authority for Requirement: 567 IAC 23.3 (2)b(2)  
Iowa DNR Construction Permit Number 93-A-525-S3  
Polk County Board of Health Rules and Regulations: Chapter V,  
Article V, Section 5-12 (1)

Pollutant: SO<sub>2</sub>

Emission Limit: 0.5 lb./ MMBTU

Authority for Requirement: Polk County Board of Health Rules and Regulations: Chapter V,  
Article IX, Section 5-27 (2) (b)

**Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

Process throughput:

1. No person shall allow, cause or permit the combustion of number 1 or number 2 fuel oil exceeding a sulfur content of 0.5 percent by weight.

Authority for Requirement: 567 IAC 23.3(3)"b"(1)

**Reporting & Record keeping:**

*The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of AQD:*

- The facility shall monitor the percent of sulfur by weight in the fuel oil as delivered. The documentation may be vendor supplied or facility generated.

Authority for Requirement: 567 IAC 22.108(3)

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the Monitoring requirements listed below.*

*Periodic Monitoring is not required at this time. Periodic Monitoring will be required if the equipment is operated more than 876 hours per 12 month period, rolled monthly.*

**Agency Approved Operation & Maintenance Plan Required? Yes  No**

**Facility Maintained Operation & Maintenance Plan Required? Yes  No**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes  No**

Authority for Requirement: 567 IAC 22.108(3)

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**Emission Point ID Number: 007**

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Associated Equipment

Emission Unit vented through this Emission Point: 007  
Emission Unit Description: Unit 2 Starting Diesel  
Raw Material/Fuel: #2 Distillate Fuel Oil  
Rated Capacity: 40 gallons/ hr

**Applicable Requirements****Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limits: 20%

Authority for Requirement: Iowa DNR Construction Permit Number 93-A-526-S3  
Polk County Board of Health Rules and Regulations: Chapter V,  
Article IV, Section 5-9

Pollutant: PM

Emission Limit: 0.6 lb./ MMBTU

Authority for Requirement: 567 IAC 23.3 (2)b(2)  
Iowa DNR Construction Permit Number 93-A-526-S3  
Polk County Board of Health Rules and Regulations: Chapter V,  
Article V, Section 5-12 (1)

Pollutant: SO<sub>2</sub>

Emission Limit: 0.5 lb./ MMBTU

Authority for Requirement: Polk County Board of Health Rules and Regulations: Chapter V,  
Article IX, Section 5-27 (2) (b)

**Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

Process throughput:

1. No person shall allow, cause or permit the combustion of number 1 or number 2 fuel oil exceeding a sulfur content of 0.5 percent by weight.

Authority for Requirement: 567 IAC 23.3(3)"b"(1)

**Reporting & Record keeping:**

*The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of AQD:*

- The facility shall monitor the percent of sulfur by weight in the fuel oil as delivered. The documentation may be vendor supplied or facility generated.

Authority for Requirement: 567 IAC 22.108(3)

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the Monitoring requirements listed below.*

*Periodic Monitoring is not required at this time. Periodic Monitoring will be required if the equipment is operated more than 876 hours per 12 month period, rolled monthly.*

**Agency Approved Operation & Maintenance Plan Required? Yes  No**

**Facility Maintained Operation & Maintenance Plan Required? Yes  No**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes  No**

Authority for Requirement: 567 IAC 22.108(3)

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## Emission Point ID Number: GDMEC-EP 1

### Associated Equipment

Associated Emission Unit ID Number: GDMEC-EU 1

Emissions Control Equipment ID Number: GDMEC-CE 01, GDMEC-CE 02

Emissions Control Equipment Description:

- GDMEC-CE 01: CORMEPECH NO<sub>x</sub> Selective Catalytic Reduction,
- GDMEC-CE 02: ENGELHARD CO Oxidation Catalyst

Continuous Emissions Monitors ID Numbers:

- GDMEC-ME 1A: NO<sub>x</sub> monitor,
  - GDMEC-ME 1B: Diluent O<sub>2</sub> monitor,
  - GDMEC-ME 1C: Fuel flow meter, and
  - GDMEC-ME 1D: CO monitor.
- 

Emission Unit vented through this Emission Point: GDMEC-EU 1

Emission Unit Description: GDMEC Unit 1 Combustion Turbine, Siemens Westinghouse Power Corp. Model 501F

Raw Material/Fuel: Natural Gas

Rated Capacity: 1,852.00 MM BTU/ hr (HHV @ base load and ISO conditions)

### Applicable Requirements

#### Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant	lb/MM BTU <sup>(1)</sup>	Tons/Yr <sup>(2)</sup>	Additional Limits	Reference (567 IAC)
Particulate Matter (PM)	0.0108 <sup>(1)</sup>	89.6	NA	BACT
PM <sub>10</sub>	0.0108 <sup>(1)</sup>	89.6	NA	BACT
Opacity	NA	NA	0% <sup>(3)</sup>	BACT
Sulfur Dioxide (SO <sub>2</sub> )	NA	11.59 <sup>(5)</sup>	NA	Synthetic Minor
Nitrogen Oxides (NO <sub>x</sub> )	0.011 <sup>(1,4,6)</sup>	112.5	NA	BACT
Volatile Organic Compounds	NA	7.75	NA	Synthetic Minor
Carbon Monoxide (CO) <sup>(6)</sup>	0.012 <sup>(1,4)</sup>	97.2	NA	BACT
Carbon Monoxide (CO) <sup>(7)</sup>	NA	337.04	2,900 <sup>(8)</sup> 2,100 <sup>(9)</sup>	BACT

- (1) Heat input used shall be the higher heating value of the natural gas used.
- (2) Standard is a 12-month rolling total.
- (3) This limit shall be interpreted as no visible emissions as determined by 40 CFR 60 Appendix A, Method 9
- (4) Emission rate is a 3-hour rolling average adjusted to 15% O<sub>2</sub>
- (5) Based on pipeline quality natural gas with a sulfur content of 0.5 gr/100 cf
- (6) During steady state operations (not startup or shutdown)
- (7) During startup and shutdown operations.
- (8) Emission rate is in lbs/hr, on a one hour rolling average, for compliance with the NAAQS
- (9) Emission rate is in lbs/hr, on an eight hour rolling average, for compliance with the NAAQS

Authority for Requirement: 40 CFR 60 Subpart GG  
 567 IAC 23.1 (2) (aa)  
 Iowa DNR PSD Construction Permit Number 02-A-048-P2  
 Polk County Board of Health Rules and Regulations: Chapter V,  
 Article VI, Section 5-16 (n) (27)

Pollutant: SO<sub>2</sub>

Emission Limits: 150 ppmvd  
 Sulfur Dioxide Allowances

Authority for Requirement: 40 CFR 60.333 (a)  
 (Attached Phase II Acid Rain Permit)  
 567 IAC 22.108 (7)  
 567 IAC 23.1 (2) "aa"  
 Iowa DNR PSD Construction Permit Number 02-A-048-P2  
 Polk County Board of Health Rules and Regulations: Chapter V,  
 Article VI, Section 5-16 (n) (27)

Pollutant: SO<sub>2</sub>

Emission Limit: 0.5 lb./ MMBTU

Authority for Requirement: Polk County Board of Health Rules and Regulations: Chapter V,  
 Article IX, Section 5-27 (2) (b)

### **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

- 1) This unit shall be fired with natural gas only.
- 2) The natural gas combusted shall have a maximum sulfur content of 0.5 gr/ 100 cf (pipeline quality natural gas).
- 3) This unit shall be operated in combined cycle only.

- 4) The total startup plus shutdown period shall not exceed 14 hours per unit per event, and shall follow good combustion practices. Startup is defined as the period beginning with turbine initial firing until the unit meets 70% of maximum baseload capacity. Shutdown is defined as the period beginning with the initiation of turbine shutdown sequence (once below 70% of maximum baseload capacity) and ending with the cessation of firing of the combustion turbine. Emissions from startup and shutdown events shall be counted towards the applicable annual emission limitations.

Authority for Requirement: 40 CFR 60 Subpart GG  
567 IAC 23.1 (2) "aa"  
Iowa DNR PSD Construction Permit Number 02-A-048-P2  
Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n) (27)

### **Operating Condition Monitoring**

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the AQD. Records shall be legible and maintained in an orderly manner.

- 1) The sulfur and nitrogen content of the fuel used in this unit shall be determined and recorded daily or on any other schedule approved by USEPA prior to the use of that schedule. (This requirement comes from 40 CFR 60.334 (h).
- 2) The owner or operator shall keep a record of the date and time the unit was started up, when it reached 70% of maximum baseload capacity, when shutdown was initiated, and when the unit ceased firing. The number of hours per event the unit was operated in startup/shutdown mode shall then be calculated for each event.

