

Vorys, Sater, Seymour and Pease LLP Legal Counsel 614.464.6400 | www.vorys.com

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MacDonald W. Taylor Direct Dial (614) 464-5413 Direct Fax (614) 719-4826 Email mwtaylor@vorys.com

January 14, 2020

Tanowa Troupe, Secretary Ohio Power Siting Board 180 E. Broad Street Columbus, OH 43215

> Re: Long Ridge Energy Generation LLC Case No. 17-1091-EL-BLN Notice of Submittal of Permits

Dear Ms. Troupe:

On December 18, 2019, Long Ridge Energy Generation LLC submitted the attached copies of permits for the Long Ridge Energy Generating Project to the Board's Staff. Please place a copy of this correspondence and the attached permit copies on the case docket.

Very truly yours,

/s/ MacDonald W. Taylor

MacDonald W. Taylor Attorneys for Long Ridge Energy Generation LLC

MWT/jaw Enclosure



John R. Kasich, Governor Mary Taylor, Lt. Governor Craig W. Butler, Director

## 11/7/2017

Mr. Kenneth Nicholson Ohio River Partners Shareholder LLC - Hannibal Power 1345 Avenue of the Americas New York, NY 10105

RE:	FINAL AIR POLL	UTION PERMIT-TO-INSTALL
	Facility ID:	0656005033
	Permit Number:	P0122829
	Permit Type:	Initial Installation
	County:	Monroe

# **Certified Mail**

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

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- How to appeal this permit
- How to save money, reduce pollution and reduce energy consumption
- How to give us feedback on your permitting experience
- How to get an electronic copy of your permit
- What should you do if you notice a spill or environmental emergency?

## How to appeal this permit

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 30 East Broad Street, 4th Floor Columbus, OH 43215

#### How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairguality.org/clean\_air

#### How to give us feedback on your permitting experience

Please complete a survey at <u>www.epa.ohio.gov/survey.aspx</u> and give us feedback on your permitting experience. We value your opinion.

#### How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, <u>www.epa.ohio.gov/dapc</u> by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

#### What should you do if you notice a spill or environmental emergency?

Any spill or environmental emergency which may endanger human health or the environment should be reported to the Emergency Response 24-HOUR EMERGENCY SPILL HOTLINE toll-free at (800) 282-9378. Report non-emergency complaints to the appropriate district office or local air agency.

If you have any questions regarding your permit, please contact Ohio EPA DAPC, Southeast District Office at (740)385-8501 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,

Michael E. Hopkins, P.E. Assistant Chief, Permitting Section, DAPC

Cc: U.S. EPA Ohio EPA-SEDO; Pennsylvania; West Virginia



# **Response to Comments**

Facility ID: 0656005033			
Facility Name:	Ohio River Partners Shareholder LLC - Hannibal Power		
Facility Description:	Combined cycle combustion turbine power generation facility		
Facility Address:	43840 St Rte 7 Hannibal, OH 43931 Monroe County		
Permit:	P0122829, Permit-To-Install - Initial Installation		
A public notice for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in the Monroe County Beacon on 09/21/2017. The comment period ended on 10/30/2017.			
Hearing date (if held)	10/25/2017		
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: None

## a. Comment:

For the combustion turbines (EUs P004-P006), U.S. EPA, Region V commented that the draft permit does not appear to require initial stack testing for  $H_2SO_4$  (pages 64, 87, and 112). Recent Ohio EPA PSD permits for Trumbull Energy and Oregon Energy Center permits require  $H_2SO_4$  stack testing. Please explain why  $H_2SO_4$  stack testing is not required in this permit?

Response:

Based on AP-42,  $H_2SO_4$  emissions are most accurately calculated using a mass balance based on fuel sulfur content, so it does not appear there would be much value in requiring initial stack testing. However, the Trumbull and Oregon PTIs do have  $H_2SO_2$  testing for the CTs, so that requirement was added to the PTI for the CTs for consistency.

b. Comment:

For the combustion turbines (EUs P004-P006), U.S. EPA, Region V commented that on page 54, 77, and 101 of the draft permit, it says that the total emissions in pounds for VOC and  $PM_{10}/PM_{2.5}$  shall be calculated using an emission factor "or the results of the most recent stack



test". Both the Trumbull Energy and Oregon Energy Center permits require that the stack testing results for VOC and  $PM_{10}/PM_{2.5}$  be used to calculate emissions to assure compliance. Please explain why this draft permit for Hannibal Port Power does not require the same. And if it is decided to add a  $H_2SO_4$  stack testing requirement to this draft permit, maybe the results could be used to calculate  $H_2SO_4$  emissions to demonstrate compliance (instead of emission factors).

#### Response:

This monitoring language is for compliance with the rolling, 12-month BACT limits, not any short-term limits. Because there will be some operating time between start-up of the equipment and when the stack testing will occur, there needs to be a way for the company to begin calculating compliance, on a monthly basis, with the rolling, 12-month emissions limitations before the testing is completed. The purpose of requiring the use of the manufacturers' specification before testing is conducted is to ensure the company can comply with the monthly recordkeeping requirements upon startup. Note this issue is not addressed in the Trumbull and Oregon permits.

The EFs used in the monthly recordkeeping requirements for the rolling, 12-month BACT limits are based on the BACT short-term limits which are vendor guarantees or are based on fuel with <0.5 grains S/100 scf. If the vendor EFs or fuel sulfur content limit are shown to be exceeded during a stack test or via fuel gas testing, the company would be in violation of BACT requirements and the issue would need to be resolved or the limits revisited from that perspective. If compliance cannot be achieved and the original limits are deemed inappropriate, the permit would need to be modified anyway. Thus, the EFs have been retained in the monitoring language, but the language has been updated to specify that the EF will be used, or, after testing has been completed, the results of the most recent stack test shall be used. This update should address both the need for recordkeeping before testing is completed and the need to base compliance with the rolling, 12-month BACT limits on stack test results after testing has been completed.



# **FINAL**

# Division of Air Pollution Control Permit-to-Install

for

Ohio River Partners Shareholder LLC - Hannibal Power

Facility ID:0656005033Permit Number:P0122829Permit Type:Initial InstallationIssued:11/7/2017Effective:11/7/2017



# Division of Air Pollution Control Permit-to-Install

for

Ohio River Partners Shareholder LLC - Hannibal Power

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# **Authorization**

0656005033
Combined cycle combustion turbine power generation facility
A0058259, A0059055
P0122829
Initial installation permit for a 485 MW combined cycle electric generating facility in Monroe County. The emissions units include a combustion turbine with a heat recovery stream generator (HRSG) and duct burners, auxiliary boiler, emergency diesel generator engine, emergency fire pump engine, and an eight-cell mechanical draft low-mist wet cooling tower.
Initial Installation
\$2,600.00
11/7/2017
11/7/2017

This document constitutes issuance to:

Ohio River Partners Shareholder LLC - Hannibal Power 43840 St Rte 7 Hannibal, OH 43931

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

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Southeast District Office 2195 Front Street Logan, OH 43138 (740)385-8501

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Craig W. Butler Director



# Authorization (continued)

Permit Number: P0122829

Permit Description: Initial installation permit for a 485 MW combined cycle electric generating facility in Monroe County. The emissions units include a combustion turbine with a heat recovery stream generator (HRSG) and duct burners, auxiliary boiler, emergency diesel generator engine, emergency fire pump engine, and an eight-cell mechanical draft low-mist wet cooling tower.

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

Emissions Unit ID:	B001
Company Equipment ID:	Auxiliary Boiler
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P001
Company Equipment ID:	Emergency diesel generator engine
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P002
Company Equipment ID:	Emergency Diesel Fire Pump Engine
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P003
Company Equipment ID:	Cooling Tower
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P004
Company Equipment ID:	CT #1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P005
Company Equipment ID:	CT #2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P006
Company Equipment ID:	CT #3
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



# A. Standard Terms and Conditions



#### 1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
  - (1) Standard Term and Condition A.2.a), Severability Clause
  - (2) Standard Term and Condition A.3.c) through A. 3.e) General Requirements
  - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
  - (4) Standard Term and Condition A.9., Reporting Requirements
  - (5) Standard Term and Condition A.10., Applicability
  - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
  - (7) Standard Term and Condition A.14., Public Disclosure
  - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
  - (9) Standard Term and Condition A.16., Fees
  - (10) Standard Term and Condition A.17., Permit Transfers

#### 2. Severability Clause

- a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

#### 3. General Requirements

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



- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

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

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
  - (1) The date, place (as defined in the permit), and time of sampling or measurements.
  - (2) The date(s) analyses were performed.
  - (3) The company or entity that performed the analyses.
  - (4) The analytical techniques or methods used.
  - (5) The results of such analyses.
  - (6) The operating conditions existing at the time of sampling or measurement.
- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
  - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Southeast District Office.



- (2) Quarterly written reports of (i) any deviations from federally enforceable <u>emission</u> limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Ohio EPA DAPC, Southeast District Office. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.
- (3) Written reports, which identify any deviations from the federally enforceable <u>monitoring</u>, <u>recordkeeping</u>, <u>and reporting requirements</u> contained in this permit shall be submitted to the Ohio EPA DAPC, Southeast District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
- (4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

## 5. Scheduled Maintenance/Malfunction Reporting

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

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

## 6. Compliance Requirements

a) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the appropriate Ohio EPA District Office or contracted



local air agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the electronic signature date shall constitute the date that the required application, notification or report is considered to be "submitted". Any document requiring signature may be represented by entry of the personal identification number (PIN) by responsible official as part of the electronic submission process or by the scanned attestation document signed by the Authorized Representative that is attached to the electronically submitted written report.

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

- b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
  - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c) The permittee shall submit progress reports to the Ohio EPA DAPC, Southeast District Office concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
  - (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

## 7. Best Available Technology

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



#### 8. Air Pollution Nuisance

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

#### 9. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Southeast District Office.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA DAPC, Southeast District Office. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

#### 10. Applicability

This Permit-to-Install is applicable only to the emissions unit(s) identified in the Permit-to-Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s) not exempt from the requirement to obtain a Permit-to-Install.

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

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the



Director within a reasonable time before the termination date and the permittee shows good cause for any such extension.

- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update electronically will constitute notifying the Director of the permanent shutdown of the affected emissions unit(s).
- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

Unless otherwise exempted, no emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31 and OAC Chapter 3745-77 if the restarted operation is subject to one or more applicable requirements.

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

## 12. Permit-To-Operate Application

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



#### **13.** Construction Compliance Certification

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

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

#### 14. Public Disclosure

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

#### 15. Additional Reporting Requirements When There Are No Deviations of <u>Federally Enforceable</u> Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

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

#### 16. Fees

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

#### 17. Permit Transfers

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

#### 18. Risk Management Plans

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

#### **19.** Title IV Provisions

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



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



- 1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
  - a) 7-12.
- 2. The following emissions unit contained in this permit is subject to 40 CFR Part 60, Subpart Dc and 40 CFR Part 63, Subpart DDDDD: B001. The complete NSPS and MACT requirements, including the NSPS and MACT General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulation (e-CFR) website <u>http://www.ecfr.gov</u> or by contacting the Ohio EPA, Southeast District Office.
- 3. The following emissions units contained in this permit are subject to 40 CFR Part 60, Subparts KKKK and TTTT: P004-P006. The complete NSPS and MACT requirements, including the NSPS and MACT General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulation (e-CFR) website <a href="http://www.ecfr.gov">http://www.ecfr.gov</a> or by contacting the Ohio EPA, Southeast District Office.
- 4. The following emissions units contained in this permit are subject to 40 CFR Part 60, Subpart IIII and 40 CFR Part 63, Subpart ZZZ: P002-P003. The complete NSPS and MACT requirements, including the NSPS and MACT General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulation (e-CFR) website <u>http://www.ecfr.gov</u> or by contacting the Ohio EPA, Southeast District Office.
- 5. This facility is subject to the applicable requirements specified in OAC Chapter 3745-25. In accordance with Ohio EPA Engineering Guide #64, the emission control action programs, as specified in OAC rule 3745-25-03, shall be developed and submitted within 60 days after receiving notification from the Ohio EPA.
- 6. The following emissions units are subject to the 40 CFR Part 97 Cross-State Air Pollution Rule (CSAPR): P004, P005 and P006. The applicable CSAPR requirements will be incorporated in the initial Title V operating permit terms and conditions for these emission units based on the U.S. EPA guidance "Title V Permit Guidance and Template for the Cross-State Air Pollution Rule" available at <a href="http://www.epa.gov/crossstaterule/pdfs/CSAPR\_Title\_V\_Permit\_Guidance.pdf">http://www.epa.gov/crossstaterule/pdfs/CSAPR\_Title\_V\_Permit\_Guidance.pdf</a>.
- 7. The permit-to-install (PTI) application for emissions units B001 and P001-P006 was evaluated based on the actual materials and the design parameters of the emissions units' exhaust systems, as specified by the permittee. The "Toxic Air Contaminant Statute," ORC 3704.03(F), was applied to these emissions units for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A," as follows:
  - a) the exposure limit, expressed as a time-weighted average concentration for a conventional 8hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):



- (1) threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
- (2) STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b) The TLV is divided by 10 to adjust the standard from the working population to the general public (TLV/10).
- c) This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., 24 hours per day and 7 days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

TLV/10 \* 8/24 \* 5/7 = 4 TLV/24 \* 7 = MAGLC

d) The following summarizes the results of dispersion modeling for the "worst case" toxic contaminant (emitted at one or more tons/year):

Toxic Contaminant: sulfuric acid mist (H<sub>2</sub>SO<sub>4</sub>) (acetaldehyde, ammonia, ethylbenzene, formaldehyde, propylene oxide, toluene and xylenes) TLV (mg/m<sup>3</sup>): 0.20 (H<sub>2</sub>SO<sub>4</sub>) Maximum Hourly Emission Rate (lb/hr): 3.78 (H<sub>2</sub>SO<sub>4</sub>) Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 4.68 MAGLC (ug/m<sup>3</sup>): 4.76

The permittee, has demonstrated that emissions of  $H_2SO_4$  from emissions units B001 and P001-P006 is estimated to be equal or greater than 80 percent, but less than 100 percent of the maximum acceptable ground level concentration (MAGLC); shall not operate the emissions unit(s) at a rate that would exceed the daily emissions rate, process weight rate, and/or restricted hours of operations, as allowed in this permit; and any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- 8. Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
  - a) changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;



- b) changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c) physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute," ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification," the permittee shall apply for and obtain a final FEPTIO prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

- 10. The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute," ORC 3704.03(F):
  - a) a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b) the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute," ORC 3704.03(F);
  - c) a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute," ORC 3704.03(F), initially and for each change that requires reevaluation of the toxic air contaminant emissions; and
  - d) the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute," ORC 3704.03(F), and documentation of any determination that was conducted to reevaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- 11. The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute," ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- 12. The permittee shall submit quarterly reports to the appropriate Ohio EPA District Office or local air agency, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect. These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.



13. This permit authorizes the installation and initial operation of only one of the three combined cycle combustion turbines in this permit: EU P004 (General Electric model 7HA.02), EU P005 (Mitsubishi Hitachi Power Systems model 501JAC) or EU P005 (Siemens Energy Inc. model SCC6-8000H).



# C. Emissions Unit Terms and Conditions



#### 1. B001, Auxiliary Boiler

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

26.8 MMBtu/hr natural gas-fired boiler with a low-NOx burner and flue gas recirculation

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (1) None.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rules 3745-31-10 through 3745-31-20 and 3745-31-34	Nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 0.011 lb/MMBtu of actual heat input, 0.29 pounds per hour and 0.74 tons per rolling, 12-month period.
		Carbon monoxide (CO) emissions shall not exceed 0.037 lb/MMBtu of actual heat input, 0.99 pounds per hour and 2.48 tons per rolling, 12-month period.
		Volatile organic compound (VOC) emissions shall not exceed 0.0050 lb/MMBtu of actual heat input, 0.13 pound per hour and 0.34 tons per rolling, 12- month period.
		Particulate emissions (PE) and emissions of particulate matter less than 10 microns ( $PM_{10}$ ) and particulate matter less than 2.5 microns ( $PM_{2.5}$ ) shall not exceed 0.010 lb/MMBtu of actual heat input, 0.27 pounds per hour and 0.67 tons per rolling, 12-month period.
		Sulfuric acid (H <sub>2</sub> SO <sub>4</sub> ) emissions shall not exceed 0.00011 lb/MMBtu, 0.003 pound per hour and 0.007 ton per rolling, 12-month period.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Carbon dioxide equivalent (CO <sub>2</sub> e) emissions shall not exceed 7,845 tons per rolling, 12-month period.
		Visible PE from the stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average.
b	OAC rule 3745-31-05(A)(3) as	The emissions limitations for $NO_{\star}$ CO
5.	effective 6/30/08	VOC, $PE/PM_{10}/PM_{2.5}$ and $SO_2$ required by this rule are equivalent to the emissions limitations for $NO_x$ , CO, VOC, and $PE/PM_{10}/PM_{2.5}$ established pursuant to OAC rules 3745-31-10 through 3745-31-20.
		Best Available Technology (BAT) requirements under OAC rule $3745-31-05(A)(3)$ do not apply to the CO <sub>2</sub> e emissions from this air contaminant source pursuant to OAC rule $3745-31-34(E)(8)$ .
		See b)(2)h. and c)(1) below.
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 6/30/08	BAT requirements under OAC rule 3745- 31-05(A)(3) do not apply to the NOx, VOC, CO, PE/PM <sub>10</sub> /PM <sub>2.5</sub> and SO <sub>2</sub> emissions from this air contaminant source since the potential to emit NOx, VOC, CO, PE/PM <sub>10</sub> /PM <sub>2.5</sub> and SO <sub>2</sub> is less than 10 tons/year.
		See b)(2)i. below.
d.	OAC rule 3745-17-10(B)(1)	The emissions limitation required by this rule is less stringent than the emission limitation required pursuant to OAC rules 3745-31-10 through 3745-31-20.
e.	OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the limitation established by OAC rule 3745-31-10 through 20.
f.	OAC rule 3745-18-06	Exempt pursuant to OAC rule 3745-18- 06(A) since only natural gas fuel is burned in this emissions unit.
g.	OAC rule 3745-110-03(C)	Exempt pursuant to OAC rule 3745-110- 03(K)(20) because this emissions unit is



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		subject to BACT requirements for NO <sub>x</sub> emissions.
h.	40 CFR Part 60, Subparts A and Dc (40 CFR 60.1-19 and 60.40c– 60.48c)	See d)(4) and e(5) below.
	[In accordance with 40 CFR 60.40c(a), this emissions unit is a steam generating unit commencing construction, modification, or reconstruction after June 9, 1989 and that has a maximum design heat input capacity of than 29 megawatts (MW) (100 million BTU per hour (MMBtu/hr) or less, but greater than or equal to 2.9 MW (10 MMBtu/h).]	
i.	40 CFR Part 63, Subpart JJJJJJ (40 CFR 63.11193-11237)	Gas-fired boilers are not subject to this subpart and to any requirements in this subpart.
	[In accordance with 40 CFR 63.11193 and 63.11194, this emissions unit is a new industrial boiler located at an area source of HAP emissions and will commence construction after June 4, 2010.]	[40 CFR 63.11195(e)]

- (2) Additional Terms and Conditions
  - a. As part of the Best Available Control Technology (BACT) determination, this emissions unit shall operate for no more than 5,000 hours per rolling, 12-month period.
  - b. As part of the BACT determination for  $NO_x$ , the boiler must be equipped with low-NOx burners and must utilize FGR. Compliance with these requirements shall be demonstrated by compliance with the short-term  $NO_x$  emission limitations in b)(1)a.
  - c. As part of the BACT determination for CO, compliance with the BACT requirements shall be demonstrated by compliance with the short-term CO emission limitations in b)(1)a.
  - d. As part of the BACT determination for VOC, compliance with the BACT requirements shall be demonstrated by compliance with the short-term VOC emission limitation in b)(1)a.



- e. As part of the BACT determination for PE,  $PM_{10}$  and  $PM_{2.5}$ , compliance with the BACT requirements shall be demonstrated by compliance with the short-term PE,  $PM_{10}$  and  $PM_{2.5}$  emission limitations in b)(1)a.
- f. As part of the BAT/BACT determination for  $H_2SO_4$ , the permittee shall burn only natural gas with a sulfur content of less than 0.50 grain/100 scf in this emissions unit. Compliance with this requirement shall be demonstrated by compliance with the SO<sub>2</sub> and  $H_2SO_4$  emissions limitations in b)(1)a and c)(1).
- g. As part of the BACT determination for  $CO_2e$ , compliance with the BACT requirements shall be demonstrated by compliance with the  $CO_2e$  emissions limitation in b)(1)a.
- h. This BAT emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- i. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.
- c) Operational Restrictions
  - (1) The permittee shall burn only natural gas fuel with a maximum sulfur content not to exceed 0.50 grain/100 scf in this emissions unit.
- d) Monitoring and/or Recordkeeping Requirements
  - (1) For each day during which the permittee burns a fuel other than natural gas fuel with a maximum sulfur content of 0.50 grain/100 scf, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
  - (2) The permittee shall maintain monthly records of the following information:
    - a. the hours of operation of this emissions unit;
    - b. the rolling, 12-month summation of operating hours for this unit, calculated by adding the total hours of operation for the present month as recorded in d)(2)a., plus the total hours of operation for the previous 11 months;
    - c. the amount of natural gas consumed in this emissions unit, in MMscf;
    - d. the heat content of the natural gas combusted in this emissions unit, in MMBtu/MMscf;
    - e. the sulfur content of the natural gas combusted in this emissions unit, in grains/100 scf;
    - f. the total NO<sub>x</sub> emissions from this emissions unit, in pounds, calculated by multiplying the NO<sub>x</sub> emissions factor of 0.011 lb/MMBtu, or the results of the most



recent stack test, by the amount of natural gas consumed, as recorded in d)(2)c. and the heat content of the natural gas consumed, as recorded in d)(2)d.;

- g. the rolling, 12-month summation of the  $NO_x$  emissions from this emissions unit, in tons, calculated by adding the total  $NO_x$  emissions for the present month as recorded in d)(2)f., plus the total  $NO_x$  emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds;
- h. the total CO emissions from this emissions unit, in pounds, calculated by multiplying the CO emissions factor of 0.037 lb/MMBtu, or after testing has been completed, the results of the most recent stack test, by the amount of natural gas consumed, as recorded in d)(2)c. and the heat content of the natural gas consumed, as recorded in d)(2)d.;
- i. the rolling, 12-month summation of the CO emissions from this emissions unit, in tons, calculated by adding the total CO emissions for the present month as recorded in d)(2)h., plus the total CO emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds;
- j. the total VOC emissions from this emissions unit, in pounds, calculated by multiplying the VOC emissions factor of 0.005 lb/MMBtu, or after testing has been completed, the results of the most recent stack test, by the amount of natural gas consumed, as recorded in d)(2)c. and the heat content of the natural gas consumed, as recorded in d)(2)d.;
- k. the rolling, 12-month summation of the VOC emissions from this emissions unit, in tons, calculated by adding the total VOC emissions for the present month as recorded in d)(2)j., plus the total VOC emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds;
- I. the total PE/PM<sub>10</sub>/PM<sub>2.5</sub> emissions from this emissions unit, in pounds, calculated by multiplying the PE/PM<sub>10</sub>/PM<sub>2.5</sub> emissions factor of 0.010 lb/MMBtu, or after testing has been completed, the results of the most recent stack test, by the amount of natural gas consumed, as recorded in d)(2)c. and the heat content of the natural gas consumed, as recorded in d)(2)d.;
- m. the rolling, 12-month summation of the PE/PM<sub>10</sub>/PM<sub>2.5</sub> emissions from this emissions unit, in tons, calculated by adding the total PE/PM<sub>10</sub>/PM<sub>2.5</sub> emissions for the present month as recorded in d)(2)I., plus the total PE/PM<sub>10</sub>/PM<sub>2.5</sub> emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds;
- n. the total H<sub>2</sub>SO<sub>4</sub> emissions from this emissions unit, in pounds, calculated by multiplying the H<sub>2</sub>SO<sub>4</sub> emissions factor of 0.00011 lb/MMBtu, or after testing has been completed, the results of the most recent stack test, by the amount of natural gas consumed, as recorded in d)(2)c. and the heat content of the natural gas consumed, as recorded in d)(2)d.;
- o. The rolling, 12-month summation of the  $H_2SO_4$  emissions from this emissions unit, in tons, calculated by adding the total  $H_2SO_4$  emissions for the present



month as recorded in d)(2)n., plus the total  $H_2SO_4$  emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds;

- p. the total CO<sub>2</sub>e emissions from this emissions unit, in pounds, calculated by multiplying the CO<sub>2</sub>e emissions factor of 117.1 lbs/MMBtu by the amount of natural gas consumed, as recorded in d)(2)c. and the heat content of the natural gas consumed, as recorded in d)(2)d.; and
- q. The rolling, 12-month summation of the  $CO_2e$  emissions from this emissions unit, in tons, calculated by adding the total  $CO_2e$  emissions for the present month as recorded in d)(2)p., plus the total  $CO_2e$  emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds.
- (3) See 40 CFR Part 60, Subpart Dc (40 CFR 60.40c–60.48c).
- 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) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas with a maximum sulfur content of 0.50 grain/100 scf was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
  - (3) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
    - a. Any exceedences of the rolling, 12-month limitation on operating hours; and
    - b. Any exceedences of the rolling, 12-month emissions limitations for  $NO_x$ , CO, VOC, PE/PM<sub>10</sub>/PM<sub>2.5</sub>, SO<sub>2</sub>, H<sub>2</sub>SO<sub>4</sub> and CO<sub>2</sub>e, calculated pursuant to the equations in d)(5).
  - (4) See 40 CFR Part 60, Subpart Dc (40 CFR 60.40c–60.48c).
- f) Testing Requirements
  - (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
    - a. <u>Emissions Limitations:</u>

 $NO_x$  emissions shall not exceed 0.011 lb/MMBtu of actual heat input, 0.29 pounds per hour and 0.74 tons per rolling, 12-month period.



## Applicable Compliance Method:

Compliance with the short-term emissions limitations shall be demonstrated based on the testing requirements in f(2).

Compliance with the rolling, 12-month emissions limitation shall be demonstrated by the recordkeeping in d)(2). Compliance with the annual and rolling, 12-month emissions limitation shall be demonstrated by the recordkeeping in d)(2).

#### b. <u>Emissions Limitations:</u>

CO emissions shall not exceed 0.037 lb/MMBtu of actual heat input, 0.99 pounds per hour and 2.48 tons per rolling, 12-month period.

#### Applicable Compliance Method:

Compliance with the short-term emissions limitations shall be demonstrated based on the testing requirements in f(2).

Compliance with the rolling, 12-month emissions limitation shall be demonstrated by the recordkeeping in d)(2).

#### c. <u>Emissions Limitations:</u>

VOC emissions shall not exceed 0.005 lb/MMBtu of actual heat input, 0.13 pound per hour and 0.34 tons per rolling, 12-month period.

#### Applicable Compliance Method:

Compliance with the short-term emissions limitations shall be demonstrated based on the testing requirements in f(2).

Compliance with the rolling, 12-month emissions limitation shall be demonstrated by the recordkeeping in d)(2).

d. <u>Emissions Limitations:</u>

PE and emissions of PM<sub>10</sub> and PM<sub>2.5</sub> shall not exceed 0.010 lb/MMBtu of actual heat input, 0.27 pounds per hour and 0.67 tons per rolling, 12-month period.

#### Applicable Compliance Method:

Compliance with the short-term emissions limitations shall be demonstrated based on the testing requirements in f(2).

Compliance with the rolling, 12-month emissions limitation shall be demonstrated by the recordkeeping in d)(2).



## e. <u>Emissions Limitations:</u>

 $H_2SO_4$  emissions shall not exceed 0.00011 lb/MMBtu, 0.003 pound per hour and 0.007 ton per rolling, 12-month period.

#### Applicable Compliance Method:

Compliance with the short-term emissions limitations shall be demonstrated based on the testing requirements in f(2).

Compliance with the rolling, 12-month emissions limitation shall be demonstrated by the recordkeeping in d)(2).

f. <u>Emissions Limitation:</u>

CO<sub>2</sub>e emissions shall not exceed 7,845 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the rolling, 12-month emissions limitation shall be demonstrated by the recordkeeping in d)(2).

g. <u>Emissions Limitations:</u>

Visible PE from the stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average.

## Applicable Compliance Method:

If required, visible PE shall be determined according to USEPA Method 9.

- (2) Performance testing shall be conducted as required in OAC rules 3745-31-10 through 20. The permittee shall conduct, or have conducted, emission testing for this emissions unit within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, as applicable, in accordance with the following requirements:
  - a. The emission testing shall be conducted to demonstrate compliance with the emissions limitations specified in b)(1) for NO<sub>x</sub>, CO, VOC, PE/PM<sub>10</sub>/PM<sub>2.5</sub>, and  $H_2SO_4$ .
  - b. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

for NOx, Methods 1 - 4, and 7 of 40 CFR Part 60 Appendix A;

for CO, Methods 1-4 and 10 of 40 CFR Part 60 Appendix A;

for VOC, Methods 1-4 and 18 and 25 of 40 CFR Part 60 Appendix A;



for PE/PM<sub>10</sub>/PM<sub>2.5</sub>, Methods 1-5 of 40 CFR Part 60 Appendix A and Method 202 of 40 CFR Part 51 Appendix M; and

for H<sub>2</sub>SO<sub>4</sub>, Methods 1-4 and 8 of 40 CFR Part 60 Appendix A.

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

- c. The test(s) for each pollutant shall be conducted while the emissions unit is operating at or near its maximum capacity, while burning representative fuel and/or combination of fuels, unless otherwise specified or approved by the Ohio EPA, Southeast District Office.
- d. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southeast District Office. 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, Southeast District Office's refusal to accept the results of the emission test(s).
- e. Personnel from the Ohio EPA, Southeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- f. A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southeast District Office 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 Ohio EPA, Southeast District Office.
- g) Miscellaneous Requirements
  - (1) None.



#### 2. P001, Emergency Diesel Generator Engine

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

1,645 kW (2,206 HP) emergency diesel-fired generator to provide on-site emergency power capabilities independent of the utility grid.

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (1) b)(1)c. and b)(2)e.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rules 3745-31-10 through 20 and 3745-31-34	Non-methane hydrocarbon plus nitrogen oxides (NMHC+NO <sub>x</sub> ) emissions shall not exceed 6.40 g/kW-hour, 24.71 pounds per hour and 1.24 tons per rolling, 12- month period.
		Carbon monoxide (CO) emissions shall not exceed 3.5 g/kW-hour, 12.64 pounds per hour and 0.63 ton per rolling, 12- month period.
		Particulate emissions (PE), emissions of particulate matter less than 10 microns ( $PM_{10}$ ) and emissions of particulate matter less than 2.5 microns ( $PM_{2.5}$ ) shall not exceed 0.20 g/kW-hour, 0.73 pound per hour and 0.037 ton per rolling, 12-month period.
		Sulfuric acid (H <sub>2</sub> SO <sub>4</sub> ) emissions shall not exceed 0.00011 lb/MMBtu, 0.0016 pound per hour and 0.000079 ton per rolling, 12-month period.
		Carbon dioxide equivalent (CO <sub>2</sub> e) emissions shall not exceed 116.8 tons per rolling, 12-month period. See b)(2)ac. and c)(1) below.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(A)(3), as effective 6/30/08	The emissions limitations for $NO_x$ , $CO$ , volatile organic compounds (VOC), $PE/PM_{10}/PM_{2.5}$ and $SO_2$ required by this rule are equivalent to the emissions limitations for $NO_x$ , $CO$ , $VOC$ , and $PE/PM_{10}/PM_{2.5}$ established pursuant to OAC rules 3745-31-10 through 3745-31-20.
		Best Available Technology (BAT) requirements under OAC rule $3745-31-05(A)(3)$ do not apply to the CO <sub>2</sub> e emissions from this air contaminant source pursuant to OAC rule $3745-31-34(E)(8)$ .
		See b)(2)d. and c)(1) below.
с.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 6/30/08	BAT requirements under OAC rule 3745- 31-05(A)(3) do not apply to the NO <sub>x</sub> , VOC, CO, PE/PM <sub>10</sub> /PM <sub>2.5</sub> and SO <sub>2</sub> emissions from this air contaminant source since the calculated annual emission rates are less than 10 tons/year taking into account the federally enforceable limits in OAC rules 3745-31- 10 through 20 and 40 CFR Part 60, Subpart IIII.
		See b)(2)e. below.
d.	OAC rule 3745-17-07(A)	The emission limitation required by this rule is less stringent than the emissions limitation for PE established pursuant to 40 CFR Part 60, Subpart IIII.
e.	OAC rule 3745-17-11(B)	The emission limitation required by this rule is less stringent than the emissions limitation for PE established pursuant to OAC rules 3745-31-10 through 20.
f.	OAC rule 3745-18-06	The emissions limitation required by this rule is less stringent than the emissions limitations required pursuant to OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 60, Subpart IIII.
g.	OAC rule 3745-110-03	Exempt pursuant to OAC rule $3745-110-03(K)(20)$ because this emissions unit is subject to BACT requirements for NO <sub>x</sub> emissions.


	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
h.	40 CFR 60, Subpart IIII (40 CFR 60.4200 – 4219) [In accordance with 40 CFR 60.4200(a)(2)(i) and 60.4205(b), this emissions unit is a 1,645 kW (2,206 HP) emergency stationary compression ignition (CI) internal combustion engine (ICE) manufactured after April 1, 2006 with a displacement of less than 30 liters per cylinder subject to the emissions limitations/control measures specified in this section.]	The emissions limitations required by this rule for NMHC+NO <sub>x</sub> , CO, and PE/PM <sub>10</sub> /PM <sub>2.5</sub> are equivalent to the emissions limitations required by OAC rules 3745-31-10 through 20 for NO <sub>x</sub> +NMHC, CO, PE/PM <sub>10</sub> /PM <sub>2.5</sub> and SO <sub>2</sub> . Exhaust opacity from CI RICE must not exceed: 20 percent during the acceleration mode; 15 percent during the lugging mode; and 50 percent during the peaks in either the acceleration or lugging modes. [40 CFR 60.4205(b), 40 CFR 60.4202(a)(2), 40 CFR 89.112 and 40 CFR 89.113, and 40 CFR 60.4207(b) and
		See b)(2)f. and c)(1) and (2) below.
i.	40 CFR 60.1 – 19 (40 CFR 60.4218)	Table 8 of Subpart III of 40 CFR Part 60 – Applicability of General Provisions to Subpart IIII, specifies the provisions of Subpart A that apply to owners and operators of affected facilities subject to this subpart.
j.	40 CFR 63, Subpart ZZZ (40 CFR 63.6580 – 6675) [In accordance with 40 CFR 63.6585, 63.6590(a)(2)(i) and 63.6590(b)(1)(i), this emissions unit is an emergency stationary reciprocating internal combustion engine (RICE) with a site rating of more than 500 brake HP located at an area source of hazardous air pollutant (HAP) emissions for which construction commenced after December 19, 2002.]	Compliance with Subpart IIII of 40 CFR Part 60 demonstrates compliance with Subpart ZZZZ of 40 CFR Part 63. [40 CFR 63.6590(c)(i)]



- (2) Additional Terms and Conditions
  - a. As part of the Best Available Control Technology (BACT) determination for NMHC, NO<sub>x</sub>, CO and PE/PM<sub>10</sub>/PM<sub>2.5</sub>, this emissions unit shall be certified to the meet the emissions standards in 40 CFR 89.112 and 89.113 pursuant to 40 CFR 60.4205(b) and 60.4202(a)(2), shall employ good combustion practices per the manufacturer's operating manual, and shall not operate more than 100 hours per year of non-emergency use. Compliance with these requirements shall be demonstrated by compliance with the short-term NMHC+NO<sub>x</sub>, CO and PE/PM<sub>10</sub>/PM<sub>2.5</sub> emissions limitations in b)(1)a.
  - b. As part of the BACT determination for  $H_2SO_4$ , the permittee shall burn only ultralow sulfur diesel (ULSD) fuel with a sulfur content of less than 15 ppm (0.0015 percent by weight) in this emissions unit. Compliance with this requirement shall be demonstrated by compliance with the SO<sub>2</sub> and  $H_2SO_4$  emissions limitations in b)(1)a.
  - c. As part of the BACT determination for CO<sub>2</sub>e, the permittee must implement good operating practices (proper maintenance and operation) and shall not operate more than 100 hours per year of non-emergency use. Compliance with this requirement shall be demonstrated by compliance with the CO<sub>2</sub>e emissions limitation in b)(1)a.
  - d. This BAT emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
  - e. This rule applies once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.
  - f. The permittee must comply with the applicable emission and operating limitations of 40 CFR Part 60, Subpart IIII upon startup.

## c) Operational Restrictions

- (1) The quality of diesel fuel burned in this emissions unit shall meet the following U.S. EPA's specifications for ULSD found in 40 CFR 80.510(b), on an 'as received' basis:
  - a. Sulfur content. 15 ppm maximum (0.0015% by weight).
  - b. Cetane index or aromatic content, as follows:
    - i. A minimum cetane index of 40; or
    - ii. A maximum aromatic content of 35 volume percent.
- (2) See 40 CFR Part 60, Subpart IIII (40 CFR 60.4200 4219).



- d) Monitoring and/or Recordkeeping Requirements
  - (1) The permittee shall maintain records of the following information each month:
    - a. the hours of non-emergency operation for this emissions unit; and
    - b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the non-emergency operating hours for this emissions unit.
  - (2) For each day during which the permittee burns a fuel other than USLD fuel with a sulfur content of less than 15 ppm (0.0015 percent by weight), the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
  - (3) The permittee shall maintain documents provided by the oil supplier for each shipment of No. 2 fuel oil to demonstrate compliance with the ULSD requirements. These documents must include the receipt or bill of lading that includes confirmation that the fuel meets the No. 2 diesel fuel ULSD standards.
  - (4) See 40 CFR Part 60, Subpart IIII (40 CFR 60.4200 4219).
- 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) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
    - a. Any exceedences of the 100 hours per year limitation per emission unit on nonemergency operating hours; and
    - Any exceedences of the rolling, 12-month emissions limitations for NMHC+NO<sub>x</sub>, CO, PE/PM<sub>10</sub>/PM<sub>2.5</sub>, SO<sub>2</sub>, H<sub>2</sub>SO<sub>4</sub> and CO<sub>2</sub>e, calculated pursuant to the equations in f)(1) below.

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

- (3) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than ultra-low sulfur diesel fuel with a sulfur content of less than 15 ppm (0.0015 percent by weight) was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
- (4) See 40 CFR Part 60, Subpart IIII (40 CFR 60.4200 4219).



### f) Testing Requirements

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

NMHC+NO<sub>x</sub> emissions shall not exceed 6.40 g/kW-hour, 24.71 pounds per hour and 1.24 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the short-term emissions limitations shall be based on the manufacturer's certification to the standards applicable to this emissions unit and by maintaining the engine according to the manufacturer's specifications. See f(2) below.

Compliance with the rolling, 12-month emissions limitation shall be demonstrated based on the following calculation:

NMHC+NO<sub>x</sub> (tons per rolling, 12-month period) =  $(1 + 1)^{-1}$ 

hours of operation per rolling, 12-month period, as recorded in d)(1) X NMHC+NO<sub>x</sub> emissions limitation, in pounds per hour X 1 ton/2,000 pounds

b. Emissions Limitations:

CO emissions shall not exceed 3.5 g/kW-hour, 12.64 pounds per hour and 0.63 ton per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the short-term emissions limitations shall be based on the manufacturer's certification to the standards applicable to this emissions unit and by maintaining the engine according to the manufacturer's specifications. See f(2) below.

Compliance with the rolling, 12-month emissions limitation shall be demonstrated based on the following calculation:

CO (tons per rolling, 12-month period) =

hours of operation per rolling, 12-month period, as recorded in d)(1) X CO emissions limitation, in pounds per hour X 1 ton/2,000 pounds

c. <u>Emissions Limitations:</u>

PE and emissions of  $PM_{10}$  and  $PM_{2.5}$  shall not exceed 0.20 g/kW-hour, 0.73 pound per hour and 0.037 ton per rolling, 12-month period.



## Applicable Compliance Method:

Compliance with the short-term emissions limitations shall be based on the manufacturer's certification to the standards applicable to this emissions unit and by maintaining the engine according to the manufacturer's specifications. See f(2) below.

Compliance with the rolling, 12-month emissions limitation shall be demonstrated based on the following calculation:

 $PE/PM_{10}/PM_{2.5}$  (tons per rolling, 12-month period) =

hours of operation per rolling, 12-month period, as recorded in d)(1) X  $PE/PM_{10}/PM_{2.5}$  emissions limitation, in pound per hour X 1 ton/2,000 pounds

d. <u>Emissions Limitations:</u>

 $H_2SO_4$  emissions shall not exceed 0.00011 pound per million Btu, 0.0016 pound per hour and 0.000079 ton per rolling, 12-month period.

Applicable Compliance Method:

The short-term emissions limitations were established based upon burning of ULSD fuel with a sulfur content of less than 15 ppm (0.0015 percent by weight).

If required,  $H_2SO_4$  emissions shall be determined according to test Methods 1 - 4, and 15 as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPAapproved test methods may be used with prior approval from Ohio EPA, Southeast District Office, including fuel sulfur sampling in lieu of stack sampling.

Compliance with the rolling, 12-month emissions limitation shall be demonstrated based on the following calculation:

 $H_2SO_4$  (tons per rolling, 12-month period) =

hours of operation per rolling, 12-month period, as recorded in d)(1) X  $H_2SO_4$  emissions limitation, in pound per hour X 1 ton/2,000 pounds

e. <u>Emissions Limitation:</u>

CO<sub>2</sub>e emissions shall not exceed 116.8 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the rolling, 12-month emissions limitation shall be demonstrated based on the following calculation:

 $CO_2e$  (tons per rolling, 12-month period) =



hours of operation per rolling, 12-month period, as recorded in d)(1) X CO<sub>2</sub>e emissions factor of 2,336 pounds per hour, calculated from the emissions factors from 40 CFR Part 98, Tables C-1 and C-2 and global warming potentials in 40 CFR Part 98, Table A-1 X 1 ton/2,000 pounds

f. <u>Emissions Limitations:</u>

Exhaust opacity from CI RICE must not exceed:

20 percent during the acceleration mode;15 percent during the lugging mode; and50 percent during the peaks in either the acceleration or lugging modes.

# Applicable Compliance Method:

If required, visible PE shall be determined according to USEPA Method 9. See f(2) below.

- (2) Pursuant to 40 CFR 60.4211(g)(3) and 89.113(b), if the permittee does not install, configure, operate and maintain this emissions unit according to the manufacturer's emission-related written instructions, or if the permittee changes emission-related settings in a way that is not permitted by the manufacturer, compliance must be demonstrated by conducting performance tests in accordance with the following requirements:
  - a. An initial performance test shall be performed to demonstrate compliance with the mass emissions limitations in b)(1)a. and g. for NO<sub>X</sub>+NMHC, CO, PE/PM<sub>10</sub>/PM<sub>2.5</sub> and exhaust opacity within one year of startup, or within one year after the emissions unit is no longer installed, configured, operated and maintained in accordance with the manufacturer's emission-related written instructions, or within one year after the permittee changes emission-related settings in a way not permitted by the manufacturer. Thereafter, subsequent performance testing must be conducted every 8,760 hours of engine operation or three years, whichever comes first.
  - b. The test method(s) in 40 CFR 60.4212 shall be employed to demonstrate compliance with the allowable mass emission rates. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
  - c. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southeast District Office. 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, Southeast District Office's refusal to accept the results of the emission test(s).
  - d. Personnel from the Ohio EPA, Southeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and



information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

- e. A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southeast District Office 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 Ohio EPA, Southeast District Office.
- g) Miscellaneous Requirements
  - (1) None.



## 3. **P002**, Emergency Diesel Fire Pump Engine

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

700 hp emergency diesel-fired fire pump to provide on-site firefighting capabilities independent of the utility grid

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (1) b)(1)c. and b)(2)e.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures	
a.	OAC rules 3745-31-10 through 3745-31-20 and 3745-31-34	Nonmethane hydrocarbons plus nitrogen oxides (NMHC+NO <sub>x</sub> ) emissions shall not exceed 4.0 g/kW-hour, 4.97 pounds per hour and 0.25 ton per rolling, 12-month period.	
		Carbon monoxide (CO) emissions shall not exceed 3.5 g/kW-hour, 4.01 pounds per hour and 0.20 ton per rolling, 12- month period.	
		Particulate emissions (PE), emissions of particulate matter less than 10 microns ( $PM_{10}$ ) and emissions of particulate matter less than 2.5 microns ( $PM_{2.5}$ ) shall not exceed 0.20 g/kW-hour, 0.23 pound per hour and 0.012 ton per rolling, 12-month period.	
		Sulfuric acid (H <sub>2</sub> SO <sub>4</sub> ) emissions shall not exceed 0.00011 lb/MMBtu, 0.00054 pound per hour and 0.000027 ton per rolling, 12-month period.	
		Carbon dioxide equivalent (CO <sub>2</sub> e) emissions shall not exceed 40.1 tons per rolling, 12-month period. See b)(2)ac. below.	



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(A)(3), as effective 6/30/08	The emissions limitations for NO <sub>x</sub> , CO, volatile organic compound (VOC), PE/PM <sub>10</sub> /PM <sub>2.5</sub> and SO <sub>2</sub> required by this rule are equivalent to the emissions limitations for NO <sub>x</sub> , CO, VOC, PE/PM <sub>10</sub> /PM <sub>2.5</sub> and SO <sub>2</sub> established pursuant to OAC rules 3745-31-10 through 3745-31-20.
		Best Available Technology (BAT) requirements under OAC rule $3745-31-05(A)(3)$ do not apply to the CO <sub>2</sub> e emissions from this air contaminant source pursuant to OAC rule $3745-31-34(E)(8)$ .
		See b)(2)d. and c)(1) below.
С.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 6/30/08	BAT requirements under OAC rule 3745- 31-05(A)(3) do not apply to the NO <sub>x</sub> , VOC, CO, PE/PM <sub>10</sub> /PM <sub>2.5</sub> and SO <sub>2</sub> emissions from this air contaminant source since the calculated annual emission rates are less than 10 tons/year taking into account the federally enforceable limits in OAC rules 3745-31- 10 through 20 and 40 CFR Part 60, Subpart IIII.
		See b)(2)e. below.
a.	OAC rule 3745-17-07(A)	Visible PE from any stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
e.	OAC rule 3745-17-11(B)	The emission limitation required by this rule is less stringent than the emissions limitation for PE established pursuant to OAC rules 3745-31-10 through 20.
f.	OAC rule 3745-18-06	Exempt pursuant to OAC rule 3745-18- 06(B) since the rated heat input capacity is equal to, or less than, ten MMBtu/hour.
g.	OAC rule 3745-110-03	Exempt pursuant to OAC rule 3745-110- 03(K)(3) because this emissions unit is a stationary IC engine with an energy output capacity of less than two thousand horsepower.
h.	40 CFR 60, Subpart IIII (40 CFR 60,4200 – 4219)	The emissions limitations for NMHC+NO <sub>x</sub> , CO. $PE/PM_{10}/PM_{25}$ and SO <sub>2</sub> required by
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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures	
	[In accordance with 40 CFR 60.4200(a)(2)(ii) and 60.4205(c), this emissions unit is a 410 HP certified fire pump compression ignition (CI) internal combustion engine (ICE) manufactured after July 1, 2006 with a displacement of less than 30 liters per cylinder subject to the emissions limitations/control measures	this rule are equivalent to the emissions limitations for NMHC+NO <sub>x</sub> , CO, PE/PM <sub>10</sub> /PM <sub>2.5</sub> and SO <sub>2</sub> established pursuant to OAC rules 3745-31-10 through 3745-31-20. [40 CFR 60.4205(c) and Table 4 to 40 CFR Part 60, Subpart IIII, and 40 CFR 60.4207(b) and 40 CFR 80.510(b)]]	
i.	specified in this section.] 40 CFR 60.1 – 19 (40 CFR 60.4218)	See b)(2)f. and c)(1) and (2) below. Table 8 of Subpart IIII of 40 CFR Part 60 – Applicability of General Provisions to Subpart IIII, specifies the provisions of Subpart A that apply to owners and operators of affected facilities subject to this subpart.	
j.	40 CFR 63, Subpart ZZZZ (40 CFR 63.6580 – 6675) [In accordance with 40 CFR 63.6585, 63.6590(a)(2)(ii) and 63.6590(c)(6), this emissions unit is an emergency stationary reciprocating internal combustion engine (RICE) with a site rating of less than 500 brake HP located at an area source of hazardous air pollutant (HAP) emissions for which construction commenced after June 12, 2006.]	Compliance with Subpart IIII of 40 CFR Part 60 demonstrates compliance with Subpart ZZZZ of 40 CFR Part 63. [40 CFR 63.6590(c)(i)]	

- (2) Additional Terms and Conditions
  - a. As part of the Best Available Control Technology (BACT) determination for NMHC+NO<sub>x</sub> CO and PE/PM<sub>10</sub>/PM<sub>2.5</sub>, this emissions unit shall be certified to the meet the emissions standards in Table 4 of 40 CFR Part 60, Subpart IIII, shall employ good combustion practices per the manufacturer's operating manual, and shall not operate more than 100 hours per year of non-emergency use. Compliance with these requirements shall be demonstrated by compliance with the short-term NO<sub>x</sub>, NMHC, CO and PE/PM<sub>10</sub>/PM<sub>2.5</sub> emission limitations in b)(1)a.
  - b. As part of the BACT determination for  $H_2SO_4$ , the permittee shall burn only ultralow sulfur diesel (ULSD) fuel with a sulfur content of less than 15 ppm (0.0015 percent by weight) in this emissions unit. Compliance with this requirement shall be demonstrated by compliance with the  $H_2SO_4$  emissions limitations in b)(1)a.



- c. As part of the BACT determination for CO<sub>2</sub>e, the permittee must implement good operating practices (proper maintenance and operation) and shall not operate more than 100 hours per year of non-emergency use. Compliance with these requirements shall be demonstrated by compliance with the CO<sub>2</sub>e emissions limitation in b)(1)a.
- d. This BAT emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- e. This rule applies once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.
- f. The permittee must comply with the applicable emission and operating limitations of 40 CFR Part 60, Subpart IIII upon startup.
- c) Operational Restrictions
  - (1) The quality of diesel fuel burned in this emissions unit shall meet the following U.S. EPA's specifications for ULSD found in 40 CFR 80.510(b), on an 'as received' basis:
    - a. Sulfur content: 15 ppm maximum (0.0015% by weight).
    - b. Cetane index or aromatic content:
      - i. A minimum cetane index of 40; or
      - ii. A maximum aromatic content of 35 volume percent.
  - (2) See 40 CFR Part 60, Subpart IIII (40 CFR 60.4200 4219).
- d) Monitoring and/or Recordkeeping Requirements
  - (1) The permittee shall maintain records of the following information each month:
    - a. the hours of non-emergency operation for this emissions unit; and
    - b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the non-emergency operating hours for this emissions unit.
  - (2) For each day during which the permittee burns a fuel other than USLD fuel with a sulfur content of less than 15 ppm (0.0015 percent by weight), the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
  - (3) The permittee shall maintain documents provided by the oil supplier for each shipment of No. 2 fuel oil to demonstrate compliance with the ULSD requirements. These documents must include the receipt or bill of lading that includes confirmation that the fuel meets the No. 2 diesel fuel ULSD standards.



- (4) See 40 CFR Part 60, Subpart IIII (40 CFR 60.4200 4219).
- e) Reporting Requirements
  - (1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
    - a. Any exceedences of the 100 hours per year limitation per emission unit on nonemergency operating hours; and
    - b. Any exceedences of the rolling, 12-month emissions limitations for NMHC+NO<sub>x</sub>, CO, PE/PM<sub>10</sub>/PM<sub>2.5</sub>, H<sub>2</sub>SO<sub>4</sub> and CO<sub>2</sub>e, calculated pursuant to the equations in f)(1) below.

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

- (2) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than ultra-low sulfur diesel fuel with a sulfur content of less than 15 ppm (0.0015 percent by weight) was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
- (3) See 40 CFR Part 60, Subpart IIII (40 CFR 60.4200 4219).
- f) Testing Requirements
  - (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
    - a. <u>Emissions Limitations:</u>

NMHC+NO<sub>x</sub> emissions shall not exceed 4.0 g/kW-hour, 4.97 pounds per hour and 0.25 ton per rolling, 12-month period.

## Applicable Compliance Method:

Compliance with the short-term emissions limitations shall be based on the manufacturer's certification to the standards applicable to this emissions unit and by maintaining the engine according to the manufacturer's specifications. See f(2) below.

Compliance with the rolling, 12-month emissions limitation shall be demonstrated based on the following calculation:

NMHC+NO<sub>x</sub> (tons per rolling, 12-month period) =

hours of operation per rolling, 12-month period, as recorded in d)(1)(b) X NMHC+  $NO_x$  emissions limitation, in pounds per hour X 1 ton/2,000 pounds



b. <u>Emissions Limitations:</u>

CO emissions shall not exceed shall not exceed 3.5 g/kW-hour (2.6 g/HP-hour), 4.01 pounds per hour and 0.20 ton per rolling, 12-month period.

