Ohio Environmental Protection Agency
John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

4/26/2012

Certified Mail

| | |
|---|---|
| No | TOXIC REVIEW |
| No | PSD |
| Yes | SYNTHETIC MINOR TO AVOID MAJOR NSR |
| No | CEMS |
| No | MACT/GACT |
| Yes | NSPS |
| No | NESHAPS |
| No | NETTING |
| No | MAJOR NON-ATTAINMENT |
| No | MODELING SUBMITTED |

Mr. Christopher McGibbeny
City of Toledo, Division of Water Reclamation
3900 N. Summit St Bldg. #1
Toledo, OH 43611

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0448010737
Permit Number: P0109314
Permit Type: Administrative Modification
County: Lucas

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio EPA Weekly Review and the local newspaper, Toledo Blade. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page,www.epa.ohio.gov/dapc by clicking the "Issued Air Pollution Control Permits" link. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall
Permit Review/Development Section
Ohio EPA, DAPC
50 West Town Street, Suite 700
P.O. Box 1049
Columbus, Ohio 43216-1049

and

Toledo Department of Environmental Services
348 South Erie Street
Toledo, OH 43604

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted.Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now.If you have any questions, please contact Toledo Department of Environmental Services at (419)936-3015.

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 *-Via E-Mail Notification*
TDES; Michigan; Indiana; Canada

# Permit Strategy Write-Up

1. Check all that apply:

   _X_ Synthetic Minor Determination

   _X_ Netting Determination

2. Source Description:

   This facility is a municipal wastewater treatment plant for the City of Toledo. This administrative permit modification is for emissions unit P109, a natural gas/digester gas/landfill gas powered combustion turbine for combined cycle cogeneration system. The turbine combusts digester gas/landfill gas during normal operation and can also be fired with natural gas. The maximum heat input capacity to the turbine is 56.1 mmBtu/hr and the maximum heat input capacity to the heat recovery steam generator (hrsg) is 65.3 mmBtu/hr.

   The facility has requested that the federally enforceable restriction in PTI 04-01485 that prohibits the operation of P109 when P105 and P106 are in operation be relaxed for operational flexibilty. Relaxing the federally enforceable operating restriction on P109 requires a review to ensure that PSD will not be triggered. To avoid PSD review, the facility has volunteered a federally enforceable limit of 2,500 hours of operating P109 and either P105 or P106 simultaneously and the PSD calculations from PTI 04-01485 will be revised.

   This modification also incorporates Senate Bill 265 language in the permit and revisions to NSPS subpart KKKK that have occurred since the initial permit was issued.

3. Facility Emissions and Attainment Status:

   The facility is an existing major source for CO and NOx and an area source of HAP emissions (i.e. – not a major source of HAP emissions). This facility is located in Lucas County which is currently designated as attainment or unclassified for all criteria pollutants.

4. Source Emissions:

PTI 04-1485 established emissions limitations for P109 using a worst case scenario for the highest emissions from burning natural gas, digester gas, or landfill gas. This permit does not modify these calculations and the permit allowables for P109 are as follows:

| PERMIT ALLOWABLES | CO | NOx | $PM_{10}$ | $SO_2$[1] | VOC |
|---|---|---|---|---|---|
| Turbine (56.1 mmBtu/hr) | | | | | |
| lb/hr | 29.2 | 18.0 | 1.29 | 7.28 | 3.3 |
| TPY | 127.9 | 78.9 | 5.7 | 32.0 | 14.5 |
| | CO | NOx | $PM_{10}$ | $SO_2$[1] | VOC |
| HRSG (65.3 mmBtu/hr) | | | | | |
| lb/hr | 7.31 | 12.3 | 0.49 | 7.28 | 1.40 |
| TPY | 32.0 | 53.9 | 2.14 | 32.0 | 6.13 |

[1]NOTE: Sulfur dioxide is regulated by NSPS, subpart KKKK and that was used as the basis for BAT. The SO2 limit for the turbine and hrsg is a combined limit.

5. Applicable Rules/Regulations

OAC rule 3745-31-05(A)(3) Best available Technology for CO, NOx, $SO_2$, and VOC

OAC rule 3745-31-05(A)(3) Best Available Technology as effective 11/30/2001 Per the July 2, 2010 Ohio EPA memo regarding *Permit Processing After U.S. District Court <10 Ton/Yr Exemption Decision*, it was necessary to set a BAT limit under the 11/30/2001 BAT rule for pollutants emitted less than 10 tons per year, since U.S. EPA has not yet approved Ohio's July 2006 OAC rule 3745-31-05 rule revisions as part of Ohio's State Implementation Plan (SIP). In accordance with this memo, BAT was established for PE and $SO_2$ for P109 in the previous PTI.

OAC rule 3745-31-05(A)(3)(a)(ii) Once U.S. EPA approves the 12/01/2006 rule revision as part of Ohio's as effective 12/01/2006 SIP, BAT requirements will no longer apply to PE, since emissions < 10 tons/yr.

OAC rule 3745-31-05(D) Volunteered limit on hours of operation to avoid PSD review

OAC rule 3745-17-07(A) Visible emissions shall not exceed 20% opacity unless otherwise exempted by the rule.

