



Environmental  
Protection Agency

John R. Kasich, Governor  
Mary Taylor, Lt. Governor  
Scott J. Nally, Director

9/7/2011

Dr. Joel Keller  
Sandusky-Clyde Energy Solutions, LLC  
300 Premier Drive  
Clyde, OH 43410

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0372022003  
Permit Number: P0108257  
Permit Type: Initial Installation  
County: Sandusky

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. Please complete a survey at [www.epa.ohio.gov/dapc/permitsurvey.aspx](http://www.epa.ohio.gov/dapc/permitsurvey.aspx) and give us feedback on your permitting experience. We value your opinion.

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
309 South Fourth Street, Room 222  
Columbus, OH 43215

If you have any questions, please contact Ohio EPA DAPC, Northwest District Office at (419)352-8461 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. This permit can be accessed electronically on the DAPC Web page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc), by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

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

Cc: Ohio EPA-NWDO



## Response to Comments

Response to comments for: Permit-To-Install and Operate

Facility ID:	0372022003
Facility Name:	Sandusky-Clyde Energy Solutions, LLC
Facility Description:	Will combust natural gas fuel in stationary internal combustion engines and sell electricity back to grid.
Facility Address:	300 Premier Drive Clyde, OH 43410 Sandusky County
Permit #:	P0108257, Initial Installation
A public notice for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in the Fremont News Messenger on 07/01/2011. The comment period ended on 07/31/2011.	
Hearing date (if held)	08/04/2011
Hearing Public Notice Date (if different from draft public notice)	

The following comments were received during the comment period specified. Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. PDF copies of the original comments in the format submitted are available upon request.

1. Topic: Site location and toxics concern

- a. Comment: The proposed site of this plant should be reconsidered based on its location being very close to a middle school. The current childhood cancer cluster in Clyde raises concerns of exposing young children to dangerous toxins that may put their health in jeopardy.

Response: The permit for the natural gas-fired generators was developed in accordance with air pollution rules and regulations which protect public health, including the health of sensitive populations such as children, asthmatics and the elderly. Air toxic emissions were quantified and reviewed as part of the permitting process and were determined to be negligible based on the use of natural gas, which is a clean-burning fuel. Additionally, the natural gas-fired generators are subject to 40 CFR Part 63 Subpart ZZZZ, which is a federal regulation that addresses the emission of hazardous air pollutants from the engines used to drive the electrical generators.

2. Topic: Issuance of permits for project phases

- a. Comment: The company discusses a possible phase 2 that would include pyrolyzing municipal solid waste and combusting the pyro-gas to produce electricity. United States Environmental Protection Agency (USEPA) considers it to be circumvention when projects are broken into multiple smaller phases that avoid major source permitting that would likely have been triggered if the project was evaluated in total. At this point, assuming the current project can proceed independently and is not reliant on phase 2 for its future viability, we can only refer to the future possibility that such a phase 2 could trigger

compliance issues covering the existing and future source. However, we (USEPA) do want Ohio EPA to be on notice regarding this issue.

Response: Ohio EPA did take into consideration possible circumvention and, in this situation, the separate issuance of a permit for the first phase will not result in the circumvention of air pollution regulations. This means the standards and requirements for the installation and operation of the natural gas generators will not result in a change which would be retroactive upon approval of the second phase involving MSW pyrolysis operations. Ohio EPA's determination was based on the facility's present concept for the second phase. If the second phase should change, Ohio EPA would review the situation for circumvention of air pollution regulations and would pursue any resulting violations. Ohio EPA also considered circumvention of major new source review regulations. The potential to emit for all criteria pollutants from Phase 1 and the facility's concept for Phase 2 would not exceed any major new source review applicability thresholds. If the proposed emissions for Phase 2 should change such that Phase 2 would be applicable to major new source review permitting, Ohio EPA would apply the principles of aggregation and would pursue any resulting violations of major new source review.

