



Environmental  
Protection Agency

Ted Strickland, Governor  
Lee Fisher, Lt. Governor  
Chris Korleski, Director

5/25/2010

Certified Mail

John Funke  
Duke Energy Indiana, Madison Generating Station  
PO Box 960  
Mail Drop EX552  
Cincinnati, OH 45201

Facility ID: 1409000896  
Permit Number: P0105343  
County: Butler

RE: DRAFT AIR POLLUTION TITLE V PERMIT  
Permit Type: Renewal

Dear Permit Holder:

A draft of the OAC Chapter 3745-77 Title V permit for the referenced facility has been issued. The purpose of this draft is to solicit public comments. A public notice will appear in the Ohio EPA Weekly Review and the local newspaper, Journal News. A copy of the public notice, the Statement of Basis, and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc) by clicking the "Issued Air Pollution Control Permits" link. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall  
Permit Review/Development Section  
Ohio EPA, DAPC  
122 South Front Street  
Columbus, Ohio 43215

and Hamilton County Dept. of Environmental Services  
250 William Howard Taft Pkwy.  
Cincinnati, OH 45219-2660

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified in writing if a public hearing is scheduled. A decision on processing the Title V permit will be made after consideration of comments received and oral testimony if a public hearing is conducted. You will then be provided with a Preliminary Proposed Title V permit and another opportunity to comment prior to the 45-day Proposed Title V permit submittal to U.S. EPA Region 5. The permit will be issued final after U.S. EPA review is completed and no objections to the final issuance have been received. If you have any questions, please contact Hamilton County Dept. of Environmental Services at (513)946-7777.

Sincerely,

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

Cc: U.S. EPA Region 5 - *Via E-Mail Notification*  
HCDOES; Indiana; Kentucky



PUBLIC NOTICE  
Issuance of Draft Air Pollution Title V Permit  
Duke Energy Indiana, Madison Generating Station

Issue Date: 5/25/2010

Permit Number: P0105343

Permit Type: Renewal

Permit Description: Electric generation utility with eight natural gas-fired, 80MW, simple-cycle turbines, two emergency diesel generators, and seven Insignificant Emissions Units

Facility ID: 1409000896

Facility Location: Duke Energy Indiana, Madison Generating Station  
P. O Box 348, 5657 Kennel Road  
Trenton, OH 45067

Facility Description: Fossil Fuel Electric Power Generation

Chris Korleski, Director of the Ohio Environmental Protection Agency, 50 West Town Street, Columbus Ohio, has issued a draft action of an air pollution control Title V operating permit for the facility at the location identified above on the date indicated. Comments concerning this draft action, or a request for a public meeting, must be sent in writing no later than thirty (30) days from the date this notice is published. All comments, questions, requests for permit applications or other pertinent documentation, and correspondence concerning this action must be directed to Paul Tedtman at Hamilton County Dept. of Environmental Services, 250 William Howard Taft Pkwy., Cincinnati, OH 45219-2660 or (513)946-7777. The permit, which includes a detailed description of the operations, and associated statement of basis for the permit requirements, can be downloaded from the Web page: [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc)



## Statement of Basis For Air Pollution Title V Permit

Facility ID:	140900896
Facility Name:	Duke Energy Indiana, Madison Station
Facility Description:	Turbine Electrical Generation Station
Facility Address:	5657 Kennel Road, Trenton OH 45067
Permit #:	P0105343

This facility is subject to Title V because it is major for:

- Lead
  Sulfur Dioxide
  Carbon Monoxide
  Volatile Organic Compounds
  Nitrogen Oxides  
 Particulate Matter ≤ 10 microns
  Single Hazardous Air Pollutant
  Combined Hazardous Air Pollutants  
 Maximum Available Control Technology Standard(s)

### A. Standard Terms and Conditions

Has each insignificant emissions unit been reviewed to confirm it meets the definition in OAC rule 3745-77-01 (U)?	Yes
Were there any "common control" issues associated with this facility? If yes, provide a summary of those issues and explain how the DAPC decided to resolve them	No
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a minor permit modification per OAC rule 3745-77-08(C)(1)	NA
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a significant permit modification per OAC rule 3745-77-08(C)(3)	NA
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a reopening per OAC rule 3745-77-08(D)	NA
Please identify the affected unit(s) and associated PTI, if	NA

applicable, along with a brief description of any changes to the permit document resulting from a renewal per OAC rule 3745-77-08(E)	
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B. Facility-Wide Terms and Conditions			
Term and Condition (paragraph)	Basis		Comments
	SIP (3745- )	Other	
B.2	77-07(A)(13)		Listing of Insignificant Emission Units
B.3-B.4	14-01		NOx Budget/C.A.I.R Terms and Conditions

**C Emissions Unit Terms and Conditions**

Key:  
 EU = emissions unit ID  
 ND = negative declaration (i.e., term that indicates that a particular rule(s) is (are) not applicable to a specific emissions unit)  
 OR = operational restriction  
 M = monitoring requirements  
 St = streamlining term used to replace a PTI monitoring, record keeping, or reporting requirement with an equivalent or more stringent requirement  
 ENF = did noncompliance issues drive the monitoring requirements?  
 R = record keeping requirements  
 Rp = reporting requirements  
 ET = emission testing requirements (not including compliance method terms)  
 Misc = miscellaneous requirements

EU(s)	Limitation	Basis		ND	OR	M	St	ENF	R	St	Rp	St	ET	Misc	Comments
		SIP (3745- )	Other												
P001-P008	See Com		40 C F	N	Y	Y	Y	N	Y	Y	Y	Y	N		The operational restrictions for the amount of natural gas and fuel oil burned, along with the NOx Continuous Emission



															<p>following emission limitations:</p> <p>83 pounds per cycle when burning natural gas; and</p> <p>130 pounds per cycle when burning fuel oil.</p>
P001-P008	See Comment Section for CO limits.		40 C F R 52.21	N	Y	Y	Y	N	Y	Y	Y	Y	N		<p>The operational restrictions for the amount of natural gas and fuel oil burned along with the CO Continuous Emission Monitoring System ensures compliance with the CO emission limitations specified below.</p> <p>-Total combined emissions from combustion turbines P001 through P008 at all load conditions, for all fuels combusted, including start up and shut down shall not exceed the following emission limitations:</p> <p>541.0 TPY of carbon monoxide (CO), based on a rolling, 12-month summation.</p> <p>-Emissions of carbon monoxide (CO) from this emissions unit shall not exceed 54.0 pounds per hour, excluding startup and shutdown periods.</p> <p>-The emissions from startup and shutdown operations shall not exceed the following emission limitations:</p> <p>308 pounds per cycle when burning natural gas; and</p> <p>354 pounds per cycle when burning fuel oil.</p>
P001-P008	See Comment		40 C F	N	Y	Y	Y	N	Y	Y	Y	Y	N		<p>The operational restrictions for the amount of natural gas and fuel oil burned, along with the sulfur content restrictions ensures compliance with the SO2</p>