Authority for Requirement: 40 CFR 60 Subpart GG  
567 IAC 23.1 (2) "aa"  
Iowa DNR PSD Construction Permit Number 02-A-048-P2  
Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n) (27)

### **NSPS and NESHAP Applicability and Requirements:**

This unit is subject to regulation outlined in 40 CFR 60 Subpart GG, *Standards of Performance for Stationary Gas Turbines* (567 IAC 23.1(2) "aa").

The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. 40 CFR 60.7(b)

The permittee shall submit an excess emissions and monitoring systems performance report to the Department and Administrator in accordance with 40 CFR 60.7(c). The summary report form shall contain the information and format required in 40 CFR 60.7(d).

Notwithstanding the frequency of reporting requirements in the prior permit conditions, the permittee may reduce the frequency of reporting of excess emissions and monitoring system performance reports pursuant to 40 CFR 60.7(e).

At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. 40 CFR 60.11(d)

The permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere. 40 CFR 60.12

Authority for Requirement: 40 CFR 60 Subpart GG  
567 IAC 23.1 (2) "aa"  
Iowa DNR PSD Construction Permit Number 02-A-048-P2  
Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n) (27)

**Reporting & Record keeping:**

*The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of AQD:*

- 1). Excess emissions of NO<sub>x</sub> shall be reported in compliance with 40 CFR 60.334(j)(1).
- 2). Excess emissions of SO<sub>2</sub> shall be reported in compliance with 40 CFR 60.334(j)(2).
- 3). Periods of excess ice fog shall be reported in compliance with 40 CFR 60.334(j)(3).
- 4). Periods of emergency fuel shall be reported in compliance with 40 CFR 60.334(j)(4).

Authority for Requirement: 40 CFR 60 Subpart GG  
567 IAC 23.1(2)"aa"  
Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16(n)(27)

5) A written log showing hours of operation, by month and by unit, shall be maintained and be made available to representatives of the EPA, Iowa DNR, or Polk County upon request.

Authority for Requirement: 40 CFR 60.7(b)

567 IAC 23.1 (2)

Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n)

6) Measurements shall be recorded in a suitable form for inspection.

Authority for Requirement: 40 CFR 60.7(f)

567 IAC 23.1 (2)

Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n)

### **Emission Point Characteristics**

This emission point shall conform to the specifications listed below.

<b>Parameter</b>	<b>Value</b>
Stack Height, (ft, from the ground)	200
Discharge Style	Vertical unobstructed
Stack Opening, (inches, dia.)	222
Exhaust Temperature (°F)	202
Exhaust Flowrate (scfm)	See Note #1

Notes:

(1) The exhaust flow will vary depending on operating load, ambient temperature, and the status of the evaporative cooler. These values will range from 569,400 scfm to 941,400 scfm.

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Authority for Requirement: Iowa DNR PSD Construction Permit Number 02-A-048-P2

## **Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

### **Continuous Emissions Monitoring:**

Pollutant - Nitrogen Oxides (NO<sub>x</sub>)

Operational Specifications - 40 CFR Part 75 Appendix E, Part 60 Subparts A and GG

Initial System Calibration/Quality Assurance – 12/12/2004

Ongoing System Calibration/Quality Assurance - 40 CFR Part 75, Part 60 Subparts A and GG

Reporting & Record keeping - 40 CFR Part 75, Part 60 Subparts A and GG, 567 IAC 25.1(6)

Authority for Requirement - 567 IAC 23.1(2)"aa"

40 CFR 60 Subpart GG

Iowa DNR PSD Construction Permit 02-A-048-P2

Pollutant – Carbon Monoxide (CO)

Operational Specifications - 40 CFR Part 60

Initial System Calibration/Quality Assurance – 12/12/2004

Ongoing System Calibration/Quality Assurance – 40 CFR Part 60

Reporting & Record keeping - 40 CFR Part 75, 567 IAC 25.1(6)

Authority for Requirement - Iowa DNR PSD Construction Permit 02-A-048-P2

### **Other Parameters**

Pollutant - Other - Diluent Oxygen (O<sub>2</sub>)

Operational Specifications - 40 CFR Part 75

Initial System Calibration/Quality Assurance – 12/12/2004

Ongoing System Calibration/Quality Assurance - 40 CFR Part 75

Reporting & Record keeping - 40 CFR Part 75, 40 CFR 60 Subpart GG, 567 IAC 25.1(6)

Authority for Requirement - 567 IAC 23.1(2)"aa"

40 CFR 60 Subpart GG

567 IAC 25.2

Pollutant - Other – Fuel Flow

Operational Specifications - 40 CFR Part 75

Initial System Calibration/Quality Assurance – 12/12/2004

Ongoing System Calibration/Quality Assurance - 40 CFR Part 75

Reporting & Record keeping - 40 CFR Part 75, 567 IAC 25.1(6)

Authority for Requirement - 567 IAC 25.2

Compliance with the nitrogen oxide emission limit of this permit shall be continuously demonstrated by the owner/operator through the use of a CEMS. Therefore, a CEMS shall be installed, calibrated, maintained, and operated for measuring nitrogen oxides emissions in units of the standards discharged to the atmosphere from this unit and the output of the system shall be recorded. The system shall be designed to meet the 40 CFR 75, Appendix A, and Appendix C requirements. The specifications of 40 CFR Appendix B (Quality Assurance/Quality Control) shall apply.

Compliance with the carbon monoxide emission limit of this permit shall be continuously demonstrated by the owner/operator through the use of a CEMS. Therefore, a CEMS shall be installed, calibrated, maintained, and operated for measuring carbon monoxide emissions in units of the standards discharged to the atmosphere from this unit and the output of the system shall be recorded. The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 3 (PS3), Performance Specification 4 (PS4) and Performance Specification 6 (PS6) requirements. The specifications of 40 CFR 60 Appendix F (Quality Assurance/Quality Control) shall apply. If PS3 is equivalent to 40 CFR 75 Appendix A, then 40 CFR 75 Appendix A may be used in place of PS3.

Missing data for both nitrogen oxides and carbon monoxide shall be treated according to 40 CFR 75 Appendix C (2).

If requested by the Department, the owner/operator shall coordinate the quarterly cylinder gas audits with AQD in order to afford AQD the opportunity to observe these audits. The relative accuracy test audits shall be coordinated with AQD.

Authority for Requirement – Iowa DNR PSD Construction Permit 02-A-048-P2

**Agency Approved Operation & Maintenance Plan Required?**      Yes  No

**Facility Maintained Operation & Maintenance Plan Required?**      Yes  No

**Compliance Assurance Monitoring (CAM) Plan Required?**      Yes  No

Authority for Requirement: 567 IAC 22.108(3)

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## Emission Point ID Number: GDMEC-EP 2

### Associated Equipment

Associated Emission Unit ID Number: GDMEC-EU 2

Emissions Control Equipment ID Number: GDMEC-CE 03, GDMEC-CE 04

Emissions Control Equipment Description:

- GDMEC-CE 03: CORMEPECH NO<sub>x</sub> Selective Catalytic Reduction,
- GDMEC-CE 04: ENGELHARD CO Oxidation Catalyst

Continuous Emissions Monitors ID Numbers:

- GDMEC-ME 2A: NO<sub>x</sub> monitor,
  - GDMEC-ME 2B: Diluent O<sub>2</sub> monitor,
  - GDMEC-ME 2C: Fuel flow meter, and
  - GDMEC-ME 2D: CO monitor.
- 

Emission Unit vented through this Emission Point: GDMEC-EU 2

Emission Unit Description: GDMEC Unit 2 Combustion Turbine, Siemens Westinghouse Power Corp. Model 501F

Raw Material/Fuel: Natural Gas

Rated Capacity: 1,852.00 MM BTU/ hr (HHV @ base load and ISO conditions)

### Applicable Requirements

#### Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant	lb/MM BTU <sup>(1)</sup>	Tons/Yr <sup>(2)</sup>	Additional Limits	Reference (567 IAC)
Particulate Matter (PM)	0.0108 <sup>(1)</sup>	89.6	NA	BACT
PM <sub>10</sub>	0.0108 <sup>(1)</sup>	89.6	NA	BACT
Opacity	NA	NA	0% <sup>(3)</sup>	BACT
Sulfur Dioxide (SO <sub>2</sub> )	NA	11.59 <sup>(5)</sup>	NA	Synthetic Minor
Nitrogen Oxides (NO <sub>x</sub> )	0.011 <sup>(1,4,6)</sup>	112.5	NA	BACT
Volatile Organic Compounds	NA	7.75	NA	Synthetic Minor
Carbon Monoxide (CO) <sup>(6)</sup>	0.012 <sup>(1,4)</sup>	97.2	NA	BACT
Carbon Monoxide (CO) <sup>(7)</sup>	NA	337.04	2,900 <sup>(8)</sup> 2,100 <sup>(9)</sup>	BACT