3. Topic: Greenhouse gas (GHG) emission concerns

- a. Comment: As of July 1, 2011, a source can be a major source for its GHG emissions alone if the potential to emit (PTE) is 100,000 tons per year or greater of carbon dioxide-equivalent (CO<sub>2</sub>e), thus being subject to Prevention of Significant Deterioration requirements. Please provide the GHG PTE and explain whether the source is a major source of GHGs.
- b. Response: GHG emissions were quantified and reviewed as part of the permitting process and the total PTE from all seven natural gas-fired generators resulted in 14,002 tons per year of CO<sub>2</sub>e emissions. The CO<sub>2</sub>e PTE was quantified using emission factors from AP-42, Chapter 3.2 – Natural Gas-fired Reciprocating Engines (7/00). The PTE of 14,002 tons CO<sub>2</sub>e per year is below the major source threshold of 100,000 tons per year, thus establishing the source as a minor facility for GHG.



**FINAL**

**Division of Air Pollution Control  
Permit-to-Install and Operate  
for  
Sandusky-Clyde Energy Solutions, LLC**

Facility ID:	0372022003
Permit Number:	P0108257
Permit Type:	Initial Installation
Issued:	9/7/2011
Effective:	9/7/2011
Expiration:	9/7/2016





Division of Air Pollution Control
Permit-to-Install and Operate
for
Sandusky-Clyde Energy Solutions, LLC

Table of Contents

Authorization..... 1
A. Standard Terms and Conditions ..... 3
1. What does this permit-to-install and operate ("PTIO") allow me to do? ..... 4
2. Who is responsible for complying with this permit? ..... 4
3. What records must I keep under this permit? ..... 4
4. What are my permit fees and when do I pay them? ..... 4
5. When does my PTIO expire, and when do I need to submit my renewal application? ..... 4
6. What happens to this permit if my project is delayed or I do not install or modify my source? ..... 5
7. What reports must I submit under this permit? ..... 5
8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit? ..... 5
9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?..... 5
10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?..... 6
11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located? ..... 6
12. What happens if one or more emissions units operated under this permit is/are shut down permanently? ..... 6
13. Can I transfer this permit to a new owner or operator?..... 7
14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"? ..... 7
15. What happens if a portion of this permit is determined to be invalid?..... 7
B. Facility-Wide Terms and Conditions ..... 8
C. Emissions Unit Terms and Conditions ..... 10
1. Emissions Unit Group - Natural Gas Fired Generators: P001, P002, P003, P004, P005, P006, P007, 11



## Authorization

Facility ID: 0372022003  
Application Number(s): A0042000  
Permit Number: P0108257  
Permit Description: Installation of 7 electrical generators powered by natural gas-fired stationary internal combustion engines.  
Permit Type: Initial Installation  
Permit Fee: \$1,400.00  
Issue Date: 9/7/2011  
Effective Date: 9/7/2011  
Expiration Date: 9/7/2016  
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Sandusky-Clyde Energy Solutions, LLC  
300 Premier Drive  
Clyde, OH 43410

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

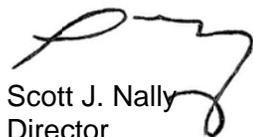
Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northwest District Office  
347 North Dunbridge Road  
Bowling Green, OH 43402  
(419)352-8461

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (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 described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency



Scott J. Nally  
Director



## Authorization (continued)

Permit Number: P0108257  
Permit Description: Installation of 7 electrical generators powered by natural gas-fired stationary internal combustion engines.

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

**Group Name: Natural Gas Fired Generators**

<b>Emissions Unit ID:</b>	<b>P001</b>
Company Equipment ID:	Generator #1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P002</b>
Company Equipment ID:	Generator #2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P003</b>
Company Equipment ID:	Generator #3
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P004</b>
Company Equipment ID:	Generator #4
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P005</b>
Company Equipment ID:	Generator #5
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P006</b>
Company Equipment ID:	Generator #6
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P007</b>
Company Equipment ID:	Generator #7
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

## **A. Standard Terms and Conditions**

**1. What does this permit-to-install and operate ("PTIO") allow me to do?**

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

**2. Who is responsible for complying with this permit?**

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

**3. What records must I keep under this permit?**

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

**4. What are my permit fees and when do I pay them?**

There are two fees associated with permitted air contaminant sources in Ohio:

- PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. Unless otherwise specified, facilities subject to one or more synthetic minor restrictions must use Ohio EPA's "Air Services" to submit annual emissions associated with this permit requirement. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

**5. When does my PTIO expire, and when do I need to submit my renewal application?**

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is

very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

**6. What happens to this permit if my project is delayed or I do not install or modify my source?**

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

**7. What reports must I submit under this permit?**

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

**8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?**

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

**9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?**

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.

