



Environmental Protection Agency

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

1/27/2011

Dr. Joel Keller  
Sandusky-Clyde Energy Solutions, LLC  
32723 Fallhaven Circle  
North Ridgeville, OH 44039

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

Facility ID: 0372022001  
Permit Number: P0106572  
Permit Type: Initial Installation  
County: Sandusky

Certified Mail

|     |                                    |
|-----|------------------------------------|
| No  | TOXIC REVIEW                       |
| No  | PSD                                |
| No  | SYNTHETIC MINOR TO AVOID MAJOR NSR |
| No  | CEMS                               |
| No  | MACT/GACT                          |
| Yes | NSPS                               |
| No  | NESHAPS                            |
| No  | NETTING                            |
| No  | MAJOR NON-ATTAINMENT               |
| No  | MODELING SUBMITTED                 |
| No  | SYNTHETIC MINOR TO AVOID TITLE V   |
| Yes | FEDERALLY ENFORCABLE PTIO (FEPTIO) |

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

Table with 2 columns and 7 rows containing facility details: Facility ID, Facility Name, Facility Description, Facility Address, Permit #, Hearing date, and Hearing Public Notice Date.

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.

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: Issuance of permits for project phases

- a. Comment: Ohio EPA received a number of comments and concerns regarding the issuance of permits for phases of the Sandusky Clyde Energy Solutions (SCES) project . The following is a comment received that encompasses the concerns presented on this topic.

The current draft permit only addresses the installation and operation of natural gas-fired generators and is the first phase of a project that is proposing to include a municipal solid waste (MSW) pyrolysis operation as part of a second phase. Ohio EPA should perform a complete review of the entire "air contaminant source project" (defined in Ohio air regulations), including the proposed MSW pyrolysis operation, rather than reviewing and approving the project in phases.

Response: "Air contaminant source project" is defined in Ohio Administrative Code (OAC) rule 3745-31-01(J) and the first phase involving the installation and operation of natural gas-fired generators meets such a definition. The first phase is an air contaminant source project involving the installation and operation of natural gas-fired generators for the purpose of fulfilling

a contractual obligation to provide energy to the city of Clyde by June 2011. Additionally, the first phase would result in a profitable outcome for SCES even in the event that the second phase of the project would never come to fruition. The first phase also involves the objective of placing the company in a favorable position to secure future financing (both private and public) which would be a portion of the financial requirements needed to pursue a second phase involving MSW pyrolysis operations.

The purpose for defining an "air contaminant source project" is to ensure that separate permits are not issued for a project which would result in circumvention of air pollution regulations. Ohio EPA did take into consideration possible circumvention and, in this specific 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 indicated during the public hearing presentation (and would like to reiterate) that the issuance of this permit for the installation and operation of natural gas-fired generators:

- i. does not authorize any type of MSW pyrolysis installations, operations or activities; and
- ii. does not create any predisposition regarding a future MSW pyrolysis project.

Any proposed project involving MSW pyrolysis operations would be required to go through the application and approval process. Public involvement, including public hearings, would be part of any Ohio EPA permit process involving a proposed MSW pyrolysis project.

- b. Comment: **This permit is for the installation of seven natural gas-fired engines, but there is talk of the source wanting to switch to burning gas from the on-site pyrolysis of MSW in the future. Has Ohio EPA considered whether the source is attempting to circumvent major new source review and whether this construction should be aggregated with the planned project involving the pyrolysis of MSW and feeding that synthetic gas to be burned in the engines?**

Response: Ohio EPA did take into consideration possible circumvention as indicated in the response to Comment (a) above including 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.

2. Topic: **Concerns regarding the use of natural gas as a fuel**

- a. Comment: **Another large possible threat with this facility is the potential source of the gas needed to fuel the generators or future incinerators.**

Response: The electric generators will be fueled by natural gas provided by commercial providers in the area. Ohio EPA is not aware of any plans or proposals associated with the construction, installation and operation of natural gas-producing facilities for purposes of supplying natural gas for the SCES project. It should be noted that the construction, installation and operation of any such facilities would be required to comply with all environmental regulations.