### Applicable Compliance Method:

Compliance with the short-term emissions limitations shall be based on the manufacturer's certification to the standards applicable to this emissions unit and by maintaining the engine according to the manufacturer's specifications. See f(2) below.

Compliance with the rolling, 12-month emissions limitation shall be demonstrated based on the following calculation:

CO (tons per rolling, 12-month period) =

hours of operation per rolling, 12-month period, as recorded in d)(1)(b) X CO emissions limitation, in pounds per hour X 1 ton/2,000 pounds

c. <u>Emissions Limitations:</u>

PE and emissions of  $PM_{10}$  and  $PM_{2.5}$  shall not exceed 0.20 g/kW-hour, 0.23 pound per hour and 0.012 ton per rolling, 12-month period.

#### Applicable Compliance Method:

Compliance with the short-term emissions limitations shall be based on the manufacturer's certification to the standards applicable to this emissions unit and by maintaining the engine according to the manufacturer's specifications. See f(2) below.

Compliance with the rolling, 12-month emissions limitation shall be demonstrated based on the following calculation:

 $PE/PM_{10}/PM_{2.5}$  (tons per rolling, 12-month period) =

hours of operation per rolling, 12-month period, as recorded in d)(1)(b) X  $PE/PM_{10}/PM_{2.5}$  emissions limitation, in pounds per hour X 1 ton/2,000 pounds

d. <u>Emissions Limitations:</u>

 $H_2SO_4$  emissions shall not exceed 0.00011 pound per million Btu, 0.00054 pound per hour and 0.000027 ton per rolling, 12-month period.

#### Applicable Compliance Method:

The short-term emissions limitations were established based upon burning of ULSD fuel with a sulfur content of less than 15 ppm (0.0015 percent by weight).



If required,  $H_2SO_4$  emissions shall be determined according to test Methods 1 - 4, and 15 as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPAapproved test methods may be used with prior approval from Ohio EPA, Southeast District Office, including fuel sulfur sampling in lieu of stack sampling.

Compliance with the rolling, 12-month emissions limitation shall be demonstrated based on the following calculation:

 $H_2SO_4$  (tons per rolling, 12-month period) =

hours of operation per rolling, 12-month period, as recorded in d)(1)(b) X  $H_2SO_4$  emissions limitation, in pound per hour X 1 ton/2,000 pounds

e. <u>Emissions Limitation:</u>

CO<sub>2</sub>e emissions shall not exceed 40.1 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the rolling, 12-month emissions limitation shall be demonstrated based on the following calculation:

 $CO_2e$  (tons per rolling, 12-month period) =

hours of operation per rolling, 12-month period, as recorded in d)(1)(b) X  $CO_2e$  emissions factor of 799 pounds per hour, calculated from the emissions factors from 40 CFR Part 98, Tables C-1 and C-2 and global warming potentials in 40 CFR Part 98, Table A-1 X 1 ton/2,000 pounds

f. <u>Emissions Limitation:</u>

Visible PE from any stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.

#### Applicable Compliance Method:

If required, visible PE shall be determined according to USEPA Method 9.

- (2) Pursuant to 40 CFR 60.4211(g)(2), if the permittee does not install, configure, operate and maintain this emissions unit according to the manufacturer's emission-related written instructions, or if the permittee changes emission-related settings in a way that is not permitted by the manufacturer, compliance must be demonstrated by conducting the initial performance test in accordance with the following requirements:
  - a. An initial performance test shall be performed to demonstrate compliance with the mass emissions limitations in b)(1)a. and g. for NMHC+NO<sub>X</sub>, CO and PE/PM<sub>10</sub>/PM<sub>2.5</sub>, within one year of startup, or within one year after the emissions unit is no longer installed, configured, operated and maintained in accordance with the manufacturer's emission-related written instructions, or within one year



after the permittee changes emission-related settings in a way not permitted by the manufacturer.

- b. The test method(s) in 60.4212 shall be employed to demonstrate compliance with the allowable mass emission rates. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
- c. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southeast District Office. 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, Southeast District Office's refusal to accept the results of the emission test(s).
- d. Personnel from the Ohio EPA, Southeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- e. A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southeast District Office 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 Ohio EPA, Southeast District Office.
- g) Miscellaneous Requirements
  - (1) None.



### 4. P003, Wet Mechanical Draft Cooling Tower

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

8-cell wet cooling tower with a maximum circulating water flow rate of 120,000 gallons per minute (gpm), equipped with a high efficiency drift eliminator.

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (1) None.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-10 through 3745- 31-20	Best Available Control Technology (BACT) for particulate emissions (PE), particulate matter 10 microns or less in size (PM <sub>10</sub> ) and particulate matter 2.5 microns or less in size (PM <sub>2.5</sub> ).
с.	OAC rule 3745-31-05(A)(3)	See b)(2)b. and b)(2)c.
	June 30, 2008	
d.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)d. and b)(2)e.
	June 30, 2008	
e.	OAC rule 3745-17-11	See b)(2)f.
f.	OAC rule 3745-17-07(A)	See b)(2)g.

- (2) Additional Terms and Conditions
  - a. The permittee shall employ BACT for this emissions unit. BACT has been determined to be the following:
    - i. for total emissions of particulate matter (PE, PM<sub>10</sub>, and PM<sub>2.5</sub>) for all 8 cells:
      - (a) use of high efficiency drift eliminator designed to achieve a 0.0005% drift rate;



- (b) maintenance of a total dissolved solids (TDS) content not to exceed 5,000 mg/l in the circulating cooling water based on a rolling 12-month average;
- (c) 6.58 tons PE per rolling 12-month period;
- (d) 4.24 tons  $PM_{10}$  per rolling 12-month period; and
- (e) 1.58 ton PM<sub>2.5</sub> per rolling 12-month period.
- b. BAT requirements for PE,  $PM_{10}$  and  $PM_{2.5}$  under OAC rule 3745-31-05(A)(3) have been determined to be compliance with the emission limitations and requirements established pursuant to OAC rule 3745-31-10 through 3745-31-20.
- c. This BAT emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- d. The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to emissions of PE/PM<sub>10</sub>/PM<sub>2.5</sub>, from this air contaminant source since the potential to emit is less than 10 tons/year (taking into account the federally enforceable BACT requirements when applicable). It should be noted that emissions of PE are not subject to BAT under OAC rule 3745-31-05(A)(3).
- e. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.
- f. This emissions unit is not subject to the "restrictions on particulate emissions from industrial processes" contained in OAC rule 3745-17-11. Particulate matter emitted from the cooling tower is not measurable by applicable test methods in 40 CFR Part 60, Appendix A and therefore the emissions of particulate matter do not meet the definition of "Particulate emissions" in OAC rule 3745-17-01.
- g. This emissions unit is exempt from the visible emission limitation specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.
- c) Operational Restrictions
  - (1) None.
- d) Monitoring and/or Recordkeeping Requirements
  - (1) The permittee shall measure the TDS content (in mg/l) of the circulating cooling water on a monthly basis using EPA Method 160.1. Other methods may be used upon approval from Ohio EPA.
  - (2) The permittee shall maintain monthly records of the following information for the circulating cooling water:



- a. the monthly TDS content, in mg/l;
- b. the average TDS content, in mg/l, based on a rolling, 12-month average; and.
- c. the average PE,  $PM_{10}$ , and  $PM_{2.5}$  content, in tons, based on a rolling, 12-month average.
- 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) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
    - a. any record which shows that the average TDS content of the circulating cooling water exceeds 5,000 mg/l (based on a rolling, 12-month average)
    - b. any record which shows an exceedance of PE, PM10, and PM2.5 emissions limits as specified in b(2)(a)(i)(c), b(2)(a)(i)(d), and b(2)(a)(i)(e), respectively.

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

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

Annual emissions shall not exceed:

PE- 6.58 tons per rolling 12-month period;

 $PM_{10}$  – 4.24 tons per rolling 12-month period; and

 $PM_{2.5}$  – 1.58 ton per rolling 12-month period.

Applicable Compliance Method:

Compliance with the annual emission limitation is demonstrated based upon the following calculation:

$$Ei = (0.000005) \left(\frac{\% \text{DMi}}{100}\right) \left(\frac{5,000}{1,000,000}\right) \left(\frac{8.34 \text{ lbs}}{gal}\right) \left(\frac{7.2 \text{ MMgal}}{hour}\right) \left(\frac{8,760 \text{ }hrs}{\text{ year }*}\right) \left(\frac{Ton}{2,000 \text{ lbs}}\right)$$

Where:



 $E_i$  = total tons of particulate matter per rolling 12-month period, i (i = PE, PM\_{10}, PM\_{2.5})

0.000005 = maximum drift loss of 0.0005%

 $%DM_i$  = percent of total drift mass<sup>\*\*</sup> for particulate size i

 $%DM_i = 100\%$  for total particulate emissions (PE)

 $\text{\%}DM_i = 64.4\%$  for emissions of PM<sub>10</sub>

 $\text{\%}DM_i = 24.0\%$  for emissions of  $PM_{2.5}$ 

5,000 = maximum TDS content in mg/l in circulating cooling water.

8.34 lbs/gal = density of water.

7.2 MMgal/hour = maximum cooling water recirculation rate.

8,760 hrs/yr = maximum annual operating schedule in rolling 12-month period.

\*year = rolling 12-month period.

\*\*The percent mass of the total drift for  $PM_{10}$  and  $PM_{2.5}$  was determined by "Calculating Realistic PM10 emission from Cooling Towers", Joel Reisman and Gordon Frisbie, Greystone Environmental Consultants, Sacramento, CA (July 2002).

If required, the permittee shall submit a testing proposal that will demonstrate that the maximum drift loss does not exceed 0.0005%.

- g) Miscellaneous Requirements
  - (1) None.



## 5. P004, General Electric Combustion Turbine

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

General Electric model 7HA.02 natural gas or natural gas+ethane fired combined cycle combustion turbine generator equipped with dry low-NO<sub>x</sub> (DLN) burners nominally rated at 3,544 MMBtu/hr at 100% load and -5° F exhausting through a heat recovery steam generator (HRSG) controlled with catalytic oxidation and selective catalytic reduction (SCR) used to generate additional electricity.

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
  - (1) None.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
а.	OAC rules 3745-31-10 through 3745-31-20 and 3745-31-34	Emissions Limits
		Nitrogen oxides $(NO_x)$ emissions shall not exceed 2.0 ppmvd at 15% oxygen $(O_2)$ and 26.1 pounds per hour, excluding periods of startup and shutdown.
		Carbon monoxide (CO) emissions shall not exceed 2.0 ppmvd at $15\% O_2$ and 15.9 pounds per hour, excluding periods of startup and shutdown.
		Volatile organic compound (VOC) emissions shall not exceed 1.0 ppmvd at $15\%$ O <sub>2</sub> and 4.54 pounds per hour, excluding periods of startup and shutdown.
		Particulate emissions (PE) and emissions of particulate matter with a diameter less than 10 microns ( $PM_{10}$ ) and particulate matter less than 2.5 microns ( $PM_{2.5}$ ) shall not exceed 0.0036 lb/MMBtu and 12.1 pounds per hour.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Sulfuric acid (H <sub>2</sub> SO <sub>4</sub> ) emissions shall not exceed 0.0011 pound/MMBtu and 3.78 pounds per hour.
		Carbon dioxide equivalent (CO <sub>2</sub> e) emissions shall not exceed 775 lb/MW-hr gross energy output at full load ISO conditions when firing natural gas. Gross energy output is defined as the gross power output of the generators before accounting for any balance of plant loads.
		Visible PE from the stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average.
		Rolling, Limitations:12-MonthEmissions125.8 tons of NOx per rolling, period, including start-up and shutdown emissions.12-month
		123.8 tons of CO emissions per rolling, 12-month period, including start-up and shutdown emissions.
		26.4 tons of VOC emissions per rolling, 12-month period, including start-up and shutdown emissions.
		53.0 tons of PE/PM $_{10}$ /PM $_{2.5}$ per rolling, 12-month period.
		16.56 tons of $H_2SO_4$ emissions per rolling, 12-month period.
		1,915,689 tons of CO <sub>2</sub> e emissions per rolling, 12-month period.
		See b)(2)ae.
b.	ORC 3704.03(T) and OAC rule 3745-31-05(A)(3)	The emissions limitations for NO <sub>x</sub> , CO, VOC, and PE/PM <sub>10</sub> /PM <sub>2.5</sub> required by this rule are equivalent to the emissions limitations for NO <sub>x</sub> , CO, VOC, and PE/PM <sub>10</sub> /PM <sub>2.5</sub> established pursuant to OAC rules 3745-31-10 through 3745-31-20.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
C.	OAC rules 3745-17-07(A) and 3745- 17-11(B)(4) (Turbine)	The PE limitations specified by these rules are less stringent than the limitations established pursuant to OAC rules 3745-31-10 through 3745-31-20.
d.	OAC rule 3745-18-06(F)	Exempt pursuant to OAC rule 3745-18- 06(A) since only natural gas and a natural gas and ethane mixture is burned in this emissions unit.
e.	40 CFR Part 75 and OAC Chapter 3745-103	See b)(2)f. below.
f.	OAC rule 3745-110-03	Exempt pursuant to OAC rule $3745-110-03(K)(20)$ because this emissions unit is subject to BACT requirements for NO <sub>x</sub> emissions.
g.	40 CFR Part 60, Subpart KKKK (40 CFR 60.4300 – 60.4420) [In accordance with 40 CFR 60.4300 and 60.4305(a), this emissions unit is a stationary combustion turbine with a heat input at peak load (HHV) equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, based on the higher heating value of the fuel, that commenced construction, modification, or reconstruction after February 18, 2005, subject to the emissions limitations/control measures specified in this section.]	NO <sub>x</sub> emissions from new combustion turbines firing natural gas with heat input capacities at peak load (HHV) greater than 850 MMBtu/hr shall not exceed 15 ppm at 15% O <sub>2</sub> or 54 ng/J of useful output (0.43 lb/MWh). [40 CFR 60.4320(a) and Table 1 of 40 CFR Part 60, Subpart KKKK] SO <sub>2</sub> emissions from the turbine must not exceed 0.90 lb/MWh of gross output, or, fuels burned in the turbine must not contain sulfur in concentrations which would result in potential sulfur emissions in excess of 0.060 lb SO <sub>2</sub> /MMBtu heat input. [40 CFR 60.4330(a)]
h.	40 CFR Part 60, Subpart TTTT (40 CFR 60.5508 – 60.5580) [In accordance with 40 CFR 60.5508 and 60.5509(a), this emissions unit is a stationary combustion turbine (EGU) that commenced construction after June 18, 2014 and has a base load rating greater than 250 MMBtu/hour and serving a generator capable of selling greater than 25 MW of electricity to a utility power distribution system, subject to the emissions limitations/control measures specified in this section.]	Carbon dioxide (CO <sub>2</sub> ) emissions shall not exceed 450 kg per MW-h of gross energy output (1,000 lbs/MW-h) on a 12- operating-month rolling average basis, or, if a petition is granted, CO <sub>2</sub> emissions shall not exceed 470 kg per MW-h of net energy output (1,030 lbs/MW-h) on a 12- operating- month rolling average basis. [40 CFR 60.5520(a)-(c) and Table 2 of 40 CFR Part 60, Subpart TTTT]



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
i.	40 CFR Part 60, Subpart A (40 CFR 60.1 – 60.19)	General Provisions
		Table 3 of 40 CFR Part 60, Subpart TTTT shows which parts of the General Provisions in 40 CFR 63.1 through 19 do not apply. [40 CFR 60.5570 and Table 3 of 40 CFR Part 60, Subpart TTTT)

- (2) Additional Terms and Conditions
  - a. As part of the Best Available Control Technology (BACT) determination for NO<sub>x</sub>, the permittee shall install and maintain dry low NO<sub>x</sub> burners and an SCR system on this emissions unit. Operation of these control systems shall reduce NO<sub>x</sub> emissions to the limitations specified in b)(1)a.
  - b. As part of the BACT determination for CO and VOC, the permittee shall install and operate an oxidation catalyst and shall operate the emissions unit in accordance with good combustion practices as recommended by the manufacturer to ensure compliance with the CO and VOC limitations specified in b)(1)a.
  - c. As part of the BACT determination for visible PE,  $PM/PM_{10}/PM_{2.5}$  and  $H_2SO_4$  emissions, the permittee shall burn only natural gas and a natural gas and ethane mixture (as specified in b)(1)) in this emissions unit to ensure compliance with the  $PM/PM_{10}/PM_{2.5}$ ,  $SO_2$  and  $H_2SO_4$  limitations specified in b)(1)a.
  - d. As part of the BACT determination for CO<sub>2</sub>e, the permittee shall operate the emissions unit using high efficiency combustion practices as recommended by the manufacturer to ensure compliance with the CO<sub>2</sub>e limitations specified in b)(1)a.
  - e. The permittee shall comply with the following requirements during periods of startup and shutdown.

	Emissions Limitations During Startup and Shutdown (Ibs/hr) <sup>a</sup>			
	Cold Startup	Warm Startup	Hot Startup	Shutdown
NO <sub>x</sub>	164.5	109.7	87.4	27.9
CO	877.0	145.3	130.6	137.7
VOC	78.1	11.5	12.0	29.6
<sup>a</sup> Pound per hour emissions rates as presented are the maximum rates during				



	Emissions Lim	nitations Dur (Ibs/	ing Startup and /hr)ª	Shutdown
	Cold Startup	Warm Startup	Hot Startup	Shutdown
any hour during th	e event from each	n unit.		

Operating modes of the combined cycle combustion turbine are defined as follows:

Operating Mode	Definition	
Cold Startup	When the combustion turbine has been shut down for more than 72 hours	
Warm Startup	When the combustion turbine has been shut down for a period from 8 to 72 hours	
Hot Startup	When the combustion turbine has been shut down for less than 8 hours	
Steady-state	When the load is between approximately 40% and 100%.	
Shutdown	Begins when the first CEM data point out of compliance with either the CO or NO <sub>x</sub> ppmvd emission limit that occurs after load is reduced below Steady-state in conjunction with the process of ceasing operation of the unit, and ends when fuel flow to the turbine ceases.	

- f. The permittee is subject to the requirements of OAC Chapter 103 and 40 CFR Parts 72 and 75 concerning acid rain, so the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.
- g. The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.
- h. Each continuous NO<sub>x</sub> monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) shall be certified to meet the requirements of 40 CFR Part 60 and 40 CFR Part 75, Appendix B and Performance Specifications 2, 3 and 6. At least 45 days before commencing certification testing of the continuous NO<sub>x</sub> monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of NO<sub>x</sub> and  $CO_2$  or  $O_2$  emissions from the continuous monitor(s), in units of the applicable standard(s). The fuel flow monitor/meter shall be maintained as required in Part 75, Appendix D. Except as allowed



below, the plan shall follow the requirements of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous  $NO_x$  monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct relative accuracy test audits for the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) in accordance with the frequencies required pursuant to 40 CFR Part 60 and 40 CFR Part 75; or may follow relative accuracy test audit frequency requirements for monitoring systems subject to 40 CFR 75, Appendix B, in lieu of frequencies required in 40 CFR Part 60. In either case, results shall be recorded and reported in units of the applicable standard(s) in accordance with 40 CFR Part 60.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits pursuant to 40 CFR Part 60, and linearity checks pursuant to 40 CFR Part 75; however, linearity checks completed pursuant to 40 CFR Part 75, Appendix B, may be substituted for the quarterly cylinder gas or relative accuracy audits required per 40 CFR Part 60.

i. Each continuous CO monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 3, 4 or 4a and 6. At least 45 days before commencing certification testing of the continuous CO monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of CO and  $CO_2$  or  $O_2$  emissions from the continuous monitor(s), in units of the applicable standard(s). The fuel flow monitor/meter shall be maintained as required in Part 75, Appendix D. Except as allowed below, the plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system (including the associated continuous CO monitoring system) must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct relative accuracy test audits for the continuous CO monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) in accordance with the frequencies required for monitoring systems subject to 40 CFR 60, or may follow relative accuracy test audit frequency requirements for monitoring systems subject to 40 CFR 75, Appendix B. In either case, results shall be recorded and reported in units of the applicable standard(s) in accordance with 40 CFR Part 60.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; however, the quarterly cylinder gas audit and relative accuracy audit frequency requirements may be adjusted to coincide with linearity checks completed for continuous emissions monitoring systems subject to 40 CFR Part 75, Appendix B requirements.

j. See 40 CFR Part 60, Subpart TTTT (40 CFR 60.5508 – 60.5580).



- c) Operational Restrictions
  - (1) The permittee shall burn only pipeline quality natural gas and a natural gas and ethane mixture with a maximum sulfur content not exceed 0.50 grain/100 scf in this emissions unit.
  - (2) Except during periods of startup, the SCR system for this emissions unit shall be in operation at all times, including during the shutdown of the unit.
  - (3) In accordance with good engineering practices, the SCR unit shall be operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The permittee shall maintain on site a copy of the operation and maintenance manual, as provided by the manufacturer.
  - (4) See 40 CFR Part 60, Subpart KKKK (40 CFR 60.4300 60.4420).
  - (5) See 40 CFR Part 60, Subpart TTTT (40 CFR 60.5508 60.5580).
- d) Monitoring and/or Recordkeeping Requirements
  - (1) For each day during which the permittee burns a fuel other than pipeline quality natural gas with a maximum sulfur content of 0.5 grain/100 scf, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
  - (2) The permittee shall maintain monthly records of the following information for this emissions unit:
    - a. the hours of operation of the combustion turbine in each operating mode;
    - b. the amount of gaseous fuel consumed in this emissions unit, in MMscf;
    - c. the heat content of the gaseous fuel combusted in this emissions unit, in MMBtu/MMscf;
    - d. the sulfur content of the gaseous fuel combusted in this emissions unit, in gr/dscf;
    - e. the total NO<sub>x</sub> emissions for this emissions unit, in pounds, as recorded in d)(4)b.;
    - f. the total CO emissions, in pounds, as recorded in d)(7)b.;
    - g. the total VOC emissions, in pounds, including startup/shutdown emissions, for this emissions unit, calculated by multiplying the VOC emissions factor of 0.0013 lb/MMBtu, or after testing has been completed, the results of the most recent stack test, by the amount of gaseous fuel consumed, including periods of startup/shutdown, as recorded in d)(2)b. and the heat content of the natural gas consumed, as recorded in d)(2)c.;
    - h. the total PE/PM<sub>10</sub>/PM<sub>2.5</sub> emissions, in pounds, including startup/shutdown emissions, for this emissions unit, calculated by multiplying the emissions factor of 0.0036 lb/MMBtu, or after testing has been completed, the results of the most recent stack test, by the amount of gaseous fuel consumed, including periods of



startup/shutdown, as recorded in d)(2)b. and the heat content of the natural gas consumed, as recorded in d)(2)c.;

- the total H<sub>2</sub>SO<sub>4</sub> emissions, in pounds, including startup/shutdown emissions, for this emissions unit, calculated by multiplying the emissions factor of 0.0011 lb/MMBtu, or after testing has been completed, the results of the most recent stack test, by the amount of gaseous fuel consumed, including periods of startup/shutdown, as recorded in d)(2)b. and the heat content of the natural gas consumed, as recorded in d)(2)c.;
- j. the total CO<sub>2</sub>e emissions, in pounds, including startup/shutdown emissions, for this emissions unit, calculated by multiplying the CO<sub>2</sub>e emissions factor of 119.0 lbs/MMBtu when firing natural gas only and 125.1 when firing 25% ethane and linearly scaled when firing intermediate amounts of ethane, by the amount of gaseous fuel consumed, including periods of startup/shutdown, as recorded in d)(2)b. and the heat content of the natural gas consumed, as recorded in d)(2)c.;
- k. the rolling, 12-month summation of the NO<sub>x</sub> emissions, in tons, including startup/shutdown emissions, calculated by adding the total NO<sub>x</sub> emissions for the present month as recorded in d)(2)e., plus the total NO<sub>x</sub> emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds;
- I. The rolling, 12-month summation of the CO emissions, in tons, including startup/shutdown emissions, calculated by adding the total CO emissions for the present month as recorded in d)(2)f., plus the total CO emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds;
- m. The rolling, 12-month summation of the VOC emissions, in tons, including startup/shutdown emissions, calculated by adding the total VOC emissions for the present month as recorded in d)(2)g., plus the total VOC emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds;
- n. The rolling, 12-month summation of the PE/PM<sub>10</sub>/PM<sub>2.5</sub> emissions, in tons, including startup/shutdown emissions, calculated by adding the total PE/PM<sub>10</sub>/PM<sub>2.5</sub> emissions for the present month as recorded in d)(2)h., plus the total PE/PM<sub>10</sub>/PM<sub>2.5</sub> emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds;
- o. The rolling, 12-month summation of the  $H_2SO_4$  emissions, in tons, including startup/shutdown emissions, calculated by adding the total  $H_2SO_4$  emissions for the present month as recorded in d)(2)i., plus the total  $H_2SO_4$  emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds; and
- p. The rolling, 12-month summation of the CO<sub>2</sub>e emissions, in tons, including startup/shutdown emissions, calculated by adding the total CO<sub>2</sub>e emissions for the present month as recorded in d)(2)j., plus the total CO<sub>2</sub>e emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds.



(3) Prior to the installation of the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system), the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specifications 2 and 3. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) meets the requirements of Performance Specifications 2 and 3 and the accuracy requirements of Performance Specification 6.

Following installation, the permittee shall document that the fuel flow monitor/meter meets 40 CFR 75 certification requirements prior to the performance specification test, and shall demonstrate how the pound per hour emissions of NOx is being calculated stoichiometrically. The U.S. EPA shall certify that the continuous NOx monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system) meets the requirements under 40 CFR Part 75, which may be approved through the recommendation for certification by Ohio EPA to U.S. EPA. Once received, the letter(s)/document(s) of certification under Part 60 and certification or recommendation for certification under Part 75 shall be maintain on-site and made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

(4) The permittee shall install, operate and maintain equipment to continuously monitor and record NO<sub>x</sub> and CO<sub>2</sub> or O<sub>2</sub> emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60 and/or Part 75.

The permittee shall maintain records of all data obtained by the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) including, but not limited to:

- a. emissions of NO<sub>x</sub> in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. emissions of  $NO_x$  in pounds per hour and in units of the applicable standard(s) in the appropriate averaging period;
- c. the percent  $CO_2$  or  $O_2$  with each cycle time of the analyzer, with no resolution less than one data point per minute required;
- d. results of quarterly cylinder gas audits or linearity checks;
- e. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- f. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
- g. hours of operation of the emissions unit, continuous NO<sub>x</sub> monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system), and control equipment;



- h. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system);
- i. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system); as well as,
- j. the reason (if known) and the corrective actions taken (if any) for each such event in d)(5)h. and i.

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

- (5) The permittee may operate and maintain equipment to continuously monitor and record the fuel flow rate in order to stoichiometrically calculate emissions of NO<sub>x</sub>, in pounds per hour, as an alternative to conducting Specification 6. Fuel heat content values for each fuel burned, as applied in the stoichiometric calculations, shall also be recorded. The permittee shall maintain records of data obtained by the fuel flow monitor/meter, including the dates and results of each calibration check and the magnitude of calibration adjustments; periods of downtime and malfunction of the fuel flow monitor/meter; as well as, the reason (if known) and the corrective actions taken (if any) for each such event.
- (6) Prior to the installation of the continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system), the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specifications 3 and 4 or 4a (as appropriate). The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous CO monitoring system meets the requirements of Performance Specifications 3 and 4 or 4a and the accuracy requirements of Performance Specification 6.

Following installation, the permittee shall document that the fuel flow monitor/meter meets 40 CFR 75 certification requirements prior to the performance specification test, and shall demonstrate how the pound per hour emissions of CO is being calculated stoichiometrically. Once received, the letter(s)/document(s) of certification shall be maintained on-site and shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

(7) The permittee shall operate and maintain equipment to continuously monitor and record CO and CO<sub>2</sub> or O<sub>2</sub> emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Parts 60.

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to:



- a. emissions of CO in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. emissions of CO in pounds per month;
- c. the percent  $CO_2$  or  $O_2$  with each cycle time of the analyzer, with no resolution less than one data point per minute required;
- d. results of quarterly cylinder gas audits;
- e. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- f. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
- g. hours of operation of the emissions unit, continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system), and control equipment;
- h. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system);
- i. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system); as well as,
- j. the reason (if known) and the corrective actions taken (if any) for each such event in (h) and (i).

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

- (8) The permittee may operate and maintain equipment to continuously monitor and record the fuel flow rate in order to stoichiometrically calculate emissions of CO in pounds per hour, as an alternative to conducting Specification 6. Fuel heat content values for each fuel burned, as applied in the stoichiometric calculations, shall also be recorded. The permittee shall maintain records of data obtained by the fuel flow monitor/meter, including the dates and results of each calibration check and the magnitude of calibration adjustments; periods of downtime and malfunction of the fuel flow monitor/meter; as well as, the reason (if known) and the corrective actions taken (if any) for each such event.
- (9) The permittee shall collect, record, and maintain measurements, data, records, and reports required per 40 CFR Part 75; and shall submit certification, recertification, notifications, applications, monitoring plans, petitions for alternative monitoring systems,



electronic quarterly reports, and any other pertinent record and/or report to the Administrator (U.S. EPA), as required by Part 75.

(10) The permittee shall operate and maintain equipment to continuously monitor and record the actual fuel flow to this emissions unit when the emissions unit is in operation. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 75. If the fuel flow monitoring and/or recording equipment is (are) not in service when the emissions unit is in operation, the permittee shall comply with the approved data substitution protocol.

Fuel flow data that is substituted in accordance with 40 CFR Part 75, Appendix D, is not to be used when verifying compliance with the hourly  $NO_x$  and CO pounds per hour emission limits. Hours in which fuel flow is substituted should be included as  $NO_x$  and CO monitoring system downtime.

- (11) The permittee shall monitor the sulfur content and gross caloric value of the fuel being fired in the combustion turbine, representative fuel sampling shall be conducted which shows that the sulfur content of the fuel does not exceed 1.5E-03 lb SO<sub>2</sub>/MMBtu heat input. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of Appendix D to 40 CFR 75 is required
- (12) The permittee shall determine the hourly heat input rate to the combustion turbine in MMBtu, from the fuel flow rate as determined in d)(9) and gross calorific value as determined in d)(10). The heat input rate shall be calculated in accordance with the procedures in section 5 of 40 CFR Part 75, Appendix F.
- (13) See 40 CFR Part 60, Subpart KKKK (40 CFR 60.4300 60.4420).
- (14) See 40 CFR Part 60, Subpart TTTT (40 CFR 60.5508 60.5580).
- 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) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than pipeline quality natural gas with a maximum sulfur content of the natural gas of 0.5 grain/100 standard cubic feet was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurred.
  - (3) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
    - a. all exceedances of the NO<sub>x</sub>, CO, and/or VOC start-up/shutdown limitations; and
    - b. all exceedances of the rolling, 12-month NO<sub>x</sub>, CO, VOC, PE/PM<sub>10</sub>/PM<sub>2.5</sub>, and/or  $H_2SO_4$  emissions limitations.

These quarterly reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.



- (4) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NO<sub>x</sub> monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system):
  - a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of NO<sub>x</sub> emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapters 3745-14 and 3745-23, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).
  - b. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of continuous  $CO_2$  or  $O_2$  monitoring system downtime and malfunction while the emissions unit was on line.
  - c. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:
    - i. the facility name and address;
    - ii. the manufacturer and model number of the continuous  $NO_x$  and  $CO_2$  or  $O_2$  and other associated monitors;
    - iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;
    - iv. the excess emissions report (EER)\*, i.e., a summary of any exceedances during the calendar quarter, as specified above;
    - v. the total NO<sub>x</sub> emissions for the calendar quarter (tons);
    - vi. the total operating time (hours) of the emissions unit;
    - vii. the total operating time of the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) while the emissions unit was in operation;
    - viii. results and date of quarterly cylinder gas audits or linearity checks;



- ix. unless previously submitted, results and date of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
- x. unless previously submitted, the results of any relative accuracy test audit showing the continuous NO<sub>x</sub> and CO<sub>2</sub> or O<sub>2</sub> monitor out-of-control and the compliant results following any corrective actions;
- xi. the date, time, and duration of any/each malfunction<sup>\*\*</sup> of the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system), emissions unit, and/or control equipment;
- xii. the date, time, and duration of any downtime\*\* of the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) and/or control equipment while the emissions unit was in operation; and
- xiii. the reason (if known) and the corrective actions taken (if any) for each event in e)(4)c.xi. and xii.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

\* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

\*\* each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

- (5) If using the fuel flow rate to stoichiometrically calculate the pound per hour emissions of NO<sub>x</sub> in place of Specification 6 requirements, the permittee shall submit quarterly reports, to the appropriate Ohio EPA District Office or local air agency, that document the date, time, and duration of each malfunction and/or period of downtime of the continuous fuel flow monitoring system, while the emissions unit was in operation, and the reason (if known) and the corrective actions taken (if any) for each such event. If there was no downtime or malfunction of the continuous fuel flow monitoring system during any calendar quarter, the report shall be submitted so stating it. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year.
- (6) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system):
  - a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of CO emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC



Chapter 3745-21, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as, the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

- b. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of continuous  $CO_2$  or  $O_2$  monitoring system downtime and malfunction while the emissions unit was on line.
- c. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:
  - i. the facility name and address;
  - ii. the manufacturer and model number of the continuous CO and CO<sub>2</sub> or O<sub>2</sub> and other associated monitors;
  - iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;
  - iv. the excess emissions report (EER)\*, i.e., a summary of any exceedances during the calendar quarter, as specified above;
  - v. the total CO emissions for the calendar quarter (tons);
  - vi. the total operating time (hours) of the emissions unit;
  - vii. the total operating time of the continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system) while the emissions unit was in operation;
  - viii. results and dates of quarterly cylinder gas audits;
  - ix. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
  - x. unless previously submitted, the results of any relative accuracy test audit showing the continuous CO and CO<sub>2</sub> or O<sub>2</sub> monitor out-of-control and the compliant results following any corrective actions;
  - xi. the date, time, and duration of any/each malfunction<sup>\*\*</sup> of the continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system), and/or emissions unit;



- xii. the date, time, and duration of any downtime<sup>\*\*</sup> of the continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system) while the emissions unit was in operation; and
- xiii. the reason (if known) and the corrective actions taken (if any) for each event in e)(6)c.xi. and xii.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

\* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

\*\* each downtime and malfunction event shall be reported regardless of whether there is an exceedance of any applicable limit

- (7) If using the fuel flow rate to stoichiometrically calculate the pound per hour emissions of CO, in place of Specification 6 requirements, the permittee shall submit quarterly reports, to the appropriate Ohio EPA District Office or local air agency, that document the date, time, and duration of each malfunction and/or period of downtime of the continuous fuel flow monitoring system, while the emissions unit was in operation, and the reason (if known) and the corrective actions taken (if any) for each such event. If there was no downtime or malfunction of the continuous fuel flow monitoring system during any calendar quarter, the report shall be submitted so stating it. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year.
- (8) See 40 CFR Part 60, Subpart KKKK (40 CFR 60.4300 60.4420).
- (9) See 40 CFR Part 60, Subpart TTTT (40 CFR 60.5508 60.5580).
- f) Testing Requirements
  - (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods for this emission unit:
    - a. <u>Emissions Limitations:</u>

 $NO_x$  emissions shall not exceed 2.0 ppmvd at 15%  $O_2$  and 26.1 pounds per hour, excluding periods of startup and shutdown.

 $NO_x$  emissions from new combustion turbines firing natural gas with heat input capacities greater than 850 MMBtu/hr shall not exceed 15 ppm at 15%  $O_2$  calculated on a 30-day rolling average or 54 ng/J of useful output (0.43 lb/MWh).

#### Applicable Compliance Method:

Initial compliance with the allowable outlet concentration and the lbs/hr emissions limitations shall be demonstrated through emissions testing performed as described in f(4) below.



Ongoing compliance with the short-term  $NO_x$  emissions limitations shall be demonstrated through the data collected as required in the Monitoring and Recordkeeping section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60 and 40 CFR Part 75.

Ongoing compliance with the  $CO_2$  or  $O_2$  monitoring requirements contained in this permit, 40 CFR Parts 60 and 75, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and demonstration of compliance with the quality assurance/quality control plan, which shall meet all of the testing and recertification requirements of 40 CFR Part 60 and 40 CFR Part 75.

### b. <u>Emissions Limitations:</u>

CO emissions shall not exceed 2.0 ppmvd at 15% O<sub>2</sub> based on a 24-hour block averaging period and 15.9 lbs/hr, excluding periods of startup and shutdown.

Applicable Compliance Method:

Initial compliance with the allowable outlet concentration and the lbs/hr emissions limitations shall be demonstrated through emissions testing performed as described in f(4) below.

Ongoing compliance with the short-term CO emission limitations shall be demonstrated through the data collected as required in the Monitoring and Recordkeeping section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

Ongoing compliance with the  $CO_2$  or  $O_2$  monitoring requirements contained in this permit, 40 CFR Parts 60 and 75, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and demonstration of compliance with the quality assurance/quality control plan, which shall meet all of the testing and recertification requirements of 40 CFR Part 60 and 40 CFR Part 75.

c. <u>Emissions Limitations:</u>

VOC emissions shall not exceed 1.0 ppmvd at 15%  $O_2$  and 4.54 lbs/hr, excluding periods of startup and shutdown.

Applicable Compliance Method:

Compliance with the short-term VOC emissions limitations shall be demonstrated by the testing requirements in f)(4).

d. <u>Emissions Limitations:</u>

PE/PM<sub>10</sub>/PM<sub>2.5</sub> emissions shall not exceed 12.1 lbs/hr.


# Applicable Compliance Method:

Compliance with the short-term  $PE/PM_{10}/PM_{2.5}$  emissions limitations shall be demonstrated by the testing requirements in f)(4).

## e. <u>Emissions Limitations:</u>

H<sub>2</sub>SO<sub>4</sub> emissions shall not exceed 3.78 lb/hr.

## Applicable Compliance Method:

Compliance with the short-term emissions limitations shall be demonstrated based on the testing requirements in f)(4).

f. <u>Emissions Limitation:</u>

Visible PE from the stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average.

#### Applicable Compliance Method:

Compliance with the visible PE limitation shall be demonstrated by the testing requirements in f(4).

g. <u>Emissions Limitations:</u>

125.8 tons of  $NO_x$  per rolling, 12-month period, including start-up and shutdown emissions.

123.8 tons of CO emissions per rolling, 12-month period, including start-up and shutdown emissions.

26.4 tons of VOC emissions per rolling, 12-month period, including start-up and shutdown emissions.

53.0 tons of PE/PM10/PM2.5 per rolling, 12-month period, including start-up and shutdown emissions;

16.56 tons of  $H_2SO_4$  emissions per rolling, 12-month period.

1,915,689 tons of CO<sub>2</sub>e emissions per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the rolling, 12-month emissions limitations shall be demonstrated by the recordkeeping in d)(2).

h. <u>Emission Limitation:</u>

 $CO_2 e$  emissions shall not exceed 775 lb/MW-hr gross energy output when firing natural gas.



# Applicable Compliance Method:

Since more than 99% of the  $CO_2e$  emissions result from  $CO_2$  emissions, compliance with the 775 lb/MW-hr gross energy output limitation will be assumed if the  $CO_2$  emissions determined during testing conducted per f)(2) are determined to not exceed 775 lb/MW-hr gross energy output.

# i. <u>Emissions Limitation:</u>

Carbon dioxide (CO<sub>2</sub>) emissions shall not exceed 450 kg per MW-h of gross energy output (1,000 lbs/MW-h) on a 12-operating-month rolling average basis, or, if a petition is granted, CO<sub>2</sub> emissions shall not exceed 470 kg per MW-h of net energy output (1,030 lbs/MW-h) on a 12-operating- month rolling average basis.

# Applicable Compliance Method:

Compliance with the output based emissions limitation shall be demonstrated by the procedures in 40 CFR 60.5535 and 60.5540.

## j. <u>Emissions Limitation:</u>

The permittee shall burn only pipeline quality natural gas and a natural gas and ethane mixture with a maximum sulfur content not to exceed 0.5 grains per 100 standard cubic feet in this emissions unit.

# Applicable Compliance Method:

Compliance with the fuel sulfur content limitations shall be demonstrated by the testing requirements in f(4) and the recordkeeping requirements in d(13).

#### k. <u>Emissions Limitations:</u>

 $NO_x$  emissions during startup and shutdown shall not exceed 164.5 lbs/hr during cold startup, 109.7 lbs/hr during warm startup, 87.4 lbs/hr during hot startup and 27.9 lbs/hr during shutdown.

CO emissions during startup and shutdown shall not exceed 877.0 lbs/hr during cold startup, 145.3 lbs/hr during warm startup, 130.6 lbs/hr during hot startup and 137.7 lbs/hr during shutdown.

VOC emissions during startup and shutdown shall not exceed 78.1 lbs/hr during cold startup, 11.5 lbs/hr during warm startup, 12.0 lbs/hr during hot startup and 29.6 lbs/hr during shutdown.

#### Applicable Compliance Method:

These emissions limitations are based on manufacturer's data.



Compliance with the CO and NO<sub>x</sub> lbs/hr startup and shutdown emissions limitations shall be demonstrated using the continuous emissions monitoring system based on a 1-hour block average.

Compliance with the VOC lbs/hr startup and shutdown emissions limitations shall be demonstrated through the record keeping requirements specified in d)(2) of this permit.

(2) Within 60 days of achieving the maximum production rate at which the emissions unit(s) will be operated, but not later than 180 days after initial startup, the permittee shall conduct certification tests of the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system), in units of the applicable standard(s), to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specifications 2 and 3; Performance Specification 6 relative accuracy requirements; ORC section 3704.03(I); and 40 CFR Part 75.

The permittee shall certify that the fuel flow monitor/meter meets 40 CFR 75 certification requirements prior to the performance specification test and shall demonstrate how the pound per hour emissions of  $NO_x$  and  $CO_2$  or  $O_2$  will be calculated stoichiometrically from the fuel flow rate.

Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 45 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification, or recommendation for certification by Ohio EPA to U.S. EPA, of the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 3; Performance Specification 6 relative accuracy requirements; ORC section 3704.03(I); and 40 CFR Part 75.

(3) Within 60 days of achieving the maximum production rate at which the emissions unit(s) will be operated, but not later than 180 days after initial startup, the permittee shall conduct certification tests of the continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system) in units of the applicable standard(s), to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specifications 3 and 4 or 4a (as appropriate) and 6; and ORC section 3704.03(l).

Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.



Certification of the continuous CO monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) shall be granted upon determination by the Ohio EPA Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 3 and 4 or 4a (as appropriate) and 6 and ORC section 3704.03(I).

- (4) The permittee shall conduct, or have conducted, emission testing for this emission unit in accordance with OAC rule 3745-31-10 through 3745-31-20, CFR 60.8, 60.4405 and 60.4415 and the following requirements:
  - a. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the modified facility will be operated, but not later than 180 days after initial startup of the modified unit. Subsequent SO<sub>2</sub> performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test) using one of the three methodologies in 60.4415(a).
  - b. The emission testing shall be conducted to demonstrate initial compliance with the NO<sub>x</sub> and CO outlet concentrations, the lb/hr emissions limitations for NO<sub>x</sub>, CO, VOC, and PE and  $PM_{10}/PM_{2.5}$ , the visible PE limit and the fuel sulfur content after modification.

NO <sub>x</sub>	Method 7E or 20 of 40 CFR Part 60, Appendix A
CO	Methods 1-4 and 10 of 40 CFR Part 60, Appendix A
VOC	Methods 1-4, 18 and 25A of 40 CFR Part 60, Appendix A
PE	Methods 1-5 of 40 CFR Part 60, Appendix A
PM <sub>10</sub> /PM <sub>2.5</sub>	Methods 1-4 of 40 CFR Part 60, Appendix A and Methods 201/201A and 202 as set forth in 40 CFR Part 51, Appendix M
CO <sub>2</sub>	Methods 1-4 of 40 CFR Part 60, Appendix A, mass balance calculations using ASTM D1945-03 (Standard Test Method for Analysis of Natural Gas by Gas Chromatography) and/or ASTM D1826-94 (Standard Test Method for Calorific Value of Gases in Natural Gas Range by Continuous Recording Calorimeter).
VEs	Method 9 of 40 CFR Part 60, Appendix A
SO <sub>2</sub> (fuel sulfur content)	40 CFR 60.4415(a)
H <sub>2</sub> SO <sub>4</sub>	Methods 1-4 and 8 of 40 CFR Part 60 Appendix A

c. The following test method(s) shall be employed to demonstrate compliance with the above emissions limitations:

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Southeast District Office.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable



emissions limits and/or control requirements, unless otherwise specified or approved by the Ohio EPA Southeast District Office. Although this 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 under these conditions 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 Ohio EPA Southeast District Office. 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 Southeast District Office's refusal to accept the results of the emission test(s).
- f. Personnel from the Ohio EPA Southeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures 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 Ohio EPA Southeast District Office 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 Ohio EPA Southeast District Office.
- g) Miscellaneous Requirements
  - (1) None.



# 6. P005, Mitsubishi Combustion Turbine

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

Mitsubishi Model 501JAC natural gas or natural gas+ethane fired combined cycle combustion turbine generator equipped with dry low-NO<sub>x</sub> (DLN) burners nominally rated at 3,320 MMBtu/hr at 100% load and -5° F exhausting through a heat recovery steam generator (HRSG) with supplemental natural gas-fired duct burners nominally rated at 108 MMBtu/hr controlled with catalytic oxidation and selective catalytic reduction (SCR) used to generate electricity.

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
  - (1) None.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rules 3745-31-10 through 3745-31-20 and 3745-31-34	Emissions Limits without Duct Burner Firing
		Nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 2.0 ppmvd at 15% oxygen (O <sub>2</sub> ) and 26.4 pounds per hour, excluding periods of startup and shutdown.
		Carbon monoxide (CO) emissions shall not exceed 2.0 ppmvd at 15% $O_2$ and 16.1 pounds per hour, excluding periods of startup and shutdown.
		Volatile organic compound (VOC) emissions shall not exceed 1.0 ppmvd at $15\%$ O <sub>2</sub> and 4.60 pounds per hour, excluding periods of startup and shutdown.
		Particulate emissions (PE) and emissions of particulate matter with a diameter less than 10 microns ( $PM_{10}$ ) and particulate matter less than 2.5 microns ( $PM_{2.5}$ ) shall not exceed 0.0037 lb/MMBtu and 12.3 pounds per hour.



Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	Sulfuric acid ( $H_2SO_4$ ) emissions shall not exceed 0.0009 pound/MMBtu and 2.99 pounds per hour.
	Carbon dioxide equivalent (CO <sub>2</sub> e) emissions shall not exceed 775 lb/MW-hr gross energy output at full load ISO conditions when firing natural gas. Gross energy output is defined as the gross power output of the generators before accounting for any balance of plant loads.
	Visible PE from the stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average.
	Emissions Limits with Duct Burner Firing
	$NO_x$ emissions shall not exceed 2.0 ppmvd at 15% $O_2$ and 25.10 pounds per hour, excluding periods of startup and shutdown.
	CO emissions shall not exceed 2.0 ppmvd at 15% $O_2$ and 15.30 pounds per hour, excluding periods of startup and shutdown.
	VOC emissions shall not exceed 2.0 ppmvd at 15% $O_2$ and 8.80 pounds per hour, excluding periods of startup and shutdown.
	$PE/PM_{10}/PM_{2.5}$ emissions shall not exceed 0.004 lb/MMBtu and 12.60 pounds per hour.
	H <sub>2</sub> SO <sub>4</sub> emissions shall not exceed 0009 lb/MMBtu and 2.85 pounds per hour.
	The emissions limitation specified by this rule for $CO_2e$ emissions is equivalent to the requirements in 40 CFR Part 60, Subpart TTTT.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Visible PE from the stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average.
		Rolling, 12-Month Emissions Limitations:
		119.4 tons of $NO_x$ per rolling, 12-month period, including start-up and shutdown emissions.
		121.2 tons of CO emissions per rolling, 12-month period, including start-up and shutdown emissions.
		79.3 tons of VOC emissions per rolling, 12-month period, including start-up and shutdown emissions.
		55.2 tons of PE/PM <sub>10</sub> /PM <sub>2.5</sub> per rolling, 12-month period.
		13.1 tons of $H_2SO_4$ emissions per rolling, 12-month period.
		1,811,235 tons of CO <sub>2</sub> e emissions per rolling, 12-month period.
		See b)(2)ae. below.
b.	ORC 3704.03(T) and OAC rule 3745-31-05(A)(3)	The emissions limitations for NO <sub>x</sub> , CO, VOC and PE/PM <sub>10</sub> /PM <sub>2.5</sub> required by this rule are equivalent to the emissions limitations for NO <sub>x</sub> , CO, VOC and PE/PM <sub>10</sub> /PM <sub>2.5</sub> established pursuant to OAC rules 3745-31-10 through 3745-31-20.
		See c)(1) below.
C.	OAC rules 3745-17-07(A), 3745-17- 10 (HRSG duct burners) and 3745- 17-11(B)(4) (Turbine)	The PE limitations specified by these rules are less stringent than the limitations established pursuant to OAC rules 3745-31-10 through 3745-31-20.
d.	OAC rule 3745-18-06(F)	Exempt pursuant to OAC rule 3745-18- 06(A) since only natural gas and a natural gas and ethane mixture is burned in this emissions unit.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	40 CFR Part 75 and OAC Chapter 3745-103	See b)(2)f. below.
f.	OAC rule 3745-110-03	Exempt pursuant to OAC rule 3745-110- $03(K)(20)$ because this emissions unit is subject to BACT requirements for NO <sub>x</sub> emissions.
g.	40 CFR Part 60, Subpart KKKK (40 CFR 60.4300 – 60.4420) [In accordance with 40 CFR 60.4300 and 60.4305(a), this emissions unit is a stationary combustion turbine with a heat input at peak load (HHV) equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, based on the higher heating value of the fuel, and associated heat recovery steam generator with duct burners that commenced construction, modification, or reconstruction after February 18, 2005, subject to the emissions limitations/control measures specified in this section.]	NO <sub>x</sub> emissions from new combustion turbines firing natural gas with heat input capacities at peak load (HHV) greater than 850 MMBtu/hr shall not exceed 15 ppm at 15% O <sub>2</sub> or 54 ng/J of useful output (0.43 lb/MWh). [40 CFR 60.4320(a) and Table 1 of 40 CFR Part 60, Subpart KKKK] SO <sub>2</sub> emissions from the turbine must not exceed 0.90 lb/MWh of gross output, or, fuels burned in the turbine must not contain sulfur in concentrations which would result in potential sulfur emissions in excess of 0.060 lb SO <sub>2</sub> /MMBtu heat input. [40 CFR 60.4330(a)] See b)(2)g. below.
h.	40 CFR Part 60, Subpart TTTT (40 CFR 60.5508 – 60.5580) [In accordance with 40 CFR 60.5508 and 60.5509(a), this emissions unit is a stationary combustion turbine (EGU) that commenced construction after June 18, 2014 and has a base load rating greater than 250 MMBtu/hour and serving a generator capable of selling greater than 25 MW of electricity to a utility power distribution system, subject to the emissions limitations/control measures specified in this section.]	Carbon dioxide (CO <sub>2</sub> ) emissions shall not exceed 450 kg per MW-h of gross energy output (1,000 lbs/MW-h) on a 12- operating-month rolling average basis, or, if a petition is granted, CO <sub>2</sub> emissions shall not exceed 470 kg per MW-h of net energy output (1,030 lbs/MW-h) on a 12- operating- month rolling average basis. [40 CFR 60.5520(a)-(c) and Table 2 of 40 CFR Part 60, Subpart TTTT]
i.	40 CFR Part 60, Subpart A (40 CFR 60.1 – 60.19)	General Provisions Table 3 of 40 CFR Part 60, Subpart TTTT shows which parts of the General Provisions in 40 CFR 63.1 through 19 do not apply.



Applicable Rules/Requirements	Applicable Emissions Limitations/Control
	Measures
	[40 CFR 60.5570 and Table 3 of 40 CFR
	Part 60, Subpart TTTT)

- (2) Additional Terms and Conditions
  - a. As part of the Best Available Control Technology (BACT) determination for NO<sub>x</sub>, the permittee shall install and maintain dry low NO<sub>x</sub> burners and an SCR system on this emissions unit. Operation of these control systems shall reduce NO<sub>x</sub> emissions to the limitations specified in b)(1)a.
  - b. As part of the BACT determination for CO and VOC, the permittee shall install and operate an oxidation catalyst and shall operate the emissions unit in accordance with good combustion practices as recommended by the manufacturer to ensure compliance with the CO and VOC limitations specified in b)(1)a.
  - c. As part of the BACT determination for visible PE, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, SO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> emissions, the permittee shall burn only natural gas and a natural gas and ethane mixture (as specified in b)(1)) in this emissions unit to ensure compliance with the PM/PM<sub>10</sub>/PM<sub>2.5</sub>, SO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> limitations specified in b)(1)a.
  - d. As part of the BACT determination for CO<sub>2</sub>e, the permittee shall operate the emissions unit using high efficiency combustion practices as recommended by the manufacturer to ensure compliance with the CO<sub>2</sub>e limitations specified in b)(1)a.
  - e. The permittee shall comply with the following requirements during periods of startup and shutdown.