	Section for SO2 limits.		R 52.21												<p>emission limitations specified below.</p> <p>-Total combined emissions from combustion turbines P001 through P008 at all load conditions, for all fuels combusted, including start up and shut down shall not exceed the following emission limitations:</p> <p>120.8 TPY of sulfur dioxide (SO2), based on a rolling, 12-month summation.</p> <p>The following short term SO2 emission limitations shall not be exceeded:</p> <p>58.0 pounds per hour*; and</p> <p>when burning diesel fuel, emissions of SO2 shall not exceed 0.0456 pound per million Btu of actual heat input.</p> <p>*The lbs per hour SO2 emission limitation is based on the emission unit's potential to emit. Therefore no hourly records are required to demonstrate compliance with the emission limit.</p>
P001-P008	See Comment Section for TPY emission limits for PE/PM10, H2SO4 mist,		40 C F R 52.21	N	Y	Y	Y	N	Y	Y	Y	Y	N		<p>The operational restrictions for the amount of natural gas and fuel oil burned ensures compliance with the TPY emission limitations specified below. Additionally, monthly emission calculations for the pollutants listed below for the updated rolling 12-month summations and quarterly deviation reports are required.</p> <p>-Total combined emissions from combustion turbines P001 through P008 at all load conditions, for all fuels combusted, including start up and shut down shall</p>

	benzene, beryllium, and arsenic.														<p>not exceed the following emission limitations:</p> <p>60.5 TPY of particulate emissions (PE) and emissions of particulate matter 10 microns and less (PM10), based on a rolling, 12-month summation;</p> <p>12.2. TPY of H2SO4 mist, based on a rolling, 12-month summation;</p> <p>7.7 TPY of benzene, based on a rolling, 12-month summation;</p> <p>0.00084 TPY of beryllium, based on a rolling, 12-month summation; and</p> <p>0.012 TPY of arsenic, based on a rolling, 12-month summation.</p>
P001-P008	See Comment Section for short term emission limits for PE/PM10, and H2SO4		40 C F R 52.21	N	N	N	Y	N	N	Y	N	Y	N		<p>Total combined emissions from combustion turbines P001 through P008 at all load conditions, for all fuels combusted, including start up and shut down shall not exceed the following emission limitations:</p> <p>Emissions of sulfuric acid (H2SO4) mist from this emissions unit shall not exceed 6.0 pounds per hour*.</p> <p>Emissions of PE/PM10 from this emissions unit shall not exceed 0.008 pound per million Btu*.</p>



															month summation.
P001-P010	20% VE limitation	17-07(A)		N	Y	Y	Y	N	Y	Y	Y	Y	N		The emission units have an operational restriction to burn only inherently clean fuels.
P009-P010	See comments section for the lbs/hr emission limitations		40 C F R P a r t 5 2 .2 1	N	N	N	Y	N	N	Y	N	Y	N		Emissions from each diesel generator, P009 & P010, shall not exceed: 8.61 pounds of SO2 per hour; 55.07 pounds of nitrogen oxides (NOx) per hour; 14.63 pounds of carbon monoxide (CO) per hour; and 1.55 pounds of volatile organic compounds (VOC) per hour. The hourly emission limitations represent the potentials to emit (PTE) for each diesel generator, P009 & P010. Therefore, no additional monitoring, recordkeeping or reporting requirements are required to demonstrate compliance with these emission limitations.
P009-P010	See comments section for the TPY emission limitations		40 C F R P a r t 5 2 .2 1	N	Y	Y	Y	N	Y	Y	Y	Y	N		Compliance with the TPY emission limitations for the pollutants specified below are ensured by compliance with the restricted annual hours of operation and the fuel oil quality operational restrictions.  Emissions from each diesel generator, P009 & P010, shall not exceed: 0.27 ton per year (TPY) of PE, based upon a rolling, 12-month summation of the monthly emissions; 2.15 TPY of SO2, based upon a rolling, 12-month summation of the monthly emissions; 13.77 TPY of NOx, based upon a rolling, 12-month summation of the monthly

															emissions; 3.66 TPY of CO, based upon a rolling, 12-month summation of the monthly emissions; and 0.39 TPY of VOC, based upon a rolling, 12-month summation of the monthly emissions.
P009-P010	See comments section for the TPY emission limitation for VOC	31-05(D)		N	Y	Y	Y	N	Y	Y	Y	Y	N		Compliance with the TPY emission limitation for VOC listed below is ensured by compliance with the restricted annual hours of operation. Emissions from each diesel generator, P009 & P010, shall not exceed: 0.39 TPY of VOC, based upon a rolling, 12-month summation of the monthly emissions.
P009-P010	0.062 pound PE per million Btu of actual heat content.	17-11(B)(5)(b)		N	Y	Y	Y	N	Y	Y	Y	Y	N		The emission unit is limited to burning only diesel fuel. The PE emissions from the combustion of diesel fuel ensures compliance with the emission limitation.
P009-P010	0.5 pound SO2 per million Btu of actual heat input.	18-06(g)		N	Y	Y	Y	N	Y	Y	Y	Y	N		The emission unit is limited to burning only diesel fuel with a sufficient sulfur content to ensure compliance with the SO2 emission limitation.



**Ohio**

**Environmental  
Protection Agency**

**DRAFT**

**Division of Air Pollution Control  
Title V Permit**

for

**Duke Energy Indiana, Madison Generating Station**

Facility ID: 1409000896  
Permit Number: P0105343  
Permit Type: Renewal  
Issued: 5/25/2010  
Effective: To be entered upon final issuance  
Expiration: To be entered upon final issuance





Division of Air Pollution Control
Title V Permit
for
Duke Energy Indiana, Madison Generating Station

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## Authorization

Facility ID: 1409000896  
Facility Description: Electric generation utility with eight natural gas-fired, 80MW, simple-cycle turbines  
Application Number(s): A0038147  
Permit Number: P0105343  
Permit Description: Electric generation utility with eight natural gas-fired, 80MW, simple-cycle turbines, two emergency diesel generators, and seven Insignificant Emissions Units  
Permit Type: Renewal  
Issue Date: 5/25/2010  
Effective Date: To be entered upon final issuance  
Expiration Date: To be entered upon final issuance  
Superseded Permit Number:

This document constitutes issuance of an OAC Chapter 3745-77 Title V permit to:

Duke Energy Indiana, Madison Generating Station  
P. O Box 348  
5657 Kennel Road  
Trenton, OH 45067

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

Hamilton County Dept. of Environmental Services  
250 William Howard Taft Pkwy.  
Cincinnati, OH 45219-2660  
(513)946-7777

The above named entity is hereby granted a Title V permit pursuant to Chapter 3745-77 of the Ohio Administrative Code. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. You will be sent a notice approximately 18 months prior to the expiration date regarding the renewal of this permit. If you do not receive a notice, please contact the Hamilton County Dept. of Environmental Services. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, if a timely renewal application is submitted. A renewal application will be considered timely if it is submitted no earlier than 18 months (540 days) and no later than 6 months (180 days) prior to the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski  
Director

## 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. 24., Reporting Requirements Related to Monitoring and Record Keeping Requirements of State-Only Enforceable Permit Terms and Conditions
  - (2) Standard Term and Condition A. 25., Records Retention Requirements for State-Only Enforceable Permit Terms and Conditions
  - (3) Standard Term and Condition A. 27., Scheduled Maintenance/Malfunction Reporting
  - (4) Standard Term and Condition A. 29., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations  
*(Authority for term: ORC 3704.036(A))*

**2. 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 (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit), 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.  
*(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))*
- 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 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.  
*(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))*
- c) The permittee shall submit required reports in the following manner:
  - (1) All reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations caused by malfunctions shall be submitted in the following manner:

Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the OAC rule 3745-77-07(A)(3)(c) deviation reporting requirements for malfunctions, written reports that identify each malfunction that occurred during each calendar quarter (including each malfunction reported only verbally in accordance with OAC rule 3745-15-06) shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year in accordance with Standard Term and Condition A.2.c)(2) below; and each report shall cover the previous calendar quarter. An exceedance of the visible emission limitations specified in OAC rule 3745-17-07(A)(1) that is caused by a malfunction is not a violation and does not need to be reported as a deviation if the owner or operator of the affected air contaminant source or air pollution control equipment complies with the requirements of OAC rule 3745-17-07(A)(3)(c).

In accordance with OAC rule 3745-15-06, a malfunction reportable under OAC rule 3745-15-06(B) constitutes a violation of an emission limitation (or control requirement) and, therefore, is a deviation of the federally enforceable permit requirements. Even though verbal notifications and written reports are required for malfunctions pursuant to OAC rule 3745-15-06, the written reports required pursuant to this term must be submitted quarterly to satisfy the prompt reporting provision of OAC rule 3745-77-07(A)(3)(c).

In identifying each deviation caused by a malfunction, the permittee shall specify the emission limitation(s) (or control requirement(s)) for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing on a quarterly basis.

Any scheduled maintenance, as referenced in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described above for malfunctions.