- (1) Heat input used shall be the higher heating value of the natural gas used.
- (2) Standard is a 12-month rolling total.
- (3) This limit shall be interpreted as no visible emissions as determined by 40 CFR 60 Appendix A, Method 9
- (4) Emission rate is a 3-hour rolling average adjusted to 15% O<sub>2</sub>
- (5) Based on pipeline quality natural gas with a sulfur content of 0.5 gr/100 cf
- (6) During steady state operations (not startup or shutdown)
- (7) During startup and shutdown operations.
- (8) Emission rate is in lbs/hr, on a one hour rolling average, for compliance with the NAAQS
- (9) Emission rate is in lbs/hr, on an eight hour rolling average, for compliance with the NAAQS

Authority for Requirement: 40 CFR 60 Subpart GG  
 567 IAC 23.1 (2) "aa"  
 Iowa DNR PSD Construction Permit Number 02-A-049-P2  
 Polk County Board of Health Rules and Regulations: Chapter V,  
 Article VI, Section 5-16 (n) (27)

Pollutant: SO<sub>2</sub>

Emission Limits: 150 ppmvd  
 Sulfur Dioxide Allowances

Authority for Requirement: 40 CFR 60.333 (a)  
 (Attached Phase II Acid Rain Permit)  
 567 IAC 22.108 (7)  
 567 IAC 23.1 (2) "aa"  
 Iowa DNR PSD Construction Permit Number 02-A-049-P2  
 Polk County Board of Health Rules and Regulations: Chapter V,  
 Article VI, Section 5-16 (n) (27)

**Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

- 1) This unit shall be fired with natural gas only.
- 2) The natural gas combusted shall have a maximum sulfur content of 0.5 gr/100 cf (pipeline quality natural gas).
- 3) This unit shall be operated in combined cycle only.

- 4) The total startup plus shutdown period shall not exceed 14 hours per unit per event, and shall follow good combustion practices. Startup is defined as the period beginning with turbine initial firing until the unit meets 70% of maximum baseload capacity. Shutdown is defined as the period beginning with the initiation of turbine shutdown sequence (once below 70% of maximum baseload capacity) and ending with the cessation of firing of the combustion turbine. Emissions from startup and shutdown events shall be counted towards the applicable annual emission limitations.

Authority for Requirement: 40 CFR 60 Subpart GG  
567 IAC 23.1 (2) "aa"  
Iowa DNR PSD Construction Permit Number 02-A-049-P2  
Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n) (27)

### **Operating Condition Monitoring**

All records as required by this permit shall be kept on-site for a minimum of two (2) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- 1) The sulfur and nitrogen content of the fuel used in this unit shall be determined and recorded daily or on any other schedule approved by USEPA prior to the use of that schedule. (This requirement comes from 40 CFR 60.334"b"(2)).
- 2) The owner or operator shall keep a record of the date and time the unit was started up, when it reached 70% of maximum baseload capacity, when shutdown was initiated, and when the unit ceased firing. The number of hours per event the unit was operated in startup/shutdown mode shall then be calculated for each event.

Authority for Requirement: 40 CFR 60 Subpart GG  
567 IAC 23.1 (2) "aa"  
Iowa DNR PSD Construction Permit Number 02-A-049-P2  
Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n) (27)

### **NSPS and NESHAP Applicability and Requirements:**

This unit is subject to regulation outlined in 40 CFR 60 Subpart GG, *Standards of Performance for Stationary Gas Turbines* (567 IAC 23.1(2) "aa").

The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. 40 CFR 60.7(b)

The permittee shall submit an excess emissions and monitoring systems performance report to the Department and Administrator in accordance with 40 CFR 60.7(c). The summary report form shall contain the information and format required in 40 CFR 60.7(d).

Notwithstanding the frequency of reporting requirements in the prior permit conditions, the permittee may reduce the frequency of reporting of excess emissions and monitoring system performance reports pursuant to 40 CFR 60.7(e).

At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. 40 CFR 60.11(d)

The permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere. 40 CFR 60.12

Authority for Requirement: 40 CFR 60 Subpart GG  
567 IAC 23.1 (2) "aa"  
Iowa DNR PSD Construction Permit Number 02-A-049-P2  
Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n) (27)

**Reporting & Record keeping:**

*The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of AQD:*

- 1). Excess emissions of NO<sub>x</sub> shall be reported in compliance with 40 CFR 60.334(j)(1).
- 2). Excess emissions of SO<sub>2</sub> shall be reported in compliance with 40 CFR 60.334(j)(2).
- 3). Periods of excess ice fog shall be reported in compliance with 40 CFR 60.334(j)(3).
- 4). Periods of emergency fuel shall be reported in compliance with 40 CFR 60.334(j)(4).

Authority for Requirement: 40 CFR 60 Subpart GG  
567 IAC 23.1(2)"aa"  
Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16(n)(27)

5) A written log showing hours of operation, by month and by unit, shall be maintained and be made available to representatives of the EPA, Iowa DNR, or Polk County upon request.

Authority for Requirement: 40 CFR 60.7(b)

567 IAC 23.1 (2)

Polk County Board of Health Rules and Regulations: Chapter V, Article VI, Section 5-16 (n)

6) Measurements shall be recorded in a suitable form for inspection.

Authority for Requirement: 40 CFR 60.7(f)

567 IAC 23.1 (2)

Polk County Board of Health Rules and Regulations: Chapter V, Article VI, Section 5-16 (n)

### **Emission Point Characteristics**

This emission point shall conform to the specifications listed below.

<b>Parameter</b>	<b>Value</b>
Stack Height, (ft, from the ground)	200
Discharge Style	Vertical unobstructed
Stack Opening, (inches, dia.)	222
Exhaust Temperature (°F)	202
Exhaust Flowrate (scfm)	See Note #1

Notes:

(1) The exhaust flow will vary depending on operating load, ambient temperature, and the status of the evaporative cooler. These values will range from 569,400 scfm to 941,400 scfm.

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Authority for Requirement: Iowa DNR PSD Construction Permit Number 02-A-049-P2

## **Monitoring Requirements**

*The owner/operator of this equipment shall comply with the Monitoring requirements listed below.*

### **Continuous Emissions Monitoring:**

Pollutant - Nitrogen Oxides (NO<sub>x</sub>)

Operational Specifications - 40 CFR Part 75 Appendix E, Part 60 Subparts A and GG

Initial System Calibration/Quality Assurance – 12/12/2004

Ongoing System Calibration/Quality Assurance - 40 CFR Part 75, Part 60 Subparts A and GG

Reporting & Record keeping - 40 CFR Part 75, Part 60 Subparts A and GG, 567 IAC 25.1(6)

Authority for Requirement - 567 IAC 23.1(2)"aa"

40 CFR 60 Subpart GG

Iowa DNR PSD Construction Permit 02-A-049-P2

Pollutant – Carbon Monoxide (CO)

Operational Specifications - 40 CFR Part 60

Initial System Calibration/Quality Assurance – 12/12/2004

Ongoing System Calibration/Quality Assurance – 40 CFR Part 60

Reporting & Record keeping - 40 CFR Part 75, 567 IAC 25.1(6)

Authority for Requirement - Iowa DNR PSD Construction Permit 02-A-049-P2

### **Other Parameters**

Pollutant - Other - Diluent Oxygen (O<sub>2</sub>)

Operational Specifications - 40 CFR Part 75

Initial System Calibration/Quality Assurance – 12/12/2004

Ongoing System Calibration/Quality Assurance - 40 CFR Part 75

Reporting & Record keeping - 40 CFR Part 75, 40 CFR 60 Subpart GG, 567 IAC 25.1(6)

Authority for Requirement - 567 IAC 23.1(2)"aa"

40 CFR 60 Subpart GG

567 IAC 25.2

Pollutant - Other – Fuel Flow

Operational Specifications - 40 CFR Part 75

Initial System Calibration/Quality Assurance – 12/12/2004

Ongoing System Calibration/Quality Assurance - 40 CFR Part 75

Reporting & Record keeping - 40 CFR Part 75, 567 IAC 25.1(6)

Authority for Requirement - 567 IAC 25.2

Compliance with the nitrogen oxide emission limit of this permit shall be continuously demonstrated by the owner/operator through the use of a CEMS. Therefore, a CEMS shall be installed, calibrated, maintained, and operated for measuring nitrogen oxides emissions in units of the standards discharged to the atmosphere from this unit and the output of the system shall be recorded. The system shall be designed to meet the 40 CFR 75, Appendix A, and Appendix C requirements. The specifications of 40 CFR Appendix B (Quality Assurance/Quality Control) shall apply.