OAC rule 3745-17-10(B)(1) 0.020 lb PE/mmBtu of actual heat input (P109 HRSG)

OAC rule 3745-17-11(B)(4) 0.04 lb PE/mmBtu of actual heat input (P109 turbine)

OAC rule 3745-18-06(G) 0.5 lb $SO_2$/mmBtu actual heat input

40 CFR Part 60, Subpart Dc The HRSG is exempt from the requirements of this rule per 60.4305(b)

40 CFR Part 60, Subpart GG Not applicable - this rule applies to stationary gas turbines installed on or before 2/18/2005. Exempt per 60.4305(b)

40 CFR Part 60 Subpart KKKK standards of performance for stationary combustion (gas) turbines installed after 2/18/2005 (P109)

40 CFR Part 60.4330(a)(2) $SO_2$ emissions shall not exceed 110 nanograms per Joule (0.90 pounds per mega-Watt hour);
26 ng $SO_2$/J (0.060 lb $SO_2$/MMBtu) – each fuel must meet requirement;
or
65 ng $SO_2$/J (0.15 lb $SO_2$/MMBtu) when firing ≥ 50% biogas (monthly basis.

40 CFR Part 60.4320 NOx emissions shall not exceed 25 ppm at 15 percent oxygen or 150 ng/J of useful output (1.2 lb/MWh) while firing natural gas.
NOx emissions shall not exceed 74 ppm at 15 percent oxygen or 460 ng/J of useful output (3.6 lb/MWh) while firing digester gas or landfill gas.
NOx emissions from the HRSG shall not exceed 54 ppm at 15 percent oxygen or 110 ng/J of useful output (0.86 lb/MWh) when operating independent of the combustion turbine.

40 CFR Part 63 Subpart YYYY exempt per 63.6085; this facility is not a major source for HAPS

6. Conclusion:

Issuance of this permit will not involve PSD review and the modification of the existing permit meets the applicable requirements for permit issuance. The permit should be issued draft/final and requires federal enforceability of the terms and conditions to avoid PSD.

7. Please provide additional notes or comments as necessary:

The terms that were modified/changed for SB 265 and changes in NSPS KKKK are:

- Terms b)(1)a., b. and c. and b)(1)h., i. and j. – Terms related to Senate Bill 265 and BAT.
- Terms c)(4), d)(7), e)(5) – terms related to NSPS, 40 CFR Part 60, subpart KKKK.

Analysis for relaxation of the operating restriction on P105, P106, and P109:

The City of Toledo Division of Water Reclamation has requested a relaxation of the restriction that prohibits the cogeneration system (P109) from operation any time during which generators 5 and 6 (P105 and P106) are in operation. The original PTI included the restriction to avoid PSD applicability. The original PSD review will be revised to determine the extent to which the synthetic minor operating restriction can be relaxed.

The original PSD review was as follows:

Summarizing the worst case emission scenarios

| | CO | NOx | PM10 | SO2 (32.0 tpy total) | VOC |
|---|---|---|---|---|---|
| turbine | | | | | |
| AP-42 | 108.2 | 52.6 | 5.7 | 1.60 | 3.2 |
| mfr data | 127.9 | 78.9 | - | - | 14.5 |
| hrsg | | | | | |
| AP-42 | 23.6 | 28.1 | 2.13 | 0.17 | 1.54 |
| mfr data | 32.0 | 53.9 | - | - | 6.13 |

<u>potential co-generation emissions</u>

| | CO | NOx | PM10 | SO2 | VOC |
|---|---|---|---|---|---|
| major source status (allows up to 250 tpy emissions increase) | | | | | |
| major source (250 tpy) | yes | yes | no | no | no |
| P109 emissions increase | | | | | |
| turbine | 127.9 | 78.9 | 5.7 | - | 14.5 |
| hrsg | 32.0 | 53.9 | 2.13 | - | 6.13 |
| P109 PTE totals | 159.9 | 132.8 | 7.83 | 32.0 | 20.6 |
| minus P105 & P106 | (67.6) | (28.6) | (0.01) | (30.2) | (17.5) |
| emissions increase | 92.3 | 104.2 | 7.82 | 1.8 | 3.10 |

| | | | | | |
|---|---|---|---|---|---|
| contemporaneous increases considering P101 through P106 and P108 through P109 to be all one project | | | | | |
| current facility wide emissions, tpy | 79.76 | 51.1 | 0.75 | 20.96 | 33.17 |
| P109 emissions increase | 92.3 | 104.2 | 7.82 | 1.8 | 3.10 |
| revised facility wide emissions, tpy | 172.1 | 155.3 | 8.57 | 22.8 | 36.27 |
| PSD significant increase | 100 | 40 | 15 | 40 | 40 |
| Both CO and NOx show significant increases. Water Reclamation was formerly a TV facility with 4 engines (1-438 hp, 2-850hp and 1-560 hp) with applicable limits that included the capability to burn natural gas, digester gas or #2 fuel oil. All four units were removed in 2004/2005. The last two years these engines operated full capacity was 2000 and 2001. Calculations performed in PTI 04-01475 for the installation of 2 generators and contiguous to the installation of the co-generation plant showed the following. | | | | | |
| lb/mmBtu[2] | 1.16 | 2.7 | 0.0573 | 0.452 | 0.2 |
| 2000 | 127 | 297 | 6.3 | 49.5 | 22 |
| 2001 | 106 | 245 | 5.24 | 41.1 | 18.3 |
| average | (116) | (271) | (5.77) | (45.3) | (20.2) |
| revised facility wide emissions, tpy | 172.1 | 155.3 | 8.57 | 22.8 | 36.27 |

| | | | | | |
|---|---|---|---|---|---|
| netting increase | 56.1 | (115.7) | 0.05 | (22.5) | 16.1 |
| PSD significant increase | 100 | 40 | 15 | 40 | 40 |
| therefore the installation of this emissions unit does not trigger PSD review requirements | | | | | |

[1] where a typical calculation is 220,000 mmBtu/yr (1.16 #CO/mmBtu) ÷ (2000 lb/ton) = 127 ton per year
[2]basis - AP-42, tables 3.4-1 and 3.4-2, rev. 10/96
[3](0.05S1+0.895S2) where S1 = the sulfur content of the fuel oil (0.05%) and S2 = the sulfur content of the digester gas (0.05%), AP-42, table 3.4-1 rev. 10/96

<u>The revised PSD review to allow P109 to operate for a restricted period of time with P105 and P106:</u>

The City of Toledo requested revising the operating restriction on P109 to be able to run with P105 and P106 for a limited period of time to allow for operational flexibility.