	Emissions Limitations During Startup and Shutdown (Ibs/hr) <sup>a</sup>			
	Cold Startup	Warm Startup	Hot Startup	Shutdown
NO <sub>x</sub>	68.1	55.4	34.6	37.9
CO	538.6	449.4	140.7	162.7
VOC	224.7	225.1	185.9	97.0
<sup>a</sup> Pound per hour emissions rates as presented are the maximum rates during any hour during the event from each unit.				

Operating modes of the combined cycle combustion turbine are defined as follows:



Operating Mode	Definition
Cold Startup	When the combustion turbine has been shut down for more than 72 hours
Warm Startup	When the combustion turbine has been shut down for a period from 8 to 72 hours
Hot Startup	When the combustion turbine has been shut down for less than 8 hours
Steady-state	When the load is between approximately 40% and 100%. The duct burners may operate when the combustion turbine is in steady-state.
Shutdown	Begins when the first CEM data point out of compliance with either the CO or NO <sub>x</sub> ppmvd emission limit that occurs after load is reduced below Steady-state in conjunction with the process of ceasing operation of the unit, and ends when fuel flow to the turbine ceases.

- f. The permittee is subject to the requirements of OAC Chapter 103 and 40 CFR Parts 72 and 75 concerning acid rain, so the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.
- g. Only heat input to the combustion turbine should be included when determining whether or not NSPS Subpart KKKK is applicable to your turbine. Any additional heat input to associated heat recovery steam generators (HRSG) or duct burners should not be included when determining your peak heat input. However, this subpart does apply to emissions from any associated HRSG and duct burners.
- h. The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.
- i. Each continuous NO<sub>x</sub> monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) shall be certified to meet the requirements of 40 CFR Part 60 and 40 CFR Part 75, Appendix B and Performance Specifications 2, 3 and 6. At least 45 days before commencing certification testing of the continuous NO<sub>x</sub> monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of NO<sub>x</sub> and  $CO_2$  or  $O_2$  emissions from the continuous monitor(s), in units of the applicable standard(s). The fuel flow monitor/meter shall be maintained as required in Part 75, Appendix D. Except as allowed below, the plan shall follow the requirements of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO<sub>x</sub> monitoring system must be kept on site and available for inspection during regular office hours.



The plan shall include the requirement to conduct relative accuracy test audits for the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) in accordance with the frequencies required pursuant to 40 CFR Part 60 and 40 CFR Part 75; or may follow relative accuracy test audit frequency requirements for monitoring systems subject to 40 CFR 75, Appendix B, in lieu of frequencies required in 40 CFR Part 60. In either case, results shall be recorded and reported in units of the applicable standard(s) in accordance with 40 CFR Part 60.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits pursuant to 40 CFR Part 60, and linearity checks pursuant to 40 CFR Part 75; however, linearity checks completed pursuant to 40 CFR Part 75, Appendix B, may be substituted for the quarterly cylinder gas or relative accuracy audits required per 40 CFR Part 60.

j. Each continuous CO monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 3, 4 or 4a and 6. At least 45 days before commencing certification testing of the continuous CO monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of CO and  $CO_2$  or  $O_2$  emissions from the continuous monitor(s), in units of the applicable standard(s). The fuel flow monitor/meter shall be maintained as required in Part 75, Appendix D. Except as allowed below, the plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system (including the associated continuous CO monitoring system) must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct relative accuracy test audits for the continuous CO monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) in accordance with the frequencies required for monitoring systems subject to 40 CFR 60, or may follow relative accuracy test audit frequency requirements for monitoring systems subject to 40 CFR 75, Appendix B. In either case, results shall be recorded and reported in units of the applicable standard(s) in accordance with 40 CFR Part 60.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; however, the quarterly cylinder gas audit and relative accuracy audit frequency requirements may be adjusted to coincide with linearity checks completed for continuous emissions monitoring systems subject to 40 CFR Part 75, Appendix B requirements.

k. See 40 CFR Part 60, Subpart TTTT (40 CFR 60.5508 – 60.5580).



- c) Operational Restrictions
  - (1) The permittee shall burn only pipeline quality natural gas and a natural gas and ethane mixture with a maximum sulfur content not exceed 0.50 grain/100 scf in this emissions unit.
  - (2) Except during periods of startup, the SCR system for this emissions unit shall be in operation at all times, including during the shutdown of the unit.
  - (3) In accordance with good engineering practices, the SCR unit shall be operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The permittee shall maintain on site a copy of the operation and maintenance manual, as provided by the manufacturer.
  - (4) See 40 CFR Part 60, Subpart KKKK (40 CFR 60.4300 60.4420).
  - (5) See 40 CFR Part 60, Subpart TTTT (40 CFR 60.5508 60.5580).
- d) Monitoring and/or Recordkeeping Requirements
  - (1) For each day during which the permittee burns a fuel other than pipeline quality natural gas with a maximum sulfur content of 0.5 grain/100 scf, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
  - (2) The permittee shall maintain monthly records of the following information for this emissions unit:
    - a. the hours of operation of the combustion turbine in each operating mode;
    - b. the hours of operation of the duct burners;
    - c. the amount of gaseous fuel consumed in this emissions unit, in MMscf;
    - d. the heat content of the gaseous fuel combusted in this emissions unit, in MMBtu/MMscf;
    - e. the sulfur content of the gaseous fuel combusted in this emissions unit, in gr/dscf;
    - f. the total NO<sub>x</sub> emissions, in pounds, including startup/shutdown emissions, as recorded in d)(4)b.;
    - g. the total CO emissions, in pounds, including startup/shutdown emissions, as recorded in d)(7)b.;
    - h. the total VOC emissions, in pounds, including startup/shutdown emissions, calculated by multiplying the VOC emissions factor of 0.0014 lb/MMBtu (w/o duct burner firing) or 0.0028 lb/MMBtu (w/ duct burner firing), or after testing has been completed, the results of the most recent stack test, by the amount of gaseous fuel consumed, including periods of startup/shutdown, as recorded in d)(2)c. and the heat content of the natural gas consumed, as recorded in d)(2)d.;



- i. the total PE/PM<sub>10</sub>/PM<sub>2.5</sub> emissions, in pounds, including startup/shutdown emissions, calculated by multiplying the emissions factor of 0.0037 lb/MMBtu (w/o duct burner firing) or 0.004 lb/MMBtu (w/ duct burner firing), or after testing has been completed, the results of the most recent stack test, by the amount of gaseous fuel consumed, including periods of startup/shutdown, as recorded in d)(2)c. and the heat content of the natural gas consumed, as recorded in d)(2)d.;
- j. the total H<sub>2</sub>SO<sub>4</sub> emissions, in pounds, including startup/shutdown emissions, calculated by multiplying the emissions factor of 0.0009 lb/MMBtu, or after testing has been completed, the results of the most recent stack test, by the amount of gaseous fuel consumed, including periods of startup/shutdown, as recorded in d)(2)c. and the heat content of the natural gas consumed, as recorded in d)(2)d.;
- k. the total CO<sub>2</sub>e emissions, in pounds, including startup/shutdown emissions, calculated by multiplying the CO<sub>2</sub>e emissions factor of 119 lbs/MMBtu when firing natural gas only and 125.1 when firing 25% ethane and linearly scaled when firing intermediate amounts of ethane, by the amount of gaseous fuel consumed, including periods of startup/shutdown, as recorded in d)(2)c. and the heat content of the natural gas consumed, as recorded in d)(2)d.;
- I. the rolling, 12-month summation of the NO<sub>x</sub> emissions, in tons, including startup/shutdown emissions, calculated by adding the total NO<sub>x</sub> emissions for the present month as recorded in d)(2)f., plus the total NO<sub>x</sub> emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds;
- m. The rolling, 12-month summation of the CO, in tons, including startup/shutdown emissions, calculated by adding the total CO emissions for the present month as recorded in d)(2)g., plus the total CO emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds;
- n. The rolling, 12-month summation of the VOC emissions, in tons, including startup/shutdown emissions, calculated by adding the total VOC emissions for the present month as recorded in d)(2)h., plus the total VOC emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds;
- The rolling, 12-month summation of the PE/PM<sub>10</sub>/PM<sub>2.5</sub> emissions, in tons, including startup/shutdown emissions, calculated by adding the total PE/PM<sub>10</sub>/PM<sub>2.5</sub> emissions for the present month as recorded in d)(2)i., plus the total PE/PM<sub>10</sub>/PM<sub>2.5</sub> emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds;
- p. The rolling, 12-month summation of the  $H_2SO_4$  emissions, in tons, including startup/shutdown emissions, calculated by adding the total  $H_2SO_4$  emissions for the present month as recorded in d)(2)j., plus the total  $H_2SO_4$  emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds; and
- q. The rolling, 12-month summation of the CO<sub>2</sub>e emissions, in tons, including startup/shutdown emissions, calculated by adding the total CO<sub>2</sub>e emissions for the present month as recorded in d)(2)k., plus the total CO<sub>2</sub>e emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds.



(3) Prior to the installation of the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system), the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specifications 2 and 3. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) meets the requirements of Performance Specifications 2 and 3 and the accuracy requirements of Performance Specification 6.

Following installation, the permittee shall document that the fuel flow monitor/meter meets 40 CFR 75 certification requirements prior to the performance specification test, and shall demonstrate how the pound per hour emissions of NOx is being calculated stoichiometrically. The U.S. EPA shall certify that the continuous NOx monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) meets the requirements under 40 CFR Part 75, which may be approved through the recommendation for certification by Ohio EPA to U.S. EPA. Once received, the letter(s)/document(s) of certification under Part 60 and certification or recommendation for certification under Part 75 shall be maintain on-site and made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

(4) The permittee shall install, operate and maintain equipment to continuously monitor and record  $NO_x$  and  $CO_2$  or  $O_2$  emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60 and/or Part 75.

The permittee shall maintain records of all data obtained by the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) including, but not limited to:

- a. emissions of NO<sub>x</sub> in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. emissions of  $NO_x$  in pounds per hour and in units of the applicable standard(s) in the appropriate averaging period;
- c. the percent  $CO_2$  or  $O_2$  with each cycle time of the analyzer, with no resolution less than one data point per minute required;
- d. results of quarterly cylinder gas audits or linearity checks;
- e. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- f. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
- g. hours of operation of the emissions unit, continuous NO<sub>x</sub> monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system), and control equipment;



- h. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system);
- i. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system); as well as,
- j. the reason (if known) and the corrective actions taken (if any) for each such event in d)(5)h. and i.

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

- (5) The permittee may operate and maintain equipment to continuously monitor and record the fuel flow rate in order to stoichiometrically calculate emissions of NO<sub>x</sub>, in pounds per hour, as an alternative to conducting Specification 6. Fuel heat content values for each fuel burned, as applied in the stoichiometric calculations, shall also be recorded. The permittee shall maintain records of data obtained by the fuel flow monitor/meter, including the dates and results of each calibration check and the magnitude of calibration adjustments; periods of downtime and malfunction of the fuel flow monitor/meter; as well as, the reason (if known) and the corrective actions taken (if any) for each such event.
- (6) Prior to the installation of the continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system), the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specifications 3 and 4 or 4a (as appropriate). The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous CO monitoring system meets the requirements of Performance Specifications 3 and 4 or 4a and the accuracy requirements of Performance Specification 6.

Following installation, the permittee shall document that the fuel flow monitor/meter meets 40 CFR 75 certification requirements prior to the performance specification test, and shall demonstrate how the pound per hour emissions of CO is being calculated stoichiometrically. Once received, the letter(s)/document(s) of certification shall be maintained on-site and shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

(7) The permittee shall operate and maintain equipment to continuously monitor and record CO and  $CO_2$  or  $O_2$  emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Parts 60.

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to:



- a. emissions of CO in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. emissions of CO in pounds per month;
- c. the percent  $CO_2$  or  $O_2$  with each cycle time of the analyzer, with no resolution less than one data point per minute required;
- d. results of quarterly cylinder gas audits;
- e. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- f. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
- g. hours of operation of the emissions unit, continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system), and control equipment;
- h. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system);
- i. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system); as well as,
- j. the reason (if known) and the corrective actions taken (if any) for each such event in (h) and (i).

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

(8) The permittee may operate and maintain equipment to continuously monitor and record the fuel flow rate in order to stoichiometrically calculate emissions of CO in pounds per hour, as an alternative to conducting Specification 6. Fuel heat content values for each fuel burned, as applied in the stoichiometric calculations, shall also be recorded. The permittee shall maintain records of data obtained by the fuel flow monitor/meter, including the dates and results of each calibration check and the magnitude of calibration adjustments; periods of downtime and malfunction of the fuel flow monitor/meter; as well as, the reason (if known) and the corrective actions taken (if any) for each such event.



- (9) The permittee shall collect, record, and maintain measurements, data, records, and reports required per 40 CFR Part 75; and shall submit certification, recertification, notifications, applications, monitoring plans, petitions for alternative monitoring systems, electronic quarterly reports, and any other pertinent record and/or report to the Administrator (U.S. EPA), as required by Part 75.
- (10) The permittee shall operate and maintain equipment to continuously monitor and record the actual fuel flow to this emissions unit when the emissions unit is in operation. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 75. If the fuel flow monitoring and/or recording equipment is (are) not in service when the emissions unit is in operation, the permittee shall comply with the approved data substitution protocol.

Fuel flow data that is substituted in accordance with 40 CFR Part 75, Appendix D, is not to be used when verifying compliance with the hourly  $NO_x$  and CO pounds per hour emission limits. Hours in which fuel flow is substituted should be included as  $NO_x$  and CO monitoring system downtime.

- (11) The permittee shall monitor the sulfur content and gross caloric value of the fuel being fired in the combustion turbine and duct burners, representative fuel sampling shall be conducted which shows that the sulfur content of the fuel does not exceed 1.5E-03 lb SO<sub>2</sub>/MMBtu heat input. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of Appendix D to 40 CFR 75 is required
- (12) The permittee shall determine the hourly heat input rate to the combustion turbine and duct burner, in MMBtu, from the fuel flow rate as determined in d)(9) and gross calorific value as determined in d)(10). The heat input rate shall be calculated in accordance with the procedures in section 5 of 40 CFR Part 75, Appendix F.
- (13) See 40 CFR Part 60, Subpart KKKK (40 CFR 60.4300 60.4420).
- (14) See 40 CFR Part 60, Subpart TTTT (40 CFR 60.5508 60.5580).
- 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) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than pipeline quality natural gas with a maximum sulfur content of the natural gas of 0.5 grain/100 standard cubic feet was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurred.
  - (3) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
    - a. all exceedances of the NO<sub>x</sub>, CO, and/or VOC start-up/shutdown limitations; and



b. all exceedances of the rolling, 12-month NO<sub>x</sub>, CO, VOC, PE/PM<sub>10</sub>/PM<sub>2.5</sub>, SO<sub>2</sub> and/or  $H_2SO_4$  emissions limitations.

These quarterly reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

- (4) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system):
  - a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of NO<sub>x</sub> emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapters 3745-14 and 3745-23, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).
  - b. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of continuous  $CO_2$  or  $O_2$  monitoring system downtime and malfunction while the emissions unit was on line.
  - c. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:
    - i. the facility name and address;
    - ii. the manufacturer and model number of the continuous  $NO_x$  and  $CO_2$  or  $O_2$  and other associated monitors;
    - iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;
    - iv. the excess emissions report (EER)\*, i.e., a summary of any exceedances during the calendar quarter, as specified above;
    - v. the total NO<sub>x</sub> emissions for the calendar quarter (tons);
    - vi. the total operating time (hours) of the emissions unit;



- vii. the total operating time of the continuous NO<sub>x</sub> monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system) while the emissions unit was in operation;
- viii. results and date of quarterly cylinder gas audits or linearity checks;
- ix. unless previously submitted, results and date of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
- x. unless previously submitted, the results of any relative accuracy test audit showing the continuous NO<sub>x</sub> and CO<sub>2</sub> or O<sub>2</sub> monitor out-of-control and the compliant results following any corrective actions;
- xi. the date, time, and duration of any/each malfunction<sup>\*\*</sup> of the continuous NO<sub>x</sub> monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system), emissions unit, and/or control equipment;
- xii. the date, time, and duration of any downtime<sup>\*\*</sup> of the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) and/or control equipment while the emissions unit was in operation; and
- xiii. the reason (if known) and the corrective actions taken (if any) for each event in e)(4)c.xi. and xii.
- Each report shall address the operations conducted and data obtained during the previous calendar quarter.
- \* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report
- \*\* each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit
- (5) If using the fuel flow rate to stoichiometrically calculate the pound per hour emissions of NO<sub>x</sub> in place of Specification 6 requirements, the permittee shall submit quarterly reports, to the appropriate Ohio EPA District Office or local air agency, that document the date, time, and duration of each malfunction and/or period of downtime of the continuous fuel flow monitoring system, while the emissions unit was in operation, and the reason (if known) and the corrective actions taken (if any) for each such event. If there was no downtime or malfunction of the continuous fuel flow monitoring system during any calendar quarter, the report shall be submitted so stating it. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year.
- (6) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system):



- a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of CO emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-21, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as, the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).
- b. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system downtime and malfunction while the emissions unit was on line.
- c. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:
  - i. the facility name and address;
  - ii. the manufacturer and model number of the continuous CO and CO<sub>2</sub> or O<sub>2</sub> and other associated monitors;
  - iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;
  - iv. the excess emissions report (EER)\*, i.e., a summary of any exceedances during the calendar quarter, as specified above;
  - v. the total CO emissions for the calendar quarter (tons);
  - vi. the total operating time (hours) of the emissions unit;
  - vii. the total operating time of the continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system) while the emissions unit was in operation;
  - viii. results and dates of quarterly cylinder gas audits;
  - ix. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));



- x. unless previously submitted, the results of any relative accuracy test audit showing the continuous CO and CO<sub>2</sub> or O<sub>2</sub> monitor out-of-control and the compliant results following any corrective actions;
- xi. the date, time, and duration of any/each malfunction\*\* of the continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system), and/or emissions unit;
- xii. the date, time, and duration of any downtime<sup>\*\*</sup> of the continuous CO monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) while the emissions unit was in operation; and
- xiii. the reason (if known) and the corrective actions taken (if any) for each event in e)(6)c.xi. and xii.
- Each report shall address the operations conducted and data obtained during the previous calendar quarter.
- \* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report
- \*\* each downtime and malfunction event shall be reported regardless of whether there is an exceedance of any applicable limit
- (7) If using the fuel flow rate to stoichiometrically calculate the pound per hour emissions of CO, in place of Specification 6 requirements, the permittee shall submit quarterly reports, to the appropriate Ohio EPA District Office or local air agency, that document the date, time, and duration of each malfunction and/or period of downtime of the continuous fuel flow monitoring system, while the emissions unit was in operation, and the reason (if known) and the corrective actions taken (if any) for each such event. If there was no downtime or malfunction of the continuous fuel flow monitoring system during any calendar quarter, the report shall be submitted so stating it. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year.
- (8) See 40 CFR Part 60, Subpart KKKK (40 CFR 60.4300 60.4420).
- (9) See 40 CFR Part 60, Subpart TTTT (40 CFR 60.5508 60.5580).
- f) Testing Requirements
  - (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods for this emission unit:
    - a. <u>Emissions Limitations:</u>

 $NO_x$  emissions without duct burner firing shall not exceed 2.0 ppmvd at 15%  $O_2$  and 26.4 lbs/hr, excluding periods of startup and shutdown.



 $NO_x$  emissions with duct burner firing shall not exceed 2.0 ppmvd at 15%  $O_2$  and 25.10 lbs/hr, excluding periods of startup and shutdown.

 $NO_x$  emissions from new combustion turbines firing natural gas with heat input capacities greater than 850 MMBtu/hr shall not exceed 15 ppm at 15%  $O_2$  calculated on a 30-day rolling average or 54 ng/J of useful output (0.43 lb/MWh).

## Applicable Compliance Method:

Initial compliance with the allowable outlet concentration and the lbs/hr emissions limitations shall be demonstrated through emissions testing performed as described in f(4) below.

Ongoing compliance with the short-term  $NO_x$  emissions limitations shall be demonstrated through the data collected as required in the Monitoring and Recordkeeping section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60 and 40 CFR Part 75.

Ongoing compliance with the  $CO_2$  or  $O_2$  monitoring requirements contained in this permit, 40 CFR Parts 60 and 75, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and demonstration of compliance with the quality assurance/quality control plan, which shall meet all of the testing and recertification requirements of 40 CFR Part 60 and 40 CFR Part 75.

#### b. <u>Emissions Limitations:</u>

CO emissions without duct burner firing shall not exceed 2.0 ppmvd at 15% O<sub>2</sub> based on a 24-hour block averaging period and 16.1 lbs/hr, excluding periods of startup and shutdown.

CO emissions with duct burner firing shall not exceed 2.0 ppmvd at 15%  $O_2$  based on a 24-hour block averaging period and 15.30 lbs/hr, excluding periods of startup and shutdown.

# Applicable Compliance Method:

Initial compliance with the allowable outlet concentration and the lbs/hr emissions limitations shall be demonstrated through emissions testing performed as described in f(4) below.

Ongoing compliance with the short-term CO emission limitations shall be demonstrated through the data collected as required in the Monitoring and Recordkeeping section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

Ongoing compliance with the  $CO_2$  or  $O_2$  monitoring requirements contained in this permit, 40 CFR Parts 60 and 75, and any other applicable standard(s) shall



be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and demonstration of compliance with the quality assurance/quality control plan, which shall meet all of the testing and recertification requirements of 40 CFR Part 60 and 40 CFR Part 75.

### c. <u>Emissions Limitations:</u>

VOC emissions without duct burner firing shall not exceed 1.0 ppmvd at 15%  $O_2$  and 4.60 lbs/hr, excluding periods of startup and shutdown.

VOC emissions with duct burner firing shall not exceed 2.0 ppmvd at  $15\% O_2$  and 8.80 lbs/hr, excluding periods of startup and shutdown.

#### Applicable Compliance Method:

Compliance with the short-term VOC emissions limitations shall be demonstrated by the testing requirements in f(4).

d. <u>Emissions Limitations:</u>

 $PE/PM_{10}/PM_{2.5}$  emissions without duct burner firing shall not exceed 0.0037 lb/MMBtu and 12.3 lbs/hr.

 $\text{PE}/\text{PM}_{10}/\text{PM}_{2.5}$  emissions with duct burner firing shall not exceed 0.004 lb/MMBtu and 12.60 lbs/hr.

#### Applicable Compliance Method:

Compliance with the short-term  $PE/PM_{10}/PM_{2.5}$  emissions limitations shall be demonstrated by the testing requirements in f)(4).

e. <u>Emissions Limitations:</u>

 $H_2SO_4$  emissions without duct burner firing shall not exceed 0.0009 lb/MMBtu and 2.99 lbs/hr.

 $H_2SO_4$  emissions with duct burner firing shall not exceed 0.0009 lb/MMBtu and 2.85 lbs/hr.

### Applicable Compliance Method:

Compliance with the short-term emissions limitations shall be demonstrated based on the testing requirements in f)(4).

f. <u>Emissions Limitation:</u>

Visible PE from the stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average.



# Applicable Compliance Method:

Compliance with the visible PE limitation shall be demonstrated by the testing requirements in f(4).

## g. <u>Emissions Limitations:</u>

119.4 tons of  $NO_x$  per rolling, 12-month period, including start-up and shutdown emissions;

121.2 tons of CO emissions per rolling, 12-month period, including start-up and shutdown emissions;

79.3 tons of VOC emissions per rolling, 12-month period, including start-up and shutdown emissions;

55.2 tons of PE/PM<sub>10</sub>/PM<sub>2.5</sub> per rolling, 12-month period;

13.1 tons of H<sub>2</sub>SO<sub>4</sub> emissions per rolling, 12-month period; and

1,811,235 tons of CO<sub>2</sub>e emissions per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the rolling, 12-month emissions limitations shall be demonstrated by the recordkeeping in d)(2).

h. <u>Emission Limitation:</u>

CO<sub>2</sub>e emissions shall not exceed 775 lb/MW-hr gross energy output (at full load ISO conditions when firing natural gas without duct firing).

Applicable Compliance Method:

Since more than 99% of the  $CO_2e$  emissions result from  $CO_2$  emissions, compliance with the 775 lb/MW-hr gross energy output limitation will be assumed if the  $CO_2$  emissions determined during testing conducted per f)(4) are determined to not exceed 775 lb/MW-hr gross energy output.

i. <u>Emissions Limitation:</u>

Carbon dioxide ( $CO_2$ ) emissions shall not exceed 450 kg per MW-h of gross energy output (1,000 lbs/MW-h) on a 12-operating-month rolling average basis, or, if a petition is granted,  $CO_2$  emissions shall not exceed 470 kg per MW-h of net energy output (1,030 lbs/MW-h) on a 12-operating- month rolling average basis.

#### Applicable Compliance Method:

Compliance with the output based emissions limitation shall be demonstrated by the procedures in 40 CFR 60.5535 and 60.5540.



j. <u>Emissions Limitation:</u>

The permittee shall burn only pipeline quality natural gas and a natural gas and ethane mixture with a maximum sulfur content not exceed 0.5 grains per 100 standard cubic feet in this emissions unit.

### Applicable Compliance Method:

Compliance with the fuel sulfur content limitations shall be demonstrated by the testing requirements in f(4) and the recordkeeping requirements in d(13).

k. <u>Emissions Limitations:</u>

 $NO_x$  emissions during startup and shutdown shall not exceed 68.1 lbs/hr during cold startup, 55.4 lbs/hr during warm startup, 34.6 lbs/hr during hot startup and 37.9 lbs/hr during shutdown.

CO emissions during startup and shutdown shall not exceed 538.6 lbs/hr during cold startup, 449.4 lbs/hr during warm startup, 140.7 lbs/hr during hot startup and 162.7 lbs/hr during shutdown.

VOC emissions during startup and shutdown shall not exceed 224.7 lbs/hr during cold startup, 225.1 lbs/hr during warm startup, 185.9 lbs/hr during hot startup and 97.0 lbs/hr during shutdown.

# Applicable Compliance Method:

These emissions limitations are based on manufacturer's data.

Compliance with the CO and  $NO_x$  lbs/hr startup and shutdown emissions limitations shall be demonstrated using the continuous emissions monitoring system based on a 1-hour block average.

Compliance with the VOC lbs/hr startup and shutdown emissions limitations shall be demonstrated through the record keeping requirements specified in d)(2) of this permit.

(2) Within 60 days of achieving the maximum production rate at which the emissions unit(s) will be operated, but not later than 180 days after initial startup, the permittee shall conduct certification tests of the continuous NO<sub>x</sub> monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system), in units of the applicable standard(s), to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specifications 2 and 3; Performance Specification 6 relative accuracy requirements; ORC section 3704.03(I); and 40 CFR Part 75.

The permittee shall certify that the fuel flow monitor/meter meets 40 CFR 75 certification requirements prior to the performance specification test and shall demonstrate how the pound per hour emissions of  $NO_x$  and  $CO_2$  or  $O_2$  will be calculated stoichiometrically from the fuel flow rate.



Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 45 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification, or recommendation for certification by Ohio EPA to U.S. EPA, of the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 3; Performance Specification 6 relative accuracy requirements; ORC section 3704.03(I); and 40 CFR Part 75.

(3) Within 60 days of achieving the maximum production rate at which the emissions unit(s) will be operated, but not later than 180 days after initial startup, the permittee shall conduct certification tests of the continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system) in units of the applicable standard(s), to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specifications 3 and 4 or 4a (as appropriate) and 6; and ORC section 3704.03(l).

Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification of the continuous CO monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) shall be granted upon determination by the Ohio EPA Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 3 and 4 or 4a (as appropriate) and 6 and ORC section 3704.03(I).

- (4) The permittee shall conduct, or have conducted, emission testing for this emission unit in accordance with OAC rule 3745-31-10 through 3745-31-20, CFR 60.8, 60.4405 and 60.4415 and the following requirements:
  - a. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the modified facility will be operated, but not later than 180 days after initial startup of the modified unit. Subsequent SO<sub>2</sub> performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test) using one of the three methodologies in 60.4415(a).



- b. The emission testing shall be conducted to demonstrate initial compliance with the NO<sub>x</sub> and CO outlet concentrations, the lb/hr emissions limitations for NO<sub>x</sub>, CO, VOC, and PE and  $PM_{10}/PM_{2.5}$ , the visible PE limit and the fuel sulfur content after modification.
- c. The following test method(s) shall be employed to demonstrate compliance with the above emissions limitations:

Method 7E or 20 of 40 CFR Part 60, Appendix A
Methods 1-4 and 10 of 40 CFR Part 60, Appendix A
Methods 1-4, 18 and 25A of 40 CFR Part 60,
Appendix A
Methods 1-5 of 40 CFR Part 60, Appendix A
Methods 1-4 of 40 CFR Part 60, Appendix A and
Methods 201/201A and 202 as set forth in 40 CFR
Part 51, Appendix M
Methods 1-4 of 40 CFR Part 60, Appendix A, mass
balance calculations using ASTM D1945-03
(Standard Test Method for Analysis of Natural Gas
by Gas Chromatography) and/or ASTM D1826-94
(Standard Test Method for Calorific Value of Gases
in Natural Gas Range by Continuous Recording
Calorimeter).
Method 9 of 40 CFR Part 60, Appendix A
40 CFR 60.44159(a)
40 CFR 60.4415(a)

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Southeast District Office.

- d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the Ohio EPA Southeast District Office. Although this 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 under these conditions 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 Ohio EPA Southeast District Office. 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 Southeast District Office's refusal to accept the results of the emission test(s).



- f. Personnel from the Ohio EPA Southeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures 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 Ohio EPA Southeast District Office 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 Ohio EPA Southeast District Office.
- g) Miscellaneous Requirements

None.



# 7. P006, Siemens Combustion Turbine

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

Siemens Model SCC6-8000H natural gas or natural gas+ethane fired combined cycle combustion turbine generator equipped with dry low-NO<sub>x</sub> (DLN) burners nominally rated at 3,602 MMBtu/hr at 100% load and -5° F exhausting through a heat recovery steam generator (HRSG) with supplemental natural gas-fired duct burners nominally rated at 667 MMBtu/hr controlled with catalytic oxidation and selective catalytic reduction (SCR) used to generate electricity.

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
  - (1) None.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
а.	OAC rules 3745-31-10 through 3745-31-20 and 3745-31-34	<b>Emissions Limits without Duct Burner</b> <b>Firing</b> Nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 2.0 ppmvd at 15% oxygen (O <sub>2</sub> ) and 22.4 pounds per hour, excluding periods of startup and shutdown.
		Carbon monoxide (CO) emissions shall not exceed 2.0 ppmvd at $15\%$ O <sub>2</sub> and 13.6 pounds per hour, excluding periods of startup and shutdown.
		Volatile organic compound (VOC) emissions shall not exceed 1.0 ppmvd at $15\% O_2$ and 3.9 pounds per hour, excluding periods of startup and shutdown.
		Particulate emissions (PE) and emissions of particulate matter with a diameter less than 10 microns ( $PM_{10}$ ) and particulate matter less than 2.5 microns ( $PM_{2.5}$ ) shall not exceed 0.006 lb/MMBtu and 13 pounds per hour.



Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	Sulfuric acid ( $H_2SO_4$ ) emissions shall not exceed 0.00055 lb/MMBtu and 1.5 pounds per hour.
	Carbon dioxide equivalent (CO <sub>2</sub> e) emissions shall not exceed 775 lb/MW-hr gross energy output at full load ISO conditions when firing natural gas. Gross energy output is defined as the gross power output of the generators before accounting for any balance of plant loads.
	Visible PE from the stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average.
	Emissions Limits with Duct Burner Firing
	$NO_x$ emissions shall not exceed 2.0 ppmvd at 15% $O_2$ and 27.1 pounds per hour, excluding periods of startup and shutdown.
	CO emissions shall not exceed 2.0 ppmvd at 15% $O_2$ and 16.5 pounds per hour, excluding periods of startup and shutdown.
	VOC emissions shall not exceed 2.0 ppmvd at 15% $O_2$ and 9.5 pounds per hour, excluding periods of startup and shutdown.
	$PE/PM_{10}/PM_{2.5}$ emissions shall not exceed 0.0057 lb/MMBtu and 19.8 pounds per hour.
	H <sub>2</sub> SO <sub>4</sub> emissions shall not exceed 0.00052 lb/MMBtu and 1.81 pounds per hour.
	The emissions limitation specified by this rule for $CO_2e$ emissions is equivalent to the requirements in 40 CFR Part 60, Subpart TTTT.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Visible PE from the stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average.
		Rolling, 12-Month Emissions Limitations:
		128.8 tons of $NO_x$ per rolling, 12-month period, including start-up and shutdown emissions.
		142.6 tons of CO emissions per rolling, 12-month period, including start-up and shutdown emissions.
		50.8 tons of VOC emissions per rolling, 12-month period, including start-up and shutdown emissions.
		86.7 tons of $PE/PM_{10}/PM_{2.5}$ per rolling, 12-month period.
		7.9 tons of $H_2SO_4$ emissions per rolling, 12-month period.
		1,962,130 tons of CO <sub>2</sub> e emissions per rolling, 12-month period.
		See b)(2)ae. below.
b.	ORC 3704.03(T) and OAC rule 3745-31-05(A)(3)	The emissions limitations for NO <sub>x</sub> , CO, VOC and PE/PM <sub>10</sub> /PM <sub>2.5</sub> required by this rule are equivalent to the emissions limitations for NO <sub>x</sub> , CO, VOC and PE/PM <sub>10</sub> /PM <sub>2.5</sub> established pursuant to OAC rules 3745-31-10 through 3745-31-20.
		See c)(1) below.
C.	OAC rules 3745-17-07(A), 3745-17- 10 (HRSG duct burners) and 3745- 17-11(B)(4) (Turbine)	The PE limitations specified by these rules are less stringent than the limitations established pursuant to OAC rules 3745-31-10 through 3745-31-20.
d.	OAC rule 3745-18-06(F)	Exempt pursuant to OAC rule 3745-18- 06(A) since only natural gas and a natural gas and ethane mixture is burned in this emissions unit.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	40 CFR Part 75 and OAC Chapter 3745-103	See b)(2)f. below.
f.	OAC rule 3745-110-03	Exempt pursuant to OAC rule $3745-110-03(K)(20)$ because this emissions unit is subject to BACT requirements for NO <sub>x</sub> emissions.
g.	40 CFR Part 60, Subpart KKKK (40 CFR 60.4300 – 60.4420) [In accordance with 40 CFR 60.4300 and 60.4305(a), this emissions unit is a stationary combustion turbine with a heat input at peak load (HHV) equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, based on the higher heating value of the fuel, and associated heat recovery steam generator with duct burners that commenced construction, modification, or reconstruction after February 18, 2005, subject to the emissions limitations/control measures specified in this section.]	<ul> <li>NO<sub>x</sub> emissions from new combustion turbines firing natural gas with heat input capacities at peak load (HHV) greater than 850 MMBtu/hr shall not exceed 15 ppm at 15% O<sub>2</sub> or 54 ng/J of useful output (0.43 lb/MWh).</li> <li>[40 CFR 60.4320(a) and Table 1 of 40 CFR Part 60, Subpart KKKK]</li> <li>SO<sub>2</sub> emissions from the turbine must not exceed 0.90 lb/MWh of gross output, or, fuels burned in the turbine must not contain sulfur in concentrations which would result in potential sulfur emissions in excess of 0.060 lb SO<sub>2</sub>/MMBtu heat input.</li> <li>[40 CFR 60.4330(a)]</li> </ul>
h	40 CER Part 60 Subpart TTTT	See b)(2)g. below. Carbon dioxide (CO <sub>2</sub> ) emissions shall not
	(40 CFR 60.5508 – 60.5580) [In accordance with 40 CFR 60.5508 and 60.5509(a), this emissions unit is a stationary combustion turbine (EGU) that commenced construction after June 18, 2014 and has a base load rating greater than 250 MMBtu/hour and serving a generator capable of selling greater than 25 MW of electricity to a utility power distribution system, subject to the emissions limitations/control measures specified in this section.]	exceed 450 kg per MW-h of gross energy output (1,000 lbs/MW-h) on a 12- operating-month rolling average basis, or, if a petition is granted, CO <sub>2</sub> emissions shall not exceed 470 kg per MW-h of net energy output (1,030 lbs/MW-h) on a 12- operating- month rolling average basis. [40 CFR 60.5520(a)-(c) and Table 2 of 40 CFR Part 60, Subpart TTTT]
i.	40 CFR Part 60, Subpart A (40 CFR 60.1 – 60.19)	General Provisions Table 3 of 40 CFR Part 60, Subpart TTTT shows which parts of the General Provisions in 40 CFR 63.1 through 19 do not apply.



Applicable Rules/Requirements	Applicable Emissions Limitations/Control
	Measures
	[40 CFR 60.5570 and Table 3 of 40 CFR
	Part 60, Subpart IIII)

- (2) Additional Terms and Conditions
  - a. As part of the Best Available Control Technology (BACT) determination for NO<sub>x</sub>, the permittee shall install and maintain dry low NO<sub>x</sub> burners and an SCR system on this emissions unit. Operation of these control systems shall reduce NO<sub>x</sub> emissions to the limitations specified in b)(1)a.
  - b. As part of the BACT determination for CO and VOC, the permittee shall install and operate an oxidation catalyst and shall operate the emissions unit in accordance with good combustion practices as recommended by the manufacturer to ensure compliance with the CO and VOC limitations specified in b)(1)a.
  - c. As part of the BACT determination for visible PE, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, SO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> emissions, the permittee shall burn only natural gas and a natural gas and ethane mixture (as specified in b)(1)) in this emissions unit to ensure compliance with the PM/PM<sub>10</sub>/PM<sub>2.5</sub>, SO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> limitations specified in b)(1)a.
  - d. As part of the BACT determination for CO<sub>2</sub>e, the permittee shall operate the emissions unit using high efficiency combustion practices as recommended by the manufacturer to ensure compliance with the CO<sub>2</sub>e limitations specified in b)(1)a.
  - e. The permittee shall comply with the following requirements during periods of startup and shutdown.

	Emissions Limitations During Startup and Shutdown (Ibs/hr) <sup>a</sup>			
	Cold Startup	Warm Startup	Hot Startup	Shutdown
NO <sub>x</sub>	72.7	87.1	77.7	44.8
CO	447.9	439.9	370.3	118.5
VOC	40.4	40.2	40.7	39.4
<sup>a</sup> Pound per hour emissions rates as presented are the maximum rates during any hour during the event from each unit.				

Operating modes of the combined cycle combustion turbine are defined as follows:



Operating Mode	Definition
Cold Startup	When the combustion turbine has been shut down for more than 72 hours
Warm Startup	When the combustion turbine has been shut down for a period from 8 to 72 hours
Hot Startup	When the combustion turbine has been shut down for less than 8 hours
Steady-state	When the load is between approximately 40% and 100%. The duct burners may operate when the combustion turbine is in steady-state.
Shutdown	Begins when the first CEM data point out of compliance with either the CO or $NO_x$ ppmvd emission limit that occurs after load is reduced below Steady-state in conjunction with the process of ceasing operation of the unit, and ends when fuel flow to the turbine ceases.

- f. The permittee is subject to the requirements of OAC Chapter 103 and 40 CFR Parts 72 and 75 concerning acid rain, so the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.
- g. Only heat input to the combustion turbine should be included when determining whether or not NSPS Subpart KKKK is applicable to your turbine. Any additional heat input to associated heat recovery steam generators (HRSG) or duct burners should not be included when determining your peak heat input. However, this subpart does apply to emissions from any associated HRSG and duct burners.
- h. The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.
- i. Each continuous NO<sub>x</sub> monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) shall be certified to meet the requirements of 40 CFR Part 60 and 40 CFR Part 75, Appendix B and Performance Specifications 2, 3 and 6. At least 45 days before commencing certification testing of the continuous NO<sub>x</sub> monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of NO<sub>x</sub> and  $CO_2$  or  $O_2$  emissions from the continuous monitor(s), in units of the applicable standard(s). The fuel flow monitor/meter shall be maintained as required in Part 75, Appendix D. Except as allowed below, the plan shall follow the requirements of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO<sub>x</sub> monitoring system must be kept on site and available for inspection during regular office hours.



The plan shall include the requirement to conduct relative accuracy test audits for the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) in accordance with the frequencies required pursuant to 40 CFR Part 60 and 40 CFR Part 75; or may follow relative accuracy test audit frequency requirements for monitoring systems subject to 40 CFR 75, Appendix B, in lieu of frequencies required in 40 CFR Part 60. In either case, results shall be recorded and reported in units of the applicable standard(s) in accordance with 40 CFR Part 60.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits pursuant to 40 CFR Part 60, and linearity checks pursuant to 40 CFR Part 75; however, linearity checks completed pursuant to 40 CFR Part 75, Appendix B, may be substituted for the quarterly cylinder gas or relative accuracy audits required per 40 CFR Part 60.

j. Each continuous CO monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 3, 4 or 4a and 6. At least 45 days before commencing certification testing of the continuous CO monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of CO and  $CO_2$  or  $O_2$  emissions from the continuous monitor(s), in units of the applicable standard(s). The fuel flow monitor/meter shall be maintained as required in Part 75, Appendix D. Except as allowed below, the plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system (including the associated continuous CO monitoring system) must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct relative accuracy test audits for the continuous CO monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) in accordance with the frequencies required for monitoring systems subject to 40 CFR 60, or may follow relative accuracy test audit frequency requirements for monitoring systems subject to 40 CFR 75, Appendix B. In either case, results shall be recorded and reported in units of the applicable standard(s) in accordance with 40 CFR Part 60.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; however, the quarterly cylinder gas audit and relative accuracy audit frequency requirements may be adjusted to coincide with linearity checks completed for continuous emissions monitoring systems subject to 40 CFR Part 75, Appendix B requirements.

k. See 40 CFR Part 60, Subpart TTTT (40 CFR 60.5508 – 60.5580).


- c) Operational Restrictions
  - (1) The permittee shall burn only pipeline quality natural gas and a natural gas and ethane mixture with a maximum sulfur content not exceed 0.50 grain/100 scf in this emissions unit.
  - (2) Except during periods of startup, the SCR system for this emissions unit shall be in operation at all times, including during the shutdown of the unit.
  - (3) In accordance with good engineering practices, the SCR unit shall be operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The permittee shall maintain on site a copy of the operation and maintenance manual, as provided by the manufacturer.
  - (4) See 40 CFR Part 60, Subpart KKKK (40 CFR 60.4300 60.4420).
  - (5) See 40 CFR Part 60, Subpart TTTT (40 CFR 60.5508 60.5580).
- d) Monitoring and/or Recordkeeping Requirements
  - (1) For each day during which the permittee burns a fuel other than pipeline quality natural gas with a maximum sulfur content of 0.5 grain/100 scf, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
  - (2) The permittee shall maintain monthly records of the following information for this emissions unit:
    - a. the hours of operation of the combustion turbine in each operating mode;
    - b. the hours of operation of the duct burners;
    - c. the amount of gaseous fuel consumed in this emissions unit, in MMscf;
    - d. the heat content of the gaseous fuel combusted in this emissions unit, in MMBtu/MMscf;
    - e. the sulfur content of the gaseous fuel combusted in this emissions unit, in gr/dscf;
    - f. the total  $NO_x$  emissions, in pounds, including startup/shutdown emissions, as recorded in d)(4)b.;
    - g. the total CO emissions, in pounds, including startup/shutdown emissions, as recorded in d)(7)b.;
    - h. the total VOC emissions, in pounds, including startup/shutdown emissions, calculated by multiplying the VOC emissions factor of 0.0014 lb/MMBtu (w/o duct burner firing) or 0.0027 lb/MMBtu (w/ duct burner firing), or after testing has been completed, the results of the most recent stack test, by the amount of gaseous fuel consumed, including periods of startup/shutdown, as recorded in d)(2)c. and the heat content of the natural gas consumed, as recorded in d)(2)d.;



- i. the total PE/PM<sub>10</sub>/PM<sub>2.5</sub> emissions, in pounds, including startup/shutdown emissions, calculated by multiplying the emissions factor of 0.006 lb/MMBtu (w/o duct burner firing) or 0.0057 lb/MMBtu (w/ duct burner firing), or after testing has been completed, the results of the most recent stack test, by the amount of gaseous fuel consumed, including periods of startup/shutdown, as recorded in d)(2)c. and the heat content of the natural gas consumed, as recorded in d)(2)d.;
- j. the total H<sub>2</sub>SO<sub>4</sub> emissions, in pounds, including startup/shutdown emissions, calculated by multiplying the emissions factor of 0.00055 lb/MMBtu (w/o duct burner firing) or 0.00052 lb/MMBtu (w/ duct burner firing), or after testing has been completed, the results of the most recent stack test, by the amount of gaseous fuel consumed, including periods of startup/shutdown, as recorded in d)(2)c. and the heat content of the natural gas consumed, as recorded in d)(2)d.;
- k. the total CO<sub>2</sub>e emissions, in pounds, including startup/shutdown emissions, calculated by multiplying the CO<sub>2</sub>e emissions factor of 119.0 lbs/MMBtu when firing natural gas only and 125.1 when firing 25% ethane and linearly scaled when firing intermediate amounts of ethane, by the amount of gaseous fuel consumed, including periods of startup/shutdown, as recorded in d)(2)c. and the heat content of the natural gas consumed, as recorded in d)(2)d.;
- I. the rolling, 12-month summation of the NO<sub>x</sub> emissions, in tons, including startup/shutdown emissions, calculated by adding the total NO<sub>x</sub> emissions for the present month as recorded in d)(2)f., plus the total NO<sub>x</sub> emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds;
- m. The rolling, 12-month summation of the CO, in tons, including startup/shutdown emissions, calculated by adding the total CO emissions for the present month as recorded in d)(2)g., plus the total CO emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds;
- n. The rolling, 12-month summation of the VOC emissions, in tons, including startup/shutdown emissions, calculated by adding the total VOC emissions for the present month as recorded in d)(2)h., plus the total VOC emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds;
- o. The rolling, 12-month summation of the PE/PM<sub>10</sub>/PM<sub>2.5</sub> emissions, in tons, including startup/shutdown emissions, calculated by adding the total PE/PM<sub>10</sub>/PM<sub>2.5</sub> emissions for the present month as recorded in d)(2)i., plus the total PE/PM<sub>10</sub>/PM<sub>2.5</sub> emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds;
- p. The rolling, 12-month summation of the  $H_2SO_4$  emissions, in tons, including startup/shutdown emissions, calculated by adding the total  $H_2SO_4$  emissions for the present month as recorded in d)(2)j., plus the total  $H_2SO_4$  emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds; and
- q. The rolling, 12-month summation of the CO<sub>2</sub>e emissions, in tons, including startup/shutdown emissions, calculated by adding the total CO<sub>2</sub>e emissions for



the present month as recorded in d)(2)k., plus the total  $CO_2e$  emissions for the previous 11 months, and dividing by 1 ton/2,000 pounds.

(3) Prior to the installation of the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system), the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specifications 2 and 3. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) meets the requirements of Performance Specifications 2 and 3 and the accuracy requirements of Performance Specification 6.

Following installation, the permittee shall document that the fuel flow monitor/meter meets 40 CFR 75 certification requirements prior to the performance specification test, and shall demonstrate how the pound per hour emissions of NOx is being calculated stoichiometrically. The U.S. EPA shall certify that the continuous NOx monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system) meets the requirements under 40 CFR Part 75, which may be approved through the recommendation for certification by Ohio EPA to U.S. EPA. Once received, the letter(s)/document(s) of certification under Part 60 and certification or recommendation for certification under Part 75 shall be maintain on-site and made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

(4) The permittee shall install, operate and maintain equipment to continuously monitor and record NO<sub>x</sub> and CO<sub>2</sub> or O<sub>2</sub> emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60 and/or Part 75.

The permittee shall maintain records of all data obtained by the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) including, but not limited to:

- a. emissions of NO<sub>x</sub> in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. emissions of  $NO_x$  in pounds per hour and in units of the applicable standard(s) in the appropriate averaging period;
- c. the percent  $CO_2$  or  $O_2$  with each cycle time of the analyzer, with no resolution less than one data point per minute required;
- d. results of quarterly cylinder gas audits or linearity checks;
- e. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- f. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);



- g. hours of operation of the emissions unit, continuous NO<sub>x</sub> monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system), and control equipment;
- h. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system);
- i. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system); as well as,
- j. the reason (if known) and the corrective actions taken (if any) for each such event in d)(5)h. and i.

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

- (5) The permittee may operate and maintain equipment to continuously monitor and record the fuel flow rate in order to stoichiometrically calculate emissions of NO<sub>x</sub>, in pounds per hour, as an alternative to conducting Specification 6. Fuel heat content values for each fuel burned, as applied in the stoichiometric calculations, shall also be recorded. The permittee shall maintain records of data obtained by the fuel flow monitor/meter, including the dates and results of each calibration check and the magnitude of calibration adjustments; periods of downtime and malfunction of the fuel flow monitor/meter; as well as, the reason (if known) and the corrective actions taken (if any) for each such event.
- (6) Prior to the installation of the continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system), the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specifications 3 and 4 or 4a (as appropriate). The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous CO monitoring system meets the requirements of Performance Specifications 3 and 4 or 4a and the accuracy requirements of Performance Specification 6.

Following installation, the permittee shall document that the fuel flow monitor/meter meets 40 CFR 75 certification requirements prior to the performance specification test, and shall demonstrate how the pound per hour emissions of CO is being calculated stoichiometrically. Once received, the letter(s)/document(s) of certification shall be maintained on-site and shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

(7) The permittee shall operate and maintain equipment to continuously monitor and record CO and  $CO_2$  or  $O_2$  emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Parts 60.



The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to:

- a. emissions of CO in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. emissions of CO in pounds per month;
- c. the percent  $CO_2$  or  $O_2$  with each cycle time of the analyzer, with no resolution less than one data point per minute required;
- d. results of quarterly cylinder gas audits;
- e. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- f. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
- g. hours of operation of the emissions unit, continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system), and control equipment;
- h. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system);
- i. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system); as well as,
- j. the reason (if known) and the corrective actions taken (if any) for each such event in (h) and (i).

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

(8) The permittee may operate and maintain equipment to continuously monitor and record the fuel flow rate in order to stoichiometrically calculate emissions of CO in pounds per hour, as an alternative to conducting Specification 6. Fuel heat content values for each fuel burned, as applied in the stoichiometric calculations, shall also be recorded. The permittee shall maintain records of data obtained by the fuel flow monitor/meter, including the dates and results of each calibration check and the magnitude of calibration adjustments; periods of downtime and malfunction of the fuel flow monitor/meter; as well as, the reason (if known) and the corrective actions taken (if any) for each such event.



- (9) The permittee shall collect, record, and maintain measurements, data, records, and reports required per 40 CFR Part 75; and shall submit certification, recertification, notifications, applications, monitoring plans, petitions for alternative monitoring systems, electronic quarterly reports, and any other pertinent record and/or report to the Administrator (U.S. EPA), as required by Part 75.
- (10) The permittee shall operate and maintain equipment to continuously monitor and record the actual fuel flow to this emissions unit when the emissions unit is in operation. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 75. If the fuel flow monitoring and/or recording equipment is (are) not in service when the emissions unit is in operation, the permittee shall comply with the approved data substitution protocol.

Fuel flow data that is substituted in accordance with 40 CFR Part 75, Appendix D, is not to be used when verifying compliance with the hourly  $NO_x$  and CO pounds per hour emission limits. Hours in which fuel flow is substituted should be included as  $NO_x$  and CO monitoring system downtime.

- (11) The permittee shall monitor the sulfur content and gross caloric value of the fuel being fired in the combustion turbine and duct burners, representative fuel sampling shall be conducted which shows that the sulfur content of the fuel does not exceed 1.5E-03 lb SO<sub>2</sub>/MMBtu heat input. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of Appendix D to 40 CFR 75 is required
- (12) The permittee shall determine the hourly heat input rate to the combustion turbine and duct burner, in MMBtu, from the fuel flow rate as determined in d)(9) and gross calorific value as determined in d)(10). The heat input rate shall be calculated in accordance with the procedures in section 5 of 40 CFR Part 75, Appendix F.
- (13) See 40 CFR Part 60, Subpart KKKK (40 CFR 60.4300 60.4420).
- (14) See 40 CFR Part 60, Subpart TTTT (40 CFR 60.5508 60.5580).
- 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) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than pipeline quality natural gas with a maximum sulfur content of the natural gas of 0.5 grain/100 standard cubic feet was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurred.
  - (3) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
    - a. all exceedances of the NO<sub>x</sub>, CO, and/or VOC start-up/shutdown limitations; and



b. all exceedances of the rolling, 12-month NO<sub>x</sub>, CO, VOC, PE/PM<sub>10</sub>/PM<sub>2.5</sub>, SO<sub>2</sub> and/or  $H_2SO_4$  emissions limitations.