*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

- (2) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit or, in some cases, in section B. Facility-Wide Terms and Conditions of this Title V permit), all reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations of the emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. Except as provided below, the written reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

In identifying each deviation, the permittee shall specify the emission limitation(s), operational restriction(s), and/or control device operating parameter limitation(s) for which the deviation occurred, describe each deviation, and provide the estimated magnitude and duration of each deviation.

These written deviation reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations. Full compliance with OAC rule 3745-77-07(A)(3)(c) requires reporting of all other deviations of the federally enforceable requirements specified in the permit as required by such rule.

If an emissions unit has a deviation reporting requirement for a specific emission limitation, operational restriction, or control device operating parameter limitation that is not on a quarterly basis (e.g., within 30 days following the end of the calendar month, or within 30 or 45 days after the exceedance occurs), that deviation reporting requirement satisfies the reporting requirements specified in this Standard Term and Condition for that specific emission limitation, operational restriction, or control device parameter limitation. Following the provisions of that non-quarterly deviation reporting requirement will also satisfy (for the deviations so reported) the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations, and additional quarterly deviation reports for that specific emission limitation, operational restriction, or control device parameter limitation are not required pursuant to this Standard Term and Condition.

See A.29 below if no deviations occurred during the quarter.  
(*Authority for term: OAC rule 3745-77-07(A)(3)(c)*)

- (3) All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) for other deviations of the federally enforceable permit requirements which are not reported in accordance with Standard Term and Condition A.2)c)(2) above shall be submitted in the following manner:

Unless otherwise specified by rule, written reports that identify deviations of the following federally enforceable requirements contained in this permit; Standard Terms and Conditions: A.3, A.4, A.5, A.7.e), A.8, A.13, A.15, A.19, A.20, A.21, and A.23 of this Title V permit, as well as any deviations from the requirements in section C. Emissions Unit Terms and Conditions of this Title V permit, and any monitoring, record keeping, and reporting requirements, which are not reported in accordance with Standard Term and Condition A.2.c)(2) above shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency by January 31 and July 31 of each year; and each report shall cover the previous six calendar months. Unless otherwise specified by rule, all other deviations from federally enforceable requirements identified in this permit shall be submitted annually as part of the annual compliance certification, including deviations of federally enforceable requirements not specifically addressed by permit or rule for the insignificant activities or emissions levels (IEU) identified in section B. Facility-Wide Terms and Conditions of this Title V permit. Annual reporting of deviations is deemed adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.



In identifying each deviation, the permittee shall specify the federally enforceable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation.

These semi-annual and annual written reports shall satisfy the reporting requirements of OAC rule 3745-77-07(A)(3)(c) for any deviations from the federally enforceable requirements contained in this permit that are not reported in accordance with Standard Term and Condition A.2.c)(2) above.

If no such deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no such deviations occurred during that period.  
*(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii) and OAC rule 3745-77-07(A)(13)(b))*

- (4) 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 (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete."  
*(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))*
- (5) Reports of any required monitoring and/or record keeping information shall be submitted to Hamilton County Dept. of Environmental Services.  
*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

### 3. Scheduled Maintenance

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06(A)(3), any scheduled maintenance necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s). Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described for malfunctions in Standard Term and Condition A.2.c)(1) above.  
*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

### 4. Risk Management Plans

If applicable, the permittee shall 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"); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

- a) a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or
- b) as part of the compliance certification submitted under 40 C.F.R. 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 C.F.R. Part 68 and OAC Chapter 3745-104, including the registration and submission of the risk management plan.  
*(Authority for term: OAC rule 3745-77-07(A)(4))*

### 5. 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.

*(Authority for term: OAC rule 3745-77-07(A)(5))*

## 6. Severability Clause

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.

*(Authority for term: OAC rule 3745-77-07(A)(6))*

## 7. General Requirements

- a) The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- 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, reopened, revoked, or revoked and reissued, for cause, in accordance with Standard Term and Condition A.11 below. 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, reopening 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.
- f) Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable when:
  - (1) the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a "major source" as defined in

OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or

- (2) the permittee no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or
- (3) a combination of (1) and (2) above.

The permittee shall continue to comply with all applicable OAC Chapter 3745-31 requirements for all regulated air contaminant sources once this permit ceases to be enforceable. The permittee shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.

*(Authority for term: OAC rule 3745-77-01(W), OAC rule 3745-77-07(A)(3)(b)(ii), OAC rule 3745-77(A)(7))*

**8. 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.

*(Authority for term: OAC rule 3745-77-07(A)(8))*

**9. Marketable Permit Programs**

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.

*(Authority for term: OAC rule 3745-77-07(A)(9))*

**10. Reasonably Anticipated Operating Scenarios**

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these standard terms and conditions shall apply to all operating scenarios authorized in this permit.

*(Authority for term: OAC rule 3745-77-07(A)(10))*

**11. Reopening for Cause**

This Title V permit will be reopened prior to its expiration date under the following conditions:

- a) Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.

- b) This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.
- c) The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.
- d) The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.  
*(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))*

## **12. Federal and State Enforceability**

Only those terms and conditions designated in this permit as federally enforceable, that 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, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.  
*(Authority for term: OAC rule 3745-77-07(B))*

## **13. Compliance Requirements**

- a) Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V 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 paragraph (E) of OAC rule 3745-77-03.
  - (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 appropriate Ohio EPA District Office or local air agency 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.
- d) Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) and the Administrator of the U.S. EPA in the following manner and with the following content:
  - (1) Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted (i.e., postmarked) on or before April 30th of each year during the permit term.
  - (2) Compliance certifications shall include the following:
    - a. An identification of each term or condition of this permit that is the basis of the certification.
    - b. The permittee's current compliance status.
    - c. Whether compliance was continuous or intermittent.
    - d. The method(s) used for determining the compliance status of the source currently and over the required reporting period.
    - e. Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
  - (3) Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

(Authority for term: OAC rules 3745-77-07(C)(1),(2),(4) and (5) and ORC section 3704.03(L))



#### 14. Permit Shield

- a) Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.
- b) This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

*(Authority for term: OAC rule 3745-77-07(F))*

#### 15. Operational Flexibility

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the appropriate Ohio EPA District Office or local air agency with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the appropriate District Office of the Ohio EPA or local air agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).

*(Authority for term: OAC rules 3745-77-07(H)(1) and (2))*

#### 16. Emergencies

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met. This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.

*(Authority for term: OAC rule 3745-77-07(G))*

#### 17. Off-Permit Changes

The owner or operator of a Title V source may make any change in its operations or emissions at the source that is not specifically addressed or prohibited in the Title V permit, without obtaining an amendment or modification of the permit, provided that the following conditions are met:

- a) The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.
- b) The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA, except that no such notice shall be required for changes that qualify as insignificant emissions levels or activities as defined in OAC rule 3745-77-01(U).



Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.

- c) The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).
- d) The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.
- e) The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit-to-install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that Chapter. Nothing in paragraph (I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.  
*(Authority for term: OAC rule 3745-77-07(I))*

## **18. Compliance Method Requirements**

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Fed. Reg. 8314, Feb. 24, 1997), in the context of any future proceeding.  
*(This term is provided for informational purposes only.)*

## **19. Insignificant Activities or Emissions Levels**

Each IEU that has one or more applicable requirements shall comply with those applicable requirements.  
*(Authority for term: OAC rule 3745-77-07(A)(1))*

## **20. Permit to Install Requirement**

Prior to the "installation" or "modification" of any "air contaminant source," as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.  
*(Authority for term: OAC rule 3745-77-07(A)(1))*

## **21. 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.  
*(Authority for term: OAC rule 3745-77-07(A)(1))*

**22. Permanent Shutdown of an Emissions Unit**

The permittee may notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification from the responsible 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 responsible official that the emissions unit was permanently shut down.

After the date on which an emissions unit is permanently shut down (i.e., that 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 and therefore ceases to meet the definition of an "emissions unit" as defined in OAC rule 3745-77-01(O)), rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the date of the certification and submission to Ohio EPA, to meet any Title V permit requirements applicable to that emissions unit, except for any residual requirements, such as the quarterly deviation reports, semi-annual deviation reports and annual compliance certification covering the period during which the emissions unit last operated. All records relating to the shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law.

No emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit to install pursuant to OAC Chapter 3745-31.  
(Authority for term: OAC rule 3745-77-01)

**23. Title VI Provisions**

If applicable, the permittee shall comply with the standards for recycling and reducing emissions of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

- a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 CFR 82.156.
- b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment specified in 40 CFR 82.158.
- c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.  
(Authority for term: OAC rule 3745-77-01(H)(11))

**24. Reporting Requirements Related to Monitoring and Record Keeping Requirements Under State Law Only**

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable

cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

## **25. Records Retention Requirements Under State Law Only**

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.

## **26. Inspections and Information Requests**

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. 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, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

*(Authority for term: OAC rule 3745-77-07(C))*

## **27. 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 of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of 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 emissions unit(s) that is (are) served by such control system(s).

## **28. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

*(Authority for term: OAC rule 3745-77-01(C))*

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

If no emission limitation (or control requirement), operational restriction and/or control device parameter limitation deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

The permittee is not required to submit a quarterly report which states that no deviations occurred during that quarter for the following situations:

- a) where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in Standard Term and Condition A.2.c)(2); or
- b) where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potentials to emit; or
- c) where the company's responsible official has certified that an emissions unit has been permanently shut down.

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

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
  - a) None.
2. The following insignificant emissions units are located at this facility:
  - a) F001 - plant roadways and parking areas;
  - b) L001 – non-halogenated parts washer; and
  - c) P011 - 140 kilowatt emergency diesel fire pump (PTI 14-04682).

Each insignificant emissions unit at this facility must comply with all applicable state and federal regulations, as well as any emission limitations and/or control requirements contained within a permit to install for the emissions unit. Insignificant emissions units listed above that are not subject to specific permit to install requirements are subject to one or more applicable requirements contained in the SIP-approved versions of OAC Chapters 3745-17, 3745-18, and 3745-21.

3. The permittee shall ensure that any CAIR NO<sub>x</sub>, SO<sub>2</sub>, or NO<sub>x</sub> ozone season units complies with the requirements of OAC 3745-109, which includes submitting timely permit applications. The permittee shall ensure that the affected emissions units comply with those requirements. Emissions exceeding any allowances that are lawfully held under Ohio rule 3745-109 are prohibited.

[Authority for term: OAC rule 3745-77-07(A)(5)]

4. Nitrogen Oxides (NO<sub>x</sub>) Budget Trading Program – OAC Chapter 3745-14 and Clean Air Interstate Rule – OAC Chapter 3745-109.
  - a) Facility Code – 1409000896.
  - b) The following regulated emissions units are subject to the applicable requirements specified in OAC Chapter 3745-14 pursuant to OAC rule 3745-14-01(C)(1)(a):
    - (1) P001 – 84.65 megawatt gas/diesel simple cycle combustion turbine;
    - (2) P002 – 84.65 megawatt gas/diesel simple cycle combustion turbine;
    - (3) P003 – 84.65 megawatt gas/diesel simple cycle combustion turbine;
    - (4) P004 – 84.65 megawatt gas/diesel simple cycle combustion turbine;
    - (5) P005 – 84.65 megawatt gas/diesel simple cycle combustion turbine;
    - (6) P006 – 84.65 megawatt gas/diesel simple cycle combustion turbine;
    - (7) P007 – 84.65 megawatt gas/diesel simple cycle combustion turbine; and
    - (8) P008 – 84.65 megawatt gas/diesel simple cycle combustion turbine.

Note: Ohio EPA DAPC has completed draft rule amendments for OAC Chapter 3745-14, specifically, OAC rule 3745-14-01 and OAC rule 3745-14-06, to facilitate the transition of the



affected units from OAC Chapter 3745-14 into the federal Clean Air Interstate Rule (CAIR) program and to begin the process of "sunsetting" the parts of OAC Chapter 3745-14 which will no longer be needed as a result of Ohio's CAIR rules (OAC Chapter 3745-109). Revising the applicability section of OAC Chapter 3745-14 will allow the rules to remain available as a backup until court required revisions to the federal CAIR program have been completed. The revision to OAC rule 3745-14-01(C)(2)(a) will require all affected units to be subject to and meet the requirements of Ohio's CAIR program beginning in 2009. Should USEPA eliminate or suspend the CAIR program, this revision would require these units to revert back and meet the requirements of OAC Chapter 3745-14, provided a NOx allowance tracking system is maintained by USEPA.

- c) The following regulated electrical generating units are subject to the applicable CAIR allowances stated below:

Table with 3 columns: Emissions Unit Identification Number, Annual CAIR Allowance (tons) for years 2009 - 2014, Ozone Season Allowance (tons) for years 2009 - 2014. Rows include units P001 through P008.

- d) The emissions units identified in 4.b) above are NOx budget units under OAC rule 3745-14-01(C)(1).

[OAC rule 3745-14-01(C)(1)(a)(i)]

- e) The NOx authorized account representative shall submit a complete NOx budget permit application in accordance with the deadlines specified in paragraphs (B)(2) and (B)(3) of OAC rule 3745-14-03. The NOx authorized account representative shall also submit, in a timely manner, any supplemental information that the Director determines is necessary in order to review a NOx budget permit application and issue or deny a NOx budget permit.

[OAC rules 3745-14-01(E)(1)(a)(i), 3745-14-01(E)(1)(a)(ii), and 3745-14-03(B)(1)]

- f) Beginning May 31, 2004, the owners and operators of each NOx budget source and each NOx budget unit at the source shall hold NOx allowances available for compliance deductions under paragraph (E) of OAC rule 3745-14-06, as of the NOx allowance transfer deadline, in the unit's

compliance account and the source's overdraft account in an amount not less than the total NOx emissions for the control period from the unit, as determined in accordance with OAC rule 3745-14-08, plus any amount necessary to account for actual utilization under paragraph (C)(5) of OAC rule 3745-14-05 for the control period.

[OAC rules 3745-14-01(E)(3)(a) and 3745-14-01(E)(3)(c)]

- g) NOx allowances shall be held in, deducted from, or transferred among NOx allowance tracking system accounts in accordance with OAC rules 3745-14-05, 3745-14-06, 3745-14-07, and 3745-14-09.

[OAC rule 3745-14-01(E)(3)(d)]

- h) A NOx allowance shall not be deducted, in order to comply with the requirement under paragraph (E)(3)(a) of OAC rule 3745-14-01, for a control period in a year prior to the year for which the NOx allowance was allocated.

[OAC rule 3745-14-01(E)(3)(e)]

- i) Each ton of NOx emitted in excess of the NOx budget emission limitation, as defined in OAC rule 3745-14-01(B)(2)(yy), shall constitute a separate violation of OAC Chapter 3745-14, the Clean Air Act, and applicable Ohio law. The owners and operators of a NOx budget unit that has excess emissions in any control period shall surrender the NOx allowances required for deduction under paragraph (E)(4)(a) of OAC rule 3745-14-06 and pay any fine, penalty, or assessment or comply with any other remedy imposed under paragraph (E)(4)(c) of OAC rule 3745-14-06.

[OAC rules 3745-14-01(E)(3)(b), 3745-14-01(E)(4)(a) and 3745-14-01(E)(4)(b)]

- j) When recorded by the Administrator pursuant to OAC rules 3745-14-06 and 3745-14-07, every allocation, transfer, or deduction of a NOx allowance to or from a NOx budget unit's compliance account or the overdraft account of the source where the unit is located is deemed to amend automatically, and become a part of, any NOx budget permit of the NOx budget unit by operation of law without any further review.

[OAC rule 3745-14-01(E)(3)(h)]

- k) Except as provided below, the Director shall revise the NOx budget permit, as necessary, in accordance with OAC rule 3745-77-08.

Each NOx budget permit is deemed to incorporate automatically the definitions of terms under paragraph (B) of OAC rule 3745-14-01 and, when recorded by the Administrator, in accordance with OAC rules 3745-14-06 and 3745-14-07, every allocation, transfer, or deduction of a NOx allowance to or from the compliance accounts of the NOx budget units covered by the permit or the overdraft account of the NOx budget source covered by the permit.