- b. Comment: **At the public hearing, when Ohio EPA was asked whether the natural gas was to be delivered as it is delivered to our homes, the answer was “No,” so how is it going to be delivered?**

Response: Ohio EPA believes this comment may have arisen from questions at the public hearing asking whether natural gas would be generated at the facility. Ohio EPA answered no to such questions, indicating that we did not have any awareness of plans or proposals associated with using natural gas produced directly at the facility. As indicated in the response to comment (a) above, natural gas will be provided by commercial providers in the area. Natural gas will be provided to the facility just as natural gas is provided to other industrial operations in the area.

- c. Comment: **If Sandusky-Clyde Energy Solutions is really into producing electricity they would use the natural resource that we have, “wind,” which is best right here in the Clyde area in the state of Ohio. Wind is non-polluting and costs nothing but the property that they already own.**

Response: Ohio EPA supports environmentally friendly sources of power such as wind but is not empowered to require its use. Ohio EPA has issued a permit which allows the use of natural gas in conformance with air pollution regulations which are designed to be protective of human health and the environment.

### 3. Topic: **Cancer cluster concerns**

- a. Comment: **Ohio EPA received a number of comments and concerns indicating opposition to allowing the installation and operation of the proposed natural gas-fired generators when the source or origin of the current childhood cancer cluster in the Clyde area is unknown.**

Response: Ohio EPA conducted a study of air quality in the Clyde-Green Springs area. The study was conducted in support of an ongoing investigation by the Sandusky County Health Department and the Ohio Department of Health regarding elevated childhood cancer incidences in the area. The study involved air monitoring and sampling for a one-year period along with surveillance, inspections, and other study methods. The study summarized its conclusions by indicating “Ohio EPA studied air quality for a full year in the Clyde and Green Springs area and detected no elevated levels of pollutants that would indicate a cause for public health concerns.” A report on the air quality study with the title “Air Quality Report for Clyde and Green Springs” can be accessed through Ohio EPA’s website at the link below or by contacting Ohio EPA’s Public Interest Center at (419) 644-2160.

<http://www.epa.state.oh.us/LinkClick.aspx?fileticket=ZJyYc9O4MgY%3d&tabid=3253>



Given the conclusions of the study regarding air quality and public health, Ohio EPA will continue to protect human health and the environment in the Clyde-Green Springs area through the issuance of a permit which will require compliance with air pollution rules and regulations which are designed and established to be protective of human health and the environment.

4. Topic: **Use of municipal solid waste as a fuel**

- a. Comment: **Ohio EPA received several comments regarding concerns about the use of MSW as a raw material to produce a gas or fuel to be used in generators to produce electricity.**

Response: The draft permit only authorizes and addresses the construction, installation and operation of natural gas-fired generators. The permit does not authorize or address the use of MSW as a raw material, fuel, etc. Ohio EPA indicated during the public hearing presentation (and would like to reiterate) that this permit addresses the installation and operation of only natural gas-fired generators and:

- i. does not authorize the use of any installations, operations or activities involving MSW; and
- ii. does not create any predisposition regarding a future project involving MSW.

Any proposed project involving MSW would be required to go through the application and approval process. Public involvement including public hearings would be part of any Ohio EPA permit process involving any proposed use of MSW.

5. Topic: **Wastewater contamination**

- a. Comment: **A comment was presented that there was information indicating a permit for a proposed wastewater discharge and the existence of such a discharge clearly indicates another threat of toxic contamination to local water sources.**

Response: The project involving the installation and operation of natural gas-fired generators does not involve a wastewater discharge. Ohio EPA apologizes for any confusion on this issue and would like to clarify that only air emissions are involved.

6. Topic: **Recipients of electricity produced**

- a. Comment: **It was addressed that these generators were to provide enough electricity for 2,000 homes, but nothing was mentioned that Whirlpool was to be the main recipient of this cheaper electricity.**

Response: The ultimate recipient of the electricity produced does not factor into Ohio EPA's permit process or evaluation as it pertains to compliance with air pollution rules and regulations. At the public hearing, it was presented that the amount of electricity produced would meet the average energy demands for approximately 2,000 households. This information was presented to give a perspective to the amount of electricity that would be produced, not as an indication of the ultimate recipients of the electricity produced.