The facility was known to be an existing major source because of emissions units P001-P006 which had 353.32 tons of NOx emissions reported in 2004. Under the NSR reform, relaxing the restriction on the operation of P109 when either P105 or P106 is in operation requires a review of the calculations in the original PSD review. If the calculations also show a significant net emissions increase, a PSD review will be required.

P109 Cogeneration Unit PTE

| PERMIT ALLOWABLES | CO | NOx | $PM_{10}$ | $SO_2$ | VOC |
|---|---|---|---|---|---|
| Turbine (56.1 mmBtu/hr) | | | | | |
| lb/hr | 29.2 | 18.0 | 1.29 | 7.28 | 3.3 |
| TPY | 127.9 | 78.9 | 5.7 | 32.0 | 14.5 |
| | CO | NOx | $PM_{10}$ | $SO_2$ | VOC |
| HRSG (65.3 mmBtu/hr) | | | | | |
| lb/hr | 7.31 | 12.3 | 0.49 | 7.28 | 1.40 |
| TPY | 32.0 | 53.9 | 2.14 | 32.0 | 6.13 |

P105 and P106 PTE:

| PERMIT ALLOWABLES | CO | NOx | $PM_{10}$ | $SO_2$ | VOC |
|---|---|---|---|---|---|
| (2) 2889 hp (nat gas) and 2233 hp (digester gas) generators, Nos. 5 & 6 | | | | | |
| lb/hr (each) | 15.02 | 6.36 | 0.01 | 6.72 | 3.88 |
| TPY (each) | 65.79 | 27.86 | 0.01 | 29.43 | 16.99 |
| @joint 9,000 hr/yr (without any joint operation with P109) | | | | | |
| TPY | 67.59 | 28.64 | 0.01 | 30.24 | 17.46 |
| @joint 5,000 hr/yr (P105 and P106 permitted to run 2,500 hours each) | | | | | |
| TPY | 37.6 | 15.9 | 0.01 | 16.8 | 9.7 |

P101-P104 and P108 PTE:

| PERMIT ALLOWABLES | CO | NOx | $PM_{10}$ | $SO_2$ | VOC |
|---|---|---|---|---|---|
| P101, P108 diesel engines @ 500 hr/yr, max. gas usage = 19,642 cu ft/hr, heat content is 950 Btu/cu ft, 4 stroke lean burn engines | | | | | |
| AP-42 emission factors (lb/hp-hr) | $5.5x10^{-3}$ | 0.024 | $7x10^{-4}$ | $4.05x10^{-3}$ | $7.05x10^{-4}$ |
| lb/hr (P101, 2884.8 hp) | 15.87 | 69.24 | 2.02 | 11.67 | 2.03 |
| TPY (P101) | 3.97 | 17.31 | 0.50 | 2.92 | 0.51 |
| lb/hr (P108, 2379 hp) | 13.08 | 57.10 | 1.67 | 9.62 | 1.68 |
| TPY (P108) | 3.27 | 14.27 | 0.42 | 2.41 | 0.42 |
| P102-P104 natural gas fired engines @ 500 hr/yr, 2,889 hp each, 4 stroke lean burn engines | | | | | |
| lb/hr (each) | 5.92 | 76.13 | 0.001 | 0.01 | 2.20 |
| TPY (each) | 1.48 | 19.03 | 0.0003 | 0.003 | 0.55 |
| **Total emissions for P101-P104, P108 @ 500 hr/yr** | **11.7** | **88.7** | **0.92** | **5.3** | **2.6** |

The revised contemporaneous increases and decreases in emissions include the following:

1. Removal of six engines (1 – 438 hp, 3 – 850 hp, 1 – 506 hp, and 1 – 560 hp) in 2004 through 2006.
2. The installation of two digester gas engines (P105 and P106) in January 2007
3. The installation of five emergency generators (P101-P104, installed and permitted in 2006 and 2007 and P108, permitted in 2007).

The netting analysis for PSD review is summarized as follows:

| | CO | NOx | PM10 | $SO_2$ | VOC |
|---|---|---|---|---|---|
| major source status (allows up to 250 tpy emissions increase) | | | | | |
| major source (250 tpy) | yes | yes | no | no | no |
| P109 emissions increase | | | | | |
| turbine | 127.9 | 78.9 | 5.7 | - | 14.5 |
| hrsg | 32.0 | 53.9 | 2.14 | - | 6.13 |
| P109 PTE totals | 159.9 | 132.8 | 7.84 | 32.0 | 20.6 |
| Revised contemporaneous increases consider P101-P106, P108 and P109 to be all one project. The facility has volunteered a restriction to 2,500 hours per year of joint operation of P109 with either P105 or P106. The worst-case scenario is operating the cogeneration facility at 8,760 hours because of its size and operating both P105 and P106 2,500 hours each. The worst case emissions are as follows: | | | | | |
| P109 emissions increase | 159.9 | 132.8 | 7.84 | 32.0 | 20.6 |
| P101-P104 & P108 (@500 hr/yr each) | 11.7 | 88.7 | 0.92 | 5.3 | 2.6 |