These quarterly reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

- (4) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system):
  - a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of NO<sub>x</sub> emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapters 3745-14 and 3745-23, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).
  - b. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of continuous  $CO_2$  or  $O_2$  monitoring system downtime and malfunction while the emissions unit was on line.
  - c. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:
    - i. the facility name and address;
    - ii. the manufacturer and model number of the continuous  $NO_x$  and  $CO_2$  or  $O_2$  and other associated monitors;
    - iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;
    - iv. the excess emissions report (EER)\*, i.e., a summary of any exceedances during the calendar quarter, as specified above;
    - v. the total NO<sub>x</sub> emissions for the calendar quarter (tons);
    - vi. the total operating time (hours) of the emissions unit;



- vii. the total operating time of the continuous NO<sub>x</sub> monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system) while the emissions unit was in operation;
- viii. results and date of quarterly cylinder gas audits or linearity checks;
- ix. unless previously submitted, results and date of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
- x. unless previously submitted, the results of any relative accuracy test audit showing the continuous NO<sub>x</sub> and CO<sub>2</sub> or O<sub>2</sub> monitor out-of-control and the compliant results following any corrective actions;
- xi. the date, time, and duration of any/each malfunction\*\* of the continuous NO<sub>x</sub> monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system), emissions unit, and/or control equipment;
- xii. the date, time, and duration of any downtime<sup>\*\*</sup> of the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) and/or control equipment while the emissions unit was in operation; and
- xiii. the reason (if known) and the corrective actions taken (if any) for each event in e)(4)c.xi. and xii.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

\* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

\*\* each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

- (5) If using the fuel flow rate to stoichiometrically calculate the pound per hour emissions of NO<sub>x</sub> in place of Specification 6 requirements, the permittee shall submit quarterly reports, to the appropriate Ohio EPA District Office or local air agency, that document the date, time, and duration of each malfunction and/or period of downtime of the continuous fuel flow monitoring system, while the emissions unit was in operation, and the reason (if known) and the corrective actions taken (if any) for each such event. If there was no downtime or malfunction of the continuous fuel flow monitoring system during any calendar quarter, the report shall be submitted so stating it. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year.
- (6) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system):



- a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of CO emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-21, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as, the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).
- b. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system downtime and malfunction while the emissions unit was on line.
- c. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:
  - i. the facility name and address;
  - ii. the manufacturer and model number of the continuous CO and CO<sub>2</sub> or O<sub>2</sub> and other associated monitors;
  - iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;
  - iv. the excess emissions report (EER)\*, i.e., a summary of any exceedances during the calendar quarter, as specified above;
  - v. the total CO emissions for the calendar quarter (tons);
  - vi. the total operating time (hours) of the emissions unit;
  - vii. the total operating time of the continuous CO monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) while the emissions unit was in operation;
  - viii. results and dates of quarterly cylinder gas audits;
  - ix. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));



- x. unless previously submitted, the results of any relative accuracy test audit showing the continuous CO and CO<sub>2</sub> or O<sub>2</sub> monitor out-of-control and the compliant results following any corrective actions;
- xi. the date, time, and duration of any/each malfunction\*\* of the continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system), and/or emissions unit;
- xii. the date, time, and duration of any downtime<sup>\*\*</sup> of the continuous CO monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) while the emissions unit was in operation; and
- xiii. the reason (if known) and the corrective actions taken (if any) for each event in e)(6)c.xi. and xii.
- Each report shall address the operations conducted and data obtained during the previous calendar quarter.
- \* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report
- \*\* each downtime and malfunction event shall be reported regardless of whether there is an exceedance of any applicable limit
- (7) If using the fuel flow rate to stoichiometrically calculate the pound per hour emissions of CO, in place of Specification 6 requirements, the permittee shall submit quarterly reports, to the appropriate Ohio EPA District Office or local air agency, that document the date, time, and duration of each malfunction and/or period of downtime of the continuous fuel flow monitoring system, while the emissions unit was in operation, and the reason (if known) and the corrective actions taken (if any) for each such event. If there was no downtime or malfunction of the continuous fuel flow monitoring system during any calendar quarter, the report shall be submitted so stating it. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year.
- (8) See 40 CFR Part 60, Subpart KKKK (40 CFR 60.4300 60.4420).
- (9) See 40 CFR Part 60, Subpart TTTT (40 CFR 60.5508 60.5580).
- f) Testing Requirements
  - (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods for this emission unit:
    - a. <u>Emissions Limitations:</u>

 $NO_x$  emissions without duct burner firing shall not exceed 2.0 ppmvd at 15%  $O_2$  and 22.4 lbs/hr, excluding periods of startup and shutdown.



 $NO_x$  emissions with duct burner firing shall not exceed 2.0 ppmvd at 15%  $O_2$  and 27.1 lbs/hr, excluding periods of startup and shutdown.

 $NO_x$  emissions from new combustion turbines firing natural gas with heat input capacities greater than 850 MMBtu/hr shall not exceed 15 ppm at 15%  $O_2$  calculated on a 30-day rolling average or 54 ng/J of useful output (0.43 lb/MWh).

## Applicable Compliance Method:

Initial compliance with the allowable outlet concentration and the lbs/hr emissions limitations shall be demonstrated through emissions testing performed as described in f(4) below.

Ongoing compliance with the short-term  $NO_x$  emissions limitations shall be demonstrated through the data collected as required in the Monitoring and Recordkeeping section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60 and 40 CFR Part 75.

Ongoing compliance with the  $CO_2$  or  $O_2$  monitoring requirements contained in this permit, 40 CFR Parts 60 and 75, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and demonstration of compliance with the quality assurance/quality control plan, which shall meet all of the testing and recertification requirements of 40 CFR Part 60 and 40 CFR Part 75.

#### b. <u>Emissions Limitations:</u>

CO emissions without duct burner firing shall not exceed 2.0 ppmvd at 15% O<sub>2</sub> based on a 24-hour block averaging period and 13.6 lbs/hr, excluding periods of startup and shutdown.

CO emissions with duct burner firing shall not exceed 2.0 ppmvd at 15%  $O_2$  based on a 24-hour block averaging period and 16.5 lbs/hr, excluding periods of startup and shutdown.

## Applicable Compliance Method:

Initial compliance with the allowable outlet concentration and the lbs/hr emissions limitations shall be demonstrated through emissions testing performed as described in f(4) below.

Ongoing compliance with the short-term CO emission limitations shall be demonstrated through the data collected as required in the Monitoring and Recordkeeping section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

Ongoing compliance with the  $CO_2$  or  $O_2$  monitoring requirements contained in this permit, 40 CFR Parts 60 and 75, and any other applicable standard(s) shall



be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and demonstration of compliance with the quality assurance/quality control plan, which shall meet all of the testing and recertification requirements of 40 CFR Part 60 and 40 CFR Part 75.

## c. <u>Emissions Limitations:</u>

VOC emissions without duct burner firing shall not exceed 1.0 ppmvd at 15%  $O_2$  and 3.9 lbs/hr, excluding periods of startup and shutdown.

VOC emissions with duct burner firing shall not exceed 2.0 ppmvd at  $15\% O_2$  and 9.50 lbs/hr, excluding periods of startup and shutdown.

#### Applicable Compliance Method:

Compliance with the short-term VOC emissions limitations shall be demonstrated by the testing requirements in f)(4).

d. <u>Emissions Limitations:</u>

 $PE/PM_{10}/PM_{2.5}$  emissions without duct burner firing shall not exceed 0.006 lb/MMBtu and 13 lbs/hr.

 $\text{PE/PM}_{10}/\text{PM}_{2.5}$  emissions with duct burner firing shall not exceed 0.0057 lb/MMBtu and 19.8 lbs/hr.

#### Applicable Compliance Method:

Compliance with the short-term  $PE/PM_{10}/PM_{2.5}$  emissions limitations shall be demonstrated by the testing requirements in f)(4).

e. <u>Emissions Limitations:</u>

 $H_2SO_4$  emissions without duct burner firing shall not exceed 0.00055 lb/MMBtu and 1.4 lbs/hr.

 $H_2SO_4$  emissions with duct burner firing shall not exceed 0.00052 lb/MMBtu and 1.81 lbs/hr.

## Applicable Compliance Method:

Compliance with the short-term emissions limitations shall be demonstrated based on the testing requirements in f(4).

f. <u>Emissions Limitation:</u>

Visible PE from the stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average.



## Applicable Compliance Method:

Compliance with the visible PE limitation shall be demonstrated by the testing requirements in f(4).

## g. <u>Emissions Limitations:</u>

128.8 tons of  $NO_x$  per rolling, 12-month period, including start-up and shutdown emissions;

142.6 tons of CO emissions per rolling, 12-month period, including start-up and shutdown emissions;

50.8 tons of VOC emissions per rolling, 12-month period, including start-up and shutdown emissions;

86.7 tons of PE/PM<sub>10</sub>/PM<sub>2.5</sub> per rolling, 12-month period;

7.9 tons of H<sub>2</sub>SO<sub>4</sub> emissions per rolling, 12-month period; and

1,962,130 tons of CO<sub>2</sub>e emissions per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the rolling, 12-month emissions limitations shall be demonstrated by the recordkeeping in d)(2).

h. <u>Emission Limitation:</u>

CO<sub>2</sub>e emissions shall not exceed 775 lb/MW-hr gross energy output (at full load ISO conditions when firing natural gas without duct firing).

Applicable Compliance Method:

Since more than 99% of the  $CO_2e$  emissions result from  $CO_2$  emissions, compliance with the 775 lb/MW-hr gross energy output limitation will be assumed if the  $CO_2$  emissions determined during testing conducted per f)(4) are determined to not exceed 775 lb/MW-hr gross energy output.

i. <u>Emissions Limitation:</u>

Carbon dioxide  $(CO_2)$  emissions shall not exceed 450 kg per MW-h of gross energy output (1,000 lbs/MW-h) on a 12-operating-month rolling average basis, or, if a petition is granted,  $CO_2$  emissions shall not exceed 470 kg per MW-h of net energy output (1,030 lbs/MW-h) on a 12-operating- month rolling average basis.

#### Applicable Compliance Method:

Compliance with the output based emissions limitation shall be demonstrated by the procedures in 40 CFR 60.5535 and 60.5540.



j. <u>Emissions Limitation:</u>

The permittee shall burn only pipeline quality natural gas and a natural gas and ethane mixture with a maximum sulfur content not exceed 0.5 grains per 100 standard cubic feet in this emissions unit.

## Applicable Compliance Method:

Compliance with the fuel sulfur content limitations shall be demonstrated by the testing requirements in f(4) and the recordkeeping requirements in d(13).

k. <u>Emissions Limitations:</u>

 $NO_x$  emissions during startup and shutdown shall not exceed 72.7 lbs/hr during cold startup, 87.1 lbs/hr during warm startup, 77.7 lbs/hr during hot startup and 44.8 lbs/hr during shutdown.

CO emissions during startup and shutdown shall not exceed 447.9 lbs/hr during cold startup, 439.9 lbs/hr during warm startup, 370.3 lbs/hr during hot startup and 118.5 lbs/hr during shutdown.

VOC emissions during startup and shutdown shall not exceed 40.4 lbs/hr during cold startup, 40.2 lbs/hr during warm startup, 40.7 lbs/hr during hot startup and 39.4 lbs/hr during shutdown.

## Applicable Compliance Method:

These emissions limitations are based on manufacturer's data.

Compliance with the CO and  $NO_x$  lbs/hr startup and shutdown emissions limitations shall be demonstrated using the continuous emissions monitoring system based on a 1-hour block average.

Compliance with the VOC lbs/hr startup and shutdown emissions limitations shall be demonstrated through the record keeping requirements specified in d)(2) of this permit.

(2) Within 60 days of achieving the maximum production rate at which the emissions unit(s) will be operated, but not later than 180 days after initial startup, the permittee shall conduct certification tests of the continuous NO<sub>x</sub> monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system), in units of the applicable standard(s), to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specifications 2 and 3; Performance Specification 6 relative accuracy requirements; ORC section 3704.03(I); and 40 CFR Part 75.

The permittee shall certify that the fuel flow monitor/meter meets 40 CFR 75 certification requirements prior to the performance specification test and shall demonstrate how the pound per hour emissions of  $NO_x$  and  $CO_2$  or  $O_2$  will be calculated stoichiometrically from the fuel flow rate.



Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 45 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification, or recommendation for certification by Ohio EPA to U.S. EPA, of the continuous  $NO_x$  monitoring system (including the associated continuous  $CO_2$  or  $O_2$  monitoring system) shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 3; Performance Specification 6 relative accuracy requirements; ORC section 3704.03(I); and 40 CFR Part 75.

- (3) Within 60 days of achieving the maximum production rate at which the emissions unit(s) will be operated, but not later than 180 days after initial startup, the permittee shall conduct certification tests of the continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system) in units of the applicable standard(s), to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specifications 3 and 4 or 4a (as appropriate) and 6; and ORC section 3704.03(l).
  - Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.
  - Certification of the continuous CO monitoring system (including the associated continuous CO<sub>2</sub> or O<sub>2</sub> monitoring system) shall be granted upon determination by the Ohio EPA Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 3 and 4 or 4a (as appropriate) and 6 and ORC section 3704.03(I).
- (4) The permittee shall conduct, or have conducted, emission testing for this emission unit in accordance with OAC rule 3745-31-10 through 3745-31-20, CFR 60.8, 60.4405 and 60.4415 and the following requirements:
  - a. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the modified facility will be operated, but not later than 180 days after initial startup of the modified unit. Subsequent SO<sub>2</sub> performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test) using one of the three methodologies in 60.4415(a).
  - b. The emission testing shall be conducted to demonstrate initial compliance with the NO<sub>x</sub> and CO outlet concentrations, the lb/hr emissions limitations for NO<sub>x</sub>, CO, VOC, and PE and  $PM_{10}/PM_{2.5}$ , the visible PE limit and the fuel sulfur content after modification.



c. The following test method(s) shall be employed to demonstrate compliance with the above emissions limitations:

NO <sub>x</sub>	Method 7E or 20 of 40 CFR Part 60, Appendix A
CO	Methods 1-4 and 10 of 40 CFR Part 60, Appendix A
VOC	Methods 1-4, 18 and 25A of 40 CFR Part 60,
	Appendix A
PE	Methods 1-5 of 40 CFR Part 60, Appendix A
PM <sub>10</sub> /PM <sub>2.5</sub>	Methods 1-4 of 40 CFR Part 60, Appendix A and
	Methods 201/201A and 202 as set forth in 40 CFR
	Part 51, Appendix M
CO <sub>2</sub>	Methods 1-4 of 40 CFR Part 60, Appendix A, mass
	balance calculations using ASTM D1945-03
	(Standard Test Method for Analysis of Natural Gas
	by Gas Chromatography) and/or ASTM D1826-94
	(Standard Test Method for Calorific Value of Gases
	in Natural Gas Range by Continuous Recording
	Calorimeter).
VEs	Method 9 of 40 CFR Part 60, Appendix A
SO <sub>2</sub> (fuel sulfur content)	40 CFR 60.4415(a)
Fuel sulfur content	40 CFR 60.4415(a)

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Southeast District Office.

- d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the Ohio EPA Southeast District Office. Although this 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 under these conditions 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 Ohio EPA Southeast District Office. 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 Southeast District Office's refusal to accept the results of the emission test(s).
- f. Personnel from the Ohio EPA Southeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures 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 Ohio EPA Southeast District Office 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 Ohio EPA Southeast District Office.
- g) Miscellaneous Requirements

None.



Mail Processing Center Federal Aviation Administration Southwest Regional Office Obstruction Evaluation Group 10101 Hillwood Parkway Fort Worth, TX 76177 Aeronautical Study No. 2017-AGL-8069-OE

Issued Date: 05/17/2017

Mark Barry Ohio River Partners Shareholder LLC Marshall Street Duxbury, MA 02332

# **\*\* DETERMINATION OF NO HAZARD TO AIR NAVIGATION \*\***

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Stack HPPP Stack
Location:	Hannibal, OH
Latitude:	39-42-07.19N NAD 83
Longitude:	80-50-43.39W
Heights:	665 feet site elevation (SE)
	235 feet above ground level (AGL)
	900 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 L Change 1, Obstruction Marking and Lighting, a med-dual system - Chapters 4,8(M-Dual),&12.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

At least 10 days prior to start of construction (7460-2, Part 1)

\_X\_\_ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

This determination expires on 11/17/2018 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.

(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates , heights, frequency(ies) and power . Any changes in coordinates , heights, and frequencies or use of greater power will void this determination. Any future construction or alteration , including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (718) 553-4199. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2017-AGL-8069-OE.

**Signature Control No: 330378982-331636284** Dianne Marin Technician ( DNE )

Attachment(s) Case Description Map(s)

# Case Description for ASN 2017-AGL-8069-OE

The Project is a natural gas-fired, combined cycle electric generating facility, with a nominal net capacity of 485 MW. The Project will utilize state-of-the-art power generator technology that is clean, safe, quiet, and reliable.

# Verified Map for ASN 2017-AGL-8069-OE



Aeronautical Study No. 2017-AGL-8069-OE



Mail Processing Center Federal Aviation Administration Southwest Regional Office Obstruction Evaluation Group 10101 Hillwood Parkway Fort Worth, TX 76177

Issued Date: 09/21/2018

Mark Barry Ohio River Partners Shareholder LLC Marshall Street Duxbury, MA 02332

## \*\* Extension \*\*

A Determination was issued by the Federal Aviation Administration (FAA) concerning:

Structure:	Stack HPPP Stack
Location:	Hannibal, OH
Latitude:	39-42-07.19N NAD 83
Longitude:	80-50-43.39W
Heights:	665 feet site elevation (SE)
	235 feet above ground level (AGL)
	900 feet above mean sea level (AMSL)

In response to your request for an extension of the effective period of the determination, the FAA has reviewed the aeronautical study in light of current aeronautical operations in the area of the structure and finds that no significant aeronautical changes have occurred which would alter the determination issued for this structure.

Accordingly, pursuant to the authority delegated to me, the effective period of the determination issued under the above cited aeronautical study number is hereby extended and will expire on 03/21/2020 unless otherwise extended, revised, or terminated by this office. You must adhere to all conditions identified in the original determination.

This extension issued in accordance with 49 U.S.C., Section 44718 and, if applicable, Title 14 of the Code of Federal Regulations, part 77, concerns the effect of the structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (718) 553-4199, or Dianne.Marin@FAA.GOV. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2017-AGL-8069-OE.

Signature Control No: 330378982-385678406 Dianne Marin Technician ( EXT )

Attachment(s) Case Description Map(s)

# Case Description for ASN 2017-AGL-8069-OE

The Project is a natural gas-fired, combined cycle electric generating facility, with a nominal net capacity of 485 MW. The Project will utilize state-of-the-art power generator technology that is clean, safe, quiet, and reliable.

# Verified Map for ASN 2017-AGL-8069-OE





# OHIO DEPARTMENT OF TRANSPORTATION

Office of Aviation 2929 West Dublin-Granville Ril, Columbus, OH 13235 614-793-5040 transportation.ohio.gov

August 9, 2017

Ohio River Partners Shareh Attn: Mark Barry Marshall Street Duxbury, MA 02332 Proposal: Stack Lat: N39°-42'-7.19" Lon: W80°-50'-43.39" Height: 235 ft AGL 900 ft AMSL

#### Subject: CONSTRUCTION PERMIT Aeronautical Study No: 2017-DOT-1896-OE (2017-AGL-8069-OE)

To Whom It May Concern,

In response to the application received on the above date concerning the proposed construction described above, a study has been conducted under provisions of Ohio State Law Chapter 119, Section 4561.34 of the Revised Code to determine whether proposed construction would be an obstruction to air navigation. The findings of that study are as follows:

The proposed construction exceeds obstruction standards adopted under Section 4561.32 of the Ohio Revised Code, but will not affect the safe and efficient use of the airports nor effect the safety of persons and property on the ground. However, the following applies to the construction proposed:

[X] Notice is required if the project is abandoned or modified; maximum height 900 feet AMSL.

[X] Obstruction Marking and/or Lighting is required.

[X] The structure should be obstruction marked and lighted per current FAA Advisory Circular (AC 70/7460-1L) Change 1 "Obstruction Marking and Lighting".

[X] Required lighting SHALL be maintained in operable condition.

[X] Compliance is mandatory with the FAA conditions of approval.

This authorization to initiate construction of the subject proposal expires on 11/17/2018 unless it is extended, revised or terminated by the Ohio State Department of Transportation. This permit does not exempt you from contacting local zoning authorities regarding compliance with local zoning ordinances.

If you have any questions, please call (614) 793-5040 or (614) 466-6804.

Respectfully,

ODOT Office of Aviation 2829 W. Dublin-Granville Road Columbus, OH 43235

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OHIO DEPARTMENT OF TRANSPORTATION

Office of Aviation 2929 West Dublin-Granville Rd. Columbus, OH 13235 614-387-2356 transportation.ohio.gov

October 15, 2018

Ohio River Partners Shareh Attn: Mark Barry Marshall Street Duxbury, MA 02332 Proposal: Stack Lat: N39°-42'-7.19" Lon: W80°-50'-43.39" Height: 235 ft AGL 900 ft AMSL

#### Subject: APPLICATION FOR CONSTRUCTION PERMIT EXTENSION Aeronautical Study No: 2017-DOT-1896-OE (2017-AGL-8069-OE)

To Whom It May Concern,

In response to the application concerning the proposed construction described above, an independent study has been conducted under provisions of Ohio Revised Code Chapters 119 and 4561 to determine whether the proposed construction would be an obstruction to air navigation. The findings of that study are as follows:

The proposed construction meets notification criteria. However, we have determined that the proposed height and location will not negatively affect the safe and efficient use of the navigable airspace for any public use airport/heliport nor affect the safety of persons and property on the ground.

This permit is being approved subject to the following mandatory conditions:

[X] Notice is required if the project is abandoned or modified; maximum height 900 feet AMSL.

[X] Obstruction Marking and/or Lighting per the current FAA Advisory Circular (AC 70/7460-1L, Change 1) "Obstruction Marking and Lighting" is required.

[X] Compliance with conditions of the FAA determination.

This authorization to initiate construction of the subject proposal expires on 3/21/2020 unless it is extended, revised or terminated by the Ohio Department of Transportation. This permit does not exempt you from coordinating with local zoning authorities regarding compliance with established zoning ordinances, nor does it exempt you from your requirement to obtain a building/construction permit from the local/state building permit authority having jurisdiction.

If you have any questions, please call (614) 466-6804, Toll Free (855) 867-1852.

Respectfully,

ODOT Office of Aviation 2829 W. Dublin-Granville Road Columbus, OH 43235

> Excellence in Government ODOT is an Eaual Opportunity Employer and Provider of Services

Application No. OH0145092

Issue Date: January 12, 2018

Effective Date: February 1, 2018

Expiration Date: January 31, 2023

Ohio Environmental Protection Agency Authorization to Discharge Under the National Pollutant Discharge Elimination System

In compliance with the provisions of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et. seq., hereinafter referred to as the "Act"), and the Ohio Water Pollution Control Act (Ohio Revised Code Section 6111),

Long Ridge Energy Generation LLC dba Hannibal Port Power (Proposed Power Plant)

is authorized by the Ohio Environmental Protection Agency, hereinafter referred to as "Ohio EPA," to discharge from the proposed Hannibal Port Power facility to be located at 43840 State Route 7, Hannibal, Ohio, Monroe County and discharging to the Ohio River in accordance with the conditions specified in Parts I, II, and III of this permit.

I have determined that a lowering of water quality in the Ohio River is necessary. In accordance with OAC 3745-1-05, this decision was reached only after examining a series of technical alternatives, reviewing social and economic issues related to the degradation, and considering all public and appropriate intergovernmental comments.

This permit is conditioned upon payment of applicable fees as required by Section 3745.11 of the Ohio Revised Code.

This permit and the authorization to discharge shall expire at midnight on the expiration date shown above. In order to receive authorization to discharge beyond the above date of expiration, the permittee shall submit such information and forms as are required by the Ohio EPA no later than 180 days prior to the above date of expiration.

Laurie A. Stevenson Director

Total Pages: 30

1. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge in accordance with the following limitations and monitoring requirements from Outfall 0IB00038 001. See Part II, OTHER REQUIREMENTS, for locations of effluent sampling.

# Table - Final Outfall - 001 - Final

Effluent Characteristic			Discl	narge Limita		Monitoring Requirements				
	Conc	entration S	Specified	Units	Lo	ading* kg/	day	Measuring	Sampling	Monitoring
Parameter	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly	Frequency	Туре	Months
00011 - Water Temperature - F	-	-	-	-	-	-	-	1/Day	Maximum Indicating Thermometer	All
00335 - Chemical Oxygen Demand (Low Level) - mg/l	-	-	-	-	-	-	-	1/Month	24hr Composite	All
00530 - Total Suspended Solids - mg/l	-	-	-	-	-	-	-	1/Week	24hr Composite	All
00552 - Oil and Grease, Hexane Extr Method - mg/l	10	-	-	-	-	-	-	1/Week	Grab	All
01094 - Zinc, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Month	24hr Composite	All
01119 - Copper, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Month	24hr Composite	All
50050 - Flow Rate - MGD	-	-	-	-	-	-	-	1/Day	24hr Total	All
50060 - Chlorine, Total Residual - mg/l	0.20	-	-	-	-	-	-	1/Day	Grab	All
50092 - Mercury, Total (Low Level) - ng/l	-	-	-	-	-	-	-	2/Year	Grab	Semi-annual - 5
61425 - Acute Toxicity, Ceriodaphnia dubia - TUa	-	-	-	-	-	-	-	1/Year	24hr Composite	May
61427 - Acute Toxicity, Pimephales promelas - TUa	-	-	-	-	-	-	-	1/Year	24hr Composite	May
61941 - pH, Maximum - S.U.	9.0	-	-	-	-	-	-	1/Day	Multiple Grab	All
61942 - pH, Minimum - S.U.	-	6.5	-	-	-	-	-	1/Day	Multiple Grab	All
70300 - Residue, Total Filterable - mg/l	-	-	-	-	-	-	-	1/Week	24hr Composite	All
78739 - Chlorination/Bromination Duration - Minutes	n 120	-	-	-	-	-	-	1/Day	Total	All
80082 - CBOD 5 day - mg/l	-	-	-	-	-	-	-	1/Month	24hr Composite	All

Notes for Station Number 0IB00038 001:

a.) \* Effluent loadings based on average design flow of 0.74 MGD.

b.) Monitoring and sampling shall be performed as required in the above table. If no sample is collected or data is not reported on a required monitoring day because there is no discharge or for any other reason, see Part II, Item C for the appropriate instructions and codes to use on the monthly discharge monitoring report (DMR).

- c.) Acute Toxicity, See Part II, Item L.
- d.) Total Residual Chlorine, See Part II, Item I. For chlorination duration of longer than 120 minutes, See Part I, A.3.
- e.) Sampling for pH, TSS, and O&G, See Part II, Item K.
- f.) Sampling for mercury, "Semi-annual 5" sampling months are May and November. See Part II, Item M for sampling methods.

## Part I, A. - STORM WATER AND OTHER MISC. DISCHARGES

2. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge storm water runoff from Outfalls 0IB00038 002 and 003 free from industrial or process related contaminants and contaminants from industrial activity that would not contribute to violations of water quality standards.

These discharges are also authorized to be discharged: discharges from fire fighting activities; fire hydrant flushings; potable water sources including waterline flushings; irrigation drainage; lawn watering; routine external building washdown which does not use detergents; pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred and where detergents are not used; air conditioning condensate; boiler condensate; springs; groundwater; and foundation or footing drains where flows are not contaminated by industrial activity.

3. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge in accordance with the following limitations and monitoring requirements from Outfall 0IB00038 091. See Part II, OTHER REQUIREMENTS, for locations of effluent sampling.

\*\*Chlorination greater than 120 minutes\*\*

Table - Ficticious Outfall/Station - 091 - Final

Effluent Characteristic			Discl	narge Limita	Monitoring Requirements					
	Conc	entration S	Specified	Units	Lo	ading* kg/	day	Measuring	Sampling	Monitoring
Parameter	Maximum N	Ainimum	Weekly	Monthly	Daily	Weekly	Monthly	Frequency	Туре	Months
00011 - Water Temperature - F	-	-	-	-	-	-	-	1/Day	Maximum Indicating Thermometer	All
00335 - Chemical Oxygen Demand (Low Level) - mg/l	-	-	-	-	-	-	-	1/Month	24hr Composite	All
00530 - Total Suspended Solids - mg/l	-	-	-	-	-	-	-	1/Week	24hr Composite	All
00552 - Oil and Grease, Hexane Extr Method - mg/l	10	-	-	-	-	-	-	1/Week	Grab	All
01094 - Zinc, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Month	24hr Composite	All
01119 - Copper, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Month	24hr Composite	All
50050 - Flow Rate - MGD	-	-	-	-	-	-	-	1/Day	24hr Total	All
50060 - Chlorine, Total Residual - mg/l	0.038	-	-	-	-	-	-	1/Day	Grab	All
50092 - Mercury, Total (Low Level) - ng/l	-	-	-	-	-	-	-	2/Year	Grab	Semi-annual - 5
61425 - Acute Toxicity, Ceriodaphnia dubia - TUa	-	-	-	-	-	-	-	1/Year	24hr Composite	May
61427 - Acute Toxicity, Pimephales promelas - TUa	-	-	-	-	-	-	-	1/Year	24hr Composite	May
61941 - pH, Maximum - S.U.	9.0	-	-	-	-	-	-	1/Day	Multiple Grab	All
61942 - pH, Minimum - S.U.	-	6.5	-	-	-	-	-	1/Day	Multiple Grab	All
70300 - Residue, Total Filterable - mg/l	-	-	-	-	-	-	-	1/Week	24hr Composite	All
80082 - CBOD 5 day - mg/l	-	-	-	-	-	-	-	1/Month	24hr Composite	All

Notes for Station Number 0IB00038 091:

a.) \* Effluent loadings based on average design flow of 0.74 MGD.

b.) Monitoring and sampling shall be performed as required in the above table. If no sample is collected or data is not reported on a required monitoring day because there is no discharge or for any other reason, see Part II, Item C for the appropriate instructions and codes to use on the monthly discharge monitoring report (DMR).

- c.) Acute Toxicity, See Part II, Item L.
- d.) Total Residual Chlorine, See Part II, Item I.
- e.) Sampling for pH, TSS, and O&G, See Part II, Item K.

f.) Sampling for mercury, "Semi-annual 5" sampling months are May and November. See Part II, Item M for sampling methods.

4. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge in accordance with the following limitations and monitoring requirements from Outfall 0IB00038 601. See Part II, OTHER REQUIREMENTS, for locations of effluent sampling.

Table - Internal Monitoring Station - 601 - Final

Effluent Characteristic			Discl	narge Limita	Monitoring Requirements					
Parameter	Conc Maximum	centration S Minimum	Specified Weekly	Units Monthly	Loading* kg/day Daily Weekly Monthly		Measuring Frequency	Sampling Type	Monitoring Months	
00400 - pH - S.U.	-	-	-	-	-	-	-	1/Day	Grab	All
00530 - Total Suspended Solids - mg/l	100	-	-	30	32.8	-	9.82	1/Week	24hr Composite	All
00552 - Oil and Grease, Hexane Extr Method - mg/l	20	-	-	15	6.55	-	4.91	1/Week	Grab	All
50050 - Flow Rate - MGD	-	-	-	-	-	-	-	1/Day	24hr Total	All

Notes for station 0IB00038 601:

- a.) \* Effluent loadings based on average design flow of 0.0864 MGD.
- b.) Concurrent sampling, See Part II, Item K.

5. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge in accordance with the following limitations and monitoring requirements from Outfall 0IB00038 602. See Part II, OTHER REQUIREMENTS, for locations of effluent sampling.

Table - Internal Monitoring Station - 602 - Final

Effluent Characteristic			Disch	narge Limita	Monitoring Requirements					
Parameter	Concentration Sp Maximum Minimum V		Specified Weekly	Units Monthly	iits Loa Monthly Daily		Loading* kg/day y Weekly Monthly		Sampling Type	Monitoring Months
00400 - pH - S.U.	-	-	-	-	-	-	-	1/Day	Grab	All
00530 - Total Suspended Solids - mg/l	100	-	-	30	25.1	-	7.53	1/Week	24hr Composite	All
00552 - Oil and Grease, Hexane Extr Method - mg/l	20	-	-	15	5.02	-	3.77	1/Week	Grab	All
50050 - Flow Rate - MGD	-	-	-	-	-	-	-	1/Day	24hr Total	All

Notes for station 0IB00038 602:

- a.) \* Effluent loadings based on average design flow of 0.06624 MGD.
- b.) Concurrent sampling, See Part II, Item K.

6. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge in accordance with the following limitations and monitoring requirements from outfall 0IB00038 603. See Part II, OTHER REQUIREMENTS, for locations of effluent sampling.

Table - Internal Monitoring Station - 603 - Final

Effluent Characteristic			Disch	narge Limita	Monitoring Requirements					
Parameter	Concentration Sp Maximum Minimum		Specified Weekly	Jnits l Monthly Daily		Loading* kg/day Daily Weekly Monthly		Measuring Frequency	Sampling Type	Monitoring Months
00400 - pH - S.U.	-	-	-	-	-	-	-	1/Day	Grab	All
00530 - Total Suspended Solids - mg/l	100	-	-	30	28.4	-	8.51	1/Week	24hr Composite	All
00552 - Oil and Grease, Hexane Extr Method - mg/l	20	-	-	15	5.67	-	4.26	1/Week	Grab	All
50050 - Flow Rate - MGD	-	-	-	-	-	-	-	1/Day	24hr Total	All

Notes for station 0IB00038 603:

- a.) \* Effluent loadings based on average design flow of 0.07488 MGD.
- b.) Concurrent sampling, See Part II, Item K.
### Part I, B. - UPSTREAM MONITORING REQUIREMENTS

1. Upstream Monitoring. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee shall monitor the receiving stream, upstream of the point of discharge at Station Number 0IB00038 801, and report to the Ohio EPA in accordance with the following table. See Part II, OTHER REQUIREMENTS, for location of sampling.

Table - Upstream Monitoring - 801 - Final

Effluent Characteristic			Disch	arge Limita	ations			N	Ionitoring Require	<u>ments</u>
<b>D</b>	Conc	entration S	Specified V	Units	Lo	ading* kg/	day	Measuring	Sampling	Monitoring
Parameter	Maximum N	Ainimum	Weekly	Monthly	Daily	Weekly	Monthly	Frequency	Type	Months
61432 - 48-Hr. Acute Toxicity Ceriodaphnia dubia - % Affected	-	-	-	-	-	-	-	1/Year	Grab	May
61435 - 96-Hr. Acute Toxicity Pimephales promela - % Affected	-	-	-	-	-	-	-	1/Year	Grab	May

NOTES for Station Number 0IB00038 801:

a.) See Part II, Item L for Toxicity.

### Part II, OTHER REQUIREMENTS

A. Description of the location of the required sampling stations are as follows:

Sampling Station Description of Location

0IB00038 001 - - -	Final Effluent discharge to the Ohio River, consisting of cooling tower blowdown, and discharges from Outfalls 0IB00038 601, 0IB00038 602, & 0IB00038 603. Samples to be collected prior to discharge into the Ohio River. (Lat: 39 N 43 ' 21.2 "; Long: 80 W 50 ' 38 ")
0IB00038 002	Storm Water Outfall (Lat: 39 N 42 ' 04 "; Long: 80 W 50 ' 30 ")
0IB00038 003	Storm Water Outfall (Lat: 39 N 08 ' 80 "; Long: 80 W 50 ' 18 ")
0IB00038 091	Fictitious Outfall. Same as Outfall 0IB00038 001. To be used when chlorination is greater than 120 minutes in 24 hours.
0IB00038 601	Internal monitoring station for oil/water separator discharge. Effluent samples to be collected prior to combining with any other waste stream.
0IB00038 602	Internal monitoring station for steam cycle blowdown. Effluent samples to be collected prior to combining with any other waste stream.
0IB00038 603	Internal monitoring station for water treatment reject wastewater. Effluent samples to be collected prior to combining with any other waste stream.
0IB00038 801	Upstream of discharge on the Ohio River. Sample to be collected upstream from the zone of effluent and receiving water interaction.

B. This permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent standard or limitation so issued or approved.

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

2. Controls any pollutant not limited in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

C. Monitoring/Reporting Requirements and Reporting Codes for Monitoring/Sampling Stations.

1) All parameters, except flow, need not be monitored on days when the plant is not normally staffed (Saturdays, Sundays, and Holidays). On those days when the plant is not normally staffed, report "AN" on the monthly report form. The use of this code is limited to Saturdays, Sundays, and officially recognized municipal holidays, if the treatment plant is not normally staffed on those days. This code is only acceptable for parameters that are sampled daily, but cannot be used if continuous monitoring and recording is used, e.g. flow metering, continuous pH or temperature monitoring. For parameters sampled at a lesser frequency, the sampling date should be moved to a date when the plant is staffed.

2) If there is no discharge during the entire month, report as follows:

DO NOT USE THE "AL" CODE or any other code or report "0" for flow. If no discharge occurred for the full monitoring period, select the "No Discharge" check box at the top of the e-DMR form and enter "No discharge during the month" in the Remarks Section. Sign or PIN the DMR.

3) If there are no discharges on one or more required monitoring days during the month, report as follows:

a) Enter the required monitoring data for the days when a discharge occurred;

b) For each required monitoring day there was no discharge, do not enter "0" for flow. Enter code "AC" for each parameter including the parameter for flow for each monitoring day the facility was not discharging.

c) Information about other data Substitution Codes (a.k.a. "A Codes") that can be used on the Monthly Discharge Monitoring Report form is on page 13 at:

http://www.epa.ohio.gov/portals/35/edmr/doc/e-DMRAll-In-One.pdf

4) More information about eDMR is at:

http://www.epa.state.oh.us/dsw/edmr/eDMR.aspx

5) Use of substitution codes is equivalent to not reporting as required by the NPDES permit and, therefore, may in some cases still be considered a violation of the permit's conditions which may result in a notice of violation letter from Ohio EPA.

D. In the event that the permittee's operation requires the use of cooling or boiler water treatment additives that are discharged to surface waters of the state, written permission must be obtained from the director of the Ohio EPA prior to use. Discharges of these additives must meet Ohio Water Quality Standards and shall not be harmful or inimical to aquatic life. Reporting and testing requirements to apply for permission to use additives can be obtained from the Ohio EPA, Central Office, Division of Surface Water, NPDES Permit Unit. This information is also available on the DSW website:

http://www.epa.ohio.gov/portals/35/policy/01\_22u2.pdf.

E. There shall be no detectable amount of any priority pollutant attributable to cooling tower maintenance chemicals in the cooling tower blowdown wastewater.

F. Composite samples shall be comprised of a series of grab samples collected over a 24-hour period and proportionate in volume to the wastewater flow rate at the time of sampling. Such samples shall be collected at such times and locations, and in such a fashion, as to be representative of the facility's monitored discharge.

G. Grab samples shall be collected at such times and locations, and in such fashion, as to be representative of the facility's monitored discharge.

H. Multiple grab samples shall be comprised of at least three grab samples collected at intervals of at least three hours during the period that the plant is staffed on each day for sampling. Samples shall be collected at such times and locations, and in such fashion, as to be representative of the facility's monitored discharge. The critical values shall be reported which for pH are the highest and lowest values.

I. Limits Below Quantification

The parameters below have had effluent limitations established that are below the Ohio EPA Quantification Level (OEPA QL) for the approved analytical procedure promulgated at 40 CFR 136. OEPA QLs may be expressed as Practical Quantification Levels (PQL) or Minimum Levels (ML). Compliance with an effluent limit that is below the OEPA QL is determined in accordance with ORC Section 6111.13 and OAC Rule 3745-33-07(C). For maximum effluent limits, any value reported below the OEPA QL shall be considered in compliance with the effluent limit. For average effluent limits, compliance shall be determined by taking the arithmetic mean of values reported for a specified averaging period, using zero (0) for any value reported at a concentration less than the OEPA QL, and comparing that mean to the appropriate average effluent limit. An arithmetic mean that is less than or equal to the average effluent limit shall be considered in compliance with that limit.

The permittee must utilize the lowest available detection method currently approved under 40 CFR Part 136 for monitoring these parameters.

### **REPORTING:**

All analytical results, even those below the OEPA QL (listed below), shall be reported.

Analytical results are to be reported as follows:

1. Results above the QL: Report the analytical result for the parameter of concern.

2. Results above the MDL, but below the QL: Report the analytical result, even though it is below the QL.

3. Results below the MDL: Analytical results below the method detection limit shall be reported as "below detection" using the reporting code "AA".

The following table of quantification levels will be used to determine compliance with NPDES permit limits:

Parameter	PQL	ML
Chlorine, Total Residual	0.050 mg/l	

This permit may be modified, or, alternatively, revoked and reissued, to include more stringent effluent limits or conditions if information generated as a result of the conditions of this permit indicate the presence of these pollutants in the discharge at levels above the water quality based effluent limit (WQBEL).

J. Water quality based permit limitations in this permit may be revised based on updated wasteload allocations or use designation rules. This permit may be modified, or revoked and reissued, to include new water quality based effluent limits or other conditions that are necessary to comply with a revised wasteload allocation, or an approved total maximum daily loads (TMDL) report as required under Section 303 (d) of the Clean Water Act.

K. Sampling for these parameters at station 0IB00038 001, 0IB00038 601, and 0IB00038 602 shall occur the same day.

L. Biomonitoring Program Requirements

As soon as possible but not later than three months after commencement of the discharge, the entity shall initiate an effluent biomonitoring program to determine the toxicity of the effluent from Outfall 0IB00038 001.

### **General Requirements**

All toxicity testing conducted as required by this permit shall be done in accordance with "Reporting and Testing Guidance for Biomonitoring Required by the Ohio Environmental Protection Agency" (hereinafter, the "biomonitoring guidance"), Ohio EPA, July 1998 (or current revision). The Standard Operating Procedures (SOP) or verification of SOP submittal, as described in Section 1.B. of the biomonitoring guidance shall be submitted no later than three months after the effective date of this permit. If the laboratory performing the testing has modified its protocols, a new SOP is required.

### **Testing Requirements**

### 1. Acute Bioassays

For the duration of this permit, the permittee shall conduct annual definitive acute toxicity tests using Ceriodaphnia dubia and fathead minnows (Pimephales promelas) on effluent samples from Outfall 0IB00038 001. These tests shall be conducted as specified in Section 2 of the biomonitoring guidance.

In conjunction with the acute toxicity tests, upstream control water shall be collected at a point outside the zone of effluent and receiving water interaction at station 0IB00038 801. Testing of ambient waters shall be done in accordance with Section 2 of the biomonitoring guidance.

### 4. Data Review

### a. Reporting

Following completion of each annual bioassay requirement, the permittee shall report results of the tests in accordance with Sections 2.H.1. and 2.H.2.a. of the biomonitoring guidance, including reporting the results on the monthly DMR and submitting a copy of the complete test report to Ohio EPA, Division of Surface Water. The test report may be submitted electronically using the acute or chronic NPDES Biomonitoring Report Form available through the Ohio EPA eBusiness Center, Division of Surface Water NPDES Permit Applications service. Alternatively, the permittee may submit a hard copy of the report to Ohio EPA, Division of Surface Water, NPDES Permit Unit, P.O. Box 1049, Columbus, OH, 43216-1049.

Based on Ohio EPA's evaluation of the results, this permit may be modified to require additional biomonitoring, require a toxicity reduction evaluation, and/or contain whole effluent toxicity limits.

### b. Definitions

TUa = Acute Toxicity Units = 100/LC50

M. The permittee shall use either EPA Method 1631 or EPA Method 245.7 promulgated under 40 CFR 136 to comply with the effluent mercury monitoring requirements of this permit.

### N. Outfall Signage

Not later than 4 months from the date the discharge commences, the permittee shall properly maintain and post a permanent sign on the stream bank at outfall 001under this NPDES permit.

1. The sign shall consist at a minimum of the name of the permittee and facility to which the permit was issued, the Ohio EPA permit number, the outfall number, and a contact telephone number. The information shall be printed in letters not less than two inches in height.

2. The sign shall be a minimum of 2 feet by 2 feet and shall be a minimum of 3 feet above ground level. The sign shall not be obstructed such that persons in boats or persons swimming on the river or someone fishing or walking along the shore cannot read the sign. Vegetation shall be periodically removed to keep the sign visible.

3. If the outfall is normally submerged the sign shall indicate that.

4. When an existing sign is replaced or reset, the new sign shall comply with the requirements of this section.

5. The Director may alter the dimension requirements of the signs, to provide more information and better legibility. In addition, the Director may alter the compliance time to install the sign due to weather conditions, or other considerations, that would cause a delay in getting signs posted.

O. Cooling Water Intake Structure Information Submittal

The permittee is proposing to use an existing intake structure to provide cooling water. The use of an existing cooling water intake structure which does not increase the design capacity at a new facility falls under the requirements of 40 CFR 125 Subpart J, a new unit at an existing facility.

No later than 180 days prior to operation of the cooling water intake structure, the permittee shall submit all the relevant information for a new unit at an existing facility. The information must include the requirements of 40 CFR 122.21(r)(2-8) and 40 CFR 122.21(r)(14).

P. Interim Compliance with 316(b) Cooling Water Intake Structure

The current intake structure has not in operation since 2013. Once the unit is in operation in approximately 2020, the permittee proposes to maintain an intake velocity of less than 0.5 ft/s and utilize a closed-cycle recirculating system. This will comply with the substantive requirements of the rules and is the basis of an interim best technology available determination. The Director will make a final best technology available determination during the next permit renewal.

Q. Cooling Water Intake Structure Monitoring Requirements The permittee is required to perform the following monitoring to demonstrate compliance with the performance standards of Part II. Item P.

1. Visual or Remote Inspections.

The permittee shall conduct weekly either visual inspections or employ remote monitoring devices during the period the cooling water intake structure is in operation.

R. Cooling Water Intake Structure Record Keeping and Reporting Requirements.

1. Record Keeping requirements

The permittee shall keep records of all the data used to complete the permit application and show compliance with the requirements of the 316(b) regulations until the subsequent permit is re-issued.

2. Reporting Requirements

After the intake structure is in operation, the permittee shall submit an annual certification statement signed by the responsible corporate officer indicating whether there have been any substantial modifications of any units that impact the cooling water withdrawals and a summary of those changes. In addition, revisions must be submitted to the information required in 40 CFR 122.21(r) during the next permit application when new information is available.

S. Endangered Species Act

Nothing in this permit authorizes the take of threatened or endangered species of fish and wildlife.

#### PART III - GENERAL CONDITIONS

#### 1. DEFINITIONS

"Daily discharge" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

"Average weekly" discharge limitation means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week. Each of the following 7-day periods is defined as a calendar week: Week 1 is Days 1 - 7 of the month; Week 2 is Days 8 - 14; Week 3 is Days 15 - 21; and Week 4 is Days 22 - 28. If the "daily discharge" on days 29, 30 or 31 exceeds the "average weekly" discharge limitation, Ohio EPA may elect to evaluate the last 7 days of the month as Week 4 instead of Days 22 - 28. Compliance with fecal coliform bacteria or E coli bacteria limitations shall be determined using the geometric mean.

"Average monthly" discharge limitation means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month. Compliance with fecal coliform bacteria or E coli bacteria limitations shall be determined using the geometric mean.

"85 percent removal" means the arithmetic mean of the values for effluent samples collected in a period of 30 consecutive days shall not exceed 15 percent of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period.

"Absolute Limitations" Compliance with limitations having descriptions of "shall not be less than," "nor greater than," "shall not exceed," "minimum," or "maximum" shall be determined from any single value for effluent samples and/or measurements collected.

"Net concentration" shall mean the difference between the concentration of a given substance in a sample taken of the discharge and the concentration of the same substances in a sample taken at the intake which supplies water to the given process. For the purpose of this definition, samples that are taken to determine the net concentration shall always be 24-hour composite samples made up of at least six increments taken at regular intervals throughout the plant day.

"Net Load" shall mean the difference between the load of a given substance as calculated from a sample taken of the discharge and the load of the same substance in a sample taken at the intake which supplies water to given process. For purposes of this definition, samples that are taken to determine the net loading shall always be 24-hour composite samples made up of at least six increments taken at regular intervals throughout the plant day.

"MGD" means million gallons per day.

"mg/l" means milligrams per liter.

"ug/l" means micrograms per liter.

"ng/l" means nanograms per liter.

"S.U." means standard pH unit.

"kg/day" means kilograms per day.

"Reporting Code" is a five digit number used by the Ohio EPA in processing reported data. The reporting code does not imply the type of analysis used nor the sampling techniques employed.

"Quarterly (1/Quarter) sampling frequency" means the sampling shall be done in the months of March, June, August, and December, unless specifically identified otherwise in the Effluent Limitations and Monitoring Requirements table.

"Yearly (1/Year) sampling frequency" means the sampling shall be done in the month of September, unless specifically identified otherwise in the effluent limitations and monitoring requirements table.

"Semi-annual (2/Year) sampling frequency" means the sampling shall be done during the months of June and December, unless specifically identified otherwise.

"Winter" shall be considered to be the period from November 1 through April 30.

"Bypass" means the intentional diversion of waste streams from any portion of the treatment facility.

"Summer" shall be considered to be the period from May 1 through October 31.

"Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. "Sewage sludge" means a solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works as defined in section 6111.01 of the Revised Code. "Sewage sludge" includes, but is not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment processes. "Sewage sludge" does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator, grit and screenings generated during preliminary treatment of domestic sewage in a treatment works, animal manure, residue generated during treatment of animal manure, or domestic septage.

"Sewage sludge weight" means the weight of sewage sludge, in dry U.S. tons, including admixtures such as liming materials or bulking agents. Monitoring frequencies for sewage sludge parameters are based on the reported sludge weight generated in a calendar year (use the most recent calendar year data when the NPDES permit is up for renewal).

"Sewage sludge fee weight" means the weight of sewage sludge, in dry U.S. tons, excluding admixtures such as liming materials or bulking agents. Annual sewage sludge fees, as per section 3745.11(Y) of the Ohio Revised Code, are based on the reported sludge fee weight for the most recent calendar year.

#### 2. GENERAL EFFLUENT LIMITATIONS

The effluent shall, at all times, be free of substances:

A. In amounts that will settle to form putrescent, or otherwise objectionable, sludge deposits; or that will adversely affect aquatic life or water fowl;

B. Of an oily, greasy, or surface-active nature, and of other floating debris, in amounts that will form noticeable accumulations of scum, foam or sheen;

C. In amounts that will alter the natural color or odor of the receiving water to such degree as to create a nuisance;

D. In amounts that either singly or in combination with other substances are toxic to human, animal, or aquatic life;

E. In amounts that are conducive to the growth of aquatic weeds or algae to the extent that such growths become inimical to more desirable forms of aquatic life, or create conditions that are unsightly, or constitute a nuisance in any other fashion;

F. In amounts that will impair designated instream or downstream water uses.

#### 3. FACILITY OPERATION AND QUALITY CONTROL

All wastewater treatment works shall be operated in a manner consistent with the following:

A. At all times, the permittee shall maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee necessary to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with conditions of the permit.

B. The permittee shall effectively monitor the operation and efficiency of treatment and control facilities and the quantity and quality of the treated discharge.

C. Maintenance of wastewater treatment works that results in degradation of effluent quality shall be scheduled during non-critical water quality periods and shall be carried out in a manner approved by Ohio EPA as specified in the Paragraph in the PART III entitled, "UNAUTHORIZED DISCHARGES".

#### 4. REPORTING

A. Monitoring data required by this permit shall be submitted monthly on Ohio EPA 4500 Discharge Monitoring Report (DMR) forms using the electronic DMR (e-DMR) internet application. e-DMR allows permitted facilities to enter, sign, and submit DMRs on the internet. e-DMR information is found on the following web page:

http://www.epa.ohio.gov/dsw/edmr/eDMR.aspx

Alternatively, if you are unable to use e-DMR due to a demonstrated hardship, monitoring data may be submitted on paper DMR forms provided by Ohio EPA. Monitoring data shall be typed on the forms. Please contact Ohio EPA, Division of Surface Water at (614) 644-2050 if you wish to receive paper DMR forms.

B. DMRs shall be signed by a facility's Responsible Official or a Delegated Responsible Official (i.e. a person delegated by the Responsible Official). The Responsible Official of a facility is defined as:

1. For corporations - a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or the manager of one or more manufacturing, production or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

2. For partnerships - a general partner;

3. For a sole proprietorship - the proprietor; or,

4. For a municipality, state or other public facility - a principal executive officer, a ranking elected official or other duly authorized employee.