**10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?**

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the Ohio EPA DAPC, Northwest District Office in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

**11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?**

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

**12. What happens if one or more emissions units operated under this permit is/are shut down permanently?**

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means 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.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting<sup>1</sup> a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emissions unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

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<sup>1</sup> Permittees that use Ohio EPA's "Air Services" can mark the affected emissions unit(s) as "permanently shutdown" in the facility profile 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).

**13. Can I transfer this permit to a new owner or operator?**

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

**14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?**

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

**15. What happens if a portion of this permit is determined to be invalid?**

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.

## **B. Facility-Wide Terms and Conditions**

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - (1) None.
  - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - (1) None.
2. The permittee is advised that this facility is subject to the "Generally Available Control Technology" (GACT) requirements under 40 CFR Part 63 Subpart ZZZZ (National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). Refer to 40 CFR 63.6590(c) for specific requirements in this case. The U.S. EPA is responsible for the administration of the requirements of this rule at this time. It should be noted that the enforcement authority of the GACT requirements have not been delegated to Ohio EPA at the time of this permit processing. The complete requirements of this rule (including the Part 63 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 of local air agency.

## **C. Emissions Unit Terms and Conditions**



**1. Emissions Unit Group - Natural Gas Fired Generators: P001, P002, P003, P004, P005, P006, P007,**

<b>EU ID</b>	<b>Operations, Property and/or Equipment Description</b>
P001	3.977 mmBtu/hr Natural Gas Fired Generator with Catalytic Converter
P002	3.977 mmBtu/hr Natural Gas Fired Generator with Catalytic Converter
P003	3.977 mmBtu/hr Natural Gas Fired Generator with Catalytic Converter
P004	3.977 mmBtu/hr Natural Gas Fired Generator with Catalytic Converter
P005	3.977 mmBtu/hr Natural Gas Fired Generator with Catalytic Converter
P006	3.977 mmBtu/hr Natural Gas Fired Generator with Catalytic Converter
P007	3.977 mmBtu/hr Natural Gas Fired Generator with Catalytic Converter

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. b)(1)i. and d)(3).

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

b. b)(1)a., b)(2)a., c)(1), f)(1), f)(2)a., f)(2)b., and f)(2)c.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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
a.	OAC rule 3745-31-05(D)	<p>Nitrogen oxides (NOx) emissions shall not exceed 0.09 pound per hour (lb/hr) and 0.39 ton per year (ton/yr)</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.38 lb/hr and 1.66 tons/yr</p> <p>Volatile organic compound (VOC) emissions shall not exceed 0.01 lb/hr and 0.04 ton/yr</p> <p>See b)(2)a. and c)(1)</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001	See b)(2)b and b)(2)c.
c.	OAC rule 3745-31-05(A)(3), as effective 12/1/2006	See b)(2)d.
d.	OAC rule 3745-17-11(B)(5)	Particulate emissions (PE) shall not exceed 0.310 lb/mmBtu of actual heat input. [see b)(2)e. and b)(2)f.]
e..	OAC rule 3745-17-07(A)(1)	Visible PE shall not exceed 20% opacity as a six-minute average except as provided by rule [see b)(2)b.]
f.	OAC rule 3745-18-06	Exempt See b)(2)g.
g.	40 CFR Part 60, Subpart JJJJ	g/HP-hr emission standards for NOx, CO, and VOC [see b)(2)h.]
h.	40 CFR 60. 1-19 (40 CFR 60.4246)	Table 3 to Subpart JJJJ of 40 CFR Part 60 – Applicability of General Provisions to Subpart JJJJ shows which parts of the General Provisions in 40 CFR 60. 1-19 apply.
i.	ORC 3704.04(F) OAC rule 3745-114-01	See d)(3).