| | | | | | |
|---|---|---|---|---|---|
| P105 (@2500 hr/yr of operation) & P106 (@ 2500 hr/yr of operation) (for combined 5,000 hr/yr of operation) | 37.6 | 15.9 | 0.01 | 16.8 | 9.7 |
| contemporaneous increases | 209.2 | 237.4 | 8.77 | 54.1 | 32.9 |
| PSD significant increase | 100 | 40 | 15 | 40 | 40 |
| CO, NOx, and $SO_2$ show significant increases. Water Reclamation was formerly a TV facility with 4 engines (1-438 hp, 2-850hp and 1-560 hp) with applicable limits that included the capability to burn natural gas, digester gas or #2 fuel oil. All four units were removed in 2004/2005. The last two years these engines operated full capacity was 2000 and 2001. Calculations performed in PTI 04-01475 for the installation of 2 generators and contiguous to the installation of the co-generation plant showed the following. | | | | | |
| lb/mmBtu[2] | 1.16 | 2.7 | 0.0573 | 0.452 | 0.2 |
| 2000 | 127 | 297 | 6.3 | 49.5 | 22 |
| 2001 | 106 | 245 | 5.24 | 41.1 | 18.3 |
| average | (116) | (271) | (5.77) | (45.3) | (20.2) |

| | | | | | |
|---|---|---|---|---|---|
| revised facility wide emissions, tpy | 209.2 | 237.4 | 8.77 | 54.1 | 32.9 |
| netting increase | 93.2 | (33.6) | 3.0 | 8.8 | 12.7 |
| PSD significant increase | 100 | 40 | 15 | 40 | 40 |
| major source status (allows up to 250 tpy emissions increase) | | | | | |
| therefore the relaxation on the operational restriction of P105, P106 and P109 to allow for 2,500 hours of joint operation does not trigger PSD review requirements | | | | | |

8. Total Permit Allowable Emissions Summary (for informational purposes only):

The emission summary below added the emissions from both scenarios for burning as a 56.1 mmBtu/hr natural gas /digester gas/landfill gas combustion turbine and a 65.3 mmBtu/hr natural gas heat recovery steam generator.

| Pollutant | Tons Per Year |
|---|---|
| CO | 159.9 |
| NOx | 132.8 |
| VOC | 20.63 |
| $PM_{10}$ | 7.84 |
| $SO_2$ | 32 |

PUBLIC NOTICE
4/26/2012 Issuance of Draft Air Pollution Permit-To-Install

City of Toledo, Division of Water Reclamation
3900 North Summit St.,
Toledo, OH 43611
Lucas County
FACILITY DESC.: Sewage Treatment Facilities
PERMIT #: P0109314
PERMIT TYPE: Administrative Modification
PERMIT DESC: This PTI administrative modification to PTI 04-01485 will incorporate Senate Bill 265 and the NSPS subpart KKKK revisions since the permit was first issued. It will also relax the operational restriction on P105, P106, and P109 allowing joint operation of P105 and P106 for 2,500 hours to allow for operational flexibility.

The Director of the Ohio Environmental Protection Agency issued the draft permit above. The permit and complete instructions for requesting information or submitting comments may be obtained at: http://epa.ohio.gov/dapc/permitsonline.aspx by entering the permit # or: Danny Pittman, Toledo Department of Environmental Services, 348 South Erie Street, Toledo, OH 43604. Ph: (419)936-3015

Ohio | Environmental Protection Agency

# DRAFT

# Division of Air Pollution Control
# Permit-to-Install
for
City of Toledo, Division of Water Reclamation

| | |
|---|---|
| Facility ID: | 0448010737 |
| Permit Number: | P0109314 |
| Permit Type: | Administrative Modification |
| Issued: | 4/26/2012 |
| Effective: | To be entered upon final issuance |

Ohio Environmental Protection Agency

**Division of Air Pollution Control**
**Permit-to-Install**
for
City of Toledo, Division of Water Reclamation

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# Authorization

Facility ID: 0448010737
Facility Description: Waster water treatment plant
Application Number(s): M0001510
Permit Number: P0109314
Permit Description: This PTI administrative modification to PTI 04-01485 will incorporate Senate Bill 265 and the NSPS subpart KKKK revisions since the permit was first issued. It will also relax the operational restriction on P105, P106, and P109 allowing joint operation of P105 and P106 for 2,500 hours to allow for operational flexibility.
Permit Type: Administrative Modification
Permit Fee: $0.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date: 4/26/2012
Effective Date: To be entered upon final issuance

This document constitutes issuance to:

City of Toledo, Division of Water Reclamation
3900 North Summit St.
Toledo, OH 43611

of a Permit-to-Install for the emissions unit(s) identified on the following page.

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Toledo Department of Environmental Services
348 South Erie Street
Toledo, OH 43604
(419)936-3015

The above named entity is hereby granted a Permit-to-Install for the emissions unit(s) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally
Director

# Authorization (continued)

Permit Number: P0109314
Permit Description: This PTI administrative modification to PTI 04-01485 will incorporate Senate Bill 265 and the NSPS subpart KKKK revisions since the permit was first issued. It will also relax the operational restriction on P105, P106, and P109 allowing joint operation of P105 and P106 for 2,500 hours to allow for operational flexibility.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

| | |
|---|---|
| **Emissions Unit ID:** | **P109** |
| Company Equipment ID: | Co-Generation |
| Superseded Permit Number: | 04-01485 |
| General Permit Category and Type: | Not Applicable |

# A. Standard Terms and Conditions

## 1. Federally Enforceable Standard Terms and Conditions

a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:

(1) Standard Term and Condition A.2.a), Severability Clause

(2) Standard Term and Condition A.3.c) through A. 3.e)General Requirements

(3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements

(4) Standard Term and Condition A.9., Reporting Requirements

(5) Standard Term and Condition A.10., Applicability

(6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install

(7) Standard Term and Condition A.14., Public Disclosure

(8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

(9) Standard Term and Condition A.16., Fees

(10) Standard Term and Condition A.17., Permit Transfers

## 2. Severability Clause

a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

## 3. General Requirements

a) The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification.

b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.

c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

d) This permit does not convey any property rights of any sort, or any exclusive privilege.

e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

**4. Monitoring and Related Record Keeping and Reporting Requirements**

a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

(1) The date, place (as defined in the permit), and time of sampling or measurements.