For e-DMR, the person signing and submitting the DMR will need to obtain an eBusiness Center account and Personal Identification Number (PIN). Additionally, Delegated Responsible Officials must be delegated by the Responsible Official, either on-line using the eBusiness Center's delegation function, or on a paper delegation form provided by Ohio EPA. For more information on the PIN and delegation processes, please view the following web page:

http://epa.ohio.gov/dsw/edmr/eDMR.aspx

C. DMRs submitted using e-DMR shall be submitted to Ohio EPA by the 20th day of the month following the month-of-interest. DMRs submitted on paper must include the original signed DMR form and shall be mailed to Ohio EPA at the following address so that they are received no later than the 15th day of the month following the month-of-interest:

Ohio Environmental Protection Agency Lazarus Government Center Division of Surface Water - PCU P.O. Box 1049 Columbus, Ohio 43216-1049 D. If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified in Section 5. SAMPLING AND ANALYTICAL METHODS, the results of such monitoring shall be included in the calculation and reporting of the values required in the reports specified above.

E. Analyses of pollutants not required by this permit, except as noted in the preceding paragraph, shall not be reported to the Ohio EPA, but records shall be retained as specified in Section 7. RECORDS RETENTION.

5. SAMPLING AND ANALYTICAL METHOD

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored flow. Test procedures for the analysis of pollutants shall conform to regulation 40 CFR 136, "Test Procedures For The Analysis of Pollutants" unless other test procedures have been specified in this permit. The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals to insure accuracy of measurements.

### 6. RECORDING OF RESULTS

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

A. The exact place and date of sampling; (time of sampling not required on EPA 4500)

- B. The person(s) who performed the sampling or measurements;
- C. The date the analyses were performed on those samples;
- D. The person(s) who performed the analyses;
- E. The analytical techniques or methods used; and
- F. The results of all analyses and measurements.

### 7. RECORDS RETENTION

The permittee shall retain all of the following records for the wastewater treatment works for a minimum of three years except those records that pertain to sewage sludge disposal, use, storage, or treatment, which shall be kept for a minimum of five years, including:

A. All sampling and analytical records (including internal sampling data not reported);

B. All original recordings for any continuous monitoring instrumentation;

C. All instrumentation, calibration and maintenance records;

- D. All plant operation and maintenance records;
- E. All reports required by this permit; and

F. Records of all data used to complete the application for this permit for a period of at least three years, or five years for sewage sludge, from the date of the sample, measurement, report, or application.

These periods will be extended during the course of any unresolved litigation, or when requested by the Regional Administrator or the Ohio EPA. The three year period, or five year period for sewage sludge, for retention of records shall start from the date of sample, measurement, report, or application.

### 8. AVAILABILITY OF REPORTS

Except for data determined by the Ohio EPA to be entitled to confidential status, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the appropriate district offices of the Ohio EPA. Both the Clean Water Act and Section 6111.05 Ohio Revised Code state that effluent data and receiving water quality data shall not be considered confidential.

#### 9. DUTY TO PROVIDE INFORMATION

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking, and reissuing, or terminating the permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

#### 10. RIGHT OF ENTRY

The permittee shall allow the Director or an authorized representative upon presentation of credentials and other documents as may be required by law to:

A. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit.

B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit.

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

D. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

### 11. UNAUTHORIZED DISCHARGES

A. Bypass Not Exceeding Limitations - The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 11.B and 11.C.

B. Notice

1. Anticipated Bypass - If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

2. Unanticipated Bypass - The permittee shall submit notice of an unanticipated bypass as required in paragraph 12.B (24 hour notice).

C. Prohibition of Bypass

1. Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

c. The permittee submitted notices as required under paragraph 11.B.

2. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph 11.C.1.

#### 12. NONCOMPLIANCE NOTIFICATION

A. Exceedance of a Daily Maximum Discharge Limit

1. The permittee shall report noncompliance that is the result of any violation of a daily maximum discharge limit for any of the pollutants listed by the Director in the permit by e-mail or telephone within twenty-four (24) hours of discovery.

The permittee may report to the appropriate Ohio EPA district office e-mail account as follows (this method is preferred):

Southeast District Office:	sedo24hournpdes@epa.state.oh.us
Southwest District Office:	swdo24hournpdes@epa.state.oh.us
Northwest District Office:	nwdo24hournpdes@epa.state.oh.us
Northeast District Office:	nedo24hournpdes@epa.state.oh.us
Central District Office:	cdo24hournpdes@epa.state.oh.us
Central Office:	co24hournpdes@epa.state.oh.us

The permittee shall attach a noncompliance report to the e-mail. A noncompliance report form is available on the following web site under the Monitoring and Reporting - Non-Compliance Notification section:

http://epa.ohio.gov/dsw/permits/individuals.aspx

Or, the permittee may report to the appropriate Ohio EPA district office by telephone toll-free between 8:00 AM and 5:00 PM as follows:

Southeast District Office:	(800) 686-7330
Southwest District Office:	(800) 686-8930
Northwest District Office:	(800) 686-6930
Northeast District Office:	(800) 686-6330
Central District Office:	(800) 686-2330
Central Office:	(614) 644-2001

The permittee shall include the following information in the telephone noncompliance report:

a. The name of the permittee, and a contact name and telephone number;

b. The limit(s) that has been exceeded;

c. The extent of the exceedance(s);

d. The cause of the exceedance(s);

e. The period of the exceedance(s) including exact dates and times;

f. If uncorrected, the anticipated time the exceedance(s) is expected to continue; and,

g. Steps taken to reduce, eliminate or prevent occurrence of the exceedance(s).

B. Other Permit Violations

1. The permittee shall report noncompliance that is the result of any unanticipated bypass resulting in an exceedance of any effluent limit in the permit or any upset resulting in an exceedance of any effluent limit in the permit by e-mail or telephone within twenty-four (24) hours of discovery.

The permittee may report to the appropriate Ohio EPA district office e-mail account as follows (this method is preferred):

Southeast District Office:	sedo24hournpdes@epa.state.oh.us
Southwest District Office:	swdo24hournpdes@epa.state.oh.us
Northwest District Office:	nwdo24hournpdes@epa.state.oh.us
Northeast District Office:	nedo24hournpdes@epa.state.oh.us
Central District Office:	cdo24hournpdes@epa.state.oh.us
Central Office:	co24hournpdes@epa.state.oh.us

The permittee shall attach a noncompliance report to the e-mail. A noncompliance report form is available on the following web site:

http://www.epa.ohio.gov/dsw/permits/permits.aspx

Or, the permittee may report to the appropriate Ohio EPA district office by telephone toll-free between 8:00 AM and 5:00 PM as follows:

Southeast District Office:	(800) 686-7330
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Northwest District Office:	(800) 686-6930
Northeast District Office:	(800) 686-6330
Central District Office:	(800) 686-2330
Central Office:	(614) 644-2001

The permittee shall include the following information in the telephone noncompliance report:

- a. The name of the permittee, and a contact name and telephone number;
- b. The time(s) at which the discharge occurred, and was discovered;
- c. The approximate amount and the characteristics of the discharge;
- d. The stream(s) affected by the discharge;
- e. The circumstances which created the discharge;
- f. The name and telephone number of the person(s) who have knowledge of these circumstances;
- g. What remedial steps are being taken; and,

h. The name and telephone number of the person(s) responsible for such remedial steps.

2. The permittee shall report noncompliance that is the result of any spill or discharge which may endanger human health or the environment within thirty (30) minutes of discovery by calling the 24-Hour Emergency Hotline toll-free at (800) 282-9378. The permittee shall also report the spill or discharge by e-mail or telephone within twenty-four (24) hours of discovery in accordance with B.1 above.

C. When the telephone option is used for the noncompliance reports required by A and B, the permittee shall submit to the appropriate Ohio EPA district office a confirmation letter and a completed noncompliance report within five (5) days of the discovery of the noncompliance. This follow up report is not necessary for the e-mail option which already includes a completed noncompliance report.

D. If the permittee is unable to meet any date for achieving an event, as specified in a schedule of compliance in their permit, the permittee shall submit a written report to the appropriate Ohio EPA district office within fourteen (14) days of becoming aware of such a situation. The report shall include the following:

1. The compliance event which has been or will be violated;

2. The cause of the violation;

- 3. The remedial action being taken;
- 4. The probable date by which compliance will occur; and,

5. The probability of complying with subsequent and final events as scheduled.

E. The permittee shall report all other instances of permit noncompliance not reported under paragraphs A or B of this section on their monthly DMR submission. The DMR shall contain comments that include the information listed in paragraphs A or B as appropriate.

F. If the permittee becomes aware that it failed to submit an application, or submitted incorrect information in an application or in any report to the director, it shall promptly submit such facts or information.

#### 13. RESERVED

#### 14. DUTY TO MITIGATE

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

### 15. AUTHORIZED DISCHARGES

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than, or at a level in excess of, that authorized by this permit shall constitute a violation of the terms and conditions of this permit. Such violations may result in the imposition of civil and/or criminal penalties as provided for in Section 309 of the Act and Ohio Revised Code Sections 6111.09 and 6111.99.

#### 16. DISCHARGE CHANGES

The following changes must be reported to the appropriate Ohio EPA district office as soon as practicable:

A. For all treatment works, any significant change in character of the discharge which the permittee knows or has reason to believe has occurred or will occur which would constitute cause for modification or revocation and reissuance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. Notification of permit changes or anticipated noncompliance does not stay any permit condition.

B. For publicly owned treatment works:

1. Any proposed plant modification, addition, and/or expansion that will change the capacity or efficiency of the plant;

2. The addition of any new significant industrial discharge; and

3. Changes in the quantity or quality of the wastes from existing tributary industrial discharges which will result in significant new or increased discharges of pollutants.

C. For non-publicly owned treatment works, any proposed facility expansions, production increases, or process modifications, which will result in new, different, or increased discharges of pollutants.

Following this notice, modifications to the permit may be made to reflect any necessary changes in permit conditions, including any necessary effluent limitations for any pollutants not identified and limited herein. A determination will also be made as to whether a National Environmental Policy Act (NEPA) review will be required. Sections 6111.44 and 6111.45, Ohio Revised Code, require that plans for treatment works or improvements to such works be approved by the Director of the Ohio EPA prior to initiation of construction.

D. In addition to the reporting requirements under 40 CFR 122.41(l) and per 40 CFR 122.42(a), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

1. That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis of any toxic pollutant which is not limited in the permit. If that discharge will exceed the highest of the "notification levels" specified in 40 CFR Sections 122.42(a)(1)(i) through 122.42(a)(1)(iv).

2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the "notification levels" specified in 122.42(a)(2)(i) through 122.42(a)(2)(iv).

### **17. TOXIC POLLUTANTS**

The permittee shall comply with effluent standards or prohibitions established under Section 307 (a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement. Following establishment of such standards or prohibitions, the Director shall modify this permit and so notify the permittee.

#### 18. PERMIT MODIFICATION OR REVOCATION

A. After notice and opportunity for a hearing, this permit may be modified or revoked, by the Ohio EPA, in whole or in part during its term for cause including, but not limited to, the following:

1. Violation of any terms or conditions of this permit;

2. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

3. Change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

B. Pursuant to rule 3745-33-04, Ohio Administrative Code, the permittee may at any time apply to the Ohio EPA for modification of any part of this permit. The filing of a request by the permittee for a permit modification or revocation does not stay any permit condition. The application for modification should be received by the appropriate Ohio EPA district office at least ninety days before the date on which it is desired that the modification become effective. The application shall be made only on forms approved by the Ohio EPA.

#### 19. TRANSFER OF OWNERSHIP OR CONTROL

This permit may be transferred or assigned and a new owner or successor can be authorized to discharge from this facility, provided the following requirements are met:

A. The permittee shall notify the succeeding owner or successor of the existence of this permit by a letter, a copy of which shall be forwarded to the appropriate Ohio EPA district office. The copy of that letter will serve as the permittee's notice to the Director of the proposed transfer. The copy of that letter shall be received by the appropriate Ohio EPA district office sixty (60) days prior to the proposed date of transfer;

B. A written agreement containing a specific date for transfer of permit responsibility and coverage between the current and new permittee (including acknowledgement that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on) shall be submitted to the appropriate Ohio EPA district office within sixty days after receipt by the district office of the copy of the letter from the permittee to the succeeding owner;

At anytime during the sixty (60) day period between notification of the proposed transfer and the effective date of the transfer, the Director may prevent the transfer if he concludes that such transfer will jeopardize compliance with the terms and conditions of the permit. If the Director does not prevent transfer, he will modify the permit to reflect the new owner.

#### 20. OIL AND HAZARDOUS SUBSTANCE LIABILITY

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act.

#### 21. SOLIDS DISPOSAL

Collected grit and screenings, and other solids other than sewage sludge, shall be disposed of in such a manner as to prevent entry of those wastes into waters of the state, and in accordance with all applicable laws and rules.

#### 22. CONSTRUCTION AFFECTING NAVIGABLE WATERS

This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any navigable waters.

### 23. CIVIL AND CRIMINAL LIABILITY

Except as exempted in the permit conditions on UNAUTHORIZED DISCHARGES or UPSETS, nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

### 24. STATE LAWS AND REGULATIONS

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Clean Water Act.

#### 25. PROPERTY RIGHTS

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

#### 26. UPSET

The provisions of 40 CFR Section 122.41(n), relating to "Upset," are specifically incorporated herein by reference in their entirety. For definition of "upset," see Part III, Paragraph 1, DEFINITIONS.

#### 27. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

#### 28. SIGNATORY REQUIREMENTS

All applications submitted to the Director shall be signed and certified in accordance with the requirements of 40 CFR 122.22.

All reports submitted to the Director shall be signed and certified in accordance with the requirements of 40 CFR Section 122.22.

#### 29. OTHER INFORMATION

A. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

B. ORC 6111.99 provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$25,000 per violation.

C. ORC 6111.99 states that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$25,000 per violation.

D. ORC 6111.99 provides that any person who violates Sections 6111.04, 6111.042, 6111.05, or division (A) of Section 6111.07 of the Revised Code shall be fined not more than \$25,000 or imprisoned not more than one year, or both.

### 30. NEED TO HALT OR REDUCE ACTIVITY

40 CFR 122.41(c) states that it shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with conditions of this permit.

31. APPLICABLE FEDERAL RULES

All references to 40 CFR in this permit mean the version of 40 CFR which is effective as of the effective date of this permit.

#### 32. AVAILABILITY OF PUBLIC SEWERS

Not withstanding the issuance or non-issuance of an NPDES permit to a semi-public disposal system, whenever the sewage system of a publicly owned treatment works becomes available and accessible, the permittee operating any semi-public disposal system shall abandon the semi-public disposal system and connect it into the publicly owned treatment works.

# **Stormwater Pollution Prevention Plan**

for:

LONG RIDGE ENERGY GENERATION (Formally Hannibal Port Power Project) 43840 State Route 7 Hannibal, OH 43931

# **SWPPP** Contact(s):

KIEWIT POWER CONSTRUCTORS CO. 9401 Renner Boulevard Lenexa, KS 66219 (913) 928-7000

TETRA TECH, INC. 6715 Tippecanoe Road, Suite C201 Canfield, OH 44406 (330) 286-3683

# **SWPPP Preparation Date:**

May 2018 Revised April 2019 Revised September 2019

Estimated Project Start Date: June 2018

Ohio EPA SWPPP

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Acronym/Abbreviation	Definition
BMP	best management practice
E&S	erosion & sediment
ODNR	Ohio Department of Natural Resources
Ohio EPA	Ohio Environmental Protection Agency
NPDES	National Pollutant Discharge Elimination System
the Project	Long Ridge Energy Generation, a proposed natural gas-fired
	electric generating facility
the Project Site	approximately 71.80 acres of an industrial property located at 43840
	State Route 7, Hannibal, OH 43931 on which the Long Ridge
	Energy Generation is proposed
SHPO	Ohio State Historic Preservation Office
SWPPP	Stormwater Pollution Prevention Plan
Tetra Tech	Tetra Tech, Inc.
TMDL	total maximum daily load

# Acronyms/Abbreviations

# SECTION 1: SITE EVALUATION, ASSESSMENT, AND PLANNING

## 1.1 Project/Site Information

Project/Site Name: Long Ridge Energy Generation	n
Project Site Street/Location: 43840 State Route 7	7
City: Hannibal	<b>State</b> : <u>OH</u> <b>ZIP</b> Code: <u>43931</u>
County or Similar Subdivision: Monroe County	
Latitude/Longitude	
Latitude:	Longitude:
39 ° 42 ' 13" N	80 ° 50 ' 45" W
Method for determining latitude/longitude:	
USGS topographic map (specify scale: <u>1:24000</u>	) $\Box$ EPA Web site $\Box$ GPS
Other (please specify): Google Earth Pro	
Is the project located in Indian country? 🗌 Yes	s 🛛 No
If yes, name of Reservation, or if not part of a Reser	vation, indicate "not applicable."
Not applicable	
Is this project considered a federal facility?	🗌 Yes 🛛 No
NPDES project or permit tracking number*: <u>00</u>	GC03161*AG
*(This is the unique identifying number assigned to your proje	ect by your permitting authority after you have applied

\*(This is the unique identifying number assigned to your project by your permitting authority after you have applied for coverage under the appropriate National Pollutant Discharge Elimination System [NPDES] construction general permit.)

# 1.2 Contact Information / Responsible Parties

### **Operator(s):**

Kiewit Power Constructors Co. 9401 Renner Boulevard Lenexa, KS 66219 P (913) 928-7000

### **Project Manager(s) or Site Supervisor(s):**

Kiewit Power Constructors Co. Erich Budde 9401 Renner Boulevard Lenexa, KS 66219 P (913) 928-7166

### SWPPP Contact(s):

Kiewit Power Constructors Co. Jackie Sheredy 9401 Renner Boulevard Lenexa, KS 66219 P (913) 554-5129

### This SWPPP was Prepared by:

Tetra Tech, Inc. Brian Chlebus, P.E., CPESC, CPSWQ 6715 Tippecanoe Road, Suite C201 Canfield, OH 44406 P (330) 286-3683

Kiewit Engineering Group, Inc. Riley Piles, P.E. 9401 Renner Boulevard Lenexa, KS 66219 P (913) 689-4313

### **Emergency 24-Hour Contact:**

Hannibal Fire Department P 911

## 1.3 Nature and Sequence of Construction Activity

### Describe the general scope of the work for the project, major phases of construction, etc.:

The scope of the Project involves the construction of a natural gas-fired electrical power plant within an existing industrial property. In addition, the Project includes construction of electrical and pipeline interconnects along short corridors to connect the power plant to the grid. This SWPPP is a modification of the SWPPP originally prepared for the Project, formally known as the Hannibal Port Power Project, which was dated March 2018. This SWPPP has been revised to include additional detail relating to Project Phase II and III (See Section 2.2). See Section 2.2, Phased Construction Activity.

What is the function of the construction activity?							
Residential	Commercial	🔀 Industrial	Road Construction	Linear Utility			
Other (please	specify):						
Estimated Projec	t Start Date:	June 20	)18				

# 1.4 Soils, Slopes, Vegetation, and Current Drainage Patterns

**Soil type(s)**: Soil information for the Project Site has been determined using the United States Department of Agriculture Natural Resources Conservation Service Web Soil Survey. The Custom Soil Resource Report is provided in Appendix L – Additional Information.

One soil type was identified within or around the Project site; Made Land (Ma). Made land consists of land so altered or so obscured by buildings or other structures that the original soil cannot be identified. In some places, cuts have removed all or nearly all the natural soil horizons. In other places, fills have buried the original soils. It is highly variable material that may include rubbish, cinders, industrial materials, brick and other building materials, limestone, sandstone, shale, or other soil materials. The areas are covered extensively by buildings and other structures. The intense urban development precludes most other land uses.

**Drainage Patterns**: Generally, surface water runoff from the Project Site drains west to an existing storm sewer system that flows south and discharges into the Ohio River.

**Vegetation**: The Project Site is located in an industrial area and primarily consists of structures and asphalt or gravel pavement. Sparse areas of lawn and grassy embankments with few trees exist adjacent existing structures and access road.

## 1.5 Construction Site Estimates

The following are estimates of the Project Site (for Project Phase II – Construction Activities) (see Section 2.2).

Total Project Site area:	71.80 acre
Construction site area to be disturbed:	37.10 acre
Runoff coefficient before construction:	95
Runoff coefficient after construction	93

# 1.6 Receiving Waters

### **Description of receiving waters:**

Receiving waters is the Ohio River via an existing on-site storm sewer.

### **Description of storm sewer systems**:

Conveyance of stormwater runoff from the entire industrial site to the Ohio River is by means of an existing storm sewer system. Modifications to the existing storm sewer system and installation of new storm sewer within the limits of the Project Site are proposed as necessary to achieve Project objectives; however, impacts to the overall storm sewer system as a result of the

Ohio EPA SWPPP

Project are anticipated to be negligible.

**Description of impaired waters or waters subject to Total Maximum Daily Loads (TMDLs)**: No known impairments or TMDLs.

# 1.7 Site Features and Sensitive Areas to be Protected

No impacts to wetlands, streams, or other sensitive natural resources are anticipated.

# 1.8 Potential Sources of Pollution

### Potential sources of sediment to stormwater runoff:

Exposed soil during earth disturbance activity is a potential source of sediment; however, erosion and sediment (E&S) best management practices (BMPs) will be implemented to prevent and/or minimize potential impacts of sedimentation caused by stormwater runoff.

### Potential pollutants and sources, other than sediment, to stormwater runoff:

No known potential pollutants or sources other than sediment. If the suspicion of potential pollutants other than sediment arises during earth disturbance activity, appropriate BMPs will be implemented for containment and mitigation.

# 1.9 Endangered Species Certification

### Are endangered or threatened species and critical habitats on or near the project area?

 $\Box$  Yes  $\boxtimes$  No

### Describe how this determination was made:

Coordination with the United States Fish and Wildlife Service and Ohio Department of Natural Resources (See Appendix L – Additional Information).

# 1.10 Historic Preservation

Are there any historic sites on or near the construction site?

 $\boxtimes$  Yes  $\Box$  No

### Describe how this determination was made:

A history/architecture reconnaissance was conducted and assessments were prepared by Weller & Associates, Inc. Assessments were reviewed by the Ohio State Historic Preservation Office (SHPO).

# If yes, describe or refer to documentation that determines the likelihood of an impact on this historic site and the steps taken to address that impact:

It was determined that the Project will not adversely affect places eligible for inclusion in the National Register of Historic Places or places of importance for preservations (See Appendix L – Additional Information).

# 1.11 Applicable Federal, Tribal, State or Local Programs

Not applicable.

### 1.12 Maps

See Appendix A – General Location Map(s) and Appendix B – Site Maps.

# **SECTION 2: EROSION AND SEDIMENT CONTROL BMPS**

E&S BMPs shall be implemented and maintained in accordance with the Ohio Environmental Protection Agency (Ohio EPA) "Rainwater and Land Development Manual" and guidelines set forth in the Ohio EPA General Permit for Stormwater Discharges Associated with Construction Activity under the NPDES.

# 2.1 Minimize Disturbed Area and Protect Natural Features and Soil

Construction phasing will minimize the amount and duration of earth disturbance to only that which is required to achieve specific construction scheduling and Project objectives.

# 2.2 Phased Construction Activity

A generalized sequence of proposed activities is as follows:

- Project Phase I Demolition
  - Sequencing for demolition activities, which was provided in a prior version of the Project SWPPP, is complete.
- Project Phase II Construction Activities
  - Place rock construction entrance.
  - Install perimeter BMP's (silt fence) and inlet protection around existing storm sewer inlet per detail on drawing CD-021 and approved E&S permit.
  - Begin construction of the southwest sedimentation basin.
  - Maintain Phase I sedimentation basin within the northern portion of the Project Site.
  - Installation of sedimentation basin outlet structure, storm pipe to existing storm trunk line and manhole structure.
  - Install skimmer per detail on drawing CD-021.
  - Seed and mulch sediment basin slopes and install silt fence along top of slope per approved SWPPP.
  - Begin installation of underground duct bank, piping, and foundations. Any dewatering necessary during these excavations shall be discharged to the sedimentation basin.
  - Install temporary stormwater bypass structure and piping. Discharge piping to southwest sedimentation basin.
  - Install proposed storm sewers as power block is backfilled. Install inlet protection per details on drawing CD-021. Inlet protection must be maintained until power block site reaches final stabilization. Immediately place rip-rap protection at any newly installed discharge points.
  - Remove temporary bypass and begin construction of the southeast sedimentation basin for final basin orientation. Once southern basin is operational, cap and remove skimmer from northern basin. Stabilize and backfill basin per steps in Phase III and direct flow to the southern basins.

- Designated stockpile during mass excavations shall have perimeter control as recommended by approved SWPPP.
- Remaining improvements will be installed in an appropriate order as the site is filled to a final elevation with required stone and seeding.
- Project Phase III Site Stabilization
  - Grade remaining areas to final elevations and establish permanent stabilization as applicable.
  - Sedimentation basin conversion to permanent condition shall be done in accordance with Ohio EPA requirements and only after all areas draining to the basin have reached their final stabilization. Final stabilization details shall be in the project finish grading plans and storm sewer plan and profile. The following shall be followed:
    - a. Flushing accumulated sediment from the contributing storm sewer piping, inlets and manholes.
    - b. Dewatering the impounded water after flushing will be done with pumps discharging through filter bags.
    - c. Removal and proper disposal of accumulated sediment to establish designated detention basin bottom. Care shall be taken not to compact the detention basin bottom. Equipment with long reach arms and low ground impact tracks shall be used for sediment removal.
  - Any remaining silt fence, including overall perimeter silt fence and inlet protection, shall be removed only after full site permeant stabilization.

# 2.3 Control Stormwater Flowing onto and through the Project

E&S BMPs will be implemented adjacent to the Project Site perimeter for treatment of stormwater runoff flowing through the Project Site prior to off-site discharge. E&S BMPs will be maintained until tributary areas have achieved final stabilization (See Section 7) upon completion of construction activities.

# 2.4 Stabilize Soils

Soil disturbances shall be minimized to an amount and duration necessary to achieve specific construction phase and Project objectives. Typically, soil stabilization BMPs include, but are not limited to the establishment of temporary/permanent vegetation and installation of erosion control blanketing. An area is typically considered stabilized when a uniform 70% perennial vegetative cover has been established or when an area is otherwise stabilized with aggregate or concrete paving.

## 2.5 Protect Slopes

Disturbed slope areas shall be stabilized as soon as practical upon completion of final grading. Permanent seed and mulch, and erosion control blanketing shall be installed on all slope areas 3:1 (horizontal:vertical) and greater.

Ohio EPA SWPPP

# 2.6 Protect Storm Drain Inlets

Fiber roll or silt sack inlet protection shall be installed at all existing and proposed catch basin locations. Inlet protection shall be installed at existing catch basins prior to earth disturbance activities. Inlet protection shall be installed at proposed catch basins immediately upon completing construction of each catch basin location.

# 2.7 Establish Perimeter Controls and Sediment Barriers

Silt fence shall be installed down slope of disturbed areas prior to earth disturbance activities.

# 2.8 Retain Sediment On-Site

E&S BMPs shall be implemented to minimize and/or prevent soil erosion and reduce the potential for sedimentation.

- Silt fence shall be installed as a perimeter control to retain sediment on the Project Site.
- A stabilized construction entrance/exit shall be installed and maintained to minimize the off-site tracking of sediment.
- Sediment basins shall be installed to capture stormwater runoff from disturbed areas and allow sediment settling time prior to offsite discharge.
- Fiber roll or silt sack inlet protection shall be installed within existing and proposed catch basin to storm sewer catch basins.

# 2.9 Establish Stabilized Construction Exits

A stabilized construction entrance/exit shall be installed and maintained to minimize off-site tracking of sediment.

# 2.10 Additional BMPs

Additional E&S BMPs may be implemented in accordance with the "Rainwater and Land Development Manual" as deemed necessary by Landowner, Operator, SWPPP Preparer, or applicable jurisdictional authorities.

# **SECTION 3: GOOD HOUSEKEEPING BMPS**

The following good housekeeping BMPs shall be implemented when applicable.

# 3.1 Material Handling and Waste Management

Construction and demolition debris must be disposed of in accordance with applicable provisions of the Ohio Revised Code 3714 at a landfill approved by the Ohio EPA. Waste materials must be collected and discarded in a containment source such as a garbage dumpster, tub, or pit. Containment shall be placed at a location to be designated by the Contractor away from runoff conveyances and must meet local and state solid-waste management regulations. Containment shall be used for refuse and waste materials from the Project Site only. Containment shall be inspected weekly and after storm events. Burning and burying of refuse and waste materials is prohibited.

# 3.2 Establish Proper Building Material Staging Areas

Construction equipment and materials shall be stored at a lay down and staging area location to be designated by the Contractor. Only non-hazardous building materials shall be stored at this area. Hazardous materials including, but not limited to petroleum products, paints, and maintenance fluids must be stored in sealed and labeled containers under cover in a secure area.

## 3.3 Designate Washout Areas

A concrete washout shall be constructed at a location to be designated by the Contractor. The concrete washout shall be constructed at level grade and consist of a temporary below ground sump with a minimum length and width of 10 feet and sufficient volume to contain all liquid and concrete waste generated by equipment washout operations. Compost filter sock must be installed around the concrete washout. A sign shall be posted marking the location of the washout area to ensure concrete equipment operators use the facility. At no time shall runoff from washout operations discharge into catch basins or downstream receiving waters.

Concrete pours should not be conducted during or before anticipated storm events. All excess concrete and concrete washout slurries from concrete mixer trucks and chutes shall be discharged to the washout area or hauled off-site for disposal. When the temporary washout area is no longer necessary for construction, the hardened concrete and materials used to construct the area shall be removed and properly discarded, and the area shall be backfilled, graded, and stabilized.

# 3.4 Establish Proper Equipment/Vehicle Fueling and Maintenance Practices

Refueling shall be performed by a mobile fuel truck or stationary fuel tank. All equipment fluids generated by maintenance activities shall be disposed of in designated drums stored on spill pallets. Absorbents, spill-cleanup materials, and spill kits shall be available onsite. Drip pans shall be placed under equipment receiving maintenance. Stationary fuel tanks shall be approved for fuel containment and have an approved secondary containment system to prevent leaks and spills.

# 3.5 Control Equipment/Vehicle Washing

Equipment and vehicle washing shall be performed off-site.

# 3.6 Spill Prevention and Control Plan

Contractor and subcontractor vehicles and equipment shall be checked for leaking fluids. Use of a vehicle or equipment that is leaking fluid shall immediately be discontinued and the vehicle or equipment shall either be repaired or removed from the Project Site.

Spill kits shall be kept on the Project Site. Clean up of all spills shall be performed immediately upon discovery. Material safety data sheets, material inventory, and emergency contact information shall be maintained on the Project Site.

## 3.7 Any Additional BMPs

Additional good housekeeping BMPs may be implemented in accordance with the "Rainwater and Land Development Manual" as deemed necessary by Landowner, Operator, SWPPP Preparer, or applicable jurisdictional authorities.

## 3.8 Allowable Non-Stormwater Discharge Management

Allowable non-stormwater discharges shall be in accordance with Part I.B.4 of Ohio EPA Permit No. OHC000005.

# **SECTION 4: SELECTING POST-CONSTRUCTION BMPs**

Post-construction BMPs for the Project shall include stormwater detention achieved through the implementation of water quality ponds and soil stabilization achieved through the application of permanent seeding. Post-construction BMPs are summarized below and information relating to design of post-construction BMPs is provided in the Supporting Calculation section of Appendix L – Additional Information.

Water quality ponds are stormwater ponds designed to treat runoff for pollutants and control increases in discharge. Water quality ponds may be predominantly dry between storm events, or have a permanent pool and are efficient for removing pollutants by settling, chemical interactions and biological uptake by plants, algae and bacteria. Water quality ponds are appropriate for residential, commercial and industrial areas and are easily incorporated on sites where a stormwater pond is to be constructed to control potential flooding. Even where detention ponds are not necessary for flood control, water quality ponds can be used to address water quality and stream stability concerns. See Section 2.6 of the ODNR Rainwater and Land Development Manual for additional information and design considerations relating to water quality ponds.

Soil stabilization is the most effective means to minimize erosion and offsite sediment from development sites. Soil stabilization is typically achieved by establishing permanent perennial vegetation on areas that are not otherwise stabilized through the application of permanent seeding. Permanent vegetation is used to stabilize soil, reduce erosion, prevent sediment pollution, reduce runoff by promoting infiltration, and provide stormwater quality benefits offered by dense grass cover. See Section 7.10 of the ODNR Rainwater and Land Development Manual for additional information and design considerations relating to permanent seeding.
# **SECTION 5: INSPECTIONS**

## 5.1 Inspections

See Appendix E – Inspection Reports.

#### 1. Inspection Personnel:

The person(s) responsible for inspection of E&S controls shall be selected, identified, and documented on-site.

## 2. Inspection Schedule and Procedures:

Minimum inspection schedule and procedures is defined by the General Permit Part III Section G(2)(i). Inspections shall be performed at least once every seven calendar days and within 24 hours after a storm event greater than one-half inch of rain within a 24-hour period. Site specific inspection can exceed the minimum, if necessary.

An Inspection Report, which is a written record documenting the results of inspections, must be created and maintained on-site. The Inspection Report shall be completed and signed by the inspector(s) after every inspection.

## 5.2 Delegation of Authority

See Appendix K – Delegation of Authority.

## 5.3 Corrective Action Log

See Appendix F – Corrective Action Log.

# **SECTION 6: RECORDKEEPING AND TRAINING**

## 6.1 Recordkeeping

Records shall be retained for a minimum period of at least three years after the permit is terminated.

## 6.2 Log of Changes to the SWPPP

See Appendix G – SWPPP Amendment Log.

## 6.3 Training

## 1. Individual(s) Responsible for Training:

See Appendix J – SWPPP Training Log. Project Manager(s) or Site Supervisor(s) shall identify Instructor and Training Topic, if training is necessary.

## 2. Training Conducted:

- If deemed necessary by the Project Manager(s) or Site Supervisor(s), general stormwater and BMP awareness training for staff and subcontractors shall be conducted on-site.
- If deemed necessary by the Project Manager(s) or Site Supervisor(s), detailed training for staff and subcontractors with specific stormwater responsibilities shall be conducted on-site.

# **SECTION 7: FINAL STABILIZATION**

The Project Site shall be considered permanently stabilized when a uniform 70% perennial vegetative cover has been established or is otherwise stabilized with aggregate or concrete paving. Soil stabilization shall be in accordance with Part II.B. of Ohio EPA Permit No.OHC000005.

# SECTION 8: CERTIFICATION AND NOTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name:	Erich Budde	Title:	Project Manager
Signature:	EBOL		Date: 10/11/19

# **SWPPP APPENDICES**

Attach the following documentation to the SWPPP:

Appendix A – General Location Map(s) Appendix B – Site Maps Appendix C – Construction General Permit Appendix D – Acknowledgement Letter from Ohio EPA Appendix E – Inspection Reports Appendix F – Corrective Action Log Appendix G – SWPPP Amendment Log Appendix H – Subcontractor Certifications/Agreements Appendix I – Grading and Stabilization Activities Log Appendix J – SWPPP Training Log Appendix K – Delegation of Authority Appendix L – Additional Information



General Location Map(s)



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Site Maps







# HANNIBAL PORT - STORMWATER ANALYSIS (3-5-2019)



**Construction General Permit** 

Issuance Date: April 23, 2018 Effective Date: April 23, 2018 Expiration Date: April 22, 2023

#### OHIO ENVIRONMENTAL PROTECTION AGENCY

#### GENERAL PERMIT AUTHORIZATION FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the federal Water Pollution Control Act, as amended (33 U.S.C. Section 1251 et. seq. hereafter referred to as "the Act") and the Ohio Water Pollution Control Act [Ohio Revised Code ("ORC") Chapter 6111], dischargers of storm water from sites where construction activity is being conducted, as defined in Part I.B of this permit, are authorized by the Ohio Environmental Protection Agency, hereafter referred to as "Ohio EPA," to discharge from the outfalls at the sites and to the receiving surface waters of the state identified in their Notice of Intent ("NOI") application form on file with Ohio EPA in accordance with the conditions specified in Parts I through VII of this permit.

It has been determined that a lowering of water quality of various waters of the state associated with granting coverage under this permit is necessary to accommodate important social and economic development in the state of Ohio. In accordance with OAC 3745-1-05, this decision was reached only after examining a series of technical alternatives, reviewing social and economic issues related to the degradation, and considering all public and intergovernmental comments received concerning the proposal.

This permit is conditioned upon payment of applicable fees, submittal of a complete NOI application form, development (and submittal, if applicable) of a complete Storm Water Pollution Prevention Plan (SWP3) and written approval of coverage from the director of Ohio EPA in accordance with Ohio Administrative Code ("OAC") Rule 3745-38-02.

Craig-W. Butler Director

Total Pages: 60

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#### PART I. COVERAGE UNDER THIS PERMIT

#### A. Permit Area.

This permit covers the entire State of Ohio. Appendices A and B of this permit contain additional watershed specific requirements for construction activities located partially or fully within the Big Darby Creek Watershed and portions of the Olentangy River Watershed. Projects within portions of the Olentangy River watershed shall seek coverage under this permit following the expiration of OHCO00002 (May 31, 2019).

#### B. Eligibility.

1. <u>Construction activities covered</u>. Except for storm water discharges identified under Part I.B.2, this permit may cover all new and existing discharges composed entirely of storm water discharges associated with construction activity that enter surface waters of the state or a storm drain leading to surface waters of the state.

For the purposes of this permit, construction activities include any clearing, grading, excavating, grubbing and/or filling activities that disturb one or more acres. Discharges from trench dewatering are also covered by this permit as long as the dewatering activity is carried out in accordance with the practices outlined in Part III.G.2.g.iv of this permit.

Construction activities disturbing one or more acres of total land, or will disturb less than one acre of land but are part of a larger common plan of development or sale that will ultimately disturb one or more acres of land are eligible for coverage under this permit. The threshold acreage includes the entire area disturbed in the larger common plan of development or sale.

This permit also authorizes storm water discharges from support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) provided:

- a. The support activity is directly related to a construction site that is required to have NPDES permit coverage for discharges of storm water associated with construction activity;
- b. The support activity is not a commercial operation serving multiple unrelated construction projects and does not operate beyond the completion of the construction activity at the site it supports;
- c. Appropriate controls and measures are identified in a storm water pollution prevention plan (SWP3) covering the discharges from the support activity; and
- d. The support activity is on or contiguous with the property defined in the NOI (offsite borrow pits and soil disposal areas, which serve only one project, do not have to be contiguous with the construction site).
- 2. <u>Limitations on coverage</u>. The following storm water discharges associated with construction activity are not covered by this permit:

- Storm water discharges that originate from the site after construction activities have ceased, including any temporary support activity, and the site has achieved final stabilization. Industrial post-construction storm water discharges may need to be covered by an NPDES permit;
- Storm water discharges associated with construction activity that the director has shown to be or may reasonably expect to be contributing to a violation of a water quality standard; and
- c. Storm water discharges authorized by an individual NPDES permit or another NPDES general permit;
- 3. <u>Waivers</u>. After March 10, 2003, sites whose larger common plan of development or sale have at least one, but less than five acres of land disturbance, which would otherwise require permit coverage for storm water discharges associated with construction activities, may request that the director waive their permit requirement. Entities wishing to request such a waiver must certify in writing that the construction activity meets one of the two waiver conditions:
  - a. <u>Rainfall Erosivity Waiver</u>. For a construction site to qualify for the rainfall erosivity waiver, the cumulative rainfall erosivity over the project duration must be five or less and the site must be stabilized with a least a 70 percent vegetative cover or other permanent, non-erosive cover. The rainfall erosivity must be calculated according to the method in U.S. EPA Fact Sheet 3.1 <u>Construction Rainfall Erosivity Waiver</u> dated January 2001 and be found at: http://epa.ohio.gov/portals/35/permits/USEPAfact3-1\_s.pdf. If it is determined that a construction activity will take place during a time period where the rainfall erosivity factor is less than five, a written waiver certification must be submitted to Ohio EPA at least 21 days before construction activity is scheduled to begin. If the construction activity will extend beyond the dates specified in the waiver certification, the operator must either: (a) recalculate the waiver using the original start date with the new ending date (if the R factor is still less than five, a new waiver certification must be submitted) or (b) submit an NOI application form and fee for coverage under this general permit at least seven days prior to the end of the waiver period; or
  - b. <u>TMDL (Total Maximum Daily Load) Waiver.</u> Storm water controls are not needed based on a TMDL approved or established by U.S. EPA that addresses the pollutant(s) of concern or, for non-impaired waters that do not require TMDLs, and equivalent analysis that determines allocations for small construction sites for the pollutant(s) of concern or that determines that such allocations are not needed to protect water quality based on consideration of existing in-stream concentrations, expected growth in pollutant contributions from all sources, and a margin of safety. The pollutant(s) of concern include sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the construction activity. The operator must certify to the director of Ohio EPA that the construction activity will take place, and storm water discharges will occur, within the drainage area addressed by the TMDL or equivalent analysis. A written waiver certification must be submitted to Ohio EPA at least 21 days before the construction activity is scheduled to begin.

4. <u>Prohibition on non-storm water discharges</u>. All discharges covered by this permit must be composed entirely of storm water with the exception of the following: discharges from firefighting activities; fire hydrant flushings; potable water sources including waterline flushings; irrigation drainage; lawn watering; routine external building washdown which does not use detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; springs; uncontaminated ground water from trench or well point dewatering and foundation or footing drains where flows are not contaminated with process materials such as solvents. Dewatering activities must be done in compliance with Part II.C and Part III.G.2.g.iv of this permit. Discharges of material other than storm water or the authorized non-storm water discharges listed above must comply with an individual NPDES permit or an alternative NPDES general permit issued for the discharge.

Except for flows from firefighting activities, sources of non-storm water listed above that are combined with storm water discharges associated with construction activity must be identified in the SWP3. The SWP3 must identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

5. <u>Spills and unintended releases</u> (Releases in excess of Reportable Quantities). This permit does not relieve the permittee of the reporting requirements of Title 40 of the Code of Federal Regulations ("CFR") Part 117 and 40 CFR Part 302. In the event of a spill or other unintended release, the discharge of hazardous substances in the storm water discharge(s) from a construction site must be minimized in accordance with the applicable storm water pollution prevention plan for the construction activity and in no case, during any 24-hour period, may the discharge(s) contain a hazardous substance equal to or in excess of reportable quantities.

40 CFR Part 117 sets forth a determination of the reportable quantity for each substance designated as hazardous in 40 CFR Part 116. The regulation applies to quantities of designated substances equal to or greater than the reportable quantities, when discharged to surface waters of the state. 40 CFR Part 302 designates under section 102(a) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, those substances in the statutes referred to in section 101(14), identifies reportable quantities for these substances and sets forth the notification requirements for releases of these substances. This regulation also sets forth reportable quantities for hazardous substances designated under section 311(b)(2)(A) of the Clean Water Act (CWA).

#### C. Requiring an individual NPDES permit or an alternative NPDES general permit.

1. <u>The director may require an alternative permit</u>. The director may require any operator eligible for this permit to apply for and obtain either an individual NPDES permit or coverage under an alternative NPDES general permit in accordance with OAC Rule 3745-38-02. Any interested person may petition the director to take action under this paragraph.

The director will send written notification that an alternative NPDES permit is required. This notice shall include a brief statement of the reasons for this decision, an application form and a statement setting a deadline for the operator to file the application. If an operator fails to submit an application in a timely manner as required by the director under this paragraph, then coverage, if in effect, under this permit is automatically terminated at the end of the day specified for application submittal.

- 2. <u>Operators may request an individual NPDES permit</u>. Any owner or operator eligible for this permit may request to be excluded from the coverage of this permit by applying for an individual permit. The owner or operator shall submit an individual application with reasons supporting the request to the director in accordance with the requirements of 40 CFR 122.26. If the reasons adequately support the request, the director shall grant it by issuing an individual NPDES permit.
- 3. When an individual NPDES permit is issued to an owner or operator otherwise subject to this permit or the owner or operator is approved for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the effective date of the individual permit or the date of approval for coverage under the alternative general permit, whichever the case may be.

#### D. Permit requirements when portions of a site are sold

If an operator obtains a permit for a development, and then the operator (permittee) sells off lots or parcels within that development, permit coverage must be continued on those lots until a Notice of Termination (NOT) in accordance with Part IV.B is submitted. For developments which require the use of centralized sediment and erosion controls (i.e., controls that address storm water runoff from one or more lots) for which the current permittee intends to terminate responsibilities under this permit for a lot after sale of the lot to a new owner and such termination will either prevent or impair the implementation of the controls and therefore jeopardize compliance with the terms and conditions of this permit, the permittee will be required to maintain responsibility for the implementation of those controls. For developments where this is not the case, it is the permittee's responsibility to temporarily stabilize all lots sold to individual lot owners unless an exception is approved in accordance with Part III.G.4. In cases where permit responsibilities for individual lot(s) will be terminated after sale of the lot, the permittee shall inform the individual lot owner of the obligations under this permit and ensure that the Individual Lot NOI application is submitted to Ohio EPA.

#### E. Authorization

1. <u>Obtaining authorization to discharge</u>. Operators that discharge storm water associated with construction activity must submit an NOI application form and Storm Water Pollution Prevention Plan (SWP3) if located within the Big Darby Creek watershed or portions of the Olentangy watershed in accordance with the requirements of Part I.F of this permit to obtain authorization to discharge under this general permit. As required under OAC Rule 3745-38-06(E), the director, in response to the NOI submission, will notify the applicant in writing that he/she has or has not been granted general permit coverage to discharge storm water associated with construction activity under the terms and conditions of this permit or that the applicant must apply for an individual NPDES permit or coverage under an alternate general NPDES permit as described in Part I.C.1.

2. <u>No release from other requirements</u>. No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations. Other permit requirements commonly associated with construction activities include, but are not limited to, section 401 water quality certifications, isolated wetland permits, permits to install sanitary sewers or other devices that discharge or convey polluted water, permits to install drinking water lines, single lot sanitary system permits and disturbance of land which was used to operate a solid or hazardous waste facility (i.e., coverage under this NPDES general permit does not satisfy the requirements of OAC Rule 3745-27-13 or ORC Section 3734.02(H)). The issuance of this permit is subject to resolution of an antidegradation review. This permit does not relieve the permittee of other responsibilities associated with construction activities such as contacting the Ohio Department of Natural Resources, Division of Water, to ensure proper well installation and abandonment of wells.

#### F. Notice of Intent Requirements

- 1. Deadlines for notification.
  - a. <u>Initial coverage</u>: Operators who intend to obtain initial coverage for a storm water discharge associated with construction activity under this general permit must submit a complete and accurate NOI application form, a completed Storm Water Pollution Prevention Plan (SWP3) for projects within the Big Darby Creek and portions of the Olentangy river watersheds and appropriate fee at least 21 days (or 45 days in the Big Darby Creek watershed and portions of the Olentangy watershed) prior to the commencement of construction activity. If more than one operator, as defined in Part VII of this general permit, will be engaged at a site, each operator shall seek coverage under this permit is not effective until an approval letter granting coverage from the director of Ohio EPA is received by the applicant. Where one operator has already submitted an NOI prior to other operator(s) being identified, the additional operator shall request modification of coverage to become a co-permittee. In such instances, the co-permittees shall be covered under the same facility permit number. No additional permit fee is required.
  - b. <u>Individual lot transfer of coverage</u>: Operators must each submit an individual lot notice of intent (Individual Lot NOI) application form (no fee required) to Ohio EPA at least seven days prior to the date that they intend to accept responsibility for permit requirements for their portion of the original permitted development from the previous permittee. Transfer of permit coverage is not granted until an approval letter from the director of Ohio EPA is received by the applicant.
- 2. <u>Failure to notify</u>. Operators who fail to notify the director of their intent to be covered and who discharge pollutants to surface waters of the state without an NPDES permit are in violation of ORC Chapter 6111. In such instances, Ohio EPA may bring an enforcement action for any discharges of storm water associated with construction activity.
- 3. <u>How to submit an NOI</u>. Operators seeking coverage under this permit must submit a complete and accurate Notice of Intent (NOI) application using Ohio EPA's electronic application form which is available through the Ohio EPA eBusiness Center at: <u>https://ebiz.epa.ohio.gov/</u>. Submission through the Ohio EPA eBusiness Center will

require establishing an Ohio EPA eBusiness Center account and obtaining a unique Personal Identification Number (PIN) for final submission of the NOI. Existing eBusiness Center account holders can access the NOI form through their existing account and submit using their existing PIN. Please see the following link for guidance: <u>http://epa.ohio.gov/dsw/ebs.aspx#170669803-streams-guidance</u>. Alternatively, if you are unable to access the NOI form through the agency eBusiness Center due to a demonstrated hardship, the NOI may be submitted on a paper NOI form provided by Ohio EPA. NOI information shall be typed on the form. Please contact Ohio EPA, Division of Surface Water at (614) 644-2001 if you wish to receive a paper NOI form.

- 4. <u>Additional notification</u>. NOIs and SWP3s are considered public documents and shall be made available to the public in accordance with Part III.C.2. The permittee shall make NOIs and SWP3s available upon request of the director of Ohio EPA, local agencies approving sediment and erosion control plans, grading plans or storm water management plans, local governmental officials, or operators of municipal separate storm sewer systems (MS4s) receiving drainage from the permitted site. Each operator that discharges to an NPDES permitted MS4 shall provide a copy of its Ohio EPA NOI submission to the MS4 in accordance with the MS4's requirements, if applicable.
- 5. <u>Re-notification</u>. Existing permittees having coverage under the previous generations of this general permit shall have continuing coverage under OHC000005 with the submittal of a timely renewal application. Within 180 days from the effective date of this permit, existing permittees shall submit the completed renewal application expressing their intent for continued coverage. In accordance with Ohio Administrative Code (OAC) 3745-38-02(E)(2)(a)(i), a renewal application fee will only apply to existing permittees having general permit coverage for 5 or more years as of the effective date of this general permit. Permit coverage will be terminated if Ohio EPA does not receive the renewal application within this 180-day period.

#### Part II. NON-NUMERIC EFFLUENT LIMITATIONS

You shall comply with the following non-numeric effluent limitations for discharges from your site and/or from construction support activities. Part III of this permit contains the specific design criteria to meet the objectives of the following non-numeric effluent limitations. You shall develop and implement the SWP3 in accordance with Part III of this permit to satisfy these non-numeric effluent limitations.

- A. Erosion and Sediment Controls. You shall design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls shall be designed, installed and maintained to:
- 1. Control storm water volume and velocity within the site to minimize soil and stream erosion;
- 2. Control storm water discharges, including both peak flowrates and total storm water volume, to minimize erosion at outlets and to minimize downstream channel and streambank erosion;
- 3. Minimize the amount of soil exposed during construction activity;

- 4. Minimize the disturbance of steep slopes;
- 5. Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls shall address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting storm water runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;
- 6. If feasible, provide and maintain a 50-foot undisturbed natural buffer around surface waters of the state, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration. If it is infeasible to provide and maintain an undisturbed 50-foot natural buffer, you shall comply with the stabilization requirements found in Part II.B for areas within 50 feet of a surface water; and
- 7. Minimize soil compaction and, unless infeasible, preserve topsoil.
- **B. Soil Stabilization**. Stabilization of disturbed areas shall, at a minimum, be initiated in accordance with the time frames specified in the following tables.

#### Table 1: Permanent Stabilization

Area requiring permanent stabilization	Time frame to apply erosion controls
Any areas that will lie dormant for one year or	Within seven days of the most recent
more	disturbance
Any areas within 50 feet of a surface water of	Within two days of reaching final grade
the state and at final grade	
Other areas at final grade	Within seven days of reaching final grade
	within that area

#### Table 2: Temporary Stabilization

Area requiring temporary stabilization	Time frame to apply erosion controls
Any disturbed areas within 50 feet of a surface water of the state and not at final grade	Within two days of the most recent disturbance if the area will remain idle for more than 14 days
Any disturbed areas that will be dormant for more than 14 days but less than one year, and not within 50 feet of a surface water of	Within seven days of the most recent disturbance within the area
the state	For residential subdivisions, disturbed areas must be stabilized at least seven days prior to transfer of permit coverage for the individual lot(s).
Disturbed cross that will be idle over winter	Drier to the enact of winter weather

Disturbed areas that will be idle over winter Prior to the onset of winter weather

Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed. Permanent and temporary stabilization are defined in Part VII.

- **C. Dewatering.** Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls.
- **D. Pollution Prevention Measures.** Design, install, implement and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented and maintained to:
- 1. Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters shall be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
- 2. Minimize the exposure of construction materials, products, and wastes; landscape materials, fertilizers, pesticides, and herbicides; detergents, sanitary waste and other materials present on the site to precipitation and to storm water; and
- 3. Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.
- E. **Prohibited Discharges.** The following discharges are prohibited:
- 1. Wastewater from washout of concrete, unless managed by an appropriate control;
- 2. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
- 3. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and
- 4. Soaps or solvents used in vehicle and equipment washing or all other waste water streams which could be subject to an individual NPDES permit (Part III.G.2.g).
- F. Surface Outlets. When discharging from sediment basins utilize outlet structures that withdraw water from the surface, unless infeasible. (Note: Ohio EPA believes that the circumstances in which it is infeasible to design outlet structures in this manner are rare. Exceptions may include time periods with extended cold weather during winter months. If you have determined that it is infeasible to meet this requirement, you shall provide documentation in your SWP3 to support your determination.)
- **G. Post-Construction Storm Water Management Controls**. So that receiving stream's physical, chemical and biological characteristics are protected, and stream functions are maintained, post-construction storm water practices shall provide long-term management of runoff quality and quantity.