(2) Additional Terms and Conditions

- a. This permit establishes the following federally enforceable emission limitations for the purpose of limiting the potentials to emit (PTE) for NOx, CO, and VOC. The PTEs for NOx and CO are being limited in order to avoid Title V applicability. The federally enforceable emission limitations are based on the operational restrictions contained in c)(1) which require control equipment:
  - i. NOx emissions:
    - (a) 0.09 lb/hr and 0.39 ton/yr from each 3.977 mmBtu/hr natural gas fired generator.
  - ii. CO emissions:
    - (a) 0.38 lb/hr and 1.66 tons/yr from each 3.977 mmBtu/hr natural gas fired generator.
  - iii. VOC emissions:
    - (a) 0.01 lb/hr and 0.04 ton/yr from each 3.977 mmBtu/hr natural gas fired generator.
- b. The requirements of this rule also include compliance with the requirements established pursuant to OAC rule 3745-31-05(D); therefore, the permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC

rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit. It should be noted that each generator emits particulate matter 10 microns or less in size (PM10) and sulfur dioxide (SO<sub>2</sub>) along with NO<sub>x</sub>, CO, and VOC. The potential emissions of PM10 and SO<sub>2</sub> are based on a cumulative maximum fuel heat input of 3.977 mmBtu (natural gas) and result in negligible emission quantities and therefore have not been addressed through limitations within this permit. It should be noted that the use of natural gas also results in negligible if not any visible particulate emissions.

- c. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants 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 3745-31-05, the requirements of 3745-31-05(A)(3) as effective November 30, 2001 will no longer apply.

It should be noted that the emission limitations and control requirements established pursuant to OAC rule 3745-31-05(D) will remain applicable after the above SIP revisions are approved by U.S. EPA.

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

BAT requirements under OAC rule 3745-31-05(A)(3)(a), as effective December 1, 2006, do not apply to the NO<sub>x</sub> and CO emissions from this air contaminant source since the controlled PTE for NO<sub>x</sub> and CO is each less than 10 tons per year taking into consideration federally enforceable requirements established under OAC rule 3745-31-05(D). Additionally the BAT requirements under OAC rule 3745-31-05(A)(3)(a), as effective December 1, 2006, do not apply to SO<sub>2</sub>, VOC, and PM10 emissions from this emissions unit since the uncontrolled PTE for each pollutant is less than 10 tons per year.

Potential emissions for SO<sub>2</sub>, VOC, and PM10 were determined by applying the appropriate emission factors from AP-42, Table 3.2-3 (07/2000) to a maximum fuel heat input of 3.977 mmBtu/hr.

- e. The potential to emit (defined as the maximum capacity to emit an air pollutant under the physical and operational design) for PE from the generator is less than the allowable emission limitation of 0.310 lb/mmBtu established by OAC rule 3745-17-11(B)(5)(a). The potential to emit for PE is 0.00950 lb/mmBtu [See AP-42, Table 3.2-3 (07/2000) for details regarding emissions of particulate matter].
- f. All emissions of particulate matter are PM10.
- g. This emissions unit is exempt from the requirements of OAC rule 3745-18-06 pursuant to OAC rule 3745-18-06(A). [Sulfur dioxide emissions are generated only from the use of natural gas.]



h. The emission standards for NOx, CO, and VOC specified by this rule are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(D) [see c)(1)a.]. As outlined in 40 CFR Part 60.4233(e), the generator engine is applicable to the emissions standards contained in Table 1 for a Non-Emergency Spark Ignition Stationary Internal Combustion Engine fueled by natural gas constructed after January 1, 2011.

c) Operational Restrictions

(1) The following operational restriction has been included in this permit for the purpose of establishing federally enforceable requirements which limit PTE [see b)(2)a.]:

a. All exhaust gas from each 3.977 mmBtu/hr natural gas fired generator shall be controlled by a catalytic convertor (three way catalysts/non selective catalytic reduction with air-to-fuel ratio controllers) to reduce NOx, CO and VOC emissions. The catalytic convertor control device shall meet the following requirements:

i. The exhaust from the catalytic converter shall meet the following:

- (a) for NOx – 0.08 grams per horsepower-hour (g/HP-hr)
(b) for CO – 0.35 g/HP-hr
(c) for VOC – 0.009 g/HP-hr

(2) The permittee shall comply with the applicable restrictions required under 40 CFR Part 60, Subpart JJJJ, including the following sections:

Table with 2 columns: Reference Code, Description. Row 1: 60.4243(g), maintenance and operation of air-to-fuel ratio controllers

(3) The permittee shall burn only natural gas in each emissions unit.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR Part 60, Subpart JJJJ, including the following sections:

Table with 2 columns: Reference Code, Description. Row 1: 60.4243(b)(1) & 60.4245(a)(2), records of conducted maintenance. Row 2: 60.4245(a)(1), records of notification and supporting documentation. Row 3: 60.4245(a)(3), documentation of manufacturer engine certification