(2) The date(s) analyses were performed.

(3) The company or entity that performed the analyses.

(4) The analytical techniques or methods used.

(5) The results of such analyses.

(6) The operating conditions existing at the time of sampling or measurement.

b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:

(1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Toledo Department of Environmental Services.

(2) Quarterly written reports of (i) any deviations from federally enforceable emissionlimitations, operationalrestrictions, andcontroldeviceoperatingparameterlimitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Toledo Department of Environmental Services. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.

(3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, andreportingrequirements contained in this permit shall be submitted (i.e., postmarked) to the Toledo Department of Environmental Services every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

(4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

**5. Scheduled Maintenance/Malfunction Reporting**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Toledo Department of Environmental Services in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

**6. Compliance Requirements**

a) The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

b) Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

c) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:

(1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.

(3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

(4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

d) The permittee shall submit progress reports to the Toledo Department of Environmental Services concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

(1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

(2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

## 7. Best Available Technology

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

## 8. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

## 9. Reporting Requirements

The permittee shall submit required reports in the following manner:

a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Toledo Department of Environmental Services.

b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission

limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Toledo Department of Environmental Services. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

**10. Applicability**

This Permit-to-Install is applicable only to the emissions unit(s) identified in the Permit-to-Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

**11. Construction of New Sources(s) and Authorization to Install**

a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as “permanently shut down” in Ohio EPA’s “Air Services” along with the date the emissions unit(s) was permanently

removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

No emissions unit certified by the authorized official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

**12. Permit-To-Operate Application**

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

**13. Construction Compliance Certification**

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

a) Completion of initial installation date shall be enteredupon completion of construction and prior to start-up.

b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

**14. Public Disclosure**

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

**15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations**

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

**16. Fees**

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

**17. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the “Owner/Contact Change” functionality in Air Services once the transfer is legally completed.The change must be submitted through Air Services within thirty days of the ownership transfer date.

**18. Risk Management Plans**

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

**19. Title IV Provisions**

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

# B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

   a) None.

2. The following emissions unit contained in this permit are subject to 40 CFR Part 60, Subpart KKKK: P109. The complete NSPS requirements, including the NSPS General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA District office or local air agency.

# C. Emissions Unit Terms and Conditions

## 1. P109, Co-Generation

**Operations, Property and/or Equipment Description:**

P109 - Natural Gas/Digester Gas/Landfill Gas powered combustion turbine for combined cycle cogeneration system

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| *56.1 mmBtu/hr natural gas/digester gas/landfill gas combustion turbine* | | |
| a. | OAC rule 3745-31-05(A)(3)<br><br>(established in PTI 04-01485 issued Feb. 12, 2008) | Carbon monoxide (CO) emissions shall not exceed 29.2 lb/hr and 127.9 tpy.<br><br>Nitrogen oxide (NOx) emissions shall not exceed 18.0 lb/hr and 78.9 tpy.<br><br>Volatile organic compound (VOC) emissions shall not exceed 3.3 lb/hr and 14.5 tpy.<br><br>See b)(2)a. through b)(2)c. |
| b. | OAC rule 3745-31-05(A)(3), as effective 11/30/01 | Particulate matter emissions of 10 microns or less ($PM_{10}$) shall not exceed 1.29 pounds per hour and 5.7 tons per year.<br><br>Visible particulate emissions from any stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average, except during start-up and shutdown.<br><br>See b)(2)d. |

| | | |
|---|---|---|
| c. | OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06 | See b)(2)e. |
| d. | OAC rule 3745-17-07(A)(1) | Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule. |
| e. | OAC rule 3745-17-11(B)(4) | Particulate emissions (PE) from the turbine's exhaust shall not exceed 0.040 pound per million Btu of actual heat input. |
| f. | OAC rule 3745-18-06(F) | The emissions limitation specified by this rule is less stringent than the emissions limitation established by OAC rule 3745-31-05(A)(3). |
| g. | 40 CFR Part 60, Subpart KKKK<br><br>(40 CFR Part 60.4300 – 60.4420)<br><br>[In accordance with 40 CFR 60.4305(a), this emissions unit has a stationary combustion turbine with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, based on the higher heating value of the fuel.] | $SO_2$ emissions shall not exceed 110 nanograms per Joule (0.90 pounds per mega-Watt hour) or 26 ng $SO_2$/J (0.060 lb SO2/mmBtu).<br><br>$SO_2$ emissions shall not exceed 65 nanograms per Joule (0.15 pound per mmBtu) heat input when burning at least 50 percent biogas on a calendar month basis.<br><br>NOx emissions shall not exceed 25 ppm at 15 percent oxygen or 150 ng/J of useful output (1.2 lb/MWh) while firing natural gas.<br><br>NOx emissions shall not exceed 74 ppm at 15 percent oxygen or 460 ng/J of useful output (3.6 lb/MWh) while firing fuels other than natural gas. |
| *65.3 mmBtu/hr natural gas/digester gas/landfill gas heat recovery steam generator (hrsg)* | | |
| h. | OAC rule 3745-31-05(A)(3)<br><br>(established in PTI 04-01485 issued Feb. 12, 2008) | Carbon monoxide (CO) emissions shall not exceed 7.31 lb/hr and 32.0 tpy.<br><br>Nitrogen oxide (NOx) emissions shall not exceed 12.3 lb/hr and 53.9 tpy.<br><br>Volatile organic compound (VOC) emissions shall not exceed 1.40 lb/hr and |