#### PART III. STORM WATER POLLUTION PREVENTION PLAN (SWP3)

#### A. Storm Water Pollution Prevention Plans.

A SWP3 shall be developed for each site covered by this permit. For a multi-phase construction project, a separate NOI shall be submitted when a separate SWP3 will be prepared for

subsequent phases. SWP3s shall be prepared in accordance with sound engineering and/or conservation practices by a professional experienced in the design and implementation of standard erosion and sediment controls and storm water management practices addressing all phases of construction. The SWP3 shall clearly identify all activities which are required to be authorized under Section 401 and subject to an antidegradation review. The SWP3 shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with construction activities. The SWP3 shall be a comprehensive, stand-alone document, which is not complete unless it contains the information required by Part III.G of this permit. In addition, the SWP3 shall describe and ensure the implementation of best management practices (BMPs) that reduce the pollutants and impact of storm water discharges during construction and pollutants associated with the post-construction land use to ensure compliance with ORC Section 6111.04, OAC Chapter 3745-1 and the terms and conditions of this permit.

#### B. Timing

An acceptable SWP3 shall be completed and submitted to the applicable regulated MS4 entity (for projects constructed entirely within a regulated MS4 area) prior to the timely submittal of an NOI. Projects within the Big Darby Creek and portions of the Olentangy watersheds must submit a SWP3 with the NOI. The SWP3 shall be updated in accordance with Part III.D. Submission of a SWP3 does not constitute review and approval on the part of Ohio EPA. Upon request and good cause shown, the director may waive the requirement to have a SWP3 completed at the time of NOI submission. If a waiver has been granted, the SWP3 must be completed prior to the initiation of construction activities. The SWP3 must be implemented upon initiation of construction activities.

In order to continue coverage from the previous generations of this permit, the permittee shall review and update the SWP3 to ensure that this permit's requirements are addressed within 180 days after the effective date of this permit. If it is infeasible for you to comply with a specific requirement in this permit because (1) the provision was not part of the permit you were previously covered under, and (2) because you are prevented from compliance due to the nature or location of earth disturbances that commenced prior to the effective date of this permit, you shall include documentation within your SWP3 of the reasons why it is infeasible for you to meet the specific requirement.

Examples of OHC000005 permit conditions that would be infeasible for permittees renewing coverage to comply with include:

- OHC000005 post-construction requirements, for projects that obtained NPDES construction storm water coverage and started construction activities prior to the effective date of this permit;
- OHC000005 post-construction requirements, for multi-phase development projects with an existing regional post-construction BMP issued under previous NPDES post-construction requirements. This only applies to construction sites authorized under Ohio EPA's Construction Storm Water Permits issued after April 20, 2003;
- OHC000005 post-construction requirements, for renewing or initial coverage and you have a SWP3 approved locally and you will start construction within 180 days of the effective date of this permit;

- Sediment settling pond design requirements, if the general permit coverage was obtained prior to April 21, 2013 and the sediment settling pond has been installed; or
- Case-by-case situations approved by the Director.

#### C. SWP3 Signature and Review.

1. <u>Plan Signature and Retention On-Site</u>. The SWP3 shall include the certification in Part V.H, be signed in accordance with Part V.G., and be retained on site during working hours.

#### 2. <u>Plan Availability</u>

- a. On-site: The plan shall be made available immediately upon request of the director or his authorized representative and MS4 operators or their authorized representative during working hours. A copy of the NOI and letter granting permit coverage under this general permit also shall be made available at the site.
- b. By written request: The permittee must provide the most recent copy of the SWP3 within 7 days upon written request by any of the following:
  - i. The director or the director's authorized representative;
  - ii. A local agency approving sediment and erosion plans, grading plans or storm water management plans; or
  - iii. In the case of a storm water discharge associated with construction activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the operator of the system.
- c. To the public: All NOIs, general permit approval for coverage letters, and SWP3s are considered reports that shall be available to the public in accordance with the Ohio Public Records law. The permittee shall make documents available to the public upon request or provide a copy at public expense, at cost, in a timely manner. However, the permittee may claim to Ohio EPA any portion of an SWP3 as confidential in accordance with Ohio law.
- 3. <u>Plan Revision</u>. The director or authorized representative may notify the permittee at any time that the SWP3 does not meet one or more of the minimum requirements of this part. Within 10 days after such notification from the director or authorized representative (or as otherwise provided in the notification), the permittee shall make the required changes to the SWP3 and shall submit to Ohio EPA the revised SWP3 or a written certification that the requested changes have been made.

#### D. Amendments

The permittee shall amend the SWP3 whenever there is a change in design, construction, operation or maintenance, which has a significant effect on the potential for the discharge of pollutants to surface waters of the state or if the SWP3 proves to be ineffective in achieving the

general objectives of controlling pollutants in storm water discharges associated with construction activity. Amendments to the SWP3 may be reviewed by Ohio EPA in the same manner as Part III.C.

#### E. Duty to inform contractors and subcontractors

The permittee shall inform all contractors and subcontractors not otherwise defined as "operators" in Part VII of this general permit who will be involved in the implementation of the SWP3 of the terms and conditions of this general permit. The permittee shall maintain a written document containing the signatures of all contractors and subcontractors involved in the implementation of the SWP3 as proof acknowledging that they reviewed and understand the conditions and responsibilities of the SWP3. The written document shall be created, and signatures shall be obtained prior to commencement of earth disturbing activity on the construction site.

#### F. Total Maximum Daily Load (TMDL) allocations

If a TMDL is approved for any waterbody into which the permittee's site discharges and requires specific BMPs for construction sites, the director may require the permittee to revise his/her SWP3. Specific conditions have been provided in Appendix A (for the Big Darby Creek Watershed) and Appendix B (for portions of the Olentangy river watershed).

#### G. SWP3 Requirements

Operations that discharge storm water from construction activities are subject to the following requirements and the SWP3 shall include the following items:

- 1. <u>Site description</u>. Each SWP3 shall provide:
  - a. A description of the nature and type of the construction activity (e.g., low density residential, shopping mall, highway, etc.);
  - Total area of the site and the area of the site that is expected to be disturbed (i.e., grubbing, clearing, excavation, filling or grading, including off-site borrow areas);
  - c. A measure of the impervious area and percent imperviousness created by the construction activity (existing, new and total impervious area after construction);
  - d. Storm water calculations, including the volumetric runoff coefficients for both the pre-construction and post- construction site conditions, and resulting water quality volume; design details for post-construction storm water facilities and pretreatment practices such as contributing drainage areas, capacities, elevations, outlet details and drain times shall be included in the SWP3; and if applicable, explanation of the use of existing post-construction facilities. Ohio EPA recommends the use of data sheets (see Ohio's Rainwater and Land Development manual and Ohio EPA resources for examples);
  - e. Existing data describing the soil and, if available, the quality of any discharge from the site;

- f. A description of prior land uses at the site;
- g. A description of the condition of any on-site streams (e.g. prior channelization, bed instability or headcuts, channels on public maintenance, or natural channels);
- h. An implementation schedule which describes the sequence of major construction operations (i.e., designation of vegetative preservation areas, grubbing, excavating, grading, utilities, infrastructure installation and others) and the implementation of erosion, sediment and storm water management practices or facilities to be employed during each operation of the sequence;
- i. The name and/or location of the immediate receiving stream or surface water(s) and the first subsequent named receiving water(s) and the areal extent and description of wetlands or other special aquatic sites at or near the site which will be disturbed, or which will receive discharges from disturbed areas of the project. For discharges to an MS4, the point of discharge to the MS4 and the location where the MS4 ultimately discharges to a stream or surface water of the state shall be indicated;
- j. For subdivided developments, a detail drawing of individual parcels with their erosion, sediment or storm water control practices and/or a typical individual lot showing standard individual lot erosion and sediment control practices.

A typical individual lot drawing does not remove the responsibility to designate specific erosion and sediment control practices in the SWP3 for critical areas such as steep slopes, stream banks, drainage ways and riparian zones;

- Location and description of any storm water discharges associated with dedicated asphalt and dedicated concrete plants covered by this permit and the best management practices to address pollutants in these storm water discharges;
- I. A cover page or title identifying the name and location of the site, the name and contact information of all construction site operators, the name and contact information for the person responsible for authorizing and amending the SWP3, preparation date, and the estimated dates that construction will start and be complete;
- m. A log documenting grading and stabilization activities as well as amendments to the SWP3, which occur after construction activities commence; and
- n. Site map showing:
  - i. Limits of earth-disturbing activity of the site including associated off-site borrow or spoil areas that are not addressed by a separate NOI and associated SWP3;
  - ii. Soils types for all areas of the site, including locations of unstable or highly erodible and/or known contaminated soils;

- iii. Existing and proposed contours. A delineation of drainage watersheds expected during and after major grading activities as well as the size of each drainage watershed, in acres;
- iv. The location of any delineated boundary for required riparian setbacks;
- v. Conservation easements or areas designated as open space, preserved vegetation or otherwise protected from earth disturbing activities. A description of any associated temporary or permanent fencing or signage;
- vi. Surface water locations including springs, wetlands, streams, lakes, water wells, etc., on or within 200 feet of the site, including the boundaries of wetlands or stream channels and first subsequent named receiving water(s) the permittee intends to fill or relocate for which the permittee is seeking approval from the Army Corps of Engineers and/or Ohio EPA;
- vii. Existing and planned locations of buildings, roads, parking facilities and utilities;
- viii. The location of all erosion and sediment control practices, including the location of areas likely to require temporary stabilization during site development;
- ix. Sediment traps and basins noting their sediment storage and dewatering (detention) volume and contributing drainage area. Ohio EPA recommends the use of data sheets (see Ohio EPA's Rainwater and Land Development manual and website for examples) to provide data for all sediment traps and basins noting important inputs to design and resulting parameters such as their contributing drainage area, disturbed area, detention volume, sedimentation volume, practice surface area, dewatering time, outlet type and dimensions;
- x. The location of permanent storm water management practices (new and existing) including pretreatment practices to be used to control pollutants in storm water after construction operations have been completed along with the location of existing and planned drainage features including catch basins, culverts, ditches, swales, surface inlets and outlet structures;
- xi. Areas designated for the storage or disposal of solid, sanitary and toxic wastes, including dumpster areas, areas designated for cement truck washout, and vehicle fueling;
- xii. The location of designated construction entrances where the vehicles will access the construction site; and
- xiii. The location of any areas of proposed floodplain fill, floodplain excavation, stream restoration or known temporary or permanent stream crossings.

2. <u>Controls</u>. In accordance with Part II.A, the SWP3 shall contain a description of the controls appropriate for each construction operation covered by this permit and the operator(s) shall implement such controls. The SWP3 shall clearly describe for each major construction activity identified in Part III.G.1.h: (a) appropriate control measures and the general timing (or sequence) during the construction process that the measures will be implemented; and (b) which contractor is responsible for implementation (e.g., contractor A will clear land and install perimeter controls and contractor B will maintain perimeter controls until final stabilization). The SWP3 shall identify the subcontractors engaged in activities that could impact storm water runoff. The SWP3 shall contain signatures from all of the identified subcontractors indicating that they have been informed and understand their roles and responsibilities in complying with the SWP3. Ohio EPA recommends that the primary site operator review the SWP3 with the primary contractor prior to commencement of construction activities and keep a SWP3 training log to demonstrate that this review has occurred.

Ohio EPA recommends that the erosion, sediment, and storm water management practices used to satisfy the conditions of this permit should meet the standards and specifications in the most current edition of Ohio's <u>Rainwater and Land Development</u> (see definitions) manual or other standards acceptable to Ohio EPA. The controls shall include the following minimum components:

- a. <u>Preservation Methods.</u> The SWP3 shall make use of practices which preserve the existing natural condition as much as feasible. Such practices may include: preserving existing vegetation, vegetative buffer strips, and existing soil profile and topsoil; phasing of construction operations to minimize the amount of disturbed land at any one time; and designation of tree preservation areas or other protective clearing or grubbing practices. For all construction activities immediately adjacent to surface waters of the state, the permittee shall comply with the buffer non-numeric effluent limitation in Part II.A.6, as measured from the ordinary high water mark of the surface water.
- b. <u>Erosion Control Practices.</u> The SWP3 shall make use of erosion controls that provide cover over disturbed soils unless an exception is approved in accordance with Part III.G.4. A description of control practices designed to re-establish vegetation or suitable cover on disturbed areas after grading shall be included in the SWP3. The SWP3 shall provide specifications for stabilization of all disturbed areas of the site and provide guidance as to which method of stabilization will be employed for any time of the year. Such practices may include: temporary seeding, permanent seeding, mulching, matting, sod stabilization, vegetative buffer strips, phasing of construction operations, use of construction entrances and the use of alternative ground cover.
  - i. **Stabilization.** Disturbed areas shall be stabilized in accordance with Table 1 (Permanent Stabilization) and Table 2 (Temporary Stabilization) in Part II.B of this permit.
  - ii. **Permanent stabilization of conveyance channels**. Operators shall undertake special measures to stabilize channels and outfalls and prevent erosive flows. Measures may include seeding, dormant seeding (as defined in the most current edition of the <u>Rainwater and Land</u>

<u>Development</u> manual), mulching, erosion control matting, sodding, riprap, natural channel design with bioengineering techniques or rock check dams.

- c. <u>Runoff Control Practices.</u> The SWP3 shall incorporate measures which control the flow of runoff from disturbed areas so as to prevent erosion from occurring. Such practices may include rock check dams, pipe slope drains, diversions to direct flow away from exposed soils and protective grading practices. These practices shall divert runoff away from disturbed areas and steep slopes where practicable. Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide non-erosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected.
- d. <u>Sediment Control Practices.</u> The plan shall include a description of structural practices that shall store runoff allowing sediments to settle and/or divert flows away from exposed soils or otherwise limit runoff from exposed areas. Structural practices shall be used to control erosion and trap sediment from a site remaining disturbed for more than 14 days. Such practices may include, among others: sediment settling ponds, sediment barriers, earth diversion dikes or channels which direct runoff to a sediment settling pond and storm drain inlet protection. All sediment control practices must be capable of ponding runoff in order to be considered functional. Earth diversion dikes or channels alone are not considered a sediment control practice unless those are used in conjunction with a sediment settling pond.

The SWP3 shall contain detail drawings for all structural practices.

- i. **Timing.** Sediment control structures shall be functional throughout the course of earth disturbing activity. Sediment basins and perimeter sediment barriers shall be implemented prior to grading and within seven days from the start of grubbing. They shall continue to function until the upslope development area is stabilized with permanent cover. As construction progresses and the topography is altered, appropriate controls shall be constructed, or existing controls altered to address the changing drainage patterns.
- ii. **Sediment settling ponds.** A sediment settling pond is required for any one of the following conditions:
  - Concentrated or collected storm water runoff (e.g., storm sewer or ditch);
  - Runoff from drainage areas, which exceed the design capacity of silt fence or other sediment barriers; or
  - Runoff from drainage areas that exceed the design capacity of inlet protection;

The permittee may request approval from Ohio EPA to use alternative controls if the permittee can demonstrate the alternative controls are equivalent in effectiveness to a sediment settling pond.

In accordance with Part II.F, if feasible, sediment settling ponds shall be dewatered at the pond surface using a skimmer or equivalent device. The sediment settling pond volume consists of both a dewatering zone and a sediment storage zone. The volume of the dewatering zone shall be a minimum of 1800 cubic feet (ft<sup>3</sup>) per acre of drainage (67 yd<sup>3</sup>/acre) with a minimum 48-hour drain time. The volume of the sediment storage zone shall be calculated by one of the following methods:

Method 1: The volume of the sediment storage zone shall be 1000  ${\rm ft}^3$  per disturbed acre within the watershed of the basin. OR

Method 2: The volume of the sediment storage zone shall be the volume necessary to store the sediment as calculated with RUSLE or a similar generally accepted erosion prediction model.

Accumulated sediment shall be removed from the sediment storage zone once it exceeds 50 percent of the minimum required sediment storage design capacity and prior to the conversion to the post-construction practice unless suitable storage is demonstrated based upon over-design. When determining the total contributing drainage area, off-site areas and areas which remain undisturbed by construction activity shall be included unless runoff from these areas is diverted away from the sediment settling pond and is not co-mingled with sediment-laden runoff. The depth of the dewatering zone shall be less than or equal to five feet. The configuration between inlets and the outlet of the basin shall provide at least two units of length for each one unit of width ( $\geq 2:1$  length:width ratio); however, a length to width ratio of 4:1 is recommended. When designing sediment settling ponds, the permittee shall consider public safety, especially as it relates to children, as a design factor for the sediment basin and alternative sediment controls shall be used where site limitations would preclude a safe design. Combining multiple sediment and erosion control measures in order to maximize pollutant removal is encouraged.

iii. **Sediment Barriers and Diversions.** Sheet flow runoff from denuded areas shall be intercepted by sediment barriers or diversions to protect adjacent properties and water resources from sediment transported via sheet flow. Where intended to provide sediment control, silt fence shall be placed on a level contour downslope of the disturbed area. For most applications, standard silt fence may be substituted with a 12-inch diameter sediment barrier. The relationship between the maximum drainage area to sediment barrier for a particular slope range is shown in the following table:

rasio o obamient Barrier maximum Branage Anda Babba en elepe			
Maximum drainage area (in acres) to 100 linear feet of sediment barrier	Range of slope for a particular drainage area (in percent)		
0.5	< 2%		
0.25	<u>&gt;</u> 2% but < 20%		
0.125	<u>≥</u> 20% but < 50%		

Table 3 Sediment Barrier Maximum Drainage Area Based on Slope

Placing sediment barriers in a parallel series does not extend the size of the drainage area. Storm water diversion practices shall be used to keep runoff away from disturbed areas and steep slopes where practicable. Diversion practices, which include swales, dikes or berms, may receive storm water runoff from areas up to 10 acres.

- iv. **Inlet Protection.** Other erosion and sediment control practices shall minimize sediment laden water entering active storm drain systems. All inlets receiving runoff from drainage areas of one or more acres will require a sediment settling pond.
- v. **Surface Waters of the State Protection.** If construction activities disturb areas adjacent to surface waters of the state, structural practices shall be designed and implemented on site to protect all adjacent surface waters of the state from the impacts of sediment runoff. No structural sediment controls (e.g., the installation of silt fence or a sediment settling pond) shall be used in a surface water of the state. For all construction activities immediately adjacent to surface waters of the state, the permittee shall comply with the buffer non-numeric effluent limitation in Part II.A.6, as measured from the ordinary high water mark of the surface water. Where impacts within this buffer area are unavoidable, due to the nature of the construction (e.g., stream crossings for roads or utilities), the project shall be designed such that the number of stream crossings and the width of the disturbance within the buffer area are minimized.
- vi. **Modifying Controls**. If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the permittee shall replace or modify the control for site conditions.
- e. <u>Post-Construction Storm Water Management Requirements.</u> So that receiving stream's physical, chemical and biological characteristics are protected, and stream functions are maintained, post-construction storm water practices shall provide long-term management of runoff quality and quantity. To meet the post-construction requirements of this permit, the SWP3 shall contain a description of the post-construction BMPs that will be installed during construction for the site and the rationale for their selection. The rationale shall address the anticipated impacts on the channel and floodplain morphology, hydrology, and water quality. Post-construction BMPs cannot be installed within a surface water of the state (e.g., wetland or stream) unless it is authorized by a CWA 401 water quality certification, CWA 404 permit, or Ohio EPA non-jurisdictional wetland/stream program approval. Note: local jurisdictions may have more stringent post-construction requirements.

Detail drawings and maintenance plans shall be provided for all post-construction BMPs in the SWP3. Maintenance plans shall be provided by the permittee to the post-construction operator of the site (including homeowner associations) upon completion of construction activities (prior to termination of permit coverage). Maintenance plans shall ensure that pollutants collected within structural postconstruction practices are disposed of in accordance with local, state, and federal regulations. To ensure that storm water management systems function as designed and constructed, the post-construction operation and maintenance plan shall be a stand-alone document which contains: (1) a designated entity for storm water inspection and maintenance responsibilities; (2) the routine and nonroutine maintenance tasks to be undertaken; (3) a schedule for inspection and maintenance: (4) any necessary legally binding maintenance easements and agreements; (5) construction drawings or excerpts showing the plan view, profile and details of the outlet(s); and (6) a map showing all access and maintenance easements (7) for table 4a practices, provide relevant elevations and associated volumes that dictate when removal of accumulated sediments must occur. Permittees are responsible for assuring all post-construction practices meet plan specifications and intended post-construction conditions have been met (e.g., sediment removed from, and sediment storage restored to, permanent pools, sediment control outlets removed and replaced with permanent post-construction discharge structures, and all slopes and drainageways permanently stabilized), but are not responsible under this permit for operation and maintenance of postconstruction practices once coverage under this permit is terminated.

Post-construction storm water BMPs that discharge pollutants from point sources once construction is completed, may in themselves, need authorization under a separate NPDES permit (one example is storm water discharges from regulated industrial sites).

Construction activities that do not include the installation of any impervious surface (e.g., park lands), abandoned mine land reclamation activities regulated by the Ohio Department of Natural Resources, stream and wetland restoration activities, and wetland mitigation activities are not required to comply with the conditions of Part III.G.2.e of this permit. Linear construction projects, (e.g., pipeline or utility line installation), which do not result in the installation of additional impervious surface, are not required to comply with the conditions of Part III.G.2.e of this permit. However, linear construction projects shall be designed to minimize the number of stream crossings and the width of disturbance and achieve final stabilization of the disturbed area as defined in Part VII.M.1.

For all construction activities that will disturb two or more acres of land, or will disturb less than two acres, that are a part of a larger common plan of development or sale which will disturb two or more acres of land, the post construction BMP(s) chosen shall be able to manage storm water runoff for protection of stream channels, stream stability, and water quality. The BMP(s) chosen must be compatible with site and soil conditions. Structural post-construction storm water treatment practices shall be incorporated into the permanent drainage system for the site. The BMP(s) chosen must be sized to treat the water quality volume (WQ<sub>v</sub>) and ensure compliance with Ohio's Water Quality Standards in OAC Chapter 3745-1. The WQ<sub>v</sub> shall be equivalent to the volume of runoff from a 0.90-inch rainfall and shall be determined using the following equations:

24 hours

24 hours

$$WQ_v = Rv * P * A / 12$$
 (Equation 1)

where:

 $WQ_v$  = water quality volume in acre-feet

Rv = the volumetric runoff coefficient calculated using equation 2

P = 0.90 inch precipitation depth

A = area draining into the BMP in acres

$$Rv = 0.05 + 0.9i$$
 (Equation 2)

where i = fraction of post-construction impervious surface)

An additional volume equal to 20 percent of the  $WQ_v$  shall be incorporated into the BMP for sediment storage. Ohio EPA recommends BMPs be designed according to the methodology described in the most current edition of the <u>Rainwater and Land Development</u> manual or in another design manual acceptable for use by Ohio EPA.

The BMPs listed in Tables 4a and 4b below are considered standard BMPs approved for general use. However, communities with a regulated MS4 may limit the use of some of these BMPs. BMPs shall be designed such that the drain time is long enough to provide treatment, but short enough to provide storage for successive rainfall events and avoid the creation of nuisance conditions. The outlet structure for the post-construction BMP shall not discharge more than the first half of the WQv in less than one-third of the drain time. The WQv is the volume of storm water runoff that must be detained by a post-construction practice as specified by the most recent edition of the Rainwater and Land Development manual.

Post-construction practices shall be sized to treat 100% of the WQv associated with their contributing drainage area. If there is an existing post-construction BMP that treats runoff from the disturbed area, and the BMP meets the post-construction requirements of this permit, no additional post-construction BMP will be required. A regional storm water BMP may be used to meet the post-construction requirement if 1) the BMP meets the design requirements for treating the WQv, and 2) a legal agreement is established through which the regional BMP owner or operator agrees to provide this service in the long term. Design information for such facilities such as contributing drainage areas, capacities, elevations, outlet details and drain times shall be included in the SWP3.

Table 4a Extended Detention 1 Ost Constituetion 1 racti			
Extended Detention Practices	Minimum Drain Time of WQv		
Wet Extended Detention Basin <sup>1,2</sup>	24 hours		
Constructed Extended Detention Wetland <sup>1,2</sup>	24 hours		
Dry Extended Detention Basin <sup>1,3</sup>	48 hours		
Permeable Pavement – Extended Detention <sup>1</sup>	24 hours		

Table 4a Extended Detention Post-Construction Practices with Minimum Drain Times

Underground Storage – Extended Detention<sup>1,4</sup>

5

Sand & Other Media Filtration - Extended Detention<sup>1,</sup>

Notes:

1. The outlet structure shall not discharge more than the first half of the WQv in less than one-third of the drain time.

2. Provide a permanent pool with a minimum volume equal to the WQv and an extended detention volume above the permanent pool equal to 1.0 x WQv.

3. Dry basins must include a forebay and a micropool each sized at a minimum of 0.1 x WQv and a protected outlet, or include acceptable pretreatment and a protected outlet. 4. Underground storage must have pretreatment for removal of suspended sediments included in the design and documented in the SWP3. This pretreatment shall concentrate sediment in a location where it can be readily removed. For non-infiltrating, underground extended detention systems, pretreatment shall be 50% effective at capturing total suspended solids according to the testing protocol established in the Alternative Post-Construction BMP Testing Protocol.

5. The WQv ponding area shall completely empty between 24 and 72 hours.

Infiltration Practices	Maximum Drain Time of WQv
Bioretention Area/Cell <sup>1,2</sup>	24 hours
Infiltration Basin	24 hours
Infiltration Trench <sup>2</sup>	48 hours
Permeable Pavement – Infiltration <sup>3</sup>	48 hours
Underground Storage – Infiltration <sup>3,4</sup>	48 hours

 Table 4b Infiltration Post-Construction Practices with Maximum Drain Times

Notes:

1. Bioretention soil media shall have a permeability of approximately 1 - 4 in/hr. Meeting the soil media specifications in the Rainwater and Land Development manual is considered compliant with this requirement. Bioretention cells must have underdrains unless in-situ conditions allow for the WQv (surface ponding) plus the bioretention soil (to a depth of 24 inches) to drain completely within 48 hours.

2. Infiltrating practices with the WQv stored aboveground (bioretention, infiltration basin) shall fully drain the WQv within 24 hours to minimize nuisance effects of standing water and to promote vigorous communities of appropriate vegetation.

3. Subsurface practices designed to fully infiltrate the WQv (infiltration trench, permeable pavement with infiltration, underground storage with infiltration) shall empty within 48 hours to recover storage for subsequent storm events.

4. Underground storage systems with infiltration must have adequate pretreatment of suspended sediments included in the design and documented in the SWP3 in order to minimize clogging of the infiltrating surface. Pretreatment shall concentrate sediment in a location where it can be readily removed. Examples include media filters situated upstream of the storage or other suitable alternative approved by Ohio EPA. For infiltrating underground systems, pretreatment shall be 80% effective at capturing total suspended solids according to the testing protocol established in the Alternative Post-Construction BMP Testing Protocol.

<u>Small Construction Activities.</u> For all construction activities authorized under this permit which result in a disturbance less than 2 acres, a post-construction practice shall be used to treat storm water runoff for pollutants and to reduce adverse impacts on receiving waters. The applicant must provide a justification in the SWP3 why the use of table 4a and 4b practices are not feasible. The justification must address limiting factors which would prohibit the project going forward should table 4a and 4b practices be required. Please note that additional practices selected will require approval from the regulated MS4. The use of green infrastructure BMPs such as runoff reducing practices is also encouraged.

<u>Transportation Projects</u>. The construction of new roads and roadway improvement projects by public entities (i.e., the state, counties, townships, cities, or villages) may implement post-construction BMPs in compliance with the current version (as of the effective date of this permit) of the Ohio Department of Transportation's "Location and Design Manual, Volume Two Drainage Design" that has been accepted by Ohio EPA as an alternative to the conditions of this permit.

<u>Offsite Mitigation of Post-Construction</u>. Ohio EPA may authorize the offsite mitigation of the post-construction requirements of Part III.G.2.e of this permit on a case by case basis provided the permittee clearly demonstrates the BMPs listed in Tables 4a and 4b are not feasible and the following criteria are met: (1) a maintenance agreement or policy is established to ensure operations and treatment long-term; (2) the offsite location discharges to the same HUC-12 watershed unit; and (3) the mitigation ratio of the WQv is 1.5 to 1 or the WQv at the point of retrofit, whichever is greater. Requests for offsite mitigation must be received prior to receipt of the NOI application.

<u>Previously Developed Areas</u> - Ohio EPA encourages the redevelopment of previously graded, paved or built upon sites through a reduction of the WQv treatment requirement. For a previously developed area, one or a combination of the following two conditions shall be met:

- A 20 percent net reduction of the site's volumetric runoff coefficient through impervious area reduction with soil restoration or replacing impervious roof area with green roof area (for these purposes green roofs shall be considered pervious surface) or
- Treatment of 20 percent of the WQv for the previously developed area using a practice meeting Table 4a/5b criteria.

Where there is a combination of redeveloped areas and new development, a weighted approached shall be used with the following equation:

$$WQv = P * A * [(Rv*0.2) + (Rv2 - Rv1)] / 12$$
 (Equation 3)

Where

P = 0.90 inches
A = Area draining into the BMP in acres
Rv1 = volumetric runoff coefficient for existing conditions (current site impervious area)
Rv2 = volumetric runoff coefficient for proposed conditions (post-construction site impervious area)

Post-construction practices shall be located to treat impervious areas most likely to generate the highest pollutant load, such as parking lots or roadways, rather than areas predicted to be cleaner such as rooftops.

<u>Runoff Reduction Practices</u>. The size of structural post-construction practices used to capture and treat the WQv can be reduced by incorporating runoff
reducing practices into the design of the site's drainage system. The approach to calculate and document runoff reduction is detailed in the Rainwater and Land Development Manual. BMP-specific runoff reduction volumes are set by specifications in the Rainwater and Land Development Manual for the following practices:

- Impervious surface disconnection
- Rainwater harvesting
- Bioretention
- Infiltration basin
- Infiltration trench
- Permeable pavement with infiltration
- Underground storage with infiltration
- Grass swale
- Sheet flow to filter strip
- Sheet flow to conservation area

A runoff reduction approach may be used to meet the groundwater recharge requirements in the Big Darby Creek Watershed; the runoff reduction practices used for groundwater recharge may be used to reduce the WQv requirement, see appendix A for details on groundwater recharge requirements.

In order to promote the implementation of green infrastructure, the Director may consider the use of runoff reducing practices to demonstrate compliance with Part III.G.2.e of this permit for areas of the site not draining into a common drainage system of the site, e.g., sheet flow from perimeter areas such as the rear yards of residential lots, low density development scenarios, or where the permittee can demonstrate that the intent of pollutant removal and stream protection, as required in Part III.G.2.e of this permit is being addressed through non-structural post-construction BMPs based upon review and approval by Ohio EPA.

<u>Use of Alternative Post-Construction BMPs.</u> This permit does not preclude the use of innovative or experimental post-construction storm water management technologies. Alternative post-construction BMPs shall previously have been tested to confirm storm water treatment efficacy equivalent to those BMPs listed in Tables 4a and 4b using the protocol described in this section. BMP testing may include laboratory testing, field testing, or both.

Permittees shall request approval from Ohio EPA to use alternative postconstruction BMPs on a case-by-case basis. To use an alternative postconstruction BMP, the permittee must demonstrate that a BMP listed in Tables 4a and 4b is not feasible and the proposed alternative post-construction BMP meets the minimum treatment criteria as described in this section. The permittee shall submit an application to Ohio EPA for any proposed alternative post-construction BMP. Where the development project is located within a regulated municipal separate storm sewer system (MS4) community, the use of an alternative practice requires pre-approval by the MS4 before submittal of the Ohio EPA permit application. Ohio EPA requires that approvals for alternative post-construction BMPs are finalized before permittees submit an NOI for permit coverage.

In addition to meeting sediment removal criteria, the discharge rate from the proposed alternative practice shall be reduced to prevent stream bed erosion and protect the physical and biological stream integrity unless there will be negligible hydrological impact to the receiving surface water of the state. Discharge rate is considered to have a negligible impact if the permittee can demonstrate that one of the following three conditions exist:

- i. The entire WQv is recharged to groundwater;
- ii. The larger common plan of development or sale will create less than one acre of impervious surface;
- iii. The storm water drainage system of the development discharges directly into a large river with drainage area equal to 100 square miles or larger upstream of the development site or to a lake where the development area is less than 5 percent of the watershed area, unless a TMDL has identified water quality problems into the receiving surface waters of the state.

If the conditions above that minimize the potential for hydrological impact to the receiving surface water of the state do not exist, then the alternative post-construction BMP must prevent stream erosion by reducing the flow rate from the WQ<sub>V</sub>. In such cases, discharge of the WQ<sub>V</sub> must be controlled. A second storm water BMP that provides extended detention of the WQv may be needed to meet the post-construction criteria.

<u>Alternative Post-Construction BMP Testing Protocol.</u> For laboratory testing, the alternative BMP shall be tested using sediment with a specific gravity of 2.65, a particle size distribution closely matching the distribution shown in Table 5, and total suspended sediment (TSS) concentrations within 10% of 200 mg/L (180 mg/L – 220 mg/L TSS). For an alternative BMP to be acceptable, the test results must demonstrate that the minimum treatment rate is 80% TSS removal at the design flow rate for the tested BMP.

Particle Size (microns)	Percent Finer (%)
1,000	100
500	95
250	90
150	75
100	60
75	50
50	45
20	35
8	20
5	10
2	5

 Table 5 Particle Size Distribution for Testing Alternative Post-Construction BMPs

• For field testing, the alternative BMP shall be tested using storm water runoff from the field, not altered by adding aggregate, or subjecting to unusually high

sediment loads such as those from unstabilized construction disturbance. The storm water runoff used for field testing shall be representative of runoff from the proposed installation site for the alternative BMP after all construction activities have ceased and the ground has been stabilized. The influent and effluent TSS concentrations of storm water runoff must be collected in the field. For an alternative BMP to be acceptable, the test results must demonstrate the minimum treatment rate is 80% TSS removal for influent concentrations equal to or greater than 100 mg/L TSS. If the influent concentration to the proposed alternative BMP is less than 100 mg/L TSS in the field, then the BMP must achieve an average effluent concentration less than or equal to 20 mg/L TSS.

- Testing of alternative post-construction BMPs shall be performed or overseen by a qualified independent, third-party testing organization.
- Testing shall demonstrate the maximum flow rate at which the alternative post-construction BMP can achieve the necessary treatment efficacy, including consideration for the potential of sediment resuspension.
- Testing shall demonstrate the maximum volume of sediment and floatables that can be collected in the alternative post-construction BMP before pollutants must be removed to maintain 80% treatment efficacy.
- Testing shall indicate the recommended maintenance frequency and maintenance protocol to ensure ongoing performance of the alternative post-construction BMP.

The alternative post-construction BMP testing protocol described in this section is similar to testing requirements specified by the New Jersey Department of Environmental Protection (NJDEP) for storm water Manufactured Treatment Devices (MTD) and therefore testing results certified by NJDEP shall be accepted by Ohio EPA. For examples of BMPs that have been tested using New Jersey Department of Environmental Protection's procedures, see the website: www.njstormwater.org.

Another nationally recognized storm water product testing procedure is the Technology Assessment Protocol – Ecology (TAPE) administered by the State of Washington, Department of Ecology. The TAPE testing procedure describes testing to achieve 80% TSS removal using a sediment mix with a particle size distribution with approximately 75% of the mass of the aggregate with particle diameters less than 45 microns. Overall, this particle size distribution is finer than the distribution in Table 6. Therefore, if TAPE testing results are available for a proposed alternative post-construction BMP, those results shall be accepted by Ohio EPA. The State of Washington, Department of Ecology website is <u>www.ecy.wa.gov</u>.

Alternative BMPs that utilize treatment processes such as filtering or centrifugal separation, rather than a detention and settling volume, must be designed to ensure treatment of 90 percent of the average annual runoff volume. For the design of these BMPs, the water quality flow rate (WQF) considered equivalent to the Water Quality Volume (WQv) shall be determined utilizing the Rational Method (Equation 4) with an intensity (i) appropriate for the water quality precipitation event. This intensity shall be calculated using the table given in Appendix C.

$$WQF = C * i * A$$
 (Equation 4)

Where

WQF = Water Quality Flow Rate in cubic feet per second (cfs) = Rational Method Coefficient of Runoff С

i

= Intensity (in/hr)

= Area draining to the BMP (acres) Α

Alternative post-construction BMPs may include, but are not limited to: vegetated swales, vegetated filter strips, hydrodynamic separators, high-flow media filters, cartridge filters, membrane filters, subsurface flow wetlands, multi-chamber treatment trains, road shoulder media filter drains, wetland channels, rain barrels, green roofs, and rain gardens. The Director may also consider non-structural post-construction approaches.

f. Surface Water Protection. If the project site contains any streams, rivers, lakes, wetlands or other surface waters, certain construction activities at the site may be regulated under the CWA and/or state isolated wetland permit requirements. Sections 404 and 401 of the Act regulate the discharge of dredged or fill material into surface waters and the impacts of such activities on water quality, respectively. Construction activities in surface waters which may be subject to CWA regulation and/or state isolated wetland permit requirements include, but are not limited to: sewer line crossings, grading, backfilling or culverting streams, filling wetlands, road and utility line construction, bridge installation and installation of flow control structures. If the project contains streams, rivers, lakes or wetlands or possible wetlands, the permittee shall contact the appropriate U.S. Army Corps of Engineers District Office. (CAUTION: Any area of seasonally wet hydric soil is a potential wetland - please consult the Soil Survey and list of hydric soils for your County, available at your county's Soil and Water Conservation District. If you have any questions about Section 401 water quality certification, please contact the Ohio Environmental Protection Agency, Section 401 Coordinator.)

U.S. Army Corps of Engineers (Section 404 regulation):

- Huntington, WV District (304) 399-5210 (Muskingum River, Hocking River, Scioto River, Little Miami River, and Great Miami River Basins)
- Buffalo, NY District (716) 879-4330 (Lake Erie Basin)
- Pittsburgh, PA District (412) 395-7155 (Mahoning River Basin)
- Louisville, KY District (502) 315-6686 (Ohio River)

Ohio EPA 401/404 and non-jurisdictional stream/wetland coordinator can be contacted at (614) 644-2001 (all of Ohio)

Concentrated storm water runoff from BMPs to natural wetlands shall be converted to diffuse flow before the runoff enters the wetlands. The flow should be released such that no erosion occurs downslope. Level spreaders may need to be placed in series, particularly on steep sloped sites, to ensure non-erosive velocities. Other structural BMPs may be used between storm water features and natural wetlands, in order to protect the natural hydrology, hydroperiod, and wetland flora. If the applicant proposes to discharge to natural wetlands, a hydrologic analysis shall be performed. The applicant shall attempt to match the pre-development hydroperiods and hydrodynamics that support the wetland. The applicant shall assess whether their construction activity will adversely impact the hydrologic flora and fauna of the wetland. Practices such as vegetative buffers, infiltration basins, conservation of forest cover, and the preservation of intermittent streams, depressions, and drainage corridors may be used to maintain wetland hydrology.

### g. Other controls.

- i. Non-Sediment Pollutant Controls. In accordance with Part II.E. no solid (other than sediment) or liquid waste, including building materials. shall be discharged in storm water runoff. The permittee must implement all necessary BMPs to prevent the discharge of non-sediment pollutants to the drainage system of the site or surface waters of the state or an MS4. Under no circumstance shall wastewater from the washout of concrete trucks, stucco, paint, form release oils, curing compounds, and other construction materials be discharged directly into a drainage channel, storm sewer or surface waters of the state. Also, no pollutants from vehicle fuel, oils, or other vehicle fluids can be discharged to surface waters of the state. No exposure of storm water to waste materials is recommended. The SWP3 must include methods to minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, and sanitary waste to precipitation, storm water runoff, and snow melt. In accordance with Part II.D.3, the SWP3 shall include measures to prevent and respond to chemical spills and leaks. You may also reference the existence of other plans (i.e., Spill Prevention Control and Countermeasure (SPCC) plans, spill control programs, Safety Response Plans, etc.) provided that such plan addresses conditions of this permit condition and a copy of such plan is maintained on site.
- ii. Off-site traffic. Off-site vehicle tracking of sediments and dust generation shall be minimized. In accordance with Part II.D.1, the SWP3 shall include methods to minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. No detergents may be used to wash vehicles. Wash waters shall be treated in a sediment basin or alternative control that provides equivalent treatment prior to discharge.
- iii. **Compliance with other requirements.** The SWP3 shall be consistent with applicable State and/or local waste disposal, sanitary sewer or septic system regulations, including provisions prohibiting waste disposal by

open burning and shall provide for the proper disposal of contaminated soils to the extent these are located within the permitted area.

- iv. Trench and ground water control. In accordance with Part II.C, there shall be no turbid discharges to surface waters of the state resulting from dewatering activities. If trench or ground water contains sediment, it shall pass through a sediment settling pond or other equally effective sediment control device, prior to being discharged from the construction site. Alternatively, sediment may be removed by settling in place or by dewatering into a sump pit, filter bag or comparable practice. Ground water which does not contain sediment or other pollutants is not required to be treated prior to discharge. However, care must be taken when discharging ground water to ensure that it does not become pollutant-laden by traversing over disturbed soils or other pollutant sources.
- v. **Contaminated Sediment.** Where construction activities are to occur on sites with contamination from previous activities, operators shall be aware that concentrations of materials that meet other criteria (is not considered a Hazardous Waste, meeting VAP standards, etc.) may still result in storm water discharges in excess of Ohio Water Quality Standards. Such discharges are not authorized by this permit. Appropriate BMPs include, but are not limited to:
  - The use of berms, trenches, and pits to collect contaminated runoff and prevent discharges;
  - Pumping runoff into a sanitary sewer (with prior approval of the sanitary sewer operator) or into a container for transport to an appropriate treatment/disposal facility; and
  - Covering areas of contamination with tarps or other methods that prevent storm water from coming into contact with the material.

Operators should consult with Ohio EPA Division of Surface Water prior to seeking permit coverage.

- h. <u>Maintenance.</u> All temporary and permanent control practices shall be maintained and repaired as needed to ensure continued performance of their intended function. All sediment control practices must be maintained in a functional condition until all up-slope areas they control are permanently stabilized. The SWP3 shall be designed to minimize maintenance requirements. The applicant shall provide a description of maintenance procedures needed to ensure the continued performance of control practices.
- i. <u>Inspections.</u> The permittee shall assign "qualified inspection personnel" to conduct inspections to ensure that the control practices are functional and to evaluate whether the SWP3 is adequate and properly implemented in accordance with the schedule proposed in Part III.G.1.g of this permit or whether additional control measures are required. At a minimum, procedures in a SWP3 shall provide that all controls on the site are inspected:

- after any storm event greater than one-half inch of rain per 24-hour period by the end of the next calendar day, excluding weekends and holidays unless work is scheduled; and
- once every seven calendar days.

The inspection frequency may be reduced to at least once every month for dormant sites if:

- · the entire site is temporarily stabilized or
- runoff is unlikely due to weather conditions for extended periods of time (e.g., site is covered with snow, ice, or the ground is frozen).

The beginning and ending dates of any reduced inspection frequency shall be documented in the SWP3.

Once a definable area has achieved final stabilization, the area may be marked on the SWP3 and no further inspection requirements shall apply to that portion of the site.

Following each inspection, a checklist must be completed and signed by the qualified inspection personnel representative. At a minimum, the inspection report shall include:

- i. the inspection date;
- ii. names, titles, and qualifications of personnel making the inspection;
- weather information for the period since the last inspection (or since commencement of construction activity if the first inspection) including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each storm event (in inches), and whether any discharges occurred;
- iv. weather information and a description of any discharges occurring at the time of the inspection;
- v. location(s) of discharges of sediment or other pollutants from the site;
- vi. location(s) of BMPs that need to be maintained;
- vii. location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location;
- viii. location(s) where additional BMPs are needed that did not exist at the time of inspection; and
- ix. corrective action required including any changes to the SWP3 necessary and implementation dates.

Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of or the potential for pollutants entering the drainage system. Erosion and sediment control measures identified in the SWP3 shall be observed to ensure that those are operating correctly. Discharge locations shall be inspected to ascertain whether erosion and sediment control measures are effective in preventing significant impacts to the receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site vehicle tracking.

The permittee shall maintain for three years following the submittal of a notice of termination form, a record summarizing the results of the inspection, names(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the SWP3 and a certification as to whether the facility is in compliance with the SWP3 and the permit and identify any incidents of non-compliance. The record and certification shall be signed in accordance with Part V.G. of this permit.

- i. When practices require repair or maintenance. If the inspection reveals that a control practice is in need of repair or maintenance, with the exception of a sediment settling pond, it shall be repaired or maintained within 3 days of the inspection. Sediment settling ponds shall be repaired or maintained within 10 days of the inspection.
- ii. When practices fail to provide their intended function. If the inspection reveals that a control practice fails to perform its intended function and that another, more appropriate control practice is required, the SWP3 shall be amended and the new control practice shall be installed within 10 days of the inspection.
- iii. When practices depicted on the SWP3 are not installed. If the inspection reveals that a control practice has not been implemented in accordance with the schedule contained in Part III.G.1.h of this permit, the control practice shall be implemented within 10 days from the date of the inspection. If the inspection reveals that the planned control practice is not needed, the record shall contain a statement of explanation as to why the control practice is not needed.
- 3. <u>Approved State or local plans.</u> All dischargers regulated under this general permit must comply, except those exempted under state law, with the lawful requirements of municipalities, counties and other local agencies regarding discharges of storm water from construction activities. All erosion and sediment control plans and storm water management plans approved by local officials shall be retained with the SWP3 prepared in accordance with this permit. Applicable requirements for erosion and sediment control and storm water management approved by local officials are, upon submittal of a NOI form, incorporated by reference and enforceable under this permit even if they are not specifically included in an SWP3 required under this permit. When the project is located within the jurisdiction of a regulated municipal separate storm sewer system (MS4), the permittee shall certify that the SWP3 complies with the requirements of the storm water management program of the MS4 operator.
- 4. <u>Exceptions.</u> If specific site conditions prohibit the implementation of any of the erosion and sediment control practices contained in this permit or site-specific conditions are such that implementation of any erosion and sediment control practices contained in this permit will result in no environmental benefit, then the permittee shall provide justification for rejecting each practice based on site conditions. Exceptions from implementing the erosion and sediment control standards contained in this permit will be approved or denied on a case-by-case basis.

The permittee may request approval from Ohio EPA to use alternative methods to satisfy conditions in this permit if the permittee can demonstrate that the alternative methods are sufficient to protect the overall integrity of receiving streams and the watershed. Alternative methods will be approved or denied on a case-by-case basis.

# PART IV. NOTICE OF TERMINATION REQUIREMENTS

## A. Failure to notify.

The terms and conditions of this permit shall remain in effect until a signed Notice of Termination (NOT) form is submitted. Failure to submit an NOT constitutes a violation of this permit and may affect the ability of the permittee to obtain general permit coverage in the future.

### B. When to submit an NOT.

- 1. Permittees wishing to terminate coverage under this permit shall submit an NOT form in accordance with Part V.G. of this permit. Compliance with this permit is required until an NOT form is submitted. The permittee's authorization to discharge under this permit terminates at midnight of the day the NOT form is submitted. Prior to submitting the NOT form, the permittee shall conduct a site inspection in accordance with Part III.G.2.i of this permit and have a maintenance plan in place to ensure all post-construction BMPs will be maintained in perpetuity.
- 2. All permittees shall submit an NOT form within 45 days of completing all permit requirements. Enforcement actions may be taken if a permittee submits an NOT form without meeting one or more of the following conditions:
  - a. Final stabilization (see definition in Part VII) has been achieved on all portions of the site for which the permittee is responsible (including, if applicable, returning agricultural land to its pre-construction agricultural use);
  - b. Another operator(s) has assumed control over all areas of the site that have not been finally stabilized;
  - c. A maintenance plan is in place to ensure all post construction BMPs are adequately maintained in the long-term;
  - d. For non-residential developments, all elements of the storm water pollution prevention plan have been completed, the disturbed soil at the identified facility have been stabilized and temporary erosion and sediment control measures have been removed at the appropriate time, or all storm water discharges associated with construction activity from the identified facility that are authorized by the above referenced NPDES general permit have otherwise been eliminated. (i)For residential developments only, temporary stabilization has been completed and the lot, which includes a home, has been transferred to the homeowner; (ii) final stabilization has been completed and the lot, which does not include a home, has been transferred to the property owner; (iii) no stabilization has been implemented on a lot, which includes a home, and the lot has been transferred to the homeowner; or

e. An exception has been granted under Part III.G.4.

# C. How to submit an NOT.

To terminate permit coverage, the permitee shall submit a complete and accurate Notice of Termination (NOT) form using Ohio EPA's electronic application form which is available through the Ohio EPA eBusiness Center at: https://ebiz.epa.ohio.gov/. Submission through the Ohio EPA eBusiness Center will require establishing an Ohio EPA eBusiness Center account and obtaining a unique Personal Identification Number (PIN) for final submission of the NOT. Existing eBusiness Center account holders can access the NOT form through their existing account and submit using their existing PIN. Please see the following link for guidance: http://epa.ohio.gov/dsw/ebs.aspx#170669803-streams-guidance. Alternatively, if you are unable to access the NOT form through the agency eBusiness Center due to a demonstrated hardship, the NOT may be submitted on paper NOT forms provided by Ohio EPA. NOT information shall be typed on the form. Please contact Ohio EPA, Division of Surface Water at (614) 644-2001 if you wish to receive a paper NOT form.

# PART V. STANDARD PERMIT CONDITIONS.

# A. Duty to comply.

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of ORC Chapter 6111 and is grounds for enforcement action.

Ohio law imposes penalties and fines for persons who knowingly make false statements or knowingly swear or affirm the truth of a false statement previously made.

## B. Continuation of an expired general permit.

An expired general permit continues in force and effect until a new general permit is issued.

## C. Need to halt or reduce activity not a defense.

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

## D. Duty to mitigate.

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

## E. Duty to provide information.

The permittee shall furnish to the director, within 10 days of written request, any information which the director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee

shall also furnish to the director upon request copies of records required to be kept by this permit.

## F. Other information.

When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the NOI, SWP3, NOT or in any other report to the director, he or she shall promptly submit such facts or information.

## G. Signatory requirements.

All NOIs, NOTs, SWP3s, reports, certifications or information either submitted to the director or that this permit requires to be maintained by the permittee, shall be signed.

- 1. These items shall be signed as follows:
  - a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
    - i. A president, secretary, treasurer or vice-president of the corporation in charge of a principal business function or any other person who performs similar policy or decision-making functions for the corporation; or
    - ii. The manager of one or more manufacturing, production or operating facilities, provided, the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
  - b. For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or
  - c. For a municipality, State, Federal or other public agency: By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (1) the chief executive officer of the agency or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA).
- 2. All reports required by the permits and other information requested by the director shall be signed by a person described in Part V.G.1 of this permit or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- a. The authorization is made in writing by a person described in Part V.G.1 of this permit and submitted to the director;
- b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator of a well or well field, superintendent, position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
- c. The written authorization is submitted to the director.
- 3. Changes to authorization. If an authorization under Part V.G.2 of this permit is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part V.G.2 of this permit must be submitted to the director prior to or together with any reports, information or applications to be signed by an authorized representative.

# H. Certification.

Any person signing documents under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

# I. Oil and hazardous substance liability.

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under section 311 of the CWA or 40 CFR Part 112. 40 CFR Part 112 establishes procedures, methods and equipment and other requirements for equipment to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable surface waters of the state or adjoining shorelines.

# J. Property rights.

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

# K. Severability.

The provisions of this permit are severable and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

# L. Transfers.

Ohio NPDES general permit coverage is transferable. Ohio EPA must be notified in writing sixty days prior to any proposed transfer of coverage under an Ohio NPDES general permit. The transferee must inform Ohio EPA it will assume the responsibilities of the original permittee transferor.

## M. Environmental laws.

No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

## N. Proper operation and maintenance.

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of SWP3s. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

## O. Inspection and entry.

The permittee shall allow the director or an authorized representative of Ohio EPA, upon the presentation of credentials and other documents as may be required by law, to:

- 1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
- 2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit;
- 3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment); and
- 4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

# P. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

# Q. Permit Actions

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

## R. Bypass

The provisions of 40 CFR Section 122.41(m), relating to "Bypass," are specifically incorporated herein by reference in their entirety. For definition of "Bypass," see Part VII.C.

# S. Upset

The provisions of 40 CFR Section 122.41(n), relating to "Upset," are specifically incorporated herein by reference in their entirety. For definition of "Upset," see Part VII.GG.