7. Topic: **Previous land use of proposed facility location**

a. Comment: **Ohio EPA received comments regarding the previous use of the land for the proposed facility location and the following concerns:**

- i. **has this location ever been a dump site;**
- ii. **is this location a superfund site or ever been a Superfund site; and**
- iii. **has a Phase I and/or Phase II environmental site assessment(s) been completed on this property.**

Response: The property for the proposed location of the natural gas-fired generators is not a Superfund site and Ohio EPA does not have any records, documents or information indicating that the site was ever a Superfund site or a dump site. The presence of hazardous substances, petroleum products, contamination, waste, etc. would fall under the authority of the Assessment, Clean up and Reuse Section (ACRE) of Ohio EPA's Division of Emergency and Remedial Response. ACRE focuses on the assessment and cleanup of contaminated and potentially contaminated properties that threaten human health and the environment.

Ohio EPA is not aware of any Phase I and/or Phase II environmental site assessments (ESA) associated with this site. Ohio EPA would only be involved with Phase I and/or Phase II ESA as they would pertain to Ohio EPA's Voluntary Action Program (VAP). VAP is a program created to give individuals a way to investigate possible environmental contamination, clean it up if necessary and receive a promise from the State of Ohio that no more clean up is needed. To date, this site is not part of Ohio EPA's VAP. Information on Ohio EPA's VAP is available at <http://www.ohio.gov/portals/30/vap/docs/fact1.pdf>.





**FINAL**

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

|                |                      |
|----------------|----------------------|
| Facility ID:   | 0372022001           |
| Permit Number: | P0106572             |
| Permit Type:   | Initial Installation |
| Issued:        | 1/27/2011            |
| Effective:     | 1/27/2011            |
| Expiration:    | 1/27/2016            |





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

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## Authorization

Facility ID: 0372022001  
Application Number(s): A0039872  
Permit Number: P0106572  
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: 1/27/2011  
Effective Date: 1/27/2011  
Expiration Date: 1/27/2016  
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Sandusky-Clyde Energy Solutions, LLC  
1357 McPherson Highway (U.S. 20)  
Clyde, OH 43410

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

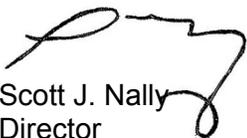
Ohio EPA District Office or local air agency responsible for processing and administering your permit:

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: P0106572  
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.

**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

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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).

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.

## **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.
- 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)(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)        | Nitrogen oxides (NOx) emissions shall not exceed 0.09 pounds per hour (lb/hr) and 0.39 tons per year (ton/yr)<br><br>Carbon monoxide (CO) emissions shall not exceed 0.38 lb/hr and 1.66 tons/yr<br><br>Volatile organic compound (VOC) emissions shall not exceed 0.01 lb/hr and 0.04 ton/yr<br><br>See b)(2)a. and c)(1) |
| b. | OAC rule 3745-31-05(A)(3), as | See b)(2)b and b)(2)c.   |

|     | Applicable Rules/Requirements                            | Applicable Emissions Limitations/Control Measures   |
|-----|--|---|
|     | effective 11/30/2001                                     |   |
| c.  | OAC rule 3745-31-05(A)(3)(a)(ii), 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.]  |
| 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<br>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<br>(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)<br>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 NO<sub>x</sub>, 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 Stationary Internal Combustion Engine fueled by natural gas.

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 converter (three way catalysts/non selective catalytic reduction with air-to-fuel ratio controllers) to reduce NO<sub>x</sub>, CO and VOC emissions. The catalytic converter control device shall meet the following requirements:

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

- (a) for NO<sub>x</sub> – 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:

|            |  |
|------------|--|
| 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:

|                               |  |
|-------------------------------|--|
| 60.4243(b)(1) & 60.4245(a)(2) | records of conducted maintenance                     |
| 60.4245(a)(1)                 | records of notification and supporting documentation |
| 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 permittee 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 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 NOx 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:  
  
NOx - 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 hourly 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.