| | | |
|---|---|---|
| | | 6.13 tpy.<br><br>See b)(2)a. through b)(2)c. |
| i. | OAC rule 3745-31-05(A)(3), as effective 11/30/01 | Particulate matter emissions of 10 microns or less ($PM_{10}$) shall not exceed 0.49 pound per hour and 2.14 tons per year.<br><br>Visible particulate emissions from all egress points shall not exceed 10% opacity as a 6-minute average, except during start-up and shutdown.<br><br>See b)(2)d. |
| j. | OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06 | See b)(2)e. |
| k. | OAC rule 3745-17-07(A)(1) | Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule. |
| l. | OAC rule 3745-17-10(B)(1) | Particulate emissions (PE) from the hrsg's exhaust shall not exceed 0.020 pound per million Btu of actual heat input. |
| m. | OAC rule 3745-18-06(A) | Exemption for fuel burning equipment during any calendar day in which natural gas is the only fuel burned. |
| n. | 40 CFR Part 60, Subpart KKKK<br><br>(40 CFR Part 60.4300 – 60.4420)<br><br>[In accordance with 40 CFR 60.4305(a), this emissions unit has a stationary combustion turbine with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, based on the higher heating value of the fuel.] | $SO_2$ emissions shall not exceed 110 nanograms per Joule (0.90 pounds per mega-Watt hour) or 26 ng $SO_2$/J (0.060 lb SO2/mmBtu).<br><br>$SO_2$ emissions shall not exceed 65 nanograms per Joule (0.15 pound per mmBtu) heat input when burning at least 50 percent biogas on a calendar month basis.<br><br>NOx emissions shall not exceed 25 ppm at 15 percent oxygen or 150 ng/J of useful output (1.2 lb/MWh) while firing natural gas. |

| | | |
|---|---|---|
| | | NOx emissions shall not exceed 74 ppm at 15 percent oxygen or 460 ng/J of useful output (3.6 lb/MWh) while firing fuels other than natural gas.<br><br>NOx emissions shall not exceed 54 ppm at 15 percent oxygen or 110 ng/J of useful output (0.86 lb/MWh) when operating independent of the turbine. |
| *Natural Gas/Digester Gas/Landfill Gas powered combustion and natural gas/digester gas/landfill gas hrsg* | | |
| o. | OAC rule 3745-31-05(D) | The combined annual emissions of CO from the use of P105, P106, and P109 shall not exceed 197.5 tons as a rolling, 12-month summation.<br><br>See b)(2)f. |

(2) Additional Terms and Conditions

a. The combined emissions of sulfur dioxide ($SO_2$) from the turbine and heat recovery steam generator shall not exceed 7.28 pounds per hour and 32.0 tons per year

b. The hourly and annual emission limitations were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with these limitations.

c. The requirements of this rule also includes compliance with 40 CFR Part 60 Subpart KKKK and OAC rule 3745-17-07(A)(1)

d. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State

Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

b)(1)b., b)(1)i., f)(1)a., f)(1)h., f)(1)i., f)(1)q., and f)(1)r.

e. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to $PM_{10}$ emissions from this air contaminant source since the uncontrolled potential to emit for $PM_{10}$ is less than 10 tons/year.

f. This annual emissions limitation for CO was established for PTI purposes to avoid PSD review and represents the combined annual potential to emit of emissions units P105, P106 and P109 with a restriction on P109 to 2,500 hours of simultaneous operation with P105 and P106.

c) Operational Restrictions

(1) The permittee shall only burn natural gas, digester gas or landfill gas in the combustion turbine and hrsg.

(2) The maximum annual operating hours for this emissions unit while operating simultaneously with P105 or P106 shall not exceed 2500 hours as a rolling, 12-month summation.

(3) Emissions units P105, P106, and P109 have been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the hours of operation, upon issuance of this permit.

(4) See 40 CFR Part 60, Subpart KKKK (40 CFR 60.4300 – 60.4420).

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than natural gas, digester gas or landfill gas in the combustion turbine or hrsg, the permittee shall maintain a record of the type and quantity of fuel burned in the combustion turbine.

(2) The permittee shall maintain monthly records of the following information:

a. the number of hours during which emissions unit P109 and either P105 or P106 are in simultaneous use, and

b. the rolling, 12-month summation of the those operating hours.

(3) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

(4) For emission points for which the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check of such emission point by the permittee or an Ohio EPA inspector indicates abnormal emissions, the frequency of emissions checks shall revert to daily for that emission point until such time as there are 30 consecutive operating days of normal visible emissions.

(5) See 40 CFR Part 60, Subpart KKKK (40 CFR 60.4300 – 60.4420).

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas, digester gas and/or landfill gas was burned in the combustion turbine or hrsg. Each report shall be submitted within 30 days after the deviation(s) occurs.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. allexceedances of the rolling, 12-month restriction on the hours of operation for this emissions unit while operating simultaneously with P105 and/or P106.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

(3) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

(4) See 40 CFR Part 60, Subpart KKKK (40 CFR 60.4300 – 60.4420).

(5) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

(6) The reports contained in this permit shall be submitted in accordance with the reporting requirements specified in Part 1 - General Terms and Conditions, Section A of this permit.