# T. Monitoring and Records

The provisions of 40 CFR Section 122.41(j), relating to "Monitoring and Records," are specifically incorporated herein by reference in their entirety.

# U. Reporting Requirements

The provisions of 40 CFR Section 122.41(I), relating to "Reporting Requirements," are specifically incorporated herein by reference in their entirety.

# PART VI. REOPENER CLAUSE

If there is evidence indicating potential or realized impacts on water quality due to any storm water discharge associated with construction activity covered by this permit, the permittee of such discharge may be required to obtain coverage under an individual permit or an alternative general permit in accordance with Part I.C of this permit or the permit may be modified to include different limitations and/or requirements.

Permit modification or revocation will be conducted according to ORC Chapter 6111.

# PART VII. DEFINITIONS

- A. <u>"Act"</u> means Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483, Pub. L. 97-117 and Pub. L. 100-4, 33 U.S.C. 1251 et. seq.
- B. <u>"Bankfull channel"</u> means a channel flowing at channel capacity and conveying the bankfull discharge. Delineated by the highest water level that has been maintained for a sufficient period of time to leave evidence on the landscape, such as the point where the natural vegetation changes from predominantly aquatic to predominantly terrestrial or

the point at which the clearly scoured substrate of the stream ends and terrestrial vegetation begins.

- C. <u>"Bankfull discharge"</u> means the streamflow that fills the main channel and just begins to spill onto the floodplain; it is the discharge most effective at moving sediment and forming the channel.
- D. <u>"Best management practices (BMPs)"</u> means schedules of activities, prohibitions of practices, maintenance procedures and other management practices (both structural and non-structural) to prevent or reduce the pollution of surface waters of the state. BMP's also include treatment requirements, operating procedures and practices to control plant and/or construction site runoff, spillage or leaks, sludge or waste disposal or drainage from raw material storage.
- E. <u>"Bypass"</u> means the intentional diversion of waste streams from any portion of a treatment facility.
- F. <u>"Channelized stream"</u> means the definition set forth in Section 6111.01 (M) of the ORC.
- G. <u>"Commencement of construction"</u> means the initial disturbance of soils associated with clearing, grubbing, grading, placement of fill, or excavating activities or other construction activities.
- H. <u>"Concentrated storm water runoff</u>" means any storm water runoff which flows through a drainage pipe, ditch, diversion or other discrete conveyance channel.
- I. <u>"Director"</u> means the director of the Ohio Environmental Protection Agency.
- J. <u>"Discharge"</u> means the addition of any pollutant to the surface waters of the state from a point source.
- K. <u>"Disturbance"</u> means any clearing, grading, excavating, filling, or other alteration of land surface where natural or man-made cover is destroyed in a manner that exposes the underlying soils.
- L. <u>"Drainage watershed"</u> means for purposes of this permit the total contributing drainage area to a BMP, i.e., the "watershed" directed to the practice. This would also include any off-site drainage.
- M. <u>"Final stabilization"</u> means that either:
  - 1. All soil disturbing activities at the site are complete and a uniform perennial vegetative cover (e.g., evenly distributed, without large bare areas) with a density of at least 70 percent cover for the area has been established on all unpaved areas and areas not covered by permanent structures or equivalent stabilization measures (such as the use of mulches, rip-rap, gabions or geotextiles) have been employed. In addition, all temporary erosion and sediment control practices are removed and disposed of and all trapped sediment is permanently stabilized to prevent further erosion; or

- 2. For individual lots in residential construction by either:
  - a. The homebuilder completing final stabilization as specified above or
  - b. The homebuilder establishing temporary stabilization including perimeter controls for an individual lot prior to occupation of the home by the homeowner and informing the homeowner of the need for and benefits of, final stabilization. (Homeowners typically have an incentive to put in the landscaping functionally equivalent to final stabilization as quick as possible to keep mud out of their homes and off sidewalks and driveways.); or
- 3. For construction projects on land used for agricultural purposes (e.g., pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its pre-construction agricultural use. Areas disturbed that were previously used for agricultural activities, such as buffer strips immediately adjacent to surface waters of the state and which are not being returned to their pre-construction agricultural use, must meet the final stabilization criteria in (1) or (2) above.
- N. <u>"General contractor"</u> for the purposes of this permit, the primary individual or company solely accountable to perform a contract. The general contractor typically supervises activities, coordinates the use of subcontractors, and is authorized to direct workers at a site to carry out activities required by the permit.
- O. <u>"Individual Lot NOI"</u> means a Notice of Intent for an individual lot to be covered by this permit (see Part I of this permit).
- P. <u>"Larger common plan of development or sale"</u>- means a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan.
- Q. <u>"MS4"</u> means municipal separate storm sewer system which means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains) that are:
  - Owned or operated by the federal government, state, municipality, township, county, district(s) or other public body (created by or pursuant to state or federal law) including special district under state law such as a sewer district, flood control district or drainage districts or similar entity or a designated and approved management agency under section 208 of the act that discharges into surface waters of the state; and
  - 2. Designed or used for collecting or conveying solely storm water,
  - 3. Which is not a combined sewer and
  - 4. Which is not a part of a publicly owned treatment works.
- R. <u>"National Pollutant Discharge Elimination System (NPDES)</u>" means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits and enforcing pretreatment requirements, under sections 307, 402, 318 and 405 of the CWA. The term includes an "approved program."

- S. <u>"Natural channel design"</u> means an engineering technique that uses knowledge of the natural process of a stream to create a stable stream that will maintain its form and function over time.
- T. <u>"NOI</u>" means notice of intent to be covered by this permit.
- U. <u>"NOT"</u> means notice of termination.
- V. <u>"Operator"</u> means any party associated with a construction project that meets either of the following two criteria:
  - 1. The party has day-to-day operational control all activities at a project which are necessary to ensure compliance with a SWP3 for the site and all permit conditions including the ability to authorize modifications to the SWP3, construction plans and site specification to ensure compliance with the General Permit, or
  - 2. Property owner meets the definition of operator should the party which has day to day operational control require additional authorization from the owner for modifications to the SWP3, construction plans, and/or site specification to ensure compliance with the permit or refuses to accept all responsibilities as listed above (Part VII.V.1).

Subcontractors generally are not considered operators for the purposes of this permit. As set forth in Part I.F.1, there can be more than one operator at a site and under these circumstances, the operators shall be co-permittees.

- W. <u>"Ordinary high water mark"</u> means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.
- X. <u>"Owner or operator"</u> means the owner or operator of any "facility or activity" subject to regulation under the NPDES program.
- Y. <u>"Permanent stabilization"</u> means the establishment of permanent vegetation, decorative landscape mulching, matting, sod, rip rap and landscaping techniques to provide permanent erosion control on areas where construction operations are complete or where no further disturbance is expected for at least one year.
- Z. <u>"Percent imperviousness"</u> means the impervious area created divided by the total area of the project site.
- AA. <u>"Point source"</u> means any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or the floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

- BB. <u>"Qualified inspection personnel"</u> means a person knowledgeable in the principles and practice of erosion and sediment controls, who possesses the skills to assess all conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activity.
- CC. <u>"Rainwater and Land Development"</u> is a manual describing construction and postconstruction best management practices and associated specifications. A copy of the manual may be obtained by contacting the Ohio Department of Natural Resources, Division of Soil & Water Conservation.
- DD. <u>"Riparian area"</u> means the transition area between flowing water and terrestrial (land) ecosystems composed of trees, shrubs and surrounding vegetation which serve to stabilize erodible soil, improve both surface and ground water quality, increase stream shading and enhance wildlife habitat.
- EE. <u>"Runoff coefficient"</u> means the fraction of total rainfall that will appear at the conveyance as runoff.
- FF. <u>"Sediment settling pond"</u> means a sediment trap, sediment basin or permanent basin that has been temporarily modified for sediment control, as described in the latest edition of the Rainwater and Land Development manual.
- GG. <u>"State isolated wetland permit requirements"</u> means the requirements set forth in Sections 6111.02 through 6111.029 of the ORC.
- HH. <u>"Storm water</u>" means storm water runoff, snow melt and surface runoff and drainage.
- II. <u>"Steep slopes"</u> means slopes that are 15 percent or greater in grade. Where a local government or industry technical manual has defined what is to be considered a "steep slope," this permit's definition automatically adopts that definition.
- JJ. <u>"Stream edge"</u> means the ordinary high water mark.
- KK. <u>"Subcontractor</u>" for the purposes of this permit, an individual or company that takes a portion of a contract from the general contractor or from another subcontractor.
- LL. <u>"Surface waters of the state" or "water bodies"</u> means all streams, lakes, reservoirs, ponds, marshes, wetlands or other waterways which are situated wholly or partially within the boundaries of the state, except those private waters which do not combine or effect a junction with natural surface or underground waters. Waters defined as sewerage systems, treatment works or disposal systems in Section 6111.01 of the ORC are not included.
- MM. <u>"SWP3"</u> means storm water pollution prevention plan.
- NN. <u>"Upset"</u> means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment

facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

- OO. <u>"Temporary stabilization"</u> means the establishment of temporary vegetation, mulching, geotextiles, sod, preservation of existing vegetation and other techniques capable of quickly establishing cover over disturbed areas to provide erosion control between construction operations.
- PP. <u>"Water Quality Volume (WQ<sub>v</sub>)"</u> means the volume of storm water runoff which must be captured and treated prior to discharge from the developed site after construction is complete.

### Appendix A Big Darby Creek Watershed

### CONTENTS OF THIS APPENDIX

- A.1 Permit Area
- A.2 TMDL Conditions
- A.3 Sediment Settling Ponds and Sampling
- A.4 Riparian Setback Requirements
- A.5 Riparian Setback Mitigation
- A.6 Groundwater Recharge Requirements
- A.7 Groundwater Recharge mitigation

Attachment A-A: Big Darby Creek Watershed Map

Attachment A-B: Stream Assessment and Restoration

- A.1 Permit Area. This appendix to Permit OHC00005 applies to the entire Big Darby Creek Watershed located within the State of Ohio. Please see Attachment A for permit area boundaries.
- **A.2** This general permit requires control measures/BMPs for construction sites that reflect recommendations set forth in the U.S. EPA approved Big Darby Creek TMDL.
- **A.3** Sediment settling ponds additional conditions. The sediment settling pond shall be sized to provide a minimum sediment storage volume of 134 cubic yards of effective sediment storage per acre of drainage and maintain a target discharge performance standard of 45 mg/I Total Suspended Solids (TSS) up to a 0.75-inch rainfall event within a 24-hour period. Unless infeasible, sediment settling ponds must be dewatered at the pond surface using a skimmer or equivalent device. The depth of the sediment settling pond must be less than or equal to five feet. Sediment must be removed from the sediment settling pond when the design capacity has been reduced by 40 percent (This is typically reached when sediment occupies one-half of the basin depth).

<u>Silt Fence and Diversions</u>. For sites five or more acres in size, the use of sediment barriers as a primary sediment control is prohibited. Centralized sediment basins shall be used for sites 5 or more acres in size. Diversions shall direct all storm water runoff from the disturbed areas to the impoundment intended for sediment control. The sediment basins and associated diversions shall be implemented prior to the major earth disturbing activity.

The permittee shall sample in accordance with sampling procedures outlined in 40 CFR 136. Sampling shall occur as follows:

- i. Occur at the outfall of each sediment settling pond associated with the site. Each associated outfall shall be identified by a three-digit number (001, 002, etc.);
- ii. The applicable rainfall event for sampling to occur shall be a rainfall event of 0.25inch to a 0.75-inch rainfall event to occur within a 24-hour period. Grab sampling shall be initiated at a site within 14 days, or the first applicable rainfall event

thereafter, once upslope disturbance of each sampling location is initiated and shall continue on a quarterly basis. Quarterly periods shall be represented as January - March, April - June, July - September and October - December. Sampling results shall be retained on site and available for inspection.

If any sample is greater than the performance standard of 45 mg/I TSS, the permittee shall modify the SWP3 and install/implement new control practice(s) within 10 days to ensure the TSS performance standard is maintained. Within 3 days of improvement(s), or the first applicable rainfall event thereafter, the permittee shall resample to ensure SWP3 modifications maintain the TSS performance standard target.

For each sample taken, the permittee shall record the following information:

- the outfall and date of sampling;
- the person(s) who performed the sampling;
- the date the analyses were performed on those samples;
- the person(s) who performed the analyses;
- the analytical techniques or methods used; and
- the results of all analyses.

Both quarterly and sampling results following a discharge target exceedance shall be retained on site and available for inspection.

### A.4 Riparian Setback Requirements.

The SWP3 shall clearly delineate the boundary of required stream setback distances. No construction activity shall occur, without appropriate mitigation, within the delineated setback boundary except activities associated with restoration or recovery of natural floodplain and channel form characteristics as described in Attachment B, storm water conveyances from permanent treatment practices and approvable utility crossings. Such conveyances must be designed to minimize the width of disturbance. If intrusion within the delineated setback boundary is necessary to accomplish the purposes of a project, then mitigation shall be required in accordance with Appendix A.5 of this permit. Streams requiring protection under this section are defined as perennial, intermittent or ephemeral streams with a defined bed, bank or channel. National Resources Conservation Service (NRCS) soil survey maps should be used as one reference and the presence of a stream requiring protection should also be confirmed in the field. Any required setback distances shall be clearly displayed in the field prior to any construction related activity.

Riparian setbacks distance shall be delineated based upon one of the following two methods:

- i. The setback distance shall be sized as the greater of the following:
  - 1. The regulatory 100-year floodplain based on FEMA mapping;
  - 2. A minimum of 100 feet from the top of the streambank on each side; or

3. A distance calculated using the following equation:

where: DA = drainage area (mi<sup>2</sup>) W = total width of riparian setback (ft)

W shall be centered over the meander pattern of the stream such that a line representing the setback width would evenly intersect equal elevation lines on either side of the stream.

If the DA remains relatively constant throughout the stretch of interest, then the DA of the downstream edge of the stretch should be used. Where there is a significant increase in the DA from the upstream edge to The downstream edge of the area of interest, the setback width shall increase accordingly.

ii. <u>Stream Restoration with 100 feet (each side) Riparian Setback</u>. Each stream segment within the proposed site boundaries can be assessed in accordance with Attachment B, Part 1. In the event the stream segment is classified as a "Previously Modified Low Gradient Headwater Stream", the permittee has the option to restore the stream segment in accordance with Attachment B and include a 100-foot water quality setback distance from the top of the streambank on each side. In the event the stream segment exceeds the minimum criteria in Attachment B to be classified as a "Previously Modified Low Gradient Headwater Stream," this Part III.G.2.b.ii may be considered on a case-by-case basis.

No structural sediment controls (e.g., the installation of sediment barriers or a sediment settling pond) or structural post-construction controls shall be used in a surface water of the State or the delineated setback corridor.

Previously developed projects (as defined in Part III.G.2.e.) located within the delineated setback boundary are exempt from Riparian Setback Mitigation (A.5) provided the proposed project does not further intrude into the delineated setback boundary.

Linear transportation projects which are caused solely by correcting safety related issues, mandates of modern design requirements and/or resulting from other mitigation activities are exempt from Riparian Setback Mitigation (Part III.G.2.c. A.5) if less than one acre of total new right-of-way is associated with the project.

### A.5 Riparian Setback Mitigation.

The mitigation required for intrusion into the riparian setback shall be determined by the horizontal distance the intrusion is from the stream. Up to three zones will be used in determining the required mitigation. Zone 1 extends from 0 to 25 feet from the stream edge. Zone 2 extends from 25 to 100 feet from the stream edge, and Zone 3 extends from 100 feet to the outer edge of the setback corridor. Intrusion into these zones will require the following mitigation within the same Watershed Assessment Unit (12-digit HUC scale):

- i. Four times the total area disturbed in the stream and within Zone 1 of the site being developed shall be mitigated within Zone 1 of the mitigation location.
- ii. Three times the area disturbed within Zone 2 of the site being developed shall be mitigated within Zones 1 and/or 2 of the mitigation location.
- iii. Two times the area disturbed within Zone 3 of the site being developed shall be mitigated within any zone of the mitigation location.

In lieu of mitigation ratios found within in this section, linear transportation projects which result in total new right-of-way greater than one acre and less than two acres, which are caused solely by correcting safety related issues, mandates of modern design requirements and/or resulting from other mitigation activities, shall provide Riparian Setback Mitigation at a ratio of 1.5 to 1.

All mitigation shall, at a minimum, include conserved or restored setback zone and should be designed to maximize the ecological function of the mitigation. Including mitigation at the stream edge along with associated setback areas is one way to maximize ecological function. Mitigation shall be protected in perpetuity by binding conservation easements or environmental covenants which must be recorded within 6 months of receiving permit authorization. Granting of binding conservation easements or environmental covenants of binding conservation easements or environmental covenants protected in perpetuity for land outside of disturbed area but within a required riparian setback counts towards required mitigation.

Mitigation may also be satisfied by approved pooled mitigation areas and in-lieu fee sponsored mitigation areas. Mitigation resulting from State or Federal environmental regulations may be adjusted in recognition of these requirements.

#### A.6 Groundwater Recharge Requirements.

The SWP3 shall ensure that the overall site post-development groundwater recharge equals or exceeds the pre-development groundwater recharge. The SWP3 shall describe the conservation development strategies, BMPs and other practices deemed necessary by the permittee to maintain or improve pre-development rates of groundwater recharge. Pre-development and post-development groundwater recharge shall be calculated using the following equation:

i. 
$$Vre_x = A_x * Dre_x / 12$$
 (Equation 2, Appendix A)

where:

Х	=	Represents a land use and hydrologic soil group pair
Vre <sub>x</sub>	=	Volume of total annual recharge from land use-soil group X
		(in acre-ft)
Drex	=	Depth of total annual recharge associated with land use-
		soil group X from Tables 1 or 2 (in inches)
A <sub>x</sub>	=	Area of land use-soil group X (in acres)

Table 1 values should be used for land where the underlying geology indicates a potential for downward migration of groundwater. Table 1 values represent the combined total groundwater recharge potential including groundwater contribution to stream baseflow and to the underlying bedrock aquifer. The potential for downward migration can be determined from a comparison of the potentiometric maps for the glacial and bedrock aquifers. Use Table 2 when this potential is unlikely to exist. Detailed potentiometric maps for the Franklin county portion of the Darby watershed, and coarse potentiometric maps for the Darby watershed outside of Franklin County and hydrologic soil group data are available at:

http://www.epa.state.oh.us/dsw/permits/GP\_ConstructionSiteStormWater\_Darby.aspx.

	Density	% Impervious	Recharge (in	Recharge (inches) by Hydrologic Soil Group2			
Land Use	(DU <sup>1</sup> /acre)		Α	В	С	D	
Woods / Forest	-	-	17.0	16.6	15.6	14.6	
Brush	-	-	17.0	16.6	15.6	14.6	
Meadow	-	-	17.0	16.5	15.4	14.4	
Managed Wood	-	-	16.9	16.0	14.7	13.4	
Pasture	-	-	16.5	15.9	14.4	13.0	
Row Crop	-	-	15.8	14.2	11.9	8.1	
Urban Grasses	-	-	15.7	15.7	14.2	12.7	
Low Density Residential	0.5	12%	15.7	15.7	14.2	12.7	
Low Density Residential	1	20%	14.8	14.8	13.7	12.2	
Medium Density Residential	2	25%	11.5	11.5	11.5	11.5	
Medium Density Residential	3	30%	11.2	11.2	11.2	11.2	
Medium Density Residential	4	38%	9.6	9.6	9.6	9.6	
High Density Residential	≥5	65%	7.3	7.3	7.3	7.3	
Commercial & Road Right-of-Way <sup>4</sup>	-	90%	4.3	4.3	4.3	4.3	

Table A-1 (Appendix A) Annual Average Expected Total Groundwater Recharge<sup>3</sup>

<sup>1</sup> DU = Dwelling Units

<sup>2</sup> Hydrologic soil group designations of A/D, B/D, and C/D should be considered as D soils for this application

<sup>3</sup> These values apply when recharge of the aquifer is expected; recharge to the bedrock aquifer can be expected when the potentiometric head of the glacial aquifer is greater than the bedrock aquifer.
 <sup>4</sup> The 4.3 infiltration value may only be used for an area as a whole (includes impervious and pervious areas) which includes a minimum of 10 percent pervious area. If all land uses (pervious and impervious)

are tabulated separately, then impervious areas have 0 inches of recharge.

	Density	% Impervious	Recharge (inches) by Hydrologic Soil Group2			
Land Use	(DU <sup>1</sup> /acre)		Α	В	С	D
Woods / Forest	-	-	11.8	11.4	10.7	9.9
Brush	-	-	11.7	11.4	10.7	99
Meadow	-	-	11.8	11.3	10.6	9.8
Managed Wood	-	-	11.7	11.0	10.0	9.1
Pasture	-	-	11.3	11.0	9.9	8.9
Row Crop	-	-	11.1	10.1	9.0	6.2
Urban Grasses	-	-	11.2	11.2	10.3	9.3
Low Density Residential	0.5	12%	11.2	11.2	10.3	9.3
Low Density Residential	1	20%	9.5	9.5	9.0	8.6
Medium Density Residential	2	25%	7.8	7.8	7.8	7.8
Medium Density Residential	3	30%	7.6	7.6	7.6	7.6
Medium Density Residential	4	38%	6.5	6.5	6.5	6.5
High Density Residential	≥5	65%	5.0	5.0	5.0	5.0
Commercial & Road Right-of-Way <sup>4</sup>	-	90%	2.9	2.9	2.9	2.9

#### Table A-2 (Appendix A) Annual Average Expected Baseflow Recharge<sup>3</sup>

<sup>1</sup> DU = Dwelling Units

<sup>2</sup> Hydrologic soil group designations of A/D, B/D, and C/D should be considered as D soils for this application

<sup>3</sup> These values apply when no recharge of the aquifer is expected.

<sup>4</sup> The 2.9 infiltration value may only be used for an area as a whole (includes impervious and pervious areas) which includes a minimum of 10 percent pervious area. If all land uses (pervious and impervious) are tabulated separately, then impervious areas have 0 inches of recharge.

Land Use	Definition
Woods / Forest	Areas dominated by trees. Woods are protected from grazing and litter and brush adequately cover the soil.
Brush	Brush, weeds, grass mixture where brush is the major element and more than 75% of the ground is covered.
Meadow	Continuous grass, protected from grazing, generally mowed for hay.
Managed Wood	Orchards, tree farms, and other areas planted or maintained for the production of fruits, nuts, berries, or ornamentals.
Pasture	Pasture, grassland, or range where at least 50% of the ground is covered and the area is not heavily grazed.
Row Crop	Areas used to produce crops, such as corn, soybeans, vegetables, tobacco, and cotton.
Urban Grasses	Vegetation (primarily grasses) planted in developed settings for recreation, erosion control, or aesthetic purposes. Examples include parks, lawns, golf courses, airport grasses, and industrial site grasses.
Residential	Areas with a mixture of constructed materials and vegetation; the average % imperviousness and number of dwelling units per acre to determine the appropriate density is specified.
Commercial	Includes infrastructure (e.g. roads, railroads, etc.) and all highly developed areas not classified as High Intensity Residential.

#### Table A-3 (Appendix A) Land Use Definitions

ii. The pre-development ground water recharge volume shall be calculated by determining the area of each land use-soil type pairing on the site of interest. The recharge associated with each such pairing multiplied by the area will give the pre-development volume of total groundwater recharge. The same shall be done for the post-development land use-soil type pairings.

Any activity that is expected to produce storm water runoff with elevated concentrations of carcinogens, hydrocarbons, metals, or toxics is prohibited from infiltrating untreated storm water from the area affected by the activity. The groundwater recharge mitigation requirement for areas affected by such activities must be met by methods which do not present a risk of groundwater contamination. The following land uses and activities are typically deemed storm water hotspots:

Vehicle salvage yards and recycling facilities

- vehicle service and maintenance facilities (i.e. truck stops, gas stations)
- fleet storage areas (i.e. bus, truck)
- industrial sites subject to industrial storm water permitting requirements
- bulk terminals
- marinas
- facilities that generate or store hazardous materials
- other land uses and activities as designated by individual review

The following land uses and activities are not normally considered hotspots:

- residential streets and rural highways
- residential development
- institutional development
- commercial and office developments
- non-industrial rooftops
- pervious areas, except golf courses and nurseries

The applicant may use structural BMPs within drinking water source protection areas for community public water systems only to the extent that the structural BMP(s) does not cause contaminants in the recharge waters to impact the ground water quality at levels that would cause an exceedance of the drinking water Maximum Contaminant Levels (OAC Section 3745-81 and 3745-82). To obtain a map of drinking water source protection areas for community public water systems contact Ohio EPA's Division of Drinking and Ground Waters at (614) 644-2752.

Linear transportation projects which are caused solely by correcting safety related issues, mandates of modern design requirements and/or resulting from other mitigation activities are exempt from Groundwater Recharge Mitigation (Part III.G.2.e) if less than one acre of total new right-of-way is associated with the project.

Protection of open space (infiltration areas) shall be by binding conservation easements that identify a third-party management agency, such as a homeowners' association/condominium association, political jurisdiction or thirdparty land trust.

### A.7 Groundwater Recharge Mitigation.

If the post-development recharge volume is less than the pre-development recharge volume, then mitigation will be required. Two options are available for most applications:

i. The preferred method is to convert additional land to land use with higher recharge potential. The difference in groundwater recharge between the existing and converted land use recharge is the amount which can be used as recharge credit. Off-site Groundwater Recharge Mitigation shall occur within the same Watershed Assessment Unit (12-digit HUC scale) as the permitted site and preferably up-gradient and within a 2-mile radius.

Mitigation shall be protected in perpetuity by binding conservation easements or environmental covenants which must be recorded within 6 months of receiving permit authorization. Granting of binding conservation easements or environmental covenants protected in perpetuity for land outside of the disturbed area, but within a required riparian setback counts towards required mitigation.

Mitigation may also be satisfied by approved pooled mitigation areas and in-lieu fee sponsored mitigation areas.

ii. On-site structural and non-structural practices may also be used to achieve groundwater mitigation requirements by retaining and infiltrating on-site a minimum volume of storm water runoff based on the area and hydrologic soil grouping of disturbed soils. If these infiltrating practices are incorporated upstream of the water quality volume treatment practice, the volume of groundwater being infiltrated may be subtracted from the water quality volume for purpose of meeting post-construction requirements. The on-site retention requirement is determined by the following formula:

 $V_{retention} = A_{HSG-A}*0.90 \text{ in } + A_{HSG-B}*0.75 \text{ in } + A_{HSG-C}*0.50 \text{ in } + A_{HSG-D}*0.25 \text{ in}$ (Equation 3, Appendix A)

Where,

 $V_{\text{retention}}$  = Volume of runoff retained onsite using an approved infiltration practice  $A_{\text{HSG-x}}$  = area of each hydrologic soil group within the disturbed area

Table A-4: Hydrologic Soil Groups and On-site Retention Depth per Acre					
Hydrologic Soil Group	HSG A	HSG B	HSG C & D	HSG D	
Retention Depth (inches)	0.90	0.75	0.50	0.25	

Table A-4: Hydrologic Soil Groups and On-site Retention Depth per Acre

Retention volume (V<sub>retention</sub>) provided by selected practices shall be determined using the runoff reduction method criteria as outlined in Part III.G.2.e, Ohio EPA's Runoff Reduction spreadsheet and supporting documentation in the Rainwater and Land Development manual. Hydrologic soil group (HSG) areas are to be determined by using the current version of SURRGO or Web Soil Survey soils information.



Appendix A Attachment A: Big Darby Creek Watershed

A more detailed map can be viewed at: http://www.epa.state.oh.us/dsw/permits/GP\_ConstructionSiteStormWater\_Darby.aspx

## Appendix A Attachment B

### Part 1 Stream Assessment

This assessment will determine if a stream is considered a previously channelized, low-gradient headwater stream (a drainage ditch) which would be applicable for stream restoration in lieu of protecting a setback as per Appendix A. A.4.i and ii.

In the event the assessment of the stream, meets all the criteria listed below, restoration (provided 401/404 permits are authorized) as depicted in Part 2 of this attachment, may be a means of reducing the setback distance required by A.4.i. (Appendix A).

Previously Channelized Low-Gradient Headwater Streams (drainage ditches) shall for the purposes of this permit be defined as having all of the following characteristics:

- Less than 10 square miles of drainage area
- Low gradient and low stream power such that despite their straightened and entrenched condition incision (down-cutting) is not evident
- Entrenched, entrenchment ratio < 2.2
- Straight, sinuosity of the bankfull channel < 1.02

# Part 2 Restoration

Restoration shall be accomplished by any natural channel design approach that will lead to a selfmaintaining reach able to provide both local habitat and watershed services (e.g. self-purification and valley floodwater storage).

- a. Construction of a floodplain, channel and habitat via natural channel design
- b. Floodplain excavation necessary to promote interaction between stream and floodplain
- c. Include a water quality setback of 100 feet from top of the streambank on each side.

The primary target regardless of design approach shall be the frequently flooded width, which shall be maximized, at 10 times the channel's self-forming width. Five times the self-forming channel width may still be acceptable particularly on portions of the site if greater widths are achieved elsewhere.

## Appendix B Olentangy River Watershed

### CONTENTS OF THIS APPENDIX

- B.1 Permit Area
- B.2 TMDL Conditions
- B.3 Riparian Setback Requirements
- B.4 Riparian Setback Mitigation

Attachment A: Area of Applicability for the Olentangy Watershed (Map)

Attachment B: Stream Assessment and Restoration

### B.1 Permit Area.

This appendix to Permit OHC00005 applies to specific portions of the Olentangy River Watershed located within the State of Ohio. The permit area includes the following 12-digit Hydrologic Unit Codes (HUC-12) within the Olentangy River Watershed:

#### 12-Digit Hydrologic Unit Codes

12-Digit Hydrologic Unit Codes (HUC)	Narrative Description of Sub-Watershed
05060001 09 01	Shaw Creek
05060001 09 02	Headwaters Whetstone Creek
05060001 09 03	Claypool Run-Whetstone Creek
05060001 10 07	Delaware Run-Olentangy River
05060001 11 01	Deep Run-Olentangy River
05060001 11 02 (Only portion as depicted in	Rush Run-Olentangy River
Attachment A)	

Please see Attachment A (Appendix B) for permit area boundaries. An electronic version of Attachment A can be viewed at

#### http://epa.ohio.gov/dsw/permits/GP\_ConstructionSiteStormWater\_Olentangy.aspx

**B.2** This general permit requires control measures/BMPs for construction sites that reflect recommendations set forth in the U.S. EPA approved Olentangy TMDL.

## **B.3** Riparian Setback Requirements.

The permittee shall comply with the riparian setback requirements of this permit or alternative riparian setback requirements established by a regulated MS4 and approved by Ohio EPA. The SWP3 shall clearly delineate the boundary of required stream setback distances. The stream setback shall consist of a streamside buffer and an outer buffer. No construction activity shall occur, without appropriate mitigation, within the streamside buffer except activities associated with storm water conveyances from permanent treatment practices, approvable utility crossings and restoration or recovery of floodplain and channel form characteristics as described in Attachment B. Storm water conveyances must be designed to minimize the width of disturbance. Construction activities requiring mitigation for intrusions within the outer buffer for the Olentangy River mainstem and perennial streams are described in Appendix B.4

If intrusion within the delineated setback boundary is necessary to accomplish the purposes of a project, then mitigation shall be required in accordance with Appendix B.3. of this permit. Streams requiring protection under this section have a defined bed and bank or channel and are defined as follows:

- The Olentangy River mainstem;
- Perennial streams have continuous flow on either the surface of the stream bed or under the surface of the stream bed;
- Intermittent streams flow for extended periods of time seasonally of a typical climate year; and
- Ephemeral streams are normally dry and only flow during and after precipitation runoff (episodic flow).

National Resources Conservation Service (NRCS) soil survey maps should be used as one reference and the presence of a stream requiring protection should also be confirmed in the field. Any required setback distances shall be clearly displayed in the field prior to any construction related activity.

Riparian setbacks shall be delineated based upon one of the following two methods:

i. The required setback distances shall vary with stream type as follows:

a. The setback distances associated with the mainstem of the Olentangy River shall consist of:

- (1) A streamside buffer width of 100 feet as measured horizontally from the ordinary high water mark per side; and
- (2) An outer buffer width sized to the regulatory 100-year floodplain based on FEMA mapping. No impervious surfaces shall be constructed without appropriate mitigation and moderate to substantial fill activities with no impervious surface may require appropriate mitigation pending an individual approval by Ohio EPA.

b.The setback distance associated with perennial streams, other than the Olentangy mainstem, shall consist of:

- (1) A streamside buffer width of 80 feet per side measured horizontally from the ordinary high water mark; and
- (2) An outer buffer width sized to the regulatory 100-year floodplain based on FEMA mapping. In the event the regulatory 100-year floodplain is not established, the outer buffer width shall be calculated using the following equation and measured horizontally from the ordinary high water mark. No impervious surfaces, structure, fill, or activity that would impair the floodplain or stream stabilizing ability of the outer buffer shall occur without appropriate mitigation:

 $W = 143DA^{0.41}$ 

(Equation 1 Appendix B)

where: DA = drainage area (mi<sup>2</sup>) W = total width of riparian setback (ft)

W shall be centered over the meander pattern of the stream such that a line representing the setback width would evenly intersect equal elevation lines on either side of the stream.

If the DA remains relatively constant throughout the stretch of interest, then the DA of the downstream edge of the stretch should be used. Where there is a significant increase in the DA from the upstream edge to the downstream edge of the area of interest, the setback width shall increase accordingly.

b.The setback distance associated with intermittent streams and ephemeral streams shall be a streamside buffer width of 30 feet per side measured horizontally from the centerline of the stream. No outer buffer is required for intermittent and ephemeral streams.

ii. Stream Restoration with 100 feet (each side) Riparian Setback. Each stream segment within the proposed site boundaries can be assessed in accordance with Attachment B. In the event the stream segment is classified as a "Previously Modified Low Gradient Headwater Stream", the permittee has the option to restore the stream segment in accordance with Attachment B and include a 100 feet water quality setback distance from the top of the streambank on each side. In the event the stream segment exceeds the minimum criteria in Attachment B to be classified as a "Previously Modified Low Gradient Headwater Stream", this may be considered on a case-by-case basis.

No structural sediment controls (e.g., the installation of sediment barriers or a sediment settling pond) or structural post-construction controls shall be used in a stream or the streamside buffer. Activities and controls that would not impair the floodplain or stream stabilizing ability of the outer buffer can be considered.

Redevelopment projects (i.e., developments on previously developed property) located within the delineated setback boundary is exempt from Riparian Setback Mitigation (B.3) provided the proposed project does not further intrude the delineated setback boundary.

## B.4 Riparian Setback Mitigation.

The mitigation required for intrusion into the riparian setback of the **Olentangy River mainstem or perennial streams** shall be determined by the horizontal distance the intrusion is from the stream. Up to three zones will be used in determining the required mitigation. Zone 1 extends from 0 to 30 feet from the stream edge. Zone 2 extends from 30 feet to the outer edge of the streamside buffer. Zone 3 extends from the outer edge of the streamside buffer to the outer edge of the outer buffer. Intrusion into these zones will require the following mitigation within the same Watershed Assessment Unit (12-digit HUC scale). Alternative mitigation, within the permit area, may be considered on a case-by-case basis:

- 1. Four (4) times the total area disturbed in the stream within Zone 1 of the site being developed shall be mitigated; or, two (2) times the total area disturbed in the stream within Zone 1 shall be mitigated within the watershed of the immediate receiving stream, and the entire required setback of the site shall be protected by binding conservation easements or environmental covenants.
- 2. Three (3) times the area disturbed within Zone 2 of the site being developed shall be mitigated within Zones 1 and/or 2 of the mitigation location; or, one and one-half (1.5) times the total area disturbed within Zone 2 shall be mitigated within the watershed of the immediate receiving stream, and the entire required setback of the site shall be protected in perpetuity by binding conservation easements or environmental covenants.
- 3. Two (2) times the area to be mitigated within Zone 3 of the site being developed shall be mitigated within any Zone of the mitigation location; or, one (1) times the total area to be mitigated within any zone shall be mitigated within the watershed of the immediate receiving stream, and the entire required setback of the site shall be protected in perpetuity by binding conservation easements or environmental covenants.

The mitigation required for intrusion into the riparian setback of an **intermittent stream** shall be four (4) times the total area disturbed within the riparian setback of the site being developed shall be mitigated; or two (2) times the total area disturbed within the riparian setback shall be mitigated within the watershed of the immediate receiving stream, and the entire required setback of the site shall be protected in perpetuity by binding conservation easements or environmental covenants.

The mitigation required for intrusion into the streamside buffer of an **ephemeral stream** shall be two (2) times the total area disturbed within the riparian setback of the site being developed shall be mitigated; or one (1) times the total area disturbed within the riparian setback shall be mitigated within the watershed of the immediate receiving stream, and the entire required setback of the site shall be protected in perpetuity by binding conservation easements or environmental covenants.

All mitigation shall, at a minimum, include conserved or restored setback zone, and should be designed to maximize the ecological function of the mitigation. Including mitigation at the stream edge along with associated setback areas is one way to maximize ecological function. Mitigation shall be protected in perpetuity by binding conservation easements or environmental covenants which must be recorded within 6 months of permit authorization. Granting of binding conservation easements or environmental covenants which must be recorded within a required riparian setback counts towards required mitigation.

Mitigation may also be satisfied by approved pooled mitigation areas and in-lieu fee sponsored mitigation areas. Mitigation resulting from State or Federal environmental regulations may be adjusted in recognition of these requirements.



Appendix B Attachment A Applicable Portions of the Olentangy Watershed



## Appendix B Attachment B

## Part 1 Stream Assessment

This assessment will determine if a stream is considered a previously channelized, low-gradient headwater stream (a drainage ditch) which would be applicable for stream restoration in lieu of protecting an outer 'no build' setback as per Appendix B B.2i. and ii.

In the event the assessment of the stream meets all the criteria listed below, restoration as depicted in Part 2 of this attachment or natural channel design could be performed, provided 401/404 permits are authorized, and may be a means of reducing the setback distance required by B.2.i. (Appendix B).

Previously Modified, Low-Gradient Headwater Streams shall, for the purposes of this permit, be defined as having all of the following characteristics:

- Less than 10 square miles of drainage area;
- Low gradient and low stream power such that incision (down-cutting) is not evident;
- Entrenched such that the ratio of the frequently flooded width to the bankfull width is less than 2.2; and
- Straight with little or no sinuosity present such that the ratio of the bankfull channel length to the straight-line distance between two points is less than 1.02.

# Part 2 Restoration

Restoration shall be accomplished by any natural channel design approach that will lead to a self-maintaining reach able to provide both local habitat and watershed services (e.g. self-purification and valley floodwater storage).

- a. Construction of a floodplain, channel and habitat via natural channel design
- b. Floodplain excavation necessary to promote interaction between stream and floodplain
- c. Include a water quality setback of 100 feet from top of the streambank on each side.

The primary target shall be a frequently flooded width of 10 times the channel's self-forming width. Five times the self-forming channel width may be acceptable if sufficient elements of natural channel design are included in the restoration project.
DURATION t <sub>c</sub> (minutes)	WATER QUALITY INTENSITY [iwq] (inches/hour)	DURATION t <sub>c</sub> (minutes)	WATER QUALITY INTENSITY [i <sub>wq</sub> ] (inches/hour)
5	2.37	33	0.95
6	2.26	34	0.93
7	2.15	35	0.92
8	2.04	36	0.90
9	1.94	37	0.88
10	1.85	38	0.86
11	1.76	39	0.85
12	1.68	40	0.83
13	1.62	41	0.82
14	1.56	42	0.80
15	1.51	43	0.78
16	1.46	44	0.77
17	1.41	45	0.76
18	1.37	46	0.75
19	1.33	47	0.74
20	1.29	48	0.73
21	1.26	49	0.72
22	1.22	50	0.71
23	1.19	51	0.69
24	1.16	52	0.68
25	1.13	53	0.67
26	1.10	54	0.66
27	1.07	55	0.66
28	1.05	56	0.65
29	1.03	57	0.64
30	1.01	58	0.64
31	0.99	59	0.63
32	0.97	60	0.62

#### Appendix C Intensity for Calculation of Water Quality Flow (WQF)

Note: For  $t_c < 5$  minutes, use i = 2.37 in/hr; for  $t_c > 60$  minutes, use i = 0.62 in/hr. For all other  $t_c$ , use the appropriate value from this table.



Acknowledgement Letter from EPA/State



April 11, 2019

Mr. Mike Joseph Ohio Environmental Protection Agency Division of Surface Water P.O. Box 1049 Columbus, Ohio 43216-1049 Re: NPDES General Stormwater Permit Transfer

Dear Mr. Joseph:

The purpose of this letter is to request a transfer of the existing Stormwater General permit, OGC03161\*AG, from the original applicant, Ohio River Partners Shareholder, LLC, to Kiewit Power Constructors, Co. regarding the Long Ridge Energy Generation facility in Hannibal, Ohio (Revenue ID #1225784).

Our intent is to increase the total land disturbance on the original NOI application for this permit from 18.65 acres to 35.70 acres. This increase will account for the remaining phases of construction activities planned for the facility. The Stormwater Pollution Prevention Plan that was submitted with the original NOI has been updated accordingly, along with all other associated documents.

Attached is the original NOI application with the total land disturbance modified for the additional area; completed and signed NPDES transfer form; and a vicinity map of the original and proposed disturbance areas.

If you need additional information regarding the project operations, please call me at (913) 928.7166.

Sincerely,

Erich Budde Project Manager Klewit Power Constructors, Co. (913) 928.7166 Erich.Budde@kiewit.com



#### Division of Surface Water - National Pollutant Discharge Elimination System General Permit Coverage Transfer Application Form

**Instructions:** Submit the completed form below with the original signatures of the previous and new owners or those responsible for the permit. Send to the following address: Ohio EPA, Division of Surface Water, P.O. Box 1049, Columbus, Ohio 43216-1049. A letter will be sent to the transferee and a copy of the letter will be sent to the transferor after the application is reviewed.

A. Existing Permit Holder Information (Transferor)

1. Facility Permit Number: 0GC03161\*AG

2. General Permit Number: OHC000005

3. Corporate (Parent Company) Name: Ohio River Partners Shareholder, LLC

4. Contact: Robert Wholey

5. Division Name: N/A

6. Facility Name Long Ridge Energy Generation (Formally Hannibal Port Power Project)

7. Mailing Address After Transfer: 1345 Avenue of the Americas, 45th Floor, New York, NY, 10105

**B.** Proposed Permit Holder Information (Transferee)

1. Corporate (Parent Company) Name (New): Kiewit Power Constructors, Co.

2. Phone Number: (913) 689,7000

3. Division Name (New): N/A

4. Facility Name (New): Long Ridge Energy Generation (Formally Hannibal Port Power Project)

5. Mailing Address for all permit related correspondence: 9401 Renner Boulevard, Lenexa, KS, 66219

6. Facility Mailing Address (if different): 43840 State Route 7, Hannibal, OH, 43931

7. Individual authorized to sign applications and Transfer Agreement pursuant to OAC 3745-33-03(F) (principal executive office, vice president or higher for a corporation; a general partner of a partnership; the proprietor of a proprietorship; principal executive officer, ranking elected official or duly authorized employee of a public entity):

Erich Budde Authorized Individual

8. Authorization: Pursuant to 40 CFR Part 122.22(b), the individual or position identified in this space is duly authorized by the individual in Item 7 to sign all reports required by permit and other information that may be required by the Director: Erich Budde

Name/Title/Position

9. Operator of Facility Name: Long Ridge Energy Generation, LLC

Address: 43840 State Route 7, Hannibal, OH, 43931

10. Contact Person for facility information or inspections:	
Name: Robert Wholey	Phone: (917) 691.1455

11. Describe any material modifications to production or facilities, subsequent to the transfer, which may alter the volume or characteristics of this discharge (including change of SiC code): (Attach additional pages as necessary) No change

Agreement to Transfer Permit	
Ohio River Partners Shareholder, LLC (Transferor)	as the holder of an NPDES permit which stipulates
responsibility, coverage and liability for operations involving discharge	arges of wastewater from the facility located at
43840 State Route 7, Hannibal, OH, 43931 hereby applies fo (Facility Location)	r approval of the Director to transfer the permit
responsibility, coverage and liability to Kiewit Power Constru	ctors, Co. (Transferee)
Ohio River Partners Shareholder, LLC agrees <i>(Transferor)</i>	s to continue to assume the responsibility for compliance
with all terms, limitations and conditions and any coverage or liabi	lity thereunder for the period ending on
February 22nd, 2019       . Klewit Power Construct         (Date)       (Transferentiation)	tors, Co as the proposed new permittee, hereby
agrees to assume the responsibility for compliance with the entire	ty of the coverage, responsibility and liability of the
NPDES permit commencing at February 22nd, 2019 (Date)	
In witness whereof, the parties have executed this Agreement on	February 22nd, 2019 , it is so agreed. (Date)
Transferor	Transferee
(Company name): Ohio River Partners Shareholder, LLC	(Company name): Kiewit Power Constructors, Co.
By (Company Representative signature):	By (Company Representative signature):
Nobert Wholey	EBL (ERTCH BUDDE)
Title: President	Title: PROJECT MANAGER
12. By signing this form, I (transferee), certify and acknowledge t General Permit Number: OHC000005	hat I have read and fully understood terms and conditions of
I certify under penalty of law that the information submitted is tr penalties for submitting false information, including the possibilit	ue, accurate and complete. I am aware that there are significant y of fine and imprisonment for knowing violations.
Transferee Signature: ZBU	
Title: PROJECT MANAGER	
Date: 4/12/19	



T T

#### Division of Surface Water - Notice of Intent (NOI) For Coverage Under Ohio Environmental Protection Agency General NPDES Permit

(Read accompanying instructions carefully before completing this form.)

Submission of this N	IOI constitutes notice	that the party le	dentified in Section	n I of this fo	rm intends to be au	thorized to disch	arge into	state surface w	vaters under Ohio EP	'A's
NPDES general per	mit program. Becomir	ng a permilitee c	obligates a dischar	ger to com	ply with the terms a	nd conditions of l	the perm	it. Complete all	required Information	as
indicated by the inst	ructions. Do not use c	correction fluid (	on this form. Forme	s transmitte	d by fax will not be	accepted. A che	ck for the	proper amoun	t must accompany th	ils
I Applicant inf	ayaole to "reasurer, ormation/Maillin	a Address	(500 110 100 1000	n în Allacini		SILUCIIONS TOT ING	appropr	iale processing	188.)	
Company (App	licant) Name: O	hlo River Par	Iners Sharehold	er, LLC						eresseres et se
Mailing (Applic	ant) Address: 1	345 Avenue d	of the Americas,	45th Floc	r			· ·		
City: New York				State : I	٧Y		Zip	Code: 10105	<u>.</u>	
Country: USA				1						
Contact Person	1: Ryan Stewart			Phone:	(212) 478-4128		Fax			
Contact E-mail	Address: rstewa	urt@fortress.c	om							ekez kezi
II. Facility/Site	Location Inform	ation								A.0884250
Facility/Site Na	me: Hannibal Por	l Power Proje	ot							
Facility Addres	s: 43840 State Ro	ute 7	1			1				
City: Hannibal			State: OH	. <u></u>	r	Zip	Code:	43931		
County: Monroe	€		E		1	fownship: O	hio			
Facility Contac	t Person: Robert	Wholey	Phone: (917)	691-1455	i	Fax:		·		
Facility Contac	t E-mall Addres	s: bo.wholey	@longridgeener	gy.com						
Latitude: 39.703611 Longitude: -80.4			).845833	3 Facility/Map Attachment Site Location Map usgs.pdf			)			
<b>Receiving Stream</b>	n or MS4: Ohio Riv	/er								
III. General Per	mit Information	31.5161-41-4								
General Permit	Number: OHC000	005			Initial Coverag	e: Y Renew	al Cove	erage: N		
Type of Activity	Construction Site	Stormwater (	General Permit		SIC Code(s):					
Existing NPDES	Facility Permit N	umber: 0GC(	03161*AG		ODNR Coal MI	ning Applicat	Ion Nui	nber:		
If Household Se	wage Treatment S	System, is sy	stem for:		New Home Co	nstruction:		Replacemer system:	nt of failed existin	ıg
Outfall	Design Flow (MGD):	Associated	Permit Effluen	t Table:	Receiving Wate	r:		Latitude	Longitude	
······										
Are These Perm	Its Regulred?	PTI: NO			Individual 401	Water Quality	/ Certifi	cation: NO	·	
Individual NPDE	S: APPROVED	Isolated W	etland: NO		U.S. Army Corp Nationwide Permit: NO					
Proposed Projec	t Start Date(if app	olicable): Jur	ne 11, 2018		Estimated Completion Date(if applicable): June 11, 2023					
Total Land Distu	rbance (Acres):+	<del>8.65</del> 35.70	Molers W.	hday	MS4 Drainage	Area (Sq. Mile	es):			
SWP3 Attachme	nt(s): SWPPP-Ha	nnibal Port P	ower Project_20	180508.p	df					
IV. Payment Inf	ormation									
Check #:						For Ohlo B	EPA Use	Only		
Check Amount:				Check ID(	0FA):	e e e e e e e e e e e e e e e e e e e	ORG #:		<del>te la contra</del> Si da hi	
Date of Check:				Rev ID:	1220/04		DOC #:			
I certify under penalty qualified personnel p responsible for gathe significant penalties f	r of law that this docur roperly gather and even ring the information, to or submitting false info	ment and all atl aluate the inform he information a prmation, includ	achments were pro mation submitted. I submitted is, to the ding the possibility	epared und Based on r best of my of line and	ter my direction or s ny Inquiry of the per / knowledge and be imprisonment for ki	upervision in acc son or persons v lief, true, accurat nowing violations	cordance vho man le and co l.	with a system o age the system, implete. I am av	designed to assure th , or those persons dir vare that there are	nat recily
Applicant Name: Kenneth Nicholson					Т	itle: Secreta	ry			

Signature:	Date:
Electronically submitted by Rstewart	Electronically submitted on 05/18/2018



Mike DeWing, Governor Jon Husted, Lt. Governor Laurle A. Stevenson, Director

May 07, 2019

Klewit Power Constructors, Co Erich Budde 9401 Renner Blvd Lenexa, KS 66219

#### RE: Transfer of Coverage Under Ohio EPA General Permit Number: OHC000005

The Ohio Environmental Protection Agency has received the request for transfer of responsibility in accordance with the requirements of the General Permit for:

Current Company Name:	Klewil Power Constructors, Co.
Former Company Name:	Ohio River Partners Shareholder, LLC
Existing/Ourrent Facility	Long Ridge Energy Generation LLC
Existing/Gurrent Permit No	0GC03161*AG

This site/facility continues to be approved for coverage under Ohio EPA General Permit for Construction Stormwater with OHC000005). Your Ohio EPA General Permit Number is: 0GC03161\*AG, Please use this number in all future correspondence.

Please read and review the permit carefully. The permit contains requirements and prohibitions with which the permittee must comply. Coverage remains in effect until a renewal general permit is issued. We will contact you on how to reapply for continuing coverage

You may obtain current general permits, forms and instructions at http://www.epa.state.oh.us/dsw/storm/stormform.html. If you need to speak to someone directly, you should call:

 Ashley Ward
 614-644-4852
 ashley ward@epa.chio.gov for all other general permits

 Scott Foster
 740-380-5277
 scott foster@eap.chio.gov for all Coal Surface Mining Activities

 Anthony Robinson
 614-728-3392
 anthony robinson@epa.chio.gov for all Coal Surface Mining Activities

Sincerely.

have a five so-

Laurie A. Stevenson Director

> 50 West Town Smeet + Sine 701 + (1.0, Ison 1040 + Columbus, QH 43216 LU4: eus oliio gov + (614) 644-3184 (fas)



Inspection Reports

		Inspec	ction Re	epo	<b>rt</b> (Page 1 of 2)
			Scope of the	e Insj	pection
			Examinatio	n Pei	rsonnel
]	Name				Title
Area(s) Exposed to Preci (Disturbed Areas	pitation		D F	escri Pollut	be Evidence of, or the Potential for, ants Entering the Drainage System
Material Storage Areas	s, etc.)		•	onut	und Entering the Frankige System
Erosion and Sediment Control Measures	Implem	te of entation dd-vv)	Correct	ng ly (a)	Comments, Recommendations, and Actions Taken
		uu-yy)	(105/11	0)	
Discharge		A	re Erosion	Cont	rol Measures Effective in Preventing
Location(s) / Point(s)			Signif	icant	Impacts to Receiving Waters
Location(s) Where Vehicles Enter/Exit the Site			Describe E	vide	nce of Off-Site Sediment Tracking

Inspection Report	(Page 2 of 2)
Changes Required to the Note: SWPPP shall be revised within 7 calendar	SWPPP days following the inspection.
Site Description:	
Storm Water Control Measures:	
Schedule to Implement ( Note: SWPPP revision(s) shall be implemented within 7	Change calendar days following the inspection.
Incidents of Non-Comp	liance
Yes No	
Certification (Ohio EPA Permit No	. OHC000005, Part V.G)
"I certify under penalty of law that this document and all atta supervision in accordance with a system designed to assure that qu the information submitted. Based on my inquiry of the person or directly responsible for gathering the information, the information su true, accurate, and complete. I am aware that there are significant p the possibility of fine and imprisonment for knowing violations."	achments were prepared under my direction or alified personnel properly gathered and evaluated persons who manage the system, or those persons abmitted is, to the best of my knowledge and belief, enalties for submitting false information, including
Signature:	Date:
Name (Print):	Phone Number:
	—



Corrective Action Log

# Appendix F – Corrective Action Log

Project Name:

SWPPP Contact:

Inspection	Inspector	Description of BMP Deficiency	Corrective Action Needed (including	Date Action
Date	Name(s)		planned date/responsible person)	Taken/Responsible
				person
				8/7/2019 - Terry Rake
				and Joe Rosenlieb



SWPPP Amendment Log

## Appendix G – SWPPP Amendment Log

Project Name:

SWPPP Contact:

Amendment No.	Description of the Amendment	Date of Amendment	Amendment Prepared by [Name(s) and Title]



Subcontractor Certification/Agreements

#### Appendix H – Subcontractor Certifications/Agreements

SUBCONTRACTOR CERTIFICATION STORMWATER POLLUTION PREVENTION PLAN

Project Number:	Long	Ridge	Energy	Generation -	103988	 
Project Title:						 
Operator(s):						

As a subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the BMPs and practices described in the SWPPP.