Compliance with the carbon monoxide emission limit of this permit shall be continuously demonstrated by the owner/operator through the use of a CEMS. Therefore, a CEMS shall be installed, calibrated, maintained, and operated for measuring carbon monoxide emissions in units of the standards discharged to the atmosphere from this unit and the output of the system shall be recorded. The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 3 (PS3), Performance Specification 4 (PS4) and Performance Specification 6 (PS6) requirements. The specifications of 40 CFR 60 Appendix F (Quality Assurance/Quality Control) shall apply. If PS3 is equivalent to 40 CFR 75 Appendix A, then 40 CFR 75 Appendix A may be used in place of PS3.

Missing data for both nitrogen oxides and carbon monoxide shall be treated according to 40 CFR 75 Appendix C (2).

If requested by the Department, the owner/operator shall coordinate the quarterly cylinder gas audits with the Department to afford the Department the opportunity to observe these audits. The relative accuracy test audits shall be coordinated with the Department.

Authority for Requirement – Iowa DNR PSD Construction Permit 02-A-049-P2

**Agency Approved Operation & Maintenance Plan Required?**      Yes  No

**Facility Maintained Operation & Maintenance Plan Required?**      Yes  No

**Compliance Assurance Monitoring (CAM) Plan Required?**      Yes  No

Authority for Requirement: 567 IAC 22.108(3)

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## Emission Point ID Number: GDMEC-EP 3

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### Associated Equipment

Emission Unit vented through this Emission Point: GDMEC-EU 3  
Emission Unit Description: Nebraska Auxiliary Boiler  
Raw Material/Fuel: Natural Gas  
Rated Capacity: 43.3 MM BTU/hr

### Applicable Requirements

#### Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant	lb/MM BTU <sup>(1)</sup>	Tons/Yr <sup>(2)</sup>	Additional Limits	Reference (567 IAC)
Particulate Matter (PM)	0.0076 <sup>(1)</sup>	1.44	NA	BACT
PM <sub>10</sub>	0.0076 <sup>(1)</sup>	1.44	NA	BACT
Opacity	NA	NA	0% <sup>(3)</sup>	BACT
Sulfur Dioxide (SO <sub>2</sub> )	NA	0.27 <sup>(4)</sup>	NA	Synthetic Minor
Nitrogen Oxides (NO <sub>x</sub> )	0.050 <sup>(1)</sup>	9.48	NA	BACT
Volatile Organic Compounds	0.0055 <sup>(1)</sup>	1.04	NA	NA
Carbon Monoxide (CO)	0.084 <sup>(1)</sup>	15.93	NA	BACT

<sup>(1)</sup> Heat input used shall be the higher heating value of the natural gas used.

<sup>(2)</sup> Standard is a 12-month rolling total.

<sup>(3)</sup> This limit shall be interpreted as no visible emissions as determined by 40 CFR 60 Appendix A, Method 9

<sup>(4)</sup> Based on pipeline quality natural gas with a sulfur content of 0.5 gr/100 cf  
Authority for Requirement: Iowa DNR PSD Construction Permit Number: 02-A-050-P2

#### Operational Limits & Requirements

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

- 1) This unit shall be fired with natural gas only.
- 2) The natural gas combusted shall have a maximum sulfur content of 0.5 gr/100 cf (pipeline quality natural gas).

Authority for Requirement: Iowa DNR PSD Construction Permit Number: 02-A-050-P2

#### **NSPS and NESHAP Applicability**

This unit is subject to regulation outlined in 40 CFR 60 Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (567 IAC 23.1(2)“III”)*.

**NSPS Requirements:**

The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. 40 CFR 60.7(b)

The permittee shall submit an excess emissions and monitoring systems performance report to the Department and Administrator in accordance with 40 CFR 60.7(c). The summary report form shall contain the information and format required in 40 CFR 60.7(d).

Notwithstanding the frequency of reporting requirements in the prior permit conditions, the permittee may reduce the frequency of reporting of excess emissions and monitoring system performance reports pursuant to 40 CFR 60.7(e).

At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. 40 CFR 60.11(d)

The permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere. 40 CFR 60.12

Authority for Requirement: Iowa DNR PSD Construction Permit Number: 02-A-050-P2  
567 IAC 23.1(2)  
Polk County Board of Health Rules and Regulations: Chapter V,  
Article VI, Section 5-16 (n)

Reporting & Record keeping:

A) Record keeping:

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

A fuel analysis shall be kept on file for each fuel used in this unit. The analyses performed on the natural gas for the combustion turbines (as required by 40 CFR 60.334(b)) shall be sufficient to satisfy this requirement. This analysis shall be performed at least semi-annually.

Authority for Requirement: Iowa DNR PSD Construction Permit Number: 02-A-050-P2

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

<b>Parameter</b>	<b>Value</b>
Stack Height, (ft, from the ground)	130
Discharge Style	Vertical unobstructed
Stack Opening, (inches, dia.)	30
Exhaust Temperature (°F)	303
Exhaust Flowrate (scfm)	8,790

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Authority for Requirement: Iowa DNR PSD Construction Permit Number: 02-A-050-P2

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the Monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes  No**

**Facility Maintained Operation & Maintenance Plan Required? Yes  No**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes  No**

Authority for Requirement: 567 IAC 22.108(3)

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**Emission Point ID Number: GDMEC-EP 6**

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Associated Equipment

Emission Unit vented through this Emission Point: GDMEC-EU 6  
Emission Unit Description: Caterpillar Emergency Generator, 700 kW  
Raw Material/Fuel: Diesel Fuel  
Rated Capacity: 49.7 gal/hr or 6.76 MM BTU/ hr.

**Applicable Requirements****Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

<b>Pollutant</b>	<b>lb/hr <sup>(1)</sup></b>	<b>Tons/Yr <sup>(2)</sup></b>	<b>Additional Limits</b>	<b>Reference (567 IAC)</b>
Particulate Matter (PM)	0.95	0.24	NA	BACT
PM <sub>10</sub>	0.95	0.24	NA	BACT
Opacity	NA	NA	20%	BACT
Sulfur Dioxide (SO <sub>2</sub> )	0.35	0.09	2.5 lb/mmBtu	Synthetic Minor 23.3(3)"b""2"
Nitrogen Oxides (NO <sub>x</sub> )	22.69	5.7	NA	BACT
Volatile Organic Compounds	0.27	0.07	NA	NA
Carbon Monoxide (CO)	2.86	0.72	NA	BACT

<sup>(1)</sup> Standard is expressed as the average of 3 runs

<sup>(2)</sup> Standard is a 12-month rolling total.

Authority for Requirement: Iowa DNR PSD Construction Permit Number 02-A-054-P2

### **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

- 1) This unit shall burn diesel fuel only.
- 2) The sulfur content of the fuel used in this unit shall not exceed a maximum of 0.05% wt.
- 3) The fuel consumption of this unit shall not exceed 24,850 gallons in any twelve (12) month period, rolled monthly.
- 4) The use of this unit shall be limited to periods of testing/exercising of the engine and periods of emergency use. The testing/exercising of the engine shall be limited to the time recommended by the manufacturer of the engine.

Authority for Requirement: Iowa DNR PSD Construction Permit Number 02-A-054-P2

### **Reporting & Record keeping:**

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- 1) A fuel certification shall be kept for each fuel delivery received for this unit. This certification shall show the type of fuel delivered along with the sulfur content of the fuel.
- 2) For each use of this unit, a log entry shall be made noting the start time of the usage, the duration of the usage, the amount of fuel used, and the reason for the usage.
- 3) At the end of each month, the fuel usage over the previous month shall be recorded. Additionally, the fuel usage over the previous twelve (12) months shall be recorded at the end of each month.
- 4) A copy of the manufacturer's documentation for the unit shall be maintained on site for review. This documentation shall specifically cover the recommendation for testing/exercising of the unit.

Authority for Requirement: Iowa DNR PSD Construction Permit Number 02-A-054-P2

**Emission Point Characteristics**

*This emission point shall conform to the specifications listed below.*

<b>Parameter</b>	<b>Value</b>
Stack Height, (ft, from the ground)	10.3
Discharge Style	Vertical unobstructed
Stack Opening, (inches, dia.)	10
Exhaust Temperature (°F)	1024
Exhaust Flowrate (scfm)	2,000

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Authority for Requirement: Iowa DNR PSD Construction Permit Number 02-A-054-P2

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the Monitoring requirements listed below.*

*Periodic Monitoring is not required at this time. Periodic Monitoring will be required if the equipment is operated more than 876 hours per 12-month period, rolled monthly.*

**Agency Approved Operation & Maintenance Plan Required? Yes  No**

**Facility Maintained Operation & Maintenance Plan Required? Yes  No**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes  No**

Authority for Requirement: 567 IAC 22.108(3)

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**Emission Point ID Number: GDMEC-EP 7**

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Associated Equipment

Emission Unit vented through this Emission Point: GDMEC-EU 7  
Emission Unit Description: Dew Point Heater  
Raw Material/Fuel: Natural Gas  
Rated Capacity: 7.16 MM BTU/ hr.