- (2) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
  - (3) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary because the maximum annual emissions for each toxic air contaminant (from P001 through P007 combined), as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified FEPTIO prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes to the emissions units, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new FEPTIO.
- e) Reporting Requirements
- (1) 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.
  - (2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director 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) The permittee shall conduct, or have conducted, emission testing on at least one of the seven proposed generators in accordance with the following requirements:
    - a. The emission testing shall be conducted within 180 days after the initial startup of the first engine operated at the facility. Testing time frame(s) specified may be amended or waived for cause upon prior request of, and written approval of, the Ohio EPA Northwest District Office.
    - b. The emission testing shall be conducted to demonstrate compliance with the following:
      - i. the NO<sub>x</sub> emission standards/rates of 0.08 g/HP-hr and 0.09 lb/hr;
      - ii. the CO emission standards/rates of 0.35 g/HP-hr and 0.38 lb/hr.
    - c. The following test method(s) shall be employed to meet the testing requirements above:  
  
NO<sub>x</sub> - Methods 1-4 and 7 of 40 CFR Part 60, Appendix A;  
  
CO - Methods 1-4 and 10 of 40 CFR Part 60, Appendix A

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted at a Maximum Source Operating Rate (MSOR), unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. MSOR is defined as the condition that is most likely to challenge the emission control measures with regards to meeting the applicable emission standard(s). Although it generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test at the MSOR is justification for not accepting the test results as a demonstration of compliance.
  - e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
  - f. Personnel from the appropriate Ohio EPA District Office or local air agency 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 provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
  - g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.
- (2) Compliance with the mass emission limitations for each emissions unit specified in this permit shall be determined in accordance with the following methods:
- a. Emission Limitations:

NOx emissions shall not exceed:

    - i. 0.08g/HP-hr;
    - ii. 0.09 lb/hr;
    - iii. 0.39 ton/yr

Applicable Compliance Method:

Compliance with the g/HP-hr and hourly emission limitations shall be determined based on the results of emission testing conducted in accordance with the test methods and procedures of 40 CFR Part 60, Appendix A, Methods 1-4, and 7 [see Testing Requirements in f)(1)].

The annual limitation was developed by multiplying the hourly emission rate by 8760 hours per year, and then dividing by 2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

b. Emission Limitations:

CO emissions shall not exceed:

- i. 0.35g/HP-hr;
- ii. 0.38 lb/hr;
- iii. 1.66 tons/yr

Applicable Compliance Method:

Compliance with the g/HP-hr and hourly emission limitations shall be determined based on the results of emission testing conducted in accordance with the test methods and procedures of 40 CFR Part 60, Appendix A, Methods 1-4, and 10 [see Testing Requirements in f)(1)].

The annual limitation was developed by multiplying the hourly emission rate by 8760 hours per year, and then dividing by 2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

c. Emission Limitations:

VOC emissions shall not exceed:

- i. 0.009 g/HP-hr
- ii. 0.01 lb/hr
- iii. 0.04 ton/yr

Applicable Compliance Method:

The g/HP-hr and hourly emission limitations were established in accordance with the engine manufacturer emissions specifications. If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4 and 18, 25, or 25 A (as applicable) of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

The annual limitation was determined by multiplying the hourly limitation by a maximum operating schedule of 8760 hours per year, and then dividing by 2000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

d. Emission Limitation:

PE shall not exceed 0.310 lb/mmBtu of actual heat input.

Applicable Compliance Method:

The potential to emit (defined as the maximum capacity to emit an air pollutant under the physical and operational design) for PE from this emissions unit is less than the allowable limitation established by OAC rule 3745-17-11(B)(5) and therefore compliance is assured. The potential to emit for PE is 0.00950 lb/mmBtu [See AP-42, Table 3.2-3 (07/2000) for details regarding emissions of particulate matter]. If required, the permittee shall demonstrate compliance with the lb/mmBtu PE limitation above in accordance with the test methods and procedures of 40 CFR Part 60, Appendix A, Methods 1-5.

e. Emission Limitation:

Visible PE shall not exceed 20% opacity as a six-minute average except as provided by rule.

Applicable Compliance Method:

Each generator engine is fired with clean burning natural gas which results in negligible if not any visible particulate emissions. If required, compliance with the visible emission limitation shall be demonstrated in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources").

g) Miscellaneous Requirements

(1) None.