[OAC rules 3745-14-03(D)(2) and 3745-14-03(E)(1)]

- l) The owner or operator of a NOx budget unit shall comply with the prohibitions under OAC rule 3745-14-08(A)(5).

[OAC rule 3745-14-08(A)(5)]

- m) The owners and operators of the NOx budget unit shall keep on site at the source each of the following documents for a period of five years from the date the document is created: (This period may be extended for cause, at any time prior to the end of five years, in writing by the Director or Administrator.)
- (1) the account certificate of representation for the NOx authorized account representative for the NOx budget unit and all documents that demonstrate the truth of the statements in the account certificate of representation, in accordance with paragraph (D) of OAC rule 3745-14-02, provided that the certificate and documents shall be retained on site at the source beyond such five-year period until such documents are superseded because of the submission of a new account certificate or representation changing the NOx authorized account representative;
  - (2) all emission monitoring information, in accordance with OAC rule 3745-14-08;
  - (3) copies of all reports, compliance certifications, and other submissions and all records made or required under the NOx budget trading program; and
  - (4) copies of all documents used to complete a NOx budget permit application and any other submission under the NOx budget trading program or to demonstrate compliance with the requirements of the NOx budget trading program.

[OAC rule 3745-14-01(E)(5)(a)(i) through (iv)]

- n) The permittee shall operate and maintain equipment to continuously estimate and record nitrogen oxides emissions from these emissions units in units of the applicable standard(s). Such continuous estimating and recording equipment shall comply with the requirements specified in 40 CFR Part 75, Appendix E.

The permittee shall comply with the initial and re-certification procedures of 40 CFR Part 75.

The permittee shall maintain records of the following data obtained by the continuous nitrogen oxides estimating system: emissions of nitrogen oxides in lb/MMBtu actual heat input on an hourly average basis and emissions of nitrogen oxides in lbs/hr.

Whenever the monitoring system fails to meet the quality assurance or data validation requirements of 40 CFR Part 75, data shall be substituted using the applicable procedures in Subpart D, Appendix D, or Appendix E of 40 CFR Part 75.

[OAC rules 3745-14-01(E)(2)(a), 3745-14-01(E)(5)(a)(ii), 3745-14-08(A)(2)(a) through (A)(2)(d), 3745-14-08(B)(1), and 3745-14-08(C)(1)]

- o) The permittee shall comply with the monitoring plan requirements of 40 CFR Part 75.62, except that the monitoring plan shall also include all of the information required by Subpart H of 40 CFR Part 75.

[OAC rule 3745-14-08(E)(2)(a)]

- p) The NOx authorized account representative of the NOx budget unit shall submit the reports and compliance certifications required under the NOx budget trading program, including those under OAC rules 3745-14-04 and 3745-14-08, to the Director and Administrator.

[OAC rule 3745-14-01(E)(5)(b)]

- q) Each submission under the NOx budget trading program shall be submitted, signed, and certified by the NOx authorized account representative for each NOx budget source on behalf of which the submission is made. Each such submission shall include the following certification statement by the NOx authorized account representative:

"I am authorized to make this submission on behalf of the owners and operators of the NOx budget sources or NOx budget units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

If the NOx authorized account representative for a NOx budget unit subject to an acid rain emission limitation who signed and certified any submission that is made under Subpart F or G of 40 CFR Part 75 and which includes data and information required under OAC rule 3745-14-08 or Subpart H of 40 CFR Part 75 is not the same person as the designated representative or the alternate designated representative for the unit under 40 CFR Part 72, then the submission shall also be signed by the designated representative or the alternate designated representative.

[OAC rules 3745-14-02(A)(5) and 3745-14-08(E)(1)(b)]

- r) The NOx authorized account representative shall submit quarterly reports that include all of the data and information required in Subpart H of 40 CFR Part 75 for each NOx budget unit (or group of units using a common stack) and the data and information in Subpart G of 40 CFR Part 75. These quarterly NOx emission reports shall be submitted by January 30, April 30, July 30 and October 30 of each year and shall be submitted in the manner specified in Subpart H of 40 CFR Part 75 and 40 CFR Part 75.64.

[OAC rules 3745-14-08(E)(4)(a) and 3745-14-08(E)(4)(c)(i)]

- s) The NOx authorized account representative shall submit to the Administrator a compliance certification in support of each quarterly report based on a reasonable inquiry of those persons with primary responsibility for ensuring that all of the unit's emissions are correctly and fully monitored. The compliance certification shall state that:
- (1) the monitoring data submitted were recorded in accordance with the applicable requirements of OAC rule 3745-14-08 and 40 CFR Part 75, including the quality assurance procedures and specifications; and
  - (2) for a unit with add-on NOx emission controls and for all hours where data are substituted in accordance with 40 CFR Part 75.34(a)(1), the add-on emission control were operating within the range of parameters listed in the quality assurance program under Appendix B of 40 CFR Part 75 and the substitute values do not systematically underestimate the NOx emissions.

[OAC rule 3745-14-08(E)(4)(d)(i) and (ii)]

- t) The NO<sub>x</sub> authorized account representative for a NO<sub>x</sub> budget unit shall submit written notice of monitoring system certification and re-certification test dates to the Director and the Administrator in accordance with 40 CFR Part 75.61. The NO<sub>x</sub> authorized account representative shall submit a certification application to the Administrator, U.S. EPA, Region V Office, and the Director within forty-five days after completing all initial or re-certification tests required under paragraph (B) of OAC rule 3745-14-08, including the information required under Subpart H of 40 CFR Part 75.

[OAC rules 3745-14-08(D) and 3745-14-08(E)(3)]

- u) For each control period in which one or more NO<sub>x</sub> budget units at a source are subject to the NO<sub>x</sub> budget emission limitation, the NO<sub>x</sub> authorized account representative of the source shall submit to the Director and the Administrator, by November 30 of that year, a compliance certification report for each source covering all such units.

The NO<sub>x</sub> authorized account representative shall include the following elements in the compliance certification report, in a format prescribed by the Administrator, concerning each unit at the source and subject to the NO<sub>x</sub> budget emission limitation for the control period covered by the report:

- (1) identification of each NO<sub>x</sub> budget unit;
- (2) at the NO<sub>x</sub> authorized account representative's option, the serial numbers of the NO<sub>x</sub> allowances that are to be deducted from each unit's compliance account under paragraph (E) of OAC rule 3745-14-06 for the control period;
- (3) at the NO<sub>x</sub> authorized account representative's option, for units sharing a common stack and having NO<sub>x</sub> emissions that are not monitored separately or apportioned in accordance with OAC rule 3745-14-08, the percentage of allowances that is to be deducted from each unit's compliance account under paragraph (E)(5) of OAC rule 3745-14-06; and
- (4) the compliance certification under paragraph (A)(3) of OAC rule 3745-14-04.

[OAC rules 3745-14-04(A)(1) and 3745-14-04(A)(2)]

- v) In the compliance certification report under 4.u)(4) above, the NO<sub>x</sub> authorized account representative shall certify, based upon reasonable inquiry of those persons with the primary responsibility for operating the source and the NO<sub>x</sub> budget units at the source in compliance with the NO<sub>x</sub> budget trading program, whether each NO<sub>x</sub> budget unit for which the compliance certification is submitted was operated during the calendar year covered by the report in compliance with the requirements of the NO<sub>x</sub> budget trading program applicable to the unit, including all the following:

- (1) whether the unit was operated in compliance with the NO<sub>x</sub> budget emission limitation;
- (2) whether the monitoring plan that governs the unit has been maintained to reflect the actual operation and monitoring of the unit, and contains all information necessary to attribute NO<sub>x</sub> emissions to the unit, in accordance with OAC rule 3745-14-08;

- (3) whether all the NO<sub>x</sub> emissions from the unit, or group of units (including the unit) using a common stack, were monitored or accounted for through the missing data procedures and reported in the quarterly monitoring reports, including whether conditional data were reported in the quarterly reports in accordance with OAC rule 3745-14-08, and if conditional data were reported, the permittee shall indicate whether the status of all conditional data has been resolved and all necessary quarterly report submissions have been made; and
- (4) whether the facts that form the basis for certification under OAC rule 3745-14-08 of each monitor at the unit or group of units (including the unit) using a common stack, or for using an excepted monitoring method or alternative monitoring method approved under OAC rule 3745-14-08, if any, have changed.