(7) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

Visible particulate emissions from any stack serving the combustion turbine and hrsg shall not exceed 10% opacity as a 6-minute average, except during start-up and shutdown

Applicable Compliance Method:

If required, compliance shall be demonstrated through visible emissions readings performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures of Method 9 of 40 CFR Part 60 Appendix A. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

b. Emission Limitation:

Visible particulate emissions from any stack serving the combustion turbine and hrsg shall not exceed 20% opacity as a 6-minute average, except as provided by rule

Applicable Compliance Method:

If required, compliance shall be demonstrated through visible emissions readings performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures of Method 9 of 40 CFR Part 60 Appendix A. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

c. Emission Limitation:

CO emissions from the combustion turbine shall not exceed 29.2 pounds per hour

Applicable Compliance Method:

This emissions limitation was developed utilizing the manufacturer's supplied worst case emission factor of 29.2 pounds per hour. A test conducted on 7/6/2011 and 7/7/2011 resulted in a combined CO emission rate of 0.4 pound per hour from the turbine and hrsg fired with biogas and natural gas.

If required, the permittee shall demonstrate compliance with this emissions limitation using Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

d. Emissions Limitation:

CO emissions from the combustion turbine shall not exceed 127.9 tons per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 29.2 pounds of CO per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

e. Emission Limitation:

NOx emissions from the combustion turbine shall not exceed 18.0 pounds per hour

Applicable Compliance Method:

This emissions limitation was developed based on a one-time worst case emissions calculation utilizing the emission factor listed in AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.1, Table 3.1-1, rev. 10/00, Large Stationary Turbines (0.32 lbNOx/mmBtu) multiplied by the maximum rated capacity of the combustion turbine (56.1 MMBtu/hr).

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1-4 and Method 7 of 40 CFR, Part 60 Appendix A. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

f. Emissions Limitation:

NOx emissions from the combustion turbine shall not exceed 78.9 tons per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 18.0 pounds of NOx per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

g. Emissions Limitation:

PE from the combustion turbine's exhaust shall not exceed 0.040 pound per million Btu of actual heat input.

Applicable Compliance Method:

Compliance may be determined by a one-time worst case emissions calculation utilizing the emission factor listed in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.1, Table 3.1-2b, rev. 10/00, Large Stationary Turbines (0.023 lb $PM_{10}$/mmBtu for landfill gas), multiplied by the ratio of PE to $PM_{10}$ in Table 3.1-2a (1.9:6.6).

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1-4 and Method 5 of 40 CFR, Part 60 Appendix A. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

h. Emission Limitation:

$PM_{10}$ emissions from the combustion turbine's exhaust shall not exceed 1.29 pounds per hour

Applicable Compliance Method:

This emissions limitation was developed based on a one-time worst case emissions calculation utilizing the emission factor listed in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.1, Table 3.1-2b, rev. 10/00, Large Stationary Turbines (0.023 lb $PM_{10}$/mmBtu for landfill gas), multiplied by the maximum rated capacity of the combustion turbine (56.1 MMBtu/hr).

If required, the permittee shall demonstrate compliance with this emissions limitation through emission testing performed in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

i. Emissions Limitation:

$PM_{10}$ emissions from the combustion turbine's exhaust shall not exceed 5.7 tons per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 1.29 pounds of $PM_{10}$ per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

j. Emission Limitation:

VOC emissions from the combustion turbine shall not exceed 3.3 pounds per hour

Applicable Compliance Method:

This emissions limitation was developed utilizing the manufacturer's supplied worst case emission factor of 3.3 pounds per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 thru 4 and 25 or 25A of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

k. Emission Limitation:

VOC emissions from the combustion turbine shall not exceed 14.5 tons per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 3.3 pounds of VOC per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

l. Emission Limitation:

CO emissions from the heat recovery steam generator shall not exceed 7.31 pounds per hour

Applicable Compliance Method:

This emissions limitation was developed utilizing the manufacturer's supplied worst case emission factor of 7.31 pounds per hour. A test conducted on 7/6/2011 and 7/7/2011 resulted in a combined CO emission rate of 0. 4 pound per hour from the turbine and hrsg fired with biogas and natural gas.

If required, the permittee shall demonstrate compliance with this emissions limitation using Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

m. Emissions Limitation:

CO emissions from the heat recovery steam generator shall not exceed 32.0 tons per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 7.31 pounds of CO per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

n. Emission Limitation:

NOx emissions from the heat recovery steam generator shall not exceed 12.3 pounds per hour

Applicable Compliance Method:

This emissions limitation was developed utilizing the manufacturer's supplied worst case emission factor of 12.3 pounds per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1-4 and Method 7 of 40 CFR, Part 60 Appendix A. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

o. Emissions Limitation:

NOx emissions from the heat recovery steam generator shall not exceed 53.9 tons per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 12.3 pounds of NOx per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

p. Emissions Limitation:

PE from the heat recovery steam generator exhaust shall not exceed 0.020 pound per million Btu of actual heat input.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 1.9 pounds of PE per million standard cubic feet by a heating value of 1020 Btus per standard cubic foot.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 thru 5 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(9). Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

q. Emission Limitation:

$PM_{10}$ emissions from the heat recovery steam generator shall not exceed 0.49 pounds per hour

Applicable Compliance Method:

This emissions limitation was developed based on a one-time worst case emissions calculation utilizing the emission factor listed in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2, rev. 7/98, Natural Gas Combustion (7.6 lb $PM_{10}$/mmft$^3$ for natural gas), divided by 1,020 mmBtu/mmft$^3$ and multiplied by the maximum rated capacity of the combustion turbine (65.3 MMBtu/hr).