**Applicable Requirements****Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

<b>Pollutant</b>	<b>lb/mmBtu<sup>(1)</sup></b>	<b>Tons/Yr<sup>(2)</sup></b>	<b>Additional Limits</b>	<b>Reference (567 IAC)</b>
Particulate Matter (PM)	0.0045 <sup>(1)</sup>	0.141	NA	BACT
PM <sub>10</sub>	0.0045 <sup>(1)</sup>	0.141	NA	BACT
Opacity	NA	NA	0% <sup>(3)</sup>	BACT
Sulfur Dioxide (SO <sub>2</sub> )	NA	0.04 <sup>(4)</sup>	NA	Synthetic Minor
Nitrogen Oxides (NO <sub>x</sub> )	0.036 <sup>(1)</sup>	1.13	NA	BACT
Volatile Organic Compounds	0.006 <sup>(1)</sup>	0.19	NA	NA
Carbon Monoxide (CO)	0.036 <sup>(1)</sup>	1.13	NA	BACT

<sup>(1)</sup> Heat input used shall be the higher heating value of the natural gas used.

<sup>(2)</sup> Standard is a 12-month rolling total.

<sup>(3)</sup> This limit shall be interpreted as no visible emissions as determined by 40 CFR 60

Appendix A, Method 9

<sup>(4)</sup> Based on pipeline quality natural gas with a sulfur content of 0.5 gr/100 cf

Authority for Requirement: Iowa DNR PSD Construction Permit Number 02-A-051-P2

### **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

- 1) This unit shall be fired with natural gas only.
- 2) The natural gas combusted shall have a maximum sulfur content of 0.5 gr/100 cf (pipeline quality natural gas).

Authority for Requirement: Iowa DNR PSD Construction Permit Number 02-A-051-P2

### **Reporting & Record keeping:**

All records shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the AQD. Records shall be legible and maintained in an orderly manner.

- 1) A fuel analysis shall be kept on file for each fuel used in this unit. The analyses performed on the natural gas for the combustion turbines (as required by 40 CFR 60.334(b)) shall be sufficient to satisfy this requirement. This analysis shall be performed at least semi-annually.

Authority for Requirement: Iowa DNR PSD Construction Permit Number 02-A-051-P2

### **Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

<b>Parameter</b>	<b>Value</b>
Stack Height, (ft, from the ground)	40
Discharge Style	Vertical unobstructed
Stack Opening, (inches, dia.)	24
Exhaust Temperature (°F)	550
Exhaust Flowrate (scfm)	1,762

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Authority for Requirement: Iowa DNR PSD Construction Permit Number 02-A-051-P2

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the Monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes  No**

**Facility Maintained Operation & Maintenance Plan Required? Yes  No**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes  No**

Authority for Requirement: 567 IAC 22.108(3)

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**Emission Point ID Number: GDMEC-EP 20**

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Associated Equipment

Emission Unit vented through this Emission Point: GDMEC- EU 20

Emission Unit Description: Diesel Fired Fire Pump (265 bhp)

Raw Material/Fuel: Diesel Fuel

Rated Capacity: 14.2 gal/hr or 1.93 MMBTU/ hr

**Applicable Requirements****Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

<b>Pollutant</b>	<b>lb/hr <sup>(1)</sup></b>	<b>Tons/Yr <sup>(2)</sup></b>	<b>Additional Limits</b>	<b>Reference (567 IAC)</b>
Particulate Matter (PM)	0.62	0.14	NA	BACT
PM <sub>10</sub>	0.62	0.14	NA	BACT
Opacity	NA	NA	20%	BACT
Sulfur Dioxide (SO <sub>2</sub> )	NA	0.02	2.5 lb/mmBtu	Synthetic Minor 23.3(3)"b""2"
Nitrogen Oxides (NO <sub>x</sub> )	3.91	0.85	NA	BACT
Volatile Organic Compounds	0.12	0.03	NA	NA
Carbon Monoxide (CO)	2.21	0.48	NA	BACT

<sup>(1)</sup> Standard is expressed as the average of 3 runs

<sup>(2)</sup> Standard is a 12-month rolling total.

Authority for Requirement: Iowa DNR PSD Construction Permit Number 02-A-055-P2

### **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

- 1) This unit shall burn diesel fuel only.
- 2) The sulfur content of the fuel used in this unit shall not exceed a maximum of 0.05% wt.
- 3) The fuel consumption of this unit shall not exceed 6,200 gallons in any twelve (12) month period, rolled monthly.
- 4) The use of this unit shall be limited to periods of testing/ exercising of the engine and periods of emergency use. The testing/exercising of the engine shall be limited to the time recommended by the manufacturer of the engine.

Authority for Requirement: Iowa DNR PSD Construction Permit Number 02-A-055-P2

### **Reporting & Record keeping:**

All records shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the AQD. Records shall be legible and maintained in an orderly manner.

- 1) A fuel certification shall be kept for each fuel delivery received for this unit. This certification shall show the type of fuel delivered along with the sulfur content of the fuel.
- 2) For each use of this unit, a log entry shall be made noting the start time of the usage, the duration of the usage, the amount of fuel used, and the reason for the usage.
- 3) At the end of each month, the fuel usage over the previous month shall be recorded. Additionally, the fuel usage over the previous twelve (12) months shall be recorded at the end of each month.
- 4) A copy of the manufacturer's documentation for the unit shall be maintained on site for review. This documentation shall specifically cover the recommendation for testing/exercising of the unit.

Authority for Requirement: Iowa DNR PSD Construction Permit Number 02-A-055-P2

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

<b>Parameter</b>	<b>Value</b>
Stack Height, (ft, from the ground)	13.9
Discharge Style	Vertical unobstructed
Stack Opening, (inches, dia.)	5
Exhaust Temperature (°F)	840
Exhaust Flowrate (scfm)	420

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Authority for Requirement: Iowa DNR PSD Construction Permit Number 02-A-055-P2

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the Monitoring requirements listed below.*

*Periodic Monitoring is not required at this time. Periodic Monitoring will be required if the equipment is operated more than 876 hours per 12-month period, rolled monthly.*

**Agency Approved Operation & Maintenance Plan Required? Yes  No**

**Facility Maintained Operation & Maintenance Plan Required? Yes  No**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes  No**

## IV. General Conditions

This permit is issued under the authority of the Iowa Code subsection 455B.133(8) and in accordance with 567 Iowa Administrative Code chapter 22 and Polk County Board Of Health Rules And Regulations, Chapter V, Air Pollution, (Chapter V), Article X, 5-35.

### G1. Duty to Comply

1. The permittee must comply with all conditions of the Title V permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. *567 IAC 22.108(9)"a"*
2. Any compliance schedule shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based. *567 IAC 22.105 (2)"h"(3)*
3. Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall be enforceable by the administrator and must be incorporated into this permit. *567 IAC 22.108 (1)"b"*
4. Unless specified as either "state enforceable only" or "local program enforceable only", all terms and conditions in the permit, including provisions to limit a source's potential to emit, are enforceable by the administrator and citizens under the Act. *567 IAC 22.108 (14)*
5. It shall not be a defense for a permittee, in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. *567 IAC 22.108 (9)"b"*

### G2. Permit Expiration

1. Except as provided in 567 IAC 22.104, the expiration of this permit terminates the permittee's right to operate unless a timely and complete application has been submitted for renewal. Any testing required for renewal shall be completed before the application is submitted. *567 IAC 22.116(2)*
2. To be considered timely, the owner, operator, or designated representative (where applicable) of each source required to obtain a Title V permit shall present or mail the Air Quality Bureau, Iowa Department of Natural Resources, Air Quality Bureau, 7900 Hickman Rd, Suite #1, Urbandale, Iowa 50322, two copies (three if your facility is located in Linn or Polk county) of a complete permit application, at least 6 months but not more than 18 months prior to the date of permit expiration. An additional copy must also be sent to EPA Region VII, Attention: Chief of Air Permits, 901 N. 5th St., Kansas City, KS 66101. The application must include all emission points, emission units, air pollution control equipment, and monitoring devices at the facility. All emissions generating activities, including fugitive emissions, must be included. The definition of a complete application is as indicated in 567 IAC 22.105(2). *567 IAC 22.105*

### G3. Certification Requirement for Title V Related Documents

Any application, report, compliance certification or other document submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. All certifications shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. *567 IAC 22.107 (4)"e"*

### G4. Annual Compliance Certification

By March 31 of each year, the permittee shall submit compliance certifications for the previous calendar year. The certifications shall include descriptions of means to monitor the compliance status of all emissions sources including emissions limitations, standards, and work practices in accordance with applicable requirements. The certification for a source shall include the identification of each term or condition of the permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with all applicable department rules. For sources determined not to be in compliance at the time of compliance certification, a compliance schedule shall be submitted which provides for periodic progress reports, dates for achieving activities, milestones, and an explanation of why any dates were missed and preventive or corrective measures. The compliance certification shall be submitted to the administrator, director, and Polk County Air Quality Division. *567 IAC 22.108 (15)"e"*

### **G5. Semi-Annual Monitoring Report**

By March 31 and September 30 of each year, the permittee shall submit a report of any monitoring required under this permit for the 6 month periods of July 1 to December 31 and January 1 to June 30, respectively. All instances of deviations from permit requirements must be clearly identified in these reports, and the report must be signed by a responsible official, consistent with 567 IAC 22.107(4). The semi-annual monitoring report shall be submitted to the director and Polk County Air Quality Division. 567 IAC 22.108 (5).