If a change is required to be reported under 4.u)(4) above, specify the nature of the change, the reason for the change, when the change occurred, and how the unit's compliance status was determined subsequent to the change, including what method was used to determine emissions when a change mandated the need for monitor re-certification.

[OAC rule 3745-14-04(A)(3)]

- w) The NO<sub>x</sub> authorized account representative shall submit a complete NO<sub>x</sub> budget permit renewal application for the NO<sub>x</sub> budget source covering the NO<sub>x</sub> budget units at the source in accordance with paragraph (E) of OAC rule 3745-77-08.

[OAC rule 3745-14-03(B)(3)(a)]

- x) The emission measurements recorded and reported in accordance with OAC rule 3745-14-08 shall be used to determine compliance by the unit with the NO<sub>x</sub> budget emission limitation under paragraph (E)(3) of OAC rule 3745-14-01.

[OAC rule 3745-14-01(E)(2)(b)]

- y) The permittee shall develop and maintain a written quality assurance/quality control plan for each continuous NO<sub>x</sub> monitoring system designed to ensure continuous valid and representative readings of NO<sub>x</sub> emissions in units of the applicable standard. The plan shall follow the requirements of 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.

[OAC rules 3745-14-08(A)(2)(c) and 3745-14-08(A)(2)(d)]

5. Acid Rain Permits and Compliance – OAC chapter 3745-103

The permittee shall ensure that any affected unit complies with the requirements of OAC Chapter 3745-103, which includes submitting timely permit applications. Emissions exceeding any allowances that are lawfully held pursuant to this rule are prohibited. The requirements of this rule will be specified in the Title V permit issued to this facility.

6. All asbestos renovation and demolition activities conducted at this facility shall be performed in accordance with the applicable requirements specified in 40 CFR Part 61, Subpart M.

7. The 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.

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



1. Emissions Unit Group - CT Group P001 - P008: P001, P002, P003, P004, P005, P006, P007, and P008.

Table with 2 columns: EU ID and Operations, Property and/or Equipment Description. Rows include P001 through P008, each with a description of an 84.65 Megawatt Simple-Cycle Combustion Turbine.

- 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 operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures.

Table with 2 columns: Applicable Rules/Requirements and Applicable Emissions Limitations/Control Measures. Row 'a' details OAC rules 3745-31-11 through 3745-31-20; and 40 CFR Part 52.21. Attainment Provisions for Prevention of Significant Deterioration (PSD) and lists emission limitations for particulate emissions (PE), sulfur dioxide (SO2), nitrogen oxides (NOx), and carbon monoxide (CO).

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Duke Energy Indiana, Madison Generating Station

**Permit Number:** P0105343

**Facility ID:** 1409000896

**Effective Date:** To be entered upon final issuance

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>12.2. TPY of H2SO4 mist, based on a rolling, 12-month summation;</p> <p>7.7 TPY of benzene, based on a rolling, 12-month summation;</p> <p>0.00084 TPY of beryllium, based on a rolling, 12-month summation; and</p> <p>0.012 TPY of arsenic, based on a rolling, 12-month summation.</p> <p>The following emission limitations for NOx from this emission unit shall not be exceeded:</p> <p>196.0 pounds per hour of NOx, excluding startup and shutdown periods;</p> <p>when burning natural gas at full load, NOx emissions shall not exceed 12 ppm by volume, at 15% oxygen, on a dry basis, based on a rolling 12-month average summation of the monthly NOx emissions in ppm;</p> <p>when burning diesel fuel, NOx emissions shall not exceed 42 ppm by volume, at 15% oxygen, on a dry basis, as a 1-hour average, at full load; and</p> <p>when burning natural gas, NOx emissions shall not exceed 15 ppm by volume, at 15% oxygen, on a dry basis, as a 1-hour average, at full load.</p> <p>The following emission limitations for SO2 from this emissions unit shall not be exceeded:</p> <p>58.0 pounds per hour*; and</p> <p>when burning diesel fuel, emissions of SO2 shall not exceed 0.0456 pound per million Btu of actual heat input.</p> <p>Emissions of sulfuric acid (H2SO4) mist from this emissions unit shall not exceed</p>

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>6.0 pounds per hour*.</p> <p>Emissions of PE/PM10 from this emissions unit shall not exceed 0.008 pound per million Btu*.</p> <p>Emissions of carbon monoxide (CO) from this emissions unit shall not exceed 54.0 pounds per hour, excluding startup and shutdown periods.</p> <p>*The lbs/hr emission limitations for SO2 and H2SO4, and the lb/MMbtu emission limitations for PE/PM10 are based on the emissions unit's Potential to Emit (PTE). Therefore no hourly (short term) records are required to demonstrate compliance with these limitations.</p> <p>See b(2)a. - b(2)h.</p>
b.	OAC rule 3745-31-05(A)(3) (PTI 14-4682 Modification Issued 8/24/2004)	<p>Emissions of volatile organic compounds (VOC) from this emissions unit shall not exceed 10.0 pounds per hour*.</p> <p>Emissions of lead from this emissions unit shall not exceed 0.15 ton per year** (TPY).</p> <p>Emissions of mercury from this emissions unit shall not exceed 0.0023 TPY**.</p> <p>Visible particulate emissions (PE) from any stack associated with the combustion turbines shall not exceed 10% opacity, as a 6-minute average, when burning natural gas.</p> <p>Compliance with this rule also include compliance with the requirements of OAC rule 3745-31-05(D) and OAC rule 3745-17-07(A)(1) when burning diesel fuel**.</p> <p>*The lbs/hr emission limitation for VOC is based on the emissions unit's Potential to Emit (PTE). Therefore no hourly records are required to demonstrate compliance with these limitations.</p>

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		**Compliance with the fuel usage restrictions in c)(1) and c)(2) ensures compliance with the TPY emission limitations for Lead and Mercury from this emissions unit.
c.	OAC rule 3745-31-05(D) (PTI 14-04682 Modification 8/24/2004); Synthetic Minor for VOC to avoid Emissions Offsets.	Emissions of VOC from combustion turbines P001 through P008, combined, shall not exceed 36.4 TPY based on a rolling, 12-month summation.
d.	OAC rule 3745-17-07(A)	Visible PE from the stack serving these emissions units shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
e.	OAC rule 3745-17-11(B)(4)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rules 3745-31-11 through 3745-31-20.
f.	OAC rule 3745-18-06(F)	The SO2 emission limitation specified by this rule (0.5 pound per million Btu) is less stringent than the SO2 emission limitation established pursuant to OAC rules 3745-31-11 through 3745-31-20.
g.	40 CFR Part 60, Subpart GG	The emission limitations established in 40 CFR Part 60, Subpart GG for SO2 and NOx are less stringent than those established pursuant to OAC rules 3745-31-11 through 3745-31-20.

(2) Additional Terms and Conditions

- a. The permittee shall operate and maintain dry low NOx burners when burning natural gas and operate and maintain a water injection system when burning diesel fuel.
- b. The emissions from startup and shutdown operations shall not exceed the following emission limitations:

Pollutant	When burning natural gas	When burning diesel fuel
NOx	83 pounds per cycle	130 pounds per cycle
CO	308 pounds per cycle	354 pounds per cycle

- c. Compliance with the startup and shutdown NOx and CO pounds per cycle emission limitations, the NOx and CO emissions limitations during steady-state operations, and the NOx ppm emission limitation during full load operations shall be demonstrated by the use of dual range NOx and CO continuous emission

monitoring systems (CEMS). For CEM systems with dual ranges, certification testing shall be performed on the range normally used for measuring emissions.