If required, the permittee shall demonstrate compliance with this emissions limitation through emission testing performed in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

r. Emissions Limitation:

$PM_{10}$ emissions from the heat recovery steam generator shall not exceed 2.14 tons per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.49 pound of $PM_{10}$ per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

s. Emission Limitation:

VOC emissions from the heat recovery steam generator shall not exceed 1.40 pounds per hour

Applicable Compliance Method:

This emissions limitation was developed utilizing the manufacturer's supplied worst case emission factor of 1.4 pounds per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 thru 4 and 25 or 25A of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

t. Emission Limitation:

VOC emissions from the heat recovery steam generator shall not exceed 6.13 tons per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 1.40 pounds of VOC per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

u. Emission Limitation:

The NOx emissions from the turbine and heat recovery steam generator shall not exceed shall not exceed 25 ppm at 15 percent oxygen or 150 ng/J of useful output (1.2 lb/MWh) while firing natural gas, or 74 ppm at 15 percent oxygen or 460 ng/J of useful output (3.6 lb/MWh) while firing fuels other than natural gas.

Applicable Compliance Method:

A test conducted on 7/6/2011 and 7/7/2011 resulted in a combined NOx emission rate of 38.8 ppmvd @ 15% $O_2$ from the turbine and hrsg fired with biogas and natural gas.

The permittee shall demonstrate compliance through monitoring of the total NOx concentrations performed in accordance with 40 CFR 60.4340 and 60.4400. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

v. Emission Limitation:

The combined emissions of $SO_2$ from the turbine and heat recovery steam generator shall not exceed 7.28 pounds per hour.

Applicable Compliance Method:

The actual digester gas sulfur content as measured on 7/6/2011 and 7/7/2011 was 0.017 lb $SO_2$/mmBtu. Multiply the most recent actual sulfur content (measured in lb/mmBtu) by the summation of the maximum rated capacities of the combustion turbine (56.1 mmBtu/hr) and the hrsg (65.3 mmBtu/hr).

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 thru 4 and 6 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-18-04. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

w. Emission Limitation:

The combined emissions of $SO_2$ from the turbine and heat recovery steam generator shall not exceed 32.0 tons per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 7.28 pounds of SO2 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

x. Emission Limitation:

The combined emissions of $SO_2$ from the turbine and heat recovery steam generator shall not exceed 110 nanograms per Joule (0.90 pounds per mega-Watt hour) or 26 ng $SO_2$/J (0.060 lb $SO_2$/MMBtu).

Applicable Compliance Method:

A test conducted on 7/6/2011 and 7/7/2011 resulted in a combined $SO_2$ emission rate of 0.017 pound per mmBtu from the turbine and hrsg fired with digester gas and a combined $SO_2$ emission rate of 0.006 pound per mmBtu from the turbine and hrsg fired with landfill gas.

The permittee shall demonstrate compliance through monitoring of the total sulfur content of the fuel combusted in this emission unit performed in accordance with 40 CFR 60.4360. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

y. Emission Limitation:

The combined emissions of $SO_2$ from the turbine and heat recovery steam generator shall not exceed 65 nanograms per Joule (0.15 pound per mmBtu) heat input when burning at least 50 percent biogas on a calendar month basis.

Applicable Compliance Method:

The permittee shall demonstrate compliance through monitoring of the total sulfur content of the fuel combusted in this emission unit performed in accordance with 40 CFR 60.4360. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

z. Emission Limitation:

The NOx emissions from the heat recovery steam generator shall not exceed shall not exceed 54 ppm at 15 percent oxygen or 110 nanograms per Joule of useful output (0.86 lb/MWh) when operating independent of the combustion turbine.

Applicable Compliance Method:

A test conducted on 7/6/2011 and 7/7/2011 resulted in a NOx emission rate of 25.2 ppmvd @ 15% $O_2$ when operating the hrsg independent of the combustion turbine.

The permittee shall demonstrate compliance through monitoring of the total NOx concentrations performed in accordance with 40 CFR 60.4340 and 60.4400. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

aa. Emissions Limitation:

The combined annual emissions of CO from P109 and either P105 and P106 shall not exceed 197.5 tons as a rolling, 12-month summation.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for the combined emissions from P105, P106 and P109 utilizing the worst-case operating scenario when restricted to 2500 hours of simultaneous operation. Annual CO emissions may be calculated as the summation of the short-term CO emission rate of P109 (36.51 pounds per hour) multiplied by the maximum annual number of hours of operation (8760 hours), plus the short-term CO emission rate of P105 (15.02 pounds per hour) multiplied by the maximum number of hours of simultaneous operation (2,500 hours), plus the short-term CO emission rate of P106 (15.02 pounds per hour) multiplied by the maximum number of hours of simultaneous operation (2,500 hours), divided by 2,000 pounds per ton.

(2) Within 60 days after achieving the maximum production rate of which this emissions unit will be operated but not later than 180 days startup of this emissions unit, the permittee shall conduct, or have conducted performance testing (this requirement was completed in July, 2011) for this unit in accordance with the following requirements:

a. The emission testing shall be conducted to demonstrate compliance with the allowable mass emissions rates (lb/hr and NSPS concentrations) for CO, $SO_2$ and NOx:

b. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate(s):

i. CO: Methods 1 though 4 and 10 of 40 CFR 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

ii. $SO_2$: Methods 1 though 4 and 6 of 40 CFR 60, Appendix A and/or compliance with 40 CFR 60.4415. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

iii. NOx: a Methods 1 though 4 and 7 of 40 CFR 60, Appendix A and/or compliance with 40 CFR 60.4400. Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

c. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. If 90-100 percent of peak load cannot be physically achieved in practice, the highest achievable maximum is acceptable. A capacity restriction may be added to the permit requiring retesting should the emission unit regularly exceed by greater than 10%, the maximum capacity established during the emissions test.

d. Personnel from the Toledo Division of Environmental Services office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provides a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

e. A comprehensive written report on the results of the emissions test(s) shall be submitted to the Toledo Division of Environmental Services within 60 days following completion of the test(s).

g) Miscellaneous Requirements

(1) None.