### **G6. Annual Fee**

1. The permittee is required under subrule 567 IAC 22.106 to pay an annual fee based on the total tons of actual emissions of each regulated air pollutant. Beginning July 1, 1996, Title V operating permit fees will be paid on July 1 of each year. The fee shall be based on emissions for the previous calendar year.
2. The fee amount shall be calculated based on the first 4,000 tons of each regulated air pollutant emitted each year. The fee to be charged per ton of pollutant will be available from the Department by June 1 of each year. The Responsible Official will be advised of any change in the annual fee per ton of pollutant.
3. The following forms shall be submitted annually by March 31 documenting actual emissions for the previous calendar year.
  - a. Form 1.0 "Facility Identification";
  - b. Form 4.0 "Emissions unit-actual operations and emissions" for each emission unit;
  - c. Form 5.0 "Title V annual emissions summary/fee"; and
  - d. Part 3 "Application certification."
4. The fee shall be submitted annually by July 1. The fee shall be submitted with the following forms:
  - a. Form 1.0 "Facility Identification";
  - b. Form 5.0 "Title V annual emissions summary/fee";
  - c. Part 3 "Application certification."
5. If there are any changes to the emission calculation form, the department shall make revised forms available to the public by January 1. If revised forms are not available by January 1, forms from the previous year may be used and the year of emissions documented changed. The department shall calculate the total statewide Title V emissions for the prior calendar year and make this information available to the public no later than April 30 of each year.
6. Phase I acid rain affected units under section 404 of the Act shall not be required to pay a fee for emissions which occur during the years 1993 through 1999 inclusive.
7. The fee for a portable emissions unit or stationary source which operates both in Iowa and out of state shall be calculated only for emissions from the source while operating in Iowa.
8. Failure to pay the appropriate Title V fee represents cause for revocation of the Title V permit as indicated in 567 IAC 22.115(1)"d".

### **G7. Inspection of Premises, Records, Equipment, Methods and Discharges**

Upon presentation of proper credentials and any other documents as may be required by law, the permittee shall allow the director or the director's authorized representative to:

1. Enter upon the permittee's premises where a Title V source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
3. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
4. Sample or monitor, at reasonable times, substances or parameters for the purpose of ensuring compliance with the permit or other applicable requirements. 567 IAC 22.108 (15)"b" and Chapter V, Article II, 5-3 and 5-4

### **G8. Duty to Provide Information**

The permittee shall furnish to the director, within a reasonable time, any information that the director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the director copies of records required to be kept by the permit, or for information claimed to be confidential, the permittee shall furnish such records directly to the administrator of EPA along with a claim of confidentiality. 567 IAC 22.108 (9)"e" and Chapter V, Article X, 5-46 and 5-47

### **G9. General Maintenance and Repair Duties**

The owner or operator of any air emission source or control equipment shall:

1. Maintain and operate the equipment or control equipment at all times in a manner consistent with good practice for minimizing emissions.
2. Remedy any cause of excess emissions in an expeditious manner.
3. Minimize the amount and duration of any excess emission to the maximum extent possible during periods of such emissions. These measures may include but not be limited to the use of clean fuels, production cutbacks, or the use of alternate process units or, in the case of utilities, purchase of electrical power until repairs are completed.
4. Schedule, at a minimum, routine maintenance of equipment or control equipment during periods of process shutdowns to the maximum extent possible. *567 IAC 24.2(1) and Chapter V, Article VI, Section 5-17.1*

### **G10. Recordkeeping Requirements for Compliance Monitoring**

1. In addition to any source specific recordkeeping requirements contained in this permit, the permittee shall maintain the following compliance monitoring records, where applicable:
  - a. The date, place and time of sampling or measurements
  - b. The date the analyses were performed.
  - c. The company or entity that performed the analyses.
  - d. The analytical techniques or methods used.
  - e. The results of such analyses; and
  - f. The operating conditions as existing at the time of sampling or measurement.
  - g. The records of quality assurance for continuous compliance monitoring systems (including but not limited to quality control activities, audits and calibration drifts.)
2. The permittee shall retain records of all required compliance monitoring data and support information for a period of at least 5 years from the date of compliance monitoring sample, measurement report or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous compliance monitoring, and copies of all reports required by the permit.
3. For any source which in its application identified reasonably anticipated alternative operating scenarios, the permittee shall:
  - a. Comply with all terms and conditions of this permit specific to each alternative scenario.
  - b. Maintain a log at the permitted facility of the scenario under which it is operating.
  - c. Consider the permit shield, if provided in this permit, to extend to all terms and conditions under each operating scenario. *567 IAC 22.108(4), 567 IAC 22.108(12)*

### **G11. Evidence used in establishing that a violation has or is occurring.**

Notwithstanding any other provisions of these rules, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any provisions herein.

1. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at a source:
  - a. A monitoring method approved for the source and incorporated in an operating permit pursuant to 567 Chapter 22;
  - b. Compliance test methods specified in 567 Chapter 25; or
  - c. Testing or monitoring methods approved for the source in a construction permit issued pursuant to 567 Chapter 22.
2. The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:
  - a. Any monitoring or testing methods provided in these rules; or
  - b. Other testing, monitoring, or information gathering methods that produce information comparable to that produced by any method in subrule 21.5(1) or this subrule. *567 IAC 21.5(1)-567 IAC 21.5(2)*

### **G12. Prevention of Accidental Release: Risk Management Plan Notification and Compliance Certification**

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Act, the permittee shall notify the department of this requirement. The plan shall be filed with all appropriate authorities by the deadline specified by EPA. A certification that this risk management plan is being properly implemented shall be included in the annual compliance certification of this permit. *567 IAC 22.108(6)*

### **G13. Hazardous Release**

The permittee must report any situation involving the actual, imminent, or probable release of a hazardous substance into the atmosphere which, because of the quantity strength and toxicity of the substance, creates an immediate or potential danger to the public health, safety or to the environment. A verbal report shall be made to the Department at (515) 281-8694 and to the local police department or the office of the sheriff of the affected county as soon as possible but not later than six hours after the discovery or onset of the condition. This verbal report must be followed up with a written report as indicated in 567 IAC 131.2(2). *567 IAC Chapter 131-State Only*

### **G14. Excess Emissions and Excess Emissions Reporting Requirements**

1. Excess Emissions. Excess emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if the startup, shutdown or cleaning is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Cleaning of control equipment which does not require the shutdown of the process equipment shall be limited to one six-minute period per one-hour period. An incident of excess emission (other than an incident during startup, shutdown or cleaning of control equipment) is a violation. If the owner or operator of a source maintains that the incident of excess emission was due to a malfunction, the owner or operator must show that the conditions which caused the incident of excess emission were not preventable by reasonable maintenance and control measures. Determination of any subsequent enforcement action will be made following review of this report. If excess emissions are occurring, either the control equipment causing the excess emission shall be repaired in an expeditious manner or the process generating the emissions shall be shutdown within a reasonable period of time. An expeditious manner is the time necessary to determine the cause of the excess emissions and to correct it within a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to shut down the process without damaging the process equipment or control equipment. In the case of an electric utility, a reasonable period of time is eight hours plus the period of time until comparable generating capacity is available to meet consumer demand with the affected unit out of service, unless, the director shall, upon investigation, reasonably determine that continued operation constitutes an unjustifiable environmental hazard and issue an order that such operation is not in the public interest and require a process shutdown to commence immediately.