This certification is hereby signed in reference to the above named project:

MANAGAR

Company: C.A. MURREN & SONS Co.
Address: 2275 LogANVILLE Highway GRAYSON, GA 30017
Telephone Number: 770-682-2946
Type of construction service to be provided: Civil Site Wark

Signature:

oignatar

Title:

Date:

#### Appendix H – Subcontractor Certifications/Agreements

#### SUBCONTRACTOR CERTIFICATION STORMWATER POLLUTION PREVENTION PLAN

Project Number:	
Project Title:	
Operator(s):	

As a subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

# I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the BMPs and practices described in the SWPPP.

This certification is hereby signed in reference to the above named project:

Company: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone	Number <sup>.</sup>		
	I NULLINGEL		

Type of construction service to be provided:

Signature:

Title:

Date:



Grading and Stabilization Activities Log

Appendix I - Grading and Stabilization Activities Log

Project Name: Long Ridge Energy Generation

SWPPP Contact: Jackie Sheredy: 913-544-5129

Dat Gra Act Initi	te ading tivity liated	Description of Grading Activity	Date Grading Activity Ceased (Indicate Temporary or Permanent)	Date When Stabilization Measures are Initiated	Description of Stabilization Measure and Location
5	122/19	Test Pits dug / backfilled for gestechnical	observation May 2	3,2019 NA	No stubilization - backfilled
4	14/19	Power Nock excavation began in north po	wer block	NA	No stabilization - Stockpile continuelly added
7/	11/19	DDC Starting compaction in north power	r block Bizo/2014	NA NA	No Subilization - no stockpile made
71	10/19	North pond benned & cleaned up	7/23/2019	7/24/2019	fond stabilized with straw bedding
181	12/19	Trenchifor Bop-EL-IC Started	North Cod	NB	Silf fence bringing back to grade and boles filled in
1 21	17/19	CR Mumon stand Sw tie-in (Sw cone)	9/4/2019	NA	The in boosfilled - west road re-setablished for access (9/4)
9]	10/19	CA MAMER CLEANING / backfilling Sut lemp po	nd 10/12/2019	NA	No stabilization - backfilled
9/	12/19	LA MUTTER added Ho TOP to SW pond 3 Areas	NA	9/12/19	Rip mp under 3 dmin pipes at the writem of the Sw pond
6	15/19	CA Marrien began Swlpind excavation	3/17/19	9/19/19	seeded & smaw blanket laid down
1	11	1///////	11/1	9/24/19	silf fince added around pend

### Appendix I – Grading and Stabilization Activities Log

Project Name:

SWPPP Contact:

Date Grading Activity Initiated	Description of Grading Activity	Date Grading Activity Ceased (Indicate Temporary or Permanent)	Date When Stabilization Measures are Initiated	Description of Stabilization Measure and Location



Training Log

# Talent Development Build Your Legacy

#### Class Sign-in Sheet

Class Name:	Stormwater Training
Date of Class:	8/14/2017
Location of Training:	IREG
Name of Facilitator:	Tackie Sheredy
Talent Navigator ID:	1

\*Return completed sign in sheets to Training.Admin@kiewit.com

	*Full Name	*Employee ID
1	Felicia Treanor	00432181
2	Gary Shannon	5233
3	Run Ry	00380571
4	Tistales William	x 7951-14
5	Jonathan Boxle	212915
6	tessing Hernandez	
7	ETHAR PEEL	944719
8	Derek Hastept	388520
9	JOSH LOGUE	345629
10	Southen Henderson	340219
11	Jamon Aleening	
12	Chris Wallace	357361
13	Lauren Jeans	
14	Score Iluna	00386999
15	Bar Privide 20	
16	Koberto Alenziski	415 216
17	PANNY Come	
18	biothow Roge	403982
19	STENDER TEERAL	00576405
20	Milke Mayo Ranay	
21	Dr/4 1 + Raips	317660
22	NIERT TOROWERI	372803/
23	1 the	3775 37
24	the wiedolie	349854
25	Day Loughon	354229

# Talent Development Build Your Legacy

#### **Class Sign-in Sheet**

Class Name:	Stormwater Training
Date of Class:	8/14/2019
Location of Training:	LREG
Name of Facilitator:	Tackie Sheredy
Talent Navigator ID: "Existing	

\*Return completed sign, in sheets to Training.Admin@kiewit.com

	*Full Name	*Employee ID
1	Nex Guides	0039035
2	Susie Weisenniller	366250
3	Share Rought	11-36-27/9
4	Larg George	
5	HANNAH BRANTIL	00357505
6	Marx Between	00401171
7	Daniel Stance	00961728
8	Jenni Hartzler	367864
9	Marc	00239849
10	b	
11		
12		
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23		
24		-
25		

### Appendix J – SWPPP Training Log

**Stormwater Pollution Prevention Training Log** 

Project	Name:			
Project	: Location:			
Instruc	tor's Name(s):			
Instruc	tor's Title(s):			
Course	Course Location: Date:			_ Date:
Course Length (hours):				
Stormv	vater Training Topic: (check as	s app	propriate)	
🗆 Ei	rosion Control BMPs		Emergency Procedure	es
🗆 Se	ediment Control BMPs		Good Housekeeping I	BMPs
	on-Stormwater BMPs			
Specifi	c Training Objective:			

Attendee Roster: (attach additional pages as necessary)

No.	Name of Attendee	Company
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		



Delegation of Authority

#### Appendix K – Delegation of Authority Form

#### **Delegation of Authority**

I, <u>Erich Budde</u>, hereby designate the person or specifically described position below to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including the Construction General Permit, at the <u>Long Ridge</u> <u>Energy Generation</u> construction site. The designee is authorized to sign any reports, stormwater pollution prevention plans and all other documents required by the permit.

Jackie Sheredy - Project Environmental	(name of person or position)
Kiewit Coordinator	(company)
43840 State Route 7	(address)
Hannibal, onio 43931	(city, state, zip)
913-544-5129	(phone)

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in Ohio EPA Permit No. OHC000005, and that the designee above meets the definition of a "duly authorized representative" as set forth in Ohio EPA Permit No. OHC000005.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name:	Erich Budde
Company:	Kiewit
Title:	Project Manager
Signature:	2Blb
Date:	4/25/19



Additional Information

**CUSTOM SOIL RESOURCE REPORT** 

United States Department of Agriculture

Natural Resources Conservation Service A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for Monroe County, Ohio



### Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/? cid=nrcs142p2\_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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Soil Map	6
Legend	7
Map Unit Legend	8
Map Unit Descriptions	
Monroe County, Ohio	
Ma—Made land	
References	

# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.





#### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at
## **Map Unit Legend**

Map Unit Symbol Map Unit Name		Acres in AOI	Percent of AOI
Ма	Made land	84.7	100.0%
Totals for Area of Interest		84.7	100.0%

## **Map Unit Descriptions**

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## Monroe County, Ohio

#### Ma—Made land

#### Map Unit Composition

*Made land:* 100 percent *Estimates are based on observations, descriptions, and transects of the mapunit.* 

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WETLAND AND STREAM MEMO



# MEMO

To:	Mark Barry, Ohio River Partners Shareholder, LLC
10.	
From:	Lynn Gresock and Preston Smith, Tetra Tech, Inc.
Date:	February 7, 2017 [Revised 4/11/2019]
Subject:	Aquatic Resource Assessment for the Hannibal Port Power Plant, Monroe County, Ohio

This memo summarizes the aquatic resource assessment completed by Tetra Tech, Inc. (Tetra Tech) for the Hannibal Port Power Project (the Project). As shown in Figure 1, the Project is proposed within approximately 50 acres within an active industrial property (Project Area). Of those 50 acres, approximately 20 acres will be permanently developed in association with the Project; therefore, Tetra Tech's investigation predominantly focused on this 20-acre portion of the property (the Study Area), as shown on Figure 2. Note that the balance of the 50 acres does not include undeveloped land, and is predominantly paved.

The assessment focused on the identification and delineation of wetlands and other water resources within the Study Area. The assessment utilized methodologies enumerated in the United States Army Corps of Engineers (USACE) Wetland Delineation Manual (Environmental Laboratory 1987)(1987 Manual), as amended by the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (April 2012) (Regional Supplement).

#### INTRODUCTION

Tetra Tech completed an aquatic resource assessment for the Project. This assessment included a review of publicly available documentation to determine the likelihood for wetlands and other water resources to be present within the Study Area, and field work to observe and assess existing conditions within the Study Area.

The Study Area is located within an active industrial property located in Monroe County, Ohio, on the northern bank of the Ohio River. The historic and on-going industrial use of the Study Area minimized the likelihood that extensive aquatic resources would be present. The Study Area lies within the drainage basin of the Ohio River. The 100-year flood zone associated with the Ohio River, as defined by Federal Emergency Management Agency, follows the northern bank of the river and lies south of the Study Area.

This memorandum presents the methodology, results, and conclusions of the wetland delineation and stream identification activities completed by Tetra Tech for the approximately 20-acre Study Area.

#### METHODOLOGY

#### Desktop Assessment

Prior to undertaking the fieldwork, Tetra Tech completed a preliminary assessment of the Study Area through a review of available Geographic Information Systems resources, including:

- United States Geological Survey (USGS) topographic mapping (Figure 1) (USGS 2009);
- Natural Resources Conservation Service (NRCS) National Cooperative Soil Survey (Figure 3) (NRCS 2016); and
- United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) Mapping (Figure 4) (USFWS 2016) and Ohio Wetlands Inventory (OWI) Mapping (Figure 5).

#### Field Investigation

Tetra Tech completed field investigation of the Study Area on December 14, 2016. General site photos are included in Appendix A.

#### Wetlands

Wetland areas are delineated using procedures enumerated in the 1987 Manual and the Regional Supplement for identifying wetlands. According to the 1987 Manual, an area is defined as a wetland if, under normal circumstances, it meets all three of the following criteria:

- 1. Predominance of hydrophytic vegetation (plants which are adapted for life in saturated soil conditions);
- 2. Hydric soils (soils which were formed under water, or in saturated conditions); and
- 3. Wetland hydrology (or the presence of inundated or saturated soils at some time during the growing season).

Wetlands identified in the field are classified in accordance with the USFWS's Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979). Dominant vegetation is identified and classified according to the *National Wetland Plant List: 2016 Update of Wetland Ratings* (Lichvar 2016). Plant classifications are as follows:

- Obligate (OBL) essentially always found in wetlands, with an estimated probability of greater than 99 percent;
- Facultative Wetland (FACW) usually found in wetlands, with an estimated probability of between 67 percent and 99 percent;
- Facultative (FAC) equally likely to occur in wetlands and non-wetlands, with an estimated probability between 34 percent and 66 percent;
- Facultative Upland (FACU) sometimes occurs in wetlands, with an estimated probability of between 1 percent and 33 percent; and
- Upland (UPL) rarely occurs in wetlands, with an estimated probability of 1 percent.

The delineation consists of establishment of the wetland/upland margin with flagging hung at intervals that accurately depict the outline of the boundary. The individual flags are then located using a Global Positioning System receiver and later added to mapping. In addition to the USACE wetland delineation, should wetlands be identified, a wetland evaluation would be performed to determine the quality and function of each wetland as required by the Ohio Environmental Protection Agency (Ohio EPA). The Ohio Rapid Assessment Method (ORAM) for Wetlands (Mack 2001) is used to perform this evaluation.

#### Streams

Headwater streams are evaluated using methods detailed in the Field Evaluation Manual for Ohio's Primary Headwater Streams (Ohio EPA 2012). Streams can be designated as either Modified Class I, Modified Class II, Class I, Class II, or Class III (Class IIIA or Class IIIB) Primary Headwater Habitats (PHWH) under Ohio Administrative Code (OAC) 3745-1-07(F)(9)(d). Ohio EPA defines Class I PHWH streams as ephemeral streams that have little or no aquatic life potential, except seasonally when flowing water is present for short time periods following precipitation or snow melt. Class II PHWH streams are defined as streams that are normally intermittent but may have perennial flow. Such watercourses may exhibit moderately diverse communities of warm water-adapted native fauna present either seasonally or year-round; the native fauna is characterized by species of vertebrates (temperature facultative species of amphibians and pioneering species of fish) and benthic macroinvertebrates (Ohio EPA 2012). Class III PHWH streams are perennial streams in which the prevailing flow and temperature conditions in are influenced by groundwater. They exhibit moderately diverse to highly diverse

communities of cold water adapted native fauna present year-round. Class IIIA streams exhibit diverse communities of native fauna, while Class IIIB streams exhibit superior species composition or diversity of native fauna (Ohio EPA 2012).

A Level 1 Assessment is performed at all headwater streams using the Primary Headwater Habitat Evaluation Index (HHEI) form. A Level 1 Assessment predicts the biological characteristics of the stream through an assessment of the stream's physical characteristics and habitat. A Level 2 Assessment uses a rapid bio-assessment field sampling method known as the Headwater Macroinvertebrate Field Evaluation Index (HMFEI) and associated HMFEI field form.

Streams categorized as Class III PHWH using the HHEI or HMFEI are assumed to be Class IIIB streams unless a Level 3 Assessment is performed. A Level 3 Assessment includes a benthic macroinvertebrate survey in which taxa are identified down to the lowest practical level. The taxa present are compared to Ohio EPA's List of Cold Water Indicator and Sensitive Macroinvertebrate Taxa Used to Classify Class III PHWH Streams (Table 7-2 of OAC 3745-1-07).

Streams with a drainage area greater than one square mile or a maximum pool depth greater than 40 centimeters are not considered headwater streams. These streams were evaluated using the Ohio EPA's Qualitative Habitat Evaluation Index (QHEI). The QHEI is a quantitative evaluation of physical stream characteristics important to supporting fish communities. Six individual metrics are scored then added with the total maximum score being 100. The evaluated metrics include substrate, instream cover, channel morphology, riparian zone, pool quality, and riffle quality. Rating scales vary slightly between headwater streams, which have watersheds less than 20 square miles, and streams with larger watersheds. For headwater streams, the QHEI scores correspond to ratings as follows:

- Excellent rating greater than or equal to 70;
- Good rating scores between 55 and 69;
- Fair rating scores between 43 and 54;
- Poor rating scores between 30 and 42; and
- Very poor rating scores less than 30.

For streams with larger headwaters, the QHEI scores corresponde to rates as follows:

- Excellent rating greater than or equal to 75;
- Good rating scores between 60 and 74;
- Fair rating scores between 45 and 59;
- Poor rating scores between 30 and 44; and
- Very poor rating scores less than 30.

#### RESULTS

The field investigations identified no features within the Study Area that met the wetland criteria outlined in the 1987 Manual as amended by the USACE Regional Supplement. The Study Area occupies a portion of an active industrial site, with small patches of maintained grass and mixed gravel and vegetation. Photographs depicting the observed conditions within the Study Area are provided in Appendix A.

#### Wetland Identification and Delineation

As shown on Figures 4 and 5, no NWI or OWI wetlands are mapped within the Study Area. The nearest NWI wetlands lie west of the Study Area. Two mapped western wetlands are long and narrow, curving along the railroad that runs parallel to Ohio State Route 7. A third mapped wetland, west of the southern portion of the Study Area, is located within the fence of the neighboring property. Field observations noted that a tank currently appears to be located in this location. Additional NWI-mapped wetlands are farther located east of the Study Area, near the Ohio River. The Ohio River is identified by both the NWI and OWI; however, no additional OWI wetlands are identified in Figure 5.

Hydrophytic vegetation, often found in wetland and aquatic resources, was not observed within the Study Area. Most of the Study Area was maintained grass, which although difficult to identify in winter months, does not represent hydrophytic vegetation. No suspect vegetation or hydrology was observed within the Study Area.

Hydric soils and soils with hydric components are often associated with wetlands. A review of the NRCS Soil Survey (Figure 3) and hydric soil list (Appendix B) indicated that no soils units mapped within the Study Area are classified as hydric or as containing hydric components (NRCS 2015). As shown on the NRCS soil survey map (Figure 3), the soil in the Study Area consists of Made Land (soil unit: Ma), in which original soils and land have been either moved, removed, graded, smoothed or covered by other materials. Confirmation of the soil mapping units was not performed during this site evaluation. Since no suspect vegetation or hydrology was observed within the Study Area, soil testing for hydric soils was not performed.

Based on field evidence and professional judgment, it was determined that no wetlands are present within the Study Area. No areas on the Study Area demonstrated the presence of all three wetland parameters required by the 1987 Manual and the Regional Supplement.

The Study Area primarily consisted of crushed stone and maintained mowed lawn. The Study Area has been significantly altered, and maintained for industrial purposes.

#### Stream Identification and Evaluation

Tetra Tech did not identify any streams within the Study Area during completion of the desktop assessment or field investigation.

#### CONCLUSIONS

Tetra Tech completed a desktop assessment and field investigation of the 20-acre Study Area with the intent to identify and delineate any aquatic resources present. Qualifications of the Tetra Tech team are provided in Appendix C.

In accordance with the 1987 Manual and the Regional Supplement, areas must exhibit the following three criteria to be considered a wetland:

- 1. Predominance of hydrophytic vegetation (plants which are adapted for life in saturated soil conditions);
- 2. Hydric soils (soils which were formed under water, or in saturated conditions); and
- 3. Wetland hydrology (or the presence of inundated or saturated soils at some time during the growing season).

Based on the December 14, 2016 site reconnaissance, there were no areas within the Study Area that exhibited all three criteria necessary to be classified as wetlands in accordance with the 1987 Manual and the Regional Supplement. Additionally, Tetra Tech did not identify any waterbodies or streams within the study area.

The wetland delineation and stream identification services performed by Tetra Tech were conducted in accordance with the 1987 Manual, Regional Supplement, ORAM, PHWH HHEI, and QHEI, as applicable. This wetland delineation and stream identification is based on site conditions at the time of the field investigation. However, final authority over these environmental resources rests with the Ohio EPA and the USACE.

#### REFERENCES

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- Mack, John J., 2001. Ohio Rapid Assessment Method for Wetlands, Manual for Using Version 5.0. Ohio EPA Technial Bulletin Wetland/2001-1-1. Ohio Environmental Protection Agency, Division of Surface Water, 401 Wetland Ecology Unit, Columbus, Ohio.
- NRCS, 2016. Web Soil Survey. Available at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx.
- Ohio EPA, 2006. Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI). Ohio EPA Technical Bulletin EAS/2006-06-1. Ohio EPA Division of Surface Water, Groveport, Ohio.
- Ohio EPA, 2012. Field Evaluation Manual for Ohio's Primary Headwater Habitat Streams. Version 3.0. Ohio EPA Division of Surface Water, Columbus, Ohio.
- USFWS, 2016. National Wetlands Inventory Mapping. Available at: <u>https://www.fws.gov/wetlands/Data/Mapper.html</u>.
- USGS, 2009. United States Geological Survey Topographical Mapping. Available at: https://viewer.nationalmap.gov/basic/?basemap=b1&category=ustopo&title=US%20Topo%20Download.

#### ATTACHMENTS

Figures

- Figure 1. USGS Project Location Map
- Figure 2. Detailed Project Location Map
- Figure 3. NRCS Soils Map
- Figure 4. NWI Wetland Map
- Figure 5. OWI Wetland Map
- Appendix A Photographs of the Study Area
- Appendix B Hydric Soils List
- Appendix C Resumes

FIGURES

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PGH P:\GIS\OHIORIVERPARTNERS\MXD\HANNIBALPOWER\_SOILS.MXD 04/11/19 TT







PGH P:\GIS\OHIORIVERPARTNERS\MXD\HANNIBALPOWER\_OWI.MXD 04/11/19 TT

APPENDIX A GENERAL SITE PHOTOGRAPHS



Photograph Number: 1

**Direction:** NE

**Date: 02/29/2016** 



Photograph Number: 2

**Direction:** NE

**Date:** 02/29/2016

APPENDIX B HYDRIC SOILS LIST

## Hydric Soils List Monroe County, Ohio

Map Unit Symbol	Map Unit Name	Component Name and Phase	Component Percent	Landforms		
BsD2	Brookside silt loam, 15 to 25 percent slopes, eroded	poorly drained soils	10	hills		
Chg1AF	Chagrin silt loam, 0 to 3 percent slopes, frequently flooded	Melvin	2	flood plains		
Hr	Hartshorn silt loam, wet variant	poorly drained soils	10	depressions		
KnL1AF	Kinnick-Lindside silt loams, 0 to 3 percent slopes, frequently flooded	Melvin	5	depressions		
Lh	Lindside silt loam	poorly drained soils	5	abandoned channels		
New1AF	Newark silt loam, 0 to 3 percent slopes, frequently flooded	Melvin	5	flood plains		
Nm	Newark silt loam, frequently flooded	Poorly drained soils	15	depressions		
Nn	Newark silt loam	poorly drained soils	5	depressions		
Nn	Newark silt loam	very poorly drained soils	5	depressions		
No	Newark Variant silt loam, frequently flooded	Poorly drained soils	15	channels		
ScB	Sciotoville silt loam, 0 to 4 percent slopes	poorly drained soils	2	closed depressions		
Modified from Hydric Soils of the United States (NRCS 2015)						

APPENDIX C RESUMES



### Jason McGuirk Wetland/Environmental Scientist IV

#### EXPERIENCE SUMMARY

Mr. Jason McGuirk has six years of professional experience in wetland delineation, permitting, fisheries and wildlife, and stream assessments and classification in Pennsylvania, New York, Ohio, and Alaska. Mr. McGuirk has conducted hundreds of wetland delineations, stream evaluations as well as conducted and produced habitat assessments, and post monitoring impact statements and assessments on over 800 miles of proposed natural gas pipeline, and fifty plus proposed well pad sites. He has extensive knowledge in watercourse classification and assessment including the Rosgen method. In particular attention of his has been focused on fisheries habitat and macro-invertebrate work, with over fifty miles of stream classifications in Alaska. Mr. McGuirks educational background is in Fisheries and Aquaculture with a minor focus in Marine Biology and Wildlife management.

#### **RELEVANT EXPERIENCE**

Environmental Scientist III; Sunoco Logistics; Wetland Delineations for Miscellaneous Natural Gas Pipeline Projects, Engendered Species Reptilia Surveys: (Glyptemys muhlenbergii), Plantae (Ellisia nyctelea); Pennsylvania. Segments 1, 2, and 3 wetlands field lead, and crew leader. Responsibilities include organizing and conducting all field work operations for multiple wetlands crews, wetland delineations and stream assessments for the proposed 450 mile Pennsylvania Pipeline Project. Additional work included proposing potential reroute on an environmental basis.

Environmental Scientist III; MarkWest Liberty Midstream & Resources, LLC; Wetland Delineations for Miscellaneous Natural Gas Pipeline Projects; Pennsylvania. Responsible for performing and assisting with wetland delineations for various proposed natural gas pipeline projects in southwestern Pennsylvania. Specific tasks included field survey, report preparation, and wetland functional assessments.

Environmental Scientist III; MarkWest Ohio Gathering Company, LLC; Wetland Delineations for Miscellaneous Natural Gas Pipeline Projects; Ohio. Responsible for performing and assisting with wetland delineations for various proposed natural gas pipeline projects in eastern Ohio. Specific tasks included field survey, report preparation, and completion of Ohio EPA specific wetland and stream assessments.

#### EDUCATION

B.T. Fisheries and Aquaculture, SUNY Cobleskill, 2011T

#### REGISTRATIONS

Wild Plant Management Permit, PA, 2014, Permit # 14-651

#### **AREA OF EXPERTISE**

Wetland Delineation and Stream Identification, Fisheries, and Botanical Surveys

#### **TRAINING/CERTIFICATIONS**

Winter Vegetation ID, Rutgers University, 2012

Amtrak Contractor Certification, 2014

Certified Wetland Assessment Delineator, NY, 2009

#### **OFFICE**

Pittsburgh, PA

**YEARS OF EXPERIENCE** 

6+

YEARS WITH TETRA TECH

2+

Environmental Scientist III; Gulfport Energy Corporation; Wetland Delineations for Miscellaneous Natural Gas Well Pad Projects; Ohio. Responsible for performing and assisting with wetland delineations for various proposed natural well pads southeastern Ohio. Specific tasks included field survey, report preparation, PCN preparation, and completion of Ohio EPA specific wetland and stream assessments.

Environmental Scientist III; MarkWest Liberty Midstream & Resources, LLC; Wetland Delineation and Engendered Species Survey (*Ranunculus flabellaris and Alopecurus aequalis*) for Vanport to Butler Gas Pipeline; Butler County, Pennsylvania. Responsible for performing and assisting with wetland delineation and endangered species survey along pipeline right-of-way. Specific tasks included field survey and report preparation.

Environmental Scientist III; Antero Resources Appalachian Corp.; Wetland Delineations for Miscellaneous Natural Gas Pipeline Projects; Ritchie and Doddridge Counties, West Virginia. Responsible for performing and assisting with wetland delineations for various proposed natural gas well pads and access roads in northern West Virginia. Specific tasks included field survey and report preparation.

Wetland & Watercourse Biologist; Chesapeake Energy; Schoharie County, PA; November 2011 to October 2012. Responsible for conducting wetland delineations for proposed pipe line routes and reroutes. Performed PA Rapid Assessments, stream evaluation, and preparation of wetland report for 30 miles of pipeline in Northeastern Pennsylvania.

Wetland & Watercourse Biologist; Southwest Energy L.P; Schoharie County, PA; November 2011 to October 2012. Responsible for conducting wetland delineations on proposed Well pad and compressor sites. Performed PA Rapid Assessments, stream evaluation, and preparation of wetland report for 15 proposed well pad locations in Northeastern Pennsylvania.

Wetland & Watercourse Biologist; Southwest Energy L.P; Susquehanna County, PA; November 2011 to October 2012. Responsible for conducting wetland delineations on proposed Well pad and compressor sites. Performed PA Rapid Assessments, stream evaluation, and preparation of wetland report for 20 proposed well pad locations in Northeastern Pennsylvania.

Wetland & Watercourse Biologist; Chesapeake Energy; Carroll, Jefferson County, OH; November 2011 to October 2012. Responsible for conducting wetland delineations for proposed pipe line routes and reroutes. Performed ORAM and QHEI Assessments, and preparation of wetland report for 30 miles of pipeline in Eastern Ohio.

Wetland & Watercourse Biologist; Shell Oil; Butler County, PA; November 2011 to October 2012. Responsible for conducting wetland delineations for proposed pipe line routes and reroutes. Performed PA Rapid Assessments, stream evaluation, and preparation of wetland report for 40 miles of pipeline in Western Pennsylvania.

Wetland & Watercourse Biologist; Chesapeake Energy; Schoharie County, PA; November 2011 to October 2012. Responsible for conducting Indiana Bat habitat surveys on multiple proposed natural gas pipelines in Northeastern Pennsylvania.

Wetland & Watercourse Biologist; Chesapeake Energy; Schoharie County, PA; November 2011 to October 2012. Responsible for conducting post construction habitat monitoring and assessment of constructed natural gas pipelines in Northeastern Pennsylvania.

#### CHRONOLOGICAL HISTORY

Wetland Environmental Scientist IV; Tetra Tech, Inc.; Pittsburgh, PA, June 2014 - Present

Wetland Environmental Scientist III; Tetra Tech, Inc.; Pittsburgh, PA, February 2013 - June 2014

Wetland & Watercourse Biologist; Hanover Engineering & Associates; Towanda, PA, November 2011 - October 2012

Assistant Hatchery Manager; SUNY Cobleskill; Cobleskill, NY, September – May of 2009- 2011

Biological Fisheries Technician, US Forest Service; Thorne Bay, AK, May 2010 - August 2010

Fisheries Technician, Cook Inlet Aquaculture Association, Kenai, AK, May 2009 – August 2009

#### SCIENTIFIC/TECHNICAL PUBLICATIONS

 McGuirk, J, M, "Walleye (Sander vitreus) spawning movements and habitat utilization in Otsego Lake, NY, 2011

#### MEMBERSHIPS

• N/A

#### AWARDS

• David E. Moorehouse Award for Outstanding Junior in Fisheries and Aquaculture B.T.



#### **EXPERIENCE SUMMARY**

Cody R. Stoliker has approximately 2 years of professional experience in wetland delineation, permitting, and stream assessments and classification in Pennsylvania, New York, Ohio, Virginia and West Virginia. With 4 years of fisheries and wildlife management experience, specializing in large game conservation, Mr. Stoliker has technical expertise working with bear, elk, moose, deer, and wolves in Wyoming, as well as lead biologist experience working with whitetail deer, red stag, feral hogs, and the endangered American Burying Beetle in Oklahoma along pipeline routes where he produced habitat assessments, post monitoring impact statements and performed population control. Mr. Stoliker is assisting Tetra Tech field leads and other environmental scientists to assess and delineate streams and wetlands along natural gas pipeline routes, access roads, right-of-ways, and well pad sites. He acts as Fleet Supervisor overseeing routine and preventative maintenance over department vehicles. Cody R. Stoliker's educational background is in Wildlife Management with a certified training in wetland assessment/delineation and fisheries.

#### **RELEVANT EXPERIENCE**

Environmental Scientist September-October 2015, Ninnescah Wind Farm, Platt, Kingman, and Sedgewick Counties, KS Conducted wetland and stream delineation for a proposed windfarm infrastructure that included turbines, access roads, electrical collection lines, and transmission lines. Specific tasks included micrositing turbines to avoid water resources on-the-fly, wetland delineation using methods outlined in the USACE wetland delinneation manual, and consultation with the Kansas Department of Water Resources and Kansas Department of Agriculture regarding construction in and around Waters of the United States and FEMA mapped flood zones. Specific tasks existed to monitor for potential habitat for threatened and endangered species, specifically, Arkansas darter, Strecker's Chorus Frog, Plains Minnow, and Arkansas River Speckled Chub. Field and desktop analysis were reported in several peer-reviewed reports.

### Cody R. Stoliker ENVIRONMENTAL SCIENTIST III

#### **EDUCATION**

Bachelor of Technology, Wildlife Management, 2013, State University of New York at Cobleskill

#### **AREA OF EXPERTISE**

Large Game Wildlife Management & Conservation, Wetland Assessment

#### REGISTRATIONS/ AFFILIATIONS

Ducks Unlimited 2012- Present

Rocky Mountain Elk Foundation 2013 – Present

National Wild Turkey Federation 2013 - Present

#### **TRAINING/CERTIFICATIONS**

Certified Wetland Assessment Delineator, NY, 2010

NYS Certified Class A Interior Firefighter

#### OFFICE

Tetra Tech OGA Pittsburgh, PA

#### **YEARS OF EXPERIENCE**

3

#### YEARS WITH TETRA TECH

2

Environmental Scientist III; MarkWest Liberty Midstream & Resources, LLC; WetlandDelineationsfor Miscellaneous Natural Gas Pipeline Projects; West Virginia. Responsible for performing and assisting with wetland delineations and report drafting/review for various proposed natural gas pipeline projects in West Virginia. Specific tasks included field survey, report preparation, and wetland functional assessments.

#### Environmental Scientist II, March-February 2016

Equitrans, Mountain Valley Pipeline Project, West Virginia, Virginia, and Pennsylvania

**Responsible for performing and assisting with wetland delineations for** a proposed 42-inch natural gas pipeline project. Assisted with project start up and procedure implementation, acted as fleet manager for vehicles used during surveys, performed safety inspections and supervised upkeep and maintenance. Wetlands and streams were mapped using Trimble® software, data collected on Apple I-Pads, and worked as part of a team to review/ revise collected data for QA/QC.Worked as part of a team reviewing, correcting, drafting, and creating Aquatic Resource Reports for 17 counties detailing +1000 collected features.

Environmental Scientist I; Sunoco Logistics; Wetland Delineations for Miscellaneous Natural Gas Pipeline Projects Pennsylvania. Responsible for performing and assisting with wetland delineations and stream assessments for the proposed Pennsylvania Pipeline Project. Other responsibilities included report preparation and wetland functional assessments.

Environmental Scientist I; MarkWest Liberty Midstream & Resources, LLC; WetlandDelineationsfor Miscellaneous Natural Gas Pipeline Projects; Pennsylvania. Responsible for performing and assisting with wetland delineations for various proposed natural gas pipeline projects in southwestern Pennsylvania. Specific tasks included field survey, report preparation, and wetland functional assessments.

Environmental Scientist I; MarkWest Ohio Gathering Company, LLC; WetlandDelineations for Miscellaneous Natural Gas Pipeline Projects; Ohio. Responsible for performing and assisting with wetland delineations for various proposed natural gas pipeline projects in eastern Ohio. Specific tasks included field survey, report preparation, and completion of Ohio EPA specific wetland and stream assessments.

#### SCIENTIFIC/TECHNICAL PUBLICATIONS

N/A

#### **CHRONOLOGICAL HISTORY**

Environmental Scientist I, Tetra Tech, 2014-2015, Pittsburgh, PA

Wildlife Biologist/Ranch Manager, Oklahoma Trophy Ranch, 2013-2014, Allen, OK

Wildlife Management Technician, Rolling Thunder & Rim Ranches, Spring-Fall 2013, Bondurant, WY

Assistant Herdsman, Bison Island, 2012-2013, Sharon Springs, NY

Avian Survey Technician, NYS Dept. of Environmental Conservation, Winter 2011, Albany NY

## **SPECIES CORRESPONDENCE**

#### Gresock, Lynn

From: Sent: To: Subject: susan\_zimmermann@fws.gov on behalf of Ohio, FW3 <ohio@fws.gov> Monday, March 20, 2017 8:54 AM Gresock, Lynn Hannibal Power Project - Monroe County



UNITED STATES DEPARTMENT OF THE INTERIOR U.S. Fish and Wildlife Service Ecological Services Office 4625 Morse Road, Sub2 104 Columbus, Ohne 43250 (614) 416-8993 / Fas (514) 415-8994



TAILS# 03E15000-2017-TA-0634

Dear Ms. Gresock,

We have received your recent correspondence requesting information about the subject proposal. There are no Federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area.

FEDERALLY LISTED, PROPOSED, AND CANDIDATE SPECIES COMMENTS: Due to the project, type, size, and location, we do not anticipate adverse effects to federally endangered, threatened, proposed, or candidate species. Should the project design change, or during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be initiated to assess any potential impacts.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or <u>ohio@fws.gov</u>.

Sincerely,

Dan Everson

Field Office Supervisor



## Ohio Department of Natural Resources

IOUNTR, KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

Ohio Division of Wildlife Raymond W. Petering, Chief 2045 Morse Rd., Bldg. G Columbus, OH 43229-6693 Phone: (614) 265-6300

17 January 2017

Lynn Gresock Tetra Tech, Inc. 2 Lan Dr. Westford, MA 01886

Dear Ms. Gresock,

After reviewing the Natural Heritage Database, I find the Division of Wildlife has no records of rare or endangered species in the Hannibal Power project area, including a one-mile radius, in Ohio Township, Monroe County, Ohio. We are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, nature preserves, parks or forests, national wildlife refuges, parks or forests or other protected natural areas within a one-mile radius of the project area.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. This letter only represents a review of rare species and natural features data within the Ohio Natural Heritage Database. It does not fulfill coordination under the National Environmental Policy Act (NEPA) or the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S. C. 661 et seq.) and does not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Please contact me at 614-265-6818 if I can be of further assistance.

Sincerely,



Debbie Woischke Ohio Natural Heritage Database Program

## Ohio Department of Natural Resources



IONN R, KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

Office of Real Estate Paul R. Baldridge, Chief 2045 Morse Road – Bldg. E-2 Columbus, OH 43229 Phone: (614) 265-6649 Fax: (614) 267-4764

March 3, 2017

Lynn Gresock Tetra Tech Inc. 661 Anderson Drive Pittsburgh, PA 15220

Re: 17-084; Hannibal Power Project

**Project:** The proposed project involves the construction and operation of a proposed natural gasfired combined cycle electric generation power plant and associated facilities on a site previously developed as an aluminum smelter.

Location: The proposed project is located in Ohio Township, Monroe County, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

**Natural Heritage Database:** A review of the Natural Heritage Database has no records at or within a one-mile radius of the project area.

A review of the Ohio Natural Heritage Database indicates there are no records of state endangered or threatened plants or animals within the project area. There are also no records of state potentially threatened plants, special interest or species of concern animals, or any federally listed species. In addition, we are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, state nature preserves, state or national parks, state or national forests, national wildlife refuges, or other protected natural areas within the project area. The review was performed on the project area you specified in your request as well as an additional one-mile radius. Records searched date from 1980.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although all types of plant communities have been surveyed, we only maintain records on the highest quality areas

#### Fish and Wildlife: The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to wetlands and other water resources be avoided and minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation.

The project is within the range of the Indiana bat (Myotis sodalis), a state endangered and federally endangered species. The following species of trees have relatively high value as potential Indiana bat roost trees: shagbark hickory (Carya ovata), shellbark hickory (Carya laciniosa), bitternut hickory (Carya cordiformis), black ash (Fraxinus nigra), green ash (Fraxinus pennsylvanica), white ash (Fraxinus americana), shingle oak (Quercus imbricaria), northern red oak (Quercus rubra), slippery elm (Ulmus rubra), American elm (Ulmus americana), eastern cottonwood (Populus deltoides), silver maple (Acer saccharinum), sassafras (Sassafras albidum), post oak (Quercus stellata), and white oak (Quercus alba). Indiana bat roost trees consists of trees that include dead and dying trees with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. However, Indiana bats are also dependent on the forest structure surrounding roost trees. If suitable habitat occurs within the project area, the DOW recommends trees be conserved. If suitable habitat occurs within the project area and trees must be cut, the DOW recommends cutting occur between October 1 and March 31. If suitable trees must be cut during the summer months, the DOW recommends a net survey be conducted between June 1 and August 15, prior to any cutting. Net surveys should incorporate either nine net nights per square 0.5 kilometer of project area, or four net nights per kilometer for linear projects. If no tree removal is proposed, this project is not likely to impact this species.

This project must not have an impact on freshwater native mussels at the project site. This applies to both listed and non-listed species. Per the Ohio Mussel Survey Protocol (2016), all Group 2, 3, and 4 streams (Appendix A) require a mussel survey. Per the Ohio Mussel Survey Protocol, Group 1 streams (Appendix A) and unlisted streams with a watershed of 10 square miles or larger above the point of impact should be assessed using the Reconnaissance Survey for Unionid Mussels (Appendix B) to determine if mussels are present. Mussel surveys may be recommended for these streams as well. This is further explained within the Ohio Mussel Survey Protocol. Therefore, if in-water work is planned in any stream that meets any of the above criteria, the DOW recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, the DOW recommends a professional malacologist conduct a mussel survey in the project area. If mussels that cannot be avoided are found in the project area, as a last resort, the DOW recommends a professional malacologist collect the mussels to suitable and similar habitat upstream of the project site. Mussel surveys and any subsequent mussel relocation should be done in accordance with the Ohio Mussel Survey Protocol. The Ohio Mussel Survey Protocol (2016) can be found at:

#### http://wildlife.ohiodnr.gov/portals/wildlife/pdfs/licenses%20&%20permits/OH%20Mussel%20Su rvey%20Protocol.pdf

The project is within the range of the Ohio lamprey (*Ichthyomyzon bdellium*) a state endangered fish, the channel darter (*Percina copelandi*), a state threatened fish, the Tippecanoe darter (*Etheostoma tippecanoe*), a state threatened fish, and the river darter (*Percina shumardi*), a state threatened fish. The DOW recommends no in-water work in the Ohio River from March 15 through June 30 and in other perennial streams from April 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*), a state endangered species and a federal species of concern. Due to the location, this project is not likely to impact this species.

The project is within the range of the black bear (*Ursus americanus*), a state endangered species. Due to the mobility of this species, this project is not likely to impact this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the US Fish & Wildlife Service.

Water Resources: The Division of Water Resources has the following comments.

The local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals for this project. Your local floodplain administrator contact information can be found at the website below.

http://water.ohiodnr.gov/water-use-planning/floodplain-management#PUB

ODNR appreciates the opportunity to provide these comments. Please contact John Kessler at (614) 265-6621 if you have questions about these comments or need additional information.

John Kessler ODNR Office of Real Estate 2045 Morse Road, Building E-2 Columbus, Ohio 43229-6693 John.Kessler@dnr.state.oh.us

## SHPO CORRESPONDENCE



In Response Reply To-2017-MOE-37785

May 30, 2017

Lynn Gresock, Environmental Consultant – Tetra Tech, Inc 2 Lan Drive, Suite 210 Westford, MA 01886

#### Re: Hannibal Power Project Ohio Township, Monroe County, Ohio

Dear Ms. Gresock

This is in response to correspondence from your office dated April 26, 2017 (received April 27), regarding the above referenced project. The comments of the Ohio State Historic Preservation Office (SLIPO) are submitted in accordance with Ohio Power Siting Board rules for power plant generation projects.

The project involves the construction of a natural gas fired electrical power plant within an existing industrial property. In addition, the project includes construction of electrical and pipeline interconnects along short corridors to connect the power plant to the grid.

Enclosed with the correspondence is a history-architecture survey report titled: "History/Architecture Investigations for the Hannibal Power Project in Hannibal, Ohio Township, Menroe County, Ohio" dated April 6, 2017, by Jacquelyn Lehmann, Weller & Associates, Inc.

Weller & Associates, Inc. (Weller), under contract with Tetra Tech, Inc., completed a history/architecture reconnaissance for the Hannibal Power Plant project. The SHPQ reviewed and offered comments on the reconnaissance field work design which complies with Ohio Power Siting Board (OPSB) rules for Power Plant applications. Weller identified six (6) properties that the firm recommends as eligible for inclusion in the National Register of Historic Places: MOF-327-12, MOE-330-12, MOE-332-12, MOE-334-12, MOE-335-12, and MOE-336-12. Our office agrees that these properties are eligible for listing in the National Register of Historic Places: Places. These properties are each evocative of latter 19<sup>th</sup> century rural architecture in southeastern Ohio. Fach property retains distinctive architectural features that qualifies if for listing in the National Register.

Pursuant to the OPSB rules Weller compiled additional information and offered assessments on the potential for the project to affect these six properties. The SHPO has reviewed these assessments, offers additional comments, and agrees that the project will not adversely affect any of these six properties. All six of the properties are located more than 2 miles from the project.

800 E 17th Ave., Columbus, OH 43211-2474 • 614,297.2300 • ohiohistory.org
Ms, Lynn Gresock May 30, 2017 Page 2

None of the properties are placed on a setting offering a broad panoramic view of the river valley. None of the properties are located on parcels where the construction and operation of the power plant will significantly alter the use of the parcel. In sum, it is the opinion of the SHPO that the characteristics that have led to meaningful preservation of these six properties during a span of many decades can reasonably be expected to remain in place after the completion of the project. For these reasons, the SHPO agrees that we can reasonably expect the current level of support for the continued meaningfulness and significance of these six properties.

In addition, the survey recorded the presence of three cemeteries within the OPSB study area for this project. As with the above listed six properties, it is our opinion that the construction and operation of the project will not increase the level of threat to these cemeteries. The cemeteries are located more than 1.5 miles from the proposed power plant and do not have an unimpeded view of the proposed plant buildings. In sum, as with the six properties listed above, we do not foresee direct consequences impinging on the operation and maintenance of these cemeteries.

In sum, the SHPO agrees that the project will not adversely affect places eligible for inclusion in the National Register of Historic Places or places of importance for preservation.

Any questions concerning this matter should be addressed to David Snyder at (614) 298-2000, between the hours of 8 am to 5 pm. Thank you for your cooperation

Sincerely, Diana Welling, Department Head Resource Protection and Review

DW/ds (Serial Number 1068595)

Ko Jon Pawley, OPSB (by email)

### OHIO HISTORY CONNECTION

800 E. 17th Ave., Columbus, OH 43211-2474 • 614.297.2300 • ohiohistory.org

# SUPPORTING CALCULATIONS

(prepared by Kiewit)

#### DEPARTMENT OF THE ARMY PITTSBURGH DISTRICT, CORPS OF ENGINEERS WILLIAM S. MOORHEAD FEDERAL BUILDING 1000 LIBERTY AVENUE PITTSBURGH, PA 15222-4186

REPLY TO ATTENTION OF

June 28, 2017

Operations and Division Regulatory Branch 1989-27

Ken Nicholson Ohio Rivers Partners Shareholders, LLC 43840 Ohio Street, Route 7 Hannibal, Ohio, 43931

Dear Mr. Nicholson:

I refer to your letter received in this office June 19, 2017, requesting the transfer of Department of the Army Permit No. 1989-27 from Hannibal Development LLC to Ohio River Partners Shareholders, LLC.

Enclosed is Department of the Army Permit No. 1989-27, in duplicate, transferring the permit to Ohio River Partners Shareholders, LLC.

The executed copy of the permit to be retained by Ohio River Partners Shareholders, LLC will not become effective until the <u>file copy</u> is signed by an authorized agent of Ohio River Partners Shareholders, LLC and returned to this office. The permit will become null and void if the <u>signed file copy</u> is not received within 30 days.

If you have any questions please contact George Brkovich at (412) 395-7247 or e-mail <u>george.r.brkovich@usace.armt.mil</u>. Please complete our customer survey online and provide us with feedback at http://corpsmapu.usace.army.mil/cm\_apex/f?p=136:4:0.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:

tt A. Hans Chief, Regulatory Branch

Enclosures

### TRANSFER OF

### DEPARTIVENT OF THE ARMY PERMIT

## FROM Hannibal Development, LUC

### PERMITTEE: Ohio River Partners Shareholder, LLC

PERMIT NUMBER: 1989-27

NOTE: The term you and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

**PROJECT DESCRIPTION:** Ohio River Partners Shareholder, LLC, 43840 Ohio Street, Route 7, Hannibal, Ohio, 43931 IS HEREBY AUTHORIZED BY THE SECRETARY OF THE ARMY TO: operate and maintain the waterfront facility's lower docks as per the conditions of this permit. This permit authorized the construction of a 2,700 linear feet waterfront, consisting of twenty (20) sheet metal mooring cells, with a top elevation of 643.0. The sheet metal cells range in a variety of sizes; three (3) 16'-1½" diameters, ten (10) 13'-7", three (3) 34'-9 5/8" diameters one (1) 35'-7 ½"and a cluster of four (4) sheet metal cells 40'-8 7/8" tied into one another to support a conveyor as per the revised drawing dated 8/17/90. A river water intake consisting of two 3000 gpm turbine pumps and a 5 ton Jib Crane had been constructed on sheet metal cell #18. IN ACCORDANCE WITH THE GENERAL AND SPECIAL CONDITIONS, AND THE PLANS AND DRAWINGS AND ANY ADDITIONAL SPECIAL CONDITIONS ATTACHED HERETO WHICH ARE INCORPORATED IN AND MADE A PART OF THIS PERMIT.

**PROJECT LOCATION:** THE PROJECT IS LOCATED IN Ohio River, Right Bank, River Mile 123.4 to 123.7, Lower Dock, at Buck Hill Bottom, Monroe County, Ohio.

### PERMIT CONDITIONS

#### **GENERAL CONDITIONS:**

1. The time limit for completing the work authorized has <u>expired</u>. Future modifications to this existing waterfront facility will require the permittee to notify this office.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you must make a good faith transfer

to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity, or should you desire to abandon it without a good faith transfer, you may obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archaeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

7. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

### **SPECIAL CONDITIONS:**

The maximum barge mooring width is limited to 4 jumbo widths or 140 feet riverward of the dock face.

### **FURTHER INFORMATION:**

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

Section 10 of the Rivers and Harbors Act of 1899

Section 404 of the Clean Water Act.

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

+Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures

provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as this specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

(PERM

7/12/17 (DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

(DISTRICT COMMANDER) JOHN P. LLOYD, COL

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFEREE)

(DATE)







#### DEPARTMENT OF THE ARMY

PITTSBURGH DISTRICT, CORPS OF ENGINEERS WILLIAM S. MOORHEAD FEDERAL BUILDING 1000 LIBERTY AVENUE PITTSBURGH, PA 15222-4186

REPLY TO

October 31, 2014

Operations Division Regulatory Branch 1989-27

Eric J. Spirtas Hannibal Development, LLC 43840 Ohio Street, Route 7 Hannibal, Ohio, 43931

Dear Mr. Spirtas:

I refer to your Department of the Army Permit, which was received back in this office on October 30, 2014. Enclosed for your records is a fully executed copy of Department of the Army Permit No. 1989-27 to transfer of Department of the Army Permit No. 1989-27 from Ormet Corporation to Hannibal Development, LLC.

Please note that a copy of this permit must be available on site at all times.

If you have any questions please contact George Brkovich at (412) 395-7247 or e-mail george.r.brkovich@usace.armt.mil. Please complete our customer survey online and provide us with feedback at http://corpsmapu.usace.army.mil/cm apex/f?p=136:4:0.

Sincerely,

t(

Scott A. Hans Chief, Regulatory Branch Pittsburgh District

Enclosure

#### TRANSFER OF

#### DEPARTMENT OF THE ARMY PERMIT

FROM Ormet Corporation

PERMITTEE: Hannibal Development, LLC

PERMIT NUMBER: 1989-27

NOTE: The term you and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

PROJECT DESCRIPTION: Hannibal Development, LLC, 43840 Ohio Street, Route 7, Hannibal, Ohio, 43931 IS HEREBY AUTHORIZED BY THE SECRETARY OF THE ARMY TO: operate and maintain the waterfront facility's lower docks as per the conditions of this permit. This permit authorized the construction of a 2,700 linear feet waterfront, consisting of twenty (20) sheet metal mooring cells, with a top elevation of 643.0. The sheet metal cells range in a variety of sizes; three (3) 16'-1½" diameters, ten (10) 13'-7", three (3) 34'-9 5/8" diameters one (1) 35'-7 ½"and a cluster of four (4) sheet metal cells 40'-8 7/8" tied into one another to support a conveyor as per the revised drawing dated 8/17/90. A river water intake consisting of two 3000 gpm turbine pumps and a 5 ton Jib Crane had been constructed on sheet metal cell #18. IN ACCORDANCE WITH THE GENERAL AND SPECIAL CONDITIONS, AND THE PLANS AND DRAWINGS AND ANY ADDITIONAL SPECIAL CONDITIONS ATTACHED HERETO WHICH ARE INCORPORATED IN AND MADE A PART OF THIS PERMIT.

PROJECT LOCATION: THE PROJECT IS LOCATED IN Ohio River, Right Bank, River Mile 123.4 to 123.7, Lower Dock, at Buck Hill Bottorn, Monroe County, Ohio.

#### PERMIT CONDITIONS

#### GENERAL CONDITIONS:

 The time limit for completing the work authorized has <u>expired</u>. Future modifications to this existing waterfront facility will require the permittee to notify this office.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you must make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to

maintain the authorized activity, or should you desire to abandon it without a good faith transfer, you may obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archaeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

7. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

#### SPECIAL CONDITIONS:

The maximum barge mooring width is limited to 4 jumbo widths or 140 feet riverward of the dock face.

#### FURTHER INFORMATION:

 Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

Section 10 of the Rivers and Harbors Act of 1899

Section 404 of the Clean Water Act.

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

 Damage claims associated with any future modification, suspension, or revocation of this permit.

Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

Recvaluation of Permit Decision. This office may recvaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a recvaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

 The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

+Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as this specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

(PERMITTEE) EKIC T. SPINIA

2014 27 OCT (DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

Chid, Regulatory Branch BERNARD R. LINDSTROM

Colonel, Corps of Engineers District Engineer

(DATE)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFEREE)

Oct-2014 (DATE)





Cell #18, East River Intake Change to Hannibal Development, LLC 78085

Ore Load/Unload Change to Hannibal Development, LLC 1989-27

Cell #1. West River Intake Change to Hannibal Development, LLC

Builds Joneo

1989-26











This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

1/14/2020 3:40:18 PM

in

Case No(s). 17-1091-EL-BLN

Summary: Notice of Submittal of Permits electronically filed by Mr. MacDonald W Taylor on behalf of Long Ridge Energy Generation LLC