#### 2. Excess Emissions Reporting

a. Oral Reporting of Excess Emissions. An incident of excess emission (other than an incident of excess emission during a period of startup, shutdown, or cleaning) shall be reported to the appropriate field office of the department within eight hours of, or at the start of the first working day following the onset of the incident. The reporting exemption for an incident of excess emission during startup, shutdown or cleaning does not relieve the owner or operator of a source with continuous monitoring equipment of the obligation of submitting reports required in 567-subrule 25.1(6). An oral report of excess emission is not required for a source with operational continuous monitoring equipment (as specified in 567-subrule 25.1(1)) if the incident of excess emission continues for less than 30 minutes and does not exceed the applicable emission standard by more than 10 percent or the applicable visible emission standard by more than 10 percent opacity. The oral report may be made in person or by telephone and shall include as a minimum the following:

- i. The identity of the equipment or source operation from which the excess emission originated and the associated stack or emission point.
- ii. The estimated quantity of the excess emission.
- iii. The time and expected duration of the excess emission.
- iv. The cause of the excess emission.
- v. The steps being taken to remedy the excess emission.
- vi. The steps being taken to limit the excess emission in the interim period.

b. Written Reporting of Excess Emissions. A written report of an incident of excess emission shall be submitted as a follow-up to all required oral reports to the department within seven days of the onset of the upset condition, and shall include as a minimum the following:

- i. The identity of the equipment or source operation point from which the excess emission originated and the associated stack or emission point.
- ii. The estimated quantity of the excess emission.
- iii. The time and duration of the excess emission.
- iv. The cause of the excess emission.
- v. The steps that were taken to remedy and to prevent the recurrence of the incident of excess emission.
- vi. The steps that were taken to limit the excess emission.

vii. If the owner claims that the excess emission was due to malfunction, documentation to support this claim. 567 IAC 24.1(1)-567 IAC 24.1(4) and Chapter V, Article VI, 5-17

3. Emergency Defense for Excess Emissions. For the purposes of this permit, an “emergency” means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include non-compliance, to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation or operator error. An emergency constitutes an affirmative defense to an action brought for non-compliance with technology based limitations if it can be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that:

- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
- b. The facility at the time was being properly operated;
- c. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements of the permit; and
- d. The permittee submitted notice of the emergency to the director by certified mail within two working days of the time when the emissions limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. 567 IAC 22.108(16)

#### **G15. Permit Deviation Reporting Requirements**

A deviation is any failure to meet a term, condition or applicable requirement in the permit. Reporting requirements for deviations that result in a hazardous release or excess emissions have been indicated above (see G13 and G14). Unless more frequent deviation reporting is specified in the permit, any other deviation shall be documented in the semi-annual monitoring report and the annual compliance certification (see G4 and G5). 567 IAC 22.108(5)"b"

#### **G16. Notification Requirements for Sources That Become Subject to NSPS and NESHAP Regulations**

During the term of this permit, the permittee must notify the department of any source that becomes subject to a standard or other requirement under 567-subrule 23.1(2) (standards of performance of new stationary sources) or section 111 of the Act; or 567-subrule 23.1(3) (emissions standards for hazardous air pollutants), 567-subrule 23.1(4) (emission standards for hazardous air pollutants for source categories) or section 112 of the Act. This notification shall be submitted in writing to the department pursuant to the notification requirements in 40 CFR Section 60.7, 40 CFR Section 61.07, and/or 40 CFR Section 63.9. 567 IAC 23.1(2), 567 IAC 23.1(3), 567 IAC 23.1(4) This notification must be made to Polk County Air Quality Division, in lieu of the Department, upon adoption of the NSPS or NESHAP into Chapter V.

#### **G17. Requirements for Making Changes to Emission Sources That Do Not Require Title V Permit Modification**

1. Off Permit Changes to a Source. Pursuant to section 502(b)(10) of the CAAA, the permittee may make changes to this installation/facility without revising this permit if:

- a. The changes are not major modifications under any provision of any program required by section 110 of the Act, modifications under section 111 of the act, modifications under section 112 of the act, or major modifications as defined in 567 IAC Chapter 22.
- b. The changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions);
- c. The changes are not modifications under any provisions of Title I of the Act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or as total emissions);
- d. The changes are not subject to any requirement under Title IV of the Act.
- e. The changes comply with all applicable requirements.
- f. For such a change, the permitted source provides to the department and the administrator by certified mail, at least 30 days in advance of the proposed change, a written notification, including the following, which will be attached to the permit by the source, the department and the administrator:
  - i. A brief description of the change within the permitted facility,
  - ii. The date on which the change will occur,
  - iii. Any change in emission as a result of that change,
  - iv. The pollutants emitted subject to the emissions trade

- v. If the emissions trading provisions of the state implementation plan are invoked, then Title V permit requirements with which the source shall comply; a description of how the emissions increases and decreases will comply with the terms and conditions of the Title V permit.
  - vi. A description of the trading of emissions increases and decreases for the purpose of complying with a federally enforceable emissions cap as specified in and in compliance with the Title V permit; and
  - vii. Any permit term or condition no longer applicable as a result of the change. *567 IAC 22.110(1)*
2. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements. *567 IAC 22.110.(2)*
  3. Notwithstanding any other part of this rule, the director may, upon review of a notice, require a stationary source to apply for a Title V permit if the change does not meet the requirements of subrule 22.110(1). *567 IAC 22.110.(3)*
  4. The permit shield provided in subrule 22.108(18) shall not apply to any change made pursuant to this rule. Compliance with the permit requirements that the source will meet using the emissions trade shall be determined according to requirements of the state implementation plan authorizing the emissions trade. *567 IAC 22.110.(4)*
  5. Aggregate Insignificant Emissions. The permittee shall not construct, establish or operate any new insignificant activities or modify any existing insignificant activities in such a way that the emissions from these activities no longer meet the criteria of aggregate insignificant emissions. If the aggregate insignificant emissions are expected to be exceeded, the permittee shall submit the appropriate permit modification and receive approval prior to making any change. *567 IAC 22.103.(2)*
  6. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes, for changes that are provided for in this permit. *567 IAC 22.108 (11)*

#### **G18. Duty to Modify a Title V Permit**

##### **1. Administrative Amendment.**

- a. An administrative permit amendment is a permit revision that is required to do any of the following:
  - i. Correct typographical errors
  - ii. Identify a change in the name, address, or telephone number of any person identified in the permit, or provides a similar minor administrative change at the source;
  - iii. Require more frequent monitoring or reporting by the permittee; or
  - iv. Allow for a change in ownership or operational control of a source where the director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittee has been submitted to the director.
- b. The permittee may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request. The request shall be submitted to the director.
- c. Administrative amendments to portions of permits containing provisions pursuant to Title IV of the Act shall be governed by regulations promulgated by the administrator under Title IV of the Act.

##### **2. Minor Permit Modification.**

- a. Minor permit modification procedures may be used only for those permit modifications that do any of the following:
  - i. Do not violate any applicable requirements
  - ii. Do not involve significant changes to existing monitoring, reporting or recordkeeping requirements in the Title V permit.
  - iii. Do not require or change a case by case determination of an emission limitation or other standard, or increment analysis.
  - iv. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed in order to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include any federally enforceable emissions caps which the source would assume to avoid classification as a modification under any provision under Title I of the Act; and an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Act.;
  - v. Are not modifications under any provision of Title I of the Act; and
  - vi. Are not required to be processed as significant modification.

b. An application for minor permit revision shall be on the minor Title V modification application form and shall include at least the following:

- i. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs.
- ii. The permittee's suggested draft permit
- iii. Certification by a responsible official, pursuant to 567 IAC 22.107(4), that the proposed modification meets the criteria for use of a minor permit modification procedures and a request that such procedures be used; and
- iv. Completed forms to enable the department to notify the administrator and the affected states as required by 567 IAC 22.107(7).

c. The permittee may make the change proposed in its minor permit modification application immediately after it files the application. After the permittee makes this change and until the director takes any of the actions specified in 567 IAC 22.112(4) "a" to "c", the permittee must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time, the permittee need not comply with the existing permit terms and conditions it seeks to modify. However, if the permittee fails to comply with its proposed permit terms and conditions during this time period, existing permit term terms and conditions it seeks to modify may subject the facility to enforcement action.

3. Significant Permit Modification. Significant Title V modification procedures shall be used for applications requesting Title V permit modifications that do not qualify as minor Title V modifications or as administrative amendments. These include but are not limited to all significant changes in monitoring permit terms, every relaxation of reporting or recordkeeping permit terms, and any change in the method of measuring compliance with existing requirements. Significant Title V modifications shall meet all requirements of 567 IAC Chapter 22, including those for applications, public participation, review by affected states, and review by the administrator, and those requirements that apply to Title V issuance and renewal. 567 IAC 22.111-567 IAC 22.113 The permittee shall submit an application for a significant permit modification not later than three months after commencing operation of the changed source unless the existing Title V permit would prohibit such construction or change in operation, in which event the operation of the changed source may not commence until the department revises the permit. 567 IAC 22.105(1)"a"(4)

#### **G19. Duty to Obtain Construction Permits**

Unless exempted under 567 IAC 22.1(2) and Chapter V, Article X, 5-33, the permittee must not construct, install, reconstruct, or alter any equipment, control equipment or anaerobic lagoon without first obtaining a construction permit, conditional permit, or permit pursuant to 567 IAC 22.8 & Polk County Chapter V, Article X, 5-28, or permits required pursuant to 567 IAC 22.4 and 567 IAC 22.5. Such permits shall be obtained prior to the initiation of construction, installation or alteration of any portion of the stationary source. 567 IAC 22.1(1) and Chapter V, Article X, 5-28

#### **G20. Asbestos**

The permittee shall comply with 567 IAC 23.1(3)"a", and 567 IAC 23.2(3)"g" when activities involve asbestos mills, surfacing of roadways, manufacturing operations, fabricating, insulating, waste disposal, spraying applications, demolition and renovation operations, training fires and controlled burning of a demolished building. 567 IAC 23.1(3)"a", and 567 IAC 23.2

#### **G21. Open Burning**

The permittee is prohibited from conducting open burning, except as may be allowed by Chapter V, Article III, 5-7

#### **G22. Acid Rain (Title IV) Emissions Allowances**

The permittee shall not exceed any allowances that it holds under Title IV of the Act or the regulations promulgated thereunder. Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners or operators of the unit or the designated representative of the owners or operators is prohibited. Exceedences of applicable emission rates are prohibited. The use of any allowance prior to the year for which it was allocated is prohibited. Contravention of any other provision of the permit is prohibited. 567 IAC 22.108(7)

### **G23. Stratospheric Ozone and Climate Protection (Title VI) Requirements**

1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
  - a. All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to § 82.106.
  - b. The placement of the required warning statement must comply with the requirements pursuant to § 82.108.
  - c. The form of the label bearing the required warning statement must comply with the requirements pursuant to § 82.110.
  - d. No person may modify, remove, or interfere with the required warning statement except as described in § 82.112.
2. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:
  - a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156.
  - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158.
  - c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161.
  - d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with reporting and recordkeeping requirements pursuant to § 82.166. ("MVAC-like appliance" as defined at § 82.152)
  - e. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to § 82.156.
  - f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.
3. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.
4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant,
5. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *40 CFR part 82*

### **G24. Permit Reopenings**

1. This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. *567 IAC 22.108(9)"c"*
2. Additional applicable requirements under the Act become applicable to a major part 70 source with a remaining permit term of 3 or more years. Revisions shall be made as expeditiously as practicable, but not later than 18 months after the promulgation of such standards and regulations.
  - a. Reopening and revision on this ground is not required if the permit has a remaining term of less than three years;
  - b. Reopening and revision on this ground is not required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii) as amended to June 25, 1993.
  - c. Reopening and revision on this ground is not required if the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. *567 IAC 22.108(17)"a", 567 IAC 22.108(17)"b"*

3. A permit shall be reopened and revised under any of the following circumstances:
  - a. The department receives notice that the administrator has granted a petition for disapproval of a permit pursuant to 40 CFR 70.8(d) as amended to June 25, 1993, provided that the reopening may be stayed pending judicial review of that determination;
  - b. The department or the administrator determines that the Title V permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Title V permit;
  - c. Additional applicable requirements under the Act become applicable to a Title V source, provided that the reopening on this ground is not required if the permit has a remaining term of less than three years, the effective date of the requirement is later than the date on which the permit is due to expire, or the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. Such a reopening shall be complete not later than 18 months after promulgation of the applicable requirement.
  - d. Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the acid rain program. Upon approval by the administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.
  - e. The department or the administrator determines that the permit must be revised or revoked to ensure compliance by the source with the applicable requirements. *567 IAC 22.114(1)*
4. Proceedings to reopen and reissue a Title V permit shall follow the procedures applicable to initial permit issuance and shall effect only those parts of the permit for which cause to reopen exists. *567 IAC 22.114(2)*

#### **G25. Permit Shield**

1. The director may expressly include in a Title V permit a provision stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:
  - a. Such applicable requirements are included and are specifically identified in the permit; or
  - b. The director, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.
2. A Title V permit that does not expressly state that a permit shield exists shall be presumed not to provide such a shield.
3. A permit shield shall not alter or affect the following:
  - a. The provisions of Section 303 of the Act (emergency orders), including the authority of the administrator under that section;
  - b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
  - c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act;
  - d. The ability of the department or the administrator to obtain information from the facility pursuant to Section 114 of the Act. *567 IAC 22.108 (18)*

#### **G26. Severability**

The provisions of this permit are severable and if any provision or application of any provision is found to be invalid by this Department or a court of law, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected by such finding. *567 IAC 22.108 (8)* and *Chapter V, Article XVII, 5-77*

#### **G27. Property Rights**

The permit does not convey any property rights of any sort, or any exclusive privilege. *567 IAC 22.108 (9)"d"*

#### **G28. Transferability**

This permit is not transferable from one source to another. If title to the facility or any part of it is transferred, an administrative amendment to the permit must be sought to determine transferability of the permit. *567 IAC 22.111 (1)"d"*

**G29. Disclaimer**

No review has been undertaken on the engineering aspects of the equipment or control equipment other than the potential of that equipment for reducing air contaminant emissions. *567 IAC 22.3(3)"c"*

**G30. Notification and Reporting Requirements for Stack Tests or Monitor Certification**

The permittee shall notify the department's stack test contact in writing not less than 30 days before a required test or performance evaluation of a continuous emission monitor is performed to determine compliance with an applicable requirement. For the department to consider test results a valid demonstration of compliance with applicable rules or a permit condition, such notice shall be given. Such notice shall include the time, the place, the name of the person who will conduct the test and other information as required by the department. Unless specifically waived by the department's stack test contact, a pretest meeting shall be held not later than 15 days prior to conducting the compliance demonstration. The department may accept a testing protocol in lieu of a pretest meeting. A representative of the department shall be permitted to witness the tests. Results of the tests shall be submitted in writing to the department's stack test contact in the form of a comprehensive report within six weeks of the completion of the testing. Compliance tests conducted pursuant to this permit shall be conducted with the source operating in a normal manner at its maximum continuous output as rated by the equipment manufacturer, or the rate specified by the owner as the maximum production rate at which the source shall be operated. In cases where compliance is to be demonstrated at less than the maximum continuous output as rated by the equipment manufacturer, and it is the owner's intent to limit the capacity to that rating, the owner may submit evidence to the department that the source has been physically altered so that capacity cannot be exceeded, or the department may require additional testing, continuous monitoring, reports of operating levels, or any other information deemed necessary by the department to determine whether such source is in compliance.

Stack test notifications, reports and correspondence shall be sent to:

Stack Test Review Coordinator  
Iowa DNR, Air Quality Bureau  
7900 Hickman Road, Suite #1  
Urbandale, IA 50322  
(515) 242-6001

Within Polk County, stack test notifications, reports, correspondence, and the appropriate fee shall also be directed to the supervisor of the county air pollution program.

*567 IAC 25.1(7)"a", 567 IAC 25.1(9) and Chapter V, Article VII, 5-18 and 5-19*

**G31. Prevention of Air Pollution Emergency Episodes**

The permittee shall comply with the provisions of *567 IAC Chapter 26* in the prevention of excessive build-up of air contaminants during air pollution episodes, thereby preventing the occurrence of an emergency due to the effects of these contaminants on the health of persons. *567 IAC 26.1(1)*

**G32. Contacts List**

The current address and phone number for reports and notifications to the EPA administrator is:

Chief of Air Permits

EPA Region 7

Air Permits and Compliance Branch

901 North 5<sup>th</sup> Street

Kansas City, KS 66101

(913) 551-7020

The current address and phone number for reports and notifications to the Department or the Director is:

Chief, Air Quality Bureau

Iowa Department of Natural Resources

7900 Hickman Road, Suite #1

Urbandale, IA 50322

(515) 242-5100

Reports or notifications to the local program shall be directed to the supervisor at the appropriate local program.

Current address and phone number is:

**Polk County Public Works Department**

Air Quality Division

5885 NE 14th St.

Des Moines, IA 50313

(515) 286-3351

## **V. Appendix I: Acid Rain Phase II Permits**

**i) GDMEC renew06 ORIS7145: Unit 3- Pleasant Hill**

**ii) GDMEC renew06 ORIS7985: Unit 1 and Unit 2- GDMEC**