- d. "Full load" shall be defined as the nameplate electrical output of 84.65 megawatts. Any load that is greater than or equal to 90% of the nameplate electrical output shall be considered full load.
- e. "Normal operation" shall be defined as the period when the combustion turbine achieves dry low NO<sub>x</sub> mode (GE Mode 6). GE Mode 6 is defined by the manufacturer as the low emissions mode during which all burner nozzles are in use, burning a lean pre-mixed gas for steady-state operation. The continuous emission monitoring system will indicate and record the GE Mode 6 status of the combustion turbine, including when the emissions unit is shutdown and when operating in startup and shutdown modes.
- f. "Startup" shall be defined as the period between when the combustion turbine is initially started (initial fuel light-off) until the combustion turbine completes transition to GE Mode 6. "Shutdown" shall be defined as the period beginning when the combustion turbine leaves GE Mode 6 and ending when combustion has ceased. "Startup and shutdown cycle" shall be defined as a startup period followed by a consecutive shutdown period.
- g. For the purpose of this permit, the term "diesel fuel" shall be considered to be any low sulfur fuel oil that is burned as defined in 40 CFR Part 72.2.
- h. In lieu of the requirements of 40 CFR Part 60.334(a) to install and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in each combustion turbine, P001 through P008, the permittee shall operate and maintain systems to continuously monitor and record emissions of NO<sub>x</sub> for each combustion turbine, P001 through P008 in accordance with this permit.
- i. In lieu of the excess emission reports required under 40 CFR Part 60.334, the permittee shall submit excess emission reports for each combustion turbine, P001 through P008 in accordance with this permit.
- j. In lieu of the test methods and procedures required under, 40 CFR Part 60.335, the permittee shall follow the monitoring and testing requirements for each combustion turbine, P001 through P008 in accordance with this permit.

c) Operational Restrictions

- (1) The maximum annual natural gas usage rate for emissions units P001 through P008, combined, shall not exceed 20,300,000,000 cubic feet per rolling, 12-month period.

(Authority for term: OAC rule 3745-77-07(A)(1), OAC rule 3745-31-05(D), and OAC rule 3745-31-11 through OAC rule 3745-31-20)

- (2) The maximum annual diesel fuel usage rate for emissions units P001 through P008, combined, shall not exceed 34,000,000 gallons per rolling, 12-month period.

(Authority for term: OAC rule 3745-77-07(A)(1), OAC rule 3745-31-05(D), and OAC rule 3745-31-11 through OAC rule 3745-31-20)

- (3) The permittee shall burn only pipeline quality natural gas or diesel fuel in emissions units P001 through P008.

(Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-31-11 through OAC rule 3745-31-20)

- (4) The quality of diesel fuel burned in emissions units P001 through P008 shall have a combination of heat and sulfur content which is sufficient to comply with the allowable SO<sub>2</sub> emission limitation of 0.0456 pound of SO<sub>2</sub> per million Btu of actual heat input.

The natural gas and diesel fuel burned in emissions units P001 through P008 shall have a sulfur content of 0.05% by weight or less.

(Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-31-11 through OAC rule 3745-31-20)

- (5) When the emissions unit is operating in startup and shutdown conditions, as defined in b)(2)f., each startup and shutdown cycle shall not exceed 1.0 hour in duration.

(Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-31-11 through OAC rule 3745-31-20)

- (6) With the exception of startup and shutdown, each combustion turbine, P001 through P008 shall be operated in GE Mode 6, defined as normal or full load operation (see b)(2)d. and b)(2)e. above).

(Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-31-11 through OAC rule 3745-31-20)

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The permittee shall maintain daily records of the following information for each emissions unit, P001 through P008:

- a. The emissions unit's actual electrical output for each operating hour; and
- b. For each day during which the permittee burns a fuel other than pipeline quality natural gas and/or diesel fuel, the permittee shall maintain a record of the type and quantity of fuel burned in each combustion turbine, P001 through P008.

(Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-11 through OAC rule 3745-31-20)

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

- a. The total amount of natural gas burned, in cubic feet, for emissions units P001 through P008, combined;

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- b. The total amount of diesel fuel burned, in gallons, for emissions units P001 through P008, combined;
- c. The rolling, 12-month summation of the total amount of natural gas burned, in cubic feet, for emissions units P001 through P008, combined (the amount of natural gas burned for the current month plus the amount of natural gas burned for the previous 11 calendar months);
- d. The rolling, 12-month summation of the total amount of diesel fuel burned, in gallons, for emissions units P001 through P008, combined (the amount of diesel fuel burned for the current month plus the amount of diesel fuel burned for the previous 11 calendar months);
- e. The date and duration, in minutes, of each startup and shutdown cycle for each emissions unit, P001 through P008;
- f. The emissions, in pounds, of NOx\* and CO\* when burning natural gas for each startup and shutdown cycle for each emissions unit P001 through P008;
- g. The emissions, in pounds, of NOx\* and CO\* when burning diesel fuel for each startup and shutdown cycle for each emissions unit P001 through P008;
- h. The total emissions, in tons, of NOx\*, CO\*, PE/PM10, SO2, VOC, H2SO4, and benzene when burning natural gas for all operating conditions for each emissions unit, P001 through P008\*\*;
- i. The total emissions, in tons, of NOx\*, CO\*, PE/PM10, SO2, VOC, H2SO4, and benzene, beryllium, and arsenic when burning diesel fuel for all operating conditions for each emissions unit, P001 through P008\*\*;
- j. The rolling, 12-month emissions, in tons, of NOx\*, CO\*, PE/PM10, SO2, VOC, H2SO4, benzene, beryllium, and arsenic for emissions units P001 through P008, combined, when burning natural gas and diesel fuel (the total emissions calculated in h. plus i. for the current month plus the total emissions for the previous 11 calendar months);\*\*
- k. The rolling, 12-month emissions, in tons, of NOx\* emissions, in ppm, when burning natural gas at full load for each combustion turbine, P001 through P008 (the NOx ppm average for the current month (from the CEM data) plus the total NOx ppm average for the previous 11 calendar months).

\*The permittee shall use the continuous NOx and CO emission monitoring data to determine the NOx and CO emissions for these emissions units. During any period when the NOx and/or the CO emission monitoring systems are not operational, the permittee shall use the appropriate missing data procedures specified in 40 CFR Part 75 to determine the NOx and/or CO emissions or an approved data substitution protocol for the purpose of calculating the rolling, 12-month emissions rate(s). The data substitution values shall not be used to demonstrate compliance with the hourly NOx and CO emission limitations applicable during normal operation of each combustion turbine, P001 through P008.

\*\*The PE/PM10, SO<sub>2</sub>, VOC, H<sub>2</sub>SO<sub>4</sub>, benzene, beryllium, and arsenic, calculations shall be based on the fuel usage information collected in d)(2)a. and d)(2)b. and the emission factors and formulas found in f)(1)(d).

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-05(D), and OAC rule 3745-31-11 through OAC rule 3745-31-20)

- (3) The permittee shall monitor and record the sulfur content of the natural gas being burned in each combustion turbine, P001 through P008 or make the demonstration that the sulfur content of the natural gas does not need to be monitored and recorded in accordance with the provisions specified in 40 CFR Part 60.334(b). Owners, operators or fuel vendors may develop custom fuel schedules for the determination of the sulfur content based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in 40 CFR Parts 60.334(i)(3)(i) and 60.334(i)(3)(ii), these custom schedules shall be substantiated with data and must be approved by the Ohio EPA, Central Office before they can be used.

Analyses for the purpose of determining the sulfur content of the natural gas may be performed by the permittee, the fuel vendor, or any other qualified agency in accordance with the analytical methods specified in 40 CFR Part 60, Subpart GG, Section 60.335(d) or equivalent methods as approved by the Administrator.

(Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-11 through OAC rule 3745-31-20)

- (4) The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Option 1 or Option 2 described below:

Option 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the fuel oil type (number 2, 4, or 6), the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/MMBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the Director.

Option 2:

The permittee shall maintain records of the oil burned in each combustion turbine, P001 through P008 in accordance with either Alternative 1 or Alternative 2 described below:

Alternative 1:

For each shipment of oil received for burning in each combustion turbine, P001 through P008, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/MMBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in each combustion turbine, P001 through P008 for each day when the emissions unit is in operation. If additional fuel oil is added to the tank serving each combustion turbine, P001 through P008 on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in each combustion turbine, P001 through P008. A representative grab sample of oil does not need to be collected on days when each combustion turbine, P001 through P008 is only operated for the purpose of "test-firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/MMBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as ASTM methods D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the Director.

(Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-11 through OAC rule 3745-31-20, OAC rule 3745-18-04(E)(3) and OAC rule 3745-18-04(I))

- (5) The continuous NO<sub>x</sub> 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.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-11 through OAC rule 3745-31-20, 40 CFR Part 60.13, 40 CFR Part 60, Appendix F, and 40 CFR Part 75)

- (6) The permittee shall maintain a written quality assurance/quality control plan for the continuous NO<sub>x</sub> monitoring system, designed to ensure continuous valid and representative readings of NO<sub>x</sub> emissions 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<sub>x</sub> 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.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-11 through OAC rule 3745-31-20, 40 CFR Part 60.13, 40 CFR Part 60, Appendix F, and 40 CFR Part 75)

- (7) The permittee shall maintain on-site, the document(s) of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous NO<sub>x</sub> monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2; the accuracy requirements of Performance Specification 6; and has been certified by U.S. EPA or recommended for certification by Ohio EPA to U.S. EPA under 40 CFR Part 75. 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 NO<sub>x</sub> is being calculated stoichiometrically. The letter(s)/document(s) of certification under Part 60 and certification or recommendation for certification under Part 75 shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-11 through OAC rule 3745-31-20, 40 CFR Part 60.13, 40 CFR Part 60, Appendix B, and 40 CFR Part 75)

- (8) The permittee shall operate and maintain equipment to continuously monitor and record NO<sub>x</sub> emissions from each combustion turbine, P001 through P008, 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 40 CFR Part 75.

The permittee shall maintain records of data obtained by the continuous NO<sub>x</sub> monitoring system including, but not limited to:

- a. emissions of NO<sub>x</sub> in parts per million on an instantaneous (one-minute) basis;
- b. emissions of NO<sub>x</sub> in pounds per hour and in all units of the applicable standard(s) in the appropriate averaging period;

- c. results of quarterly cylinder gas audits or linearity checks;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
- f. hours of operation of the emissions unit, continuous NO<sub>x</sub> monitoring system, and control equipment;
- g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous NO<sub>x</sub> monitoring system;
- h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous NO<sub>x</sub> monitoring system; as well as, and
- i. the reason (if known) and the corrective actions taken (if any) for each such event in g. and h.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-11 through OAC rule 3745-31-20, 40 CFR Part 60.13, 40 CFR Part 60, Appendices B & F, and 40 CFR Part 75)

- (9) 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.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-11 through OAC rule 3745-31-20, and 40 CFR Part 75)

- (10) The continuous emission monitoring system for oxygen 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.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-11 through OAC rule 3745-31-20, and 40 CFR Part 75)

- (11) The permittee shall maintain a written quality assurance/quality control plan for the continuous O<sub>2</sub> monitoring system, designed to ensure continuous valid and representative readings of O<sub>2</sub> emissions in units of the applicable standard(s). 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 O<sub>2</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 O<sub>2</sub> 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.

Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-11 through OAC rule 3745-31-20, and 40 CFR Part 75)

- (12) The permittee shall maintain on-site, the document(s) of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous O<sub>2</sub> monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 3; and has been certified by U.S. EPA or recommended for certification by Ohio EPA to U.S. EPA under 40 CFR Part 75. The letter(s)/document(s) of certification under 40 Part 60 and certification or recommendation for certification under Part 75 shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-11 through OAC rule 3745-31-20, and 40 CFR Part 75)

- (13) The permittee shall operate and maintain equipment to continuously monitor and record O<sub>2</sub> emitted from this emissions unit in percent O<sub>2</sub>. The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Parts 60 and Part 75.

The permittee shall maintain records of data obtained by the continuous O<sub>2</sub> monitoring system including, but not limited to:

- a. percent O<sub>2</sub> on an instantaneous (one-minute) basis;
- b. results of quarterly cylinder gas audits or linearity checks;
- c. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- d. results of required relative accuracy test audit(s);
- e. hours of operation of the emissions unit, continuous O<sub>2</sub> monitoring system;
- f. the date, time, and hours of operation of the emissions unit without the continuous O<sub>2</sub> monitoring system; and

g. the date, time, and hours of operation of the emissions unit during any malfunction of the continuous O<sub>2</sub> monitoring system; as well as, the reason (if known) and the corrective actions taken (if any) for each such event in f. and g.

- (14) The continuous CO 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.

(Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-11 through OAC rule 3745-31-20)

- (15) The permittee shall maintain a written quality assurance/quality control plan for the continuous dual-range CO monitoring system, designed to ensure continuous valid and representative dual-range readings of CO emissions 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 dual-range 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 dual-range CO 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.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-11 through OAC rule 3745-31-20, 40 CFR Part 60.13, and 40 CFR Part 60, Appendix F)

- (16) The permittee shall maintain on-site, the document(s) of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous dual-range carbon monoxide (CO) monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 4 or 4a (as appropriate), and the accuracy requirements of Specification 6. 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 emission of CO is being calculated stoichiometrically. The letter(s)/document(s) of certification under 40 Part 60 shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and

transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-11 through OAC rule 3745-31-20, 40 CFR 60.13, and 40 CFR Part 60, Appendix B)

- (17) The permittee shall operate and maintain equipment to continuously monitor and record CO emissions from each combustion turbine, P001 through P008, 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 data obtained by the continuous dual-range CO monitoring system including, but not limited to:

- a. emissions of CO in parts per million on an instantaneous (one-minute) basis;
- b. emissions of CO in pounds per hour and in all units of the applicable standard(s) in the appropriate averaging period;
- c. results of quarterly cylinder gas audits;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
- f. hours of operation of the emissions unit, continuous dual-range CO monitoring system, and control equipment;
- g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous dual-range CO monitoring system;
- h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous dual-range CO monitoring system; as well as,
- i. the reason (if known) and the corrective actions taken (if any) for each such event in g. and h.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-11 through OAC rule 3745-31-20, 40 CFR 60.13, and 40 CFR Part 60, Appendices B & F)

- (18) 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.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-11 through OAC rule 3745-31-20, 40 CFR Part 75)

- (19) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install #14-04682, issued on 8/24/2004: d)(1) through d)(18). The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

e) Reporting Requirements

- (1) The permittee shall submit quarterly reports that identify each period during which an exemption for ice-fog provided in 40 CFR Part 60.332(f) is in effect. The report shall include the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time when the air pollution control system was reactivated.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-11 through OAC rule 3745-31-20, and 40 CFR Part 60.334(j)(3))

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
- a. All exceedances of the rolling, 12-month natural gas usage limitation for emissions units P001 through P008, combined;
  - b. All exceedances of the rolling, 12-month emission limitations for PE/PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, H<sub>2</sub>SO<sub>4</sub> mist, VOC, benzene, beryllium, and arsenic for emissions units P001 through P008, combined;
  - c. All exceedances of the sulfur content restriction (i.e., 0.05% by weight) for the fuels (natural gas and diesel fuel) received for burning in each combustion turbine, P001 through P008;
  - d. All exceedances of the SO<sub>2</sub> lbs/MMBtu emission limitation when burning diesel fuel in each combustion turbine, P001 through P008;
  - e. All exceedances of the 1.0 hour startup and shutdown cycle operational restriction;
  - f. All exceedances of the rolling, 12-month diesel fuel usage limitation for emissions units P001 through P008, combined;
  - g. All exceedances of the startup and shutdown emission limitations specified in b)(2)b. when burning natural gas;
  - h. All exceedances of the startup and shutdown emission limitations specified in b)(2)b. when burning diesel fuel;

- i. Each day when a fuel other than natural gas or diesel fuel was burned in any combustion turbine, P001 through P008.

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

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-05(D), and OAC rule 3745-31-11 through OAC rule 3745-31-20)

- (3) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NOx 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 NOx emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, 40 CFR Parts 75 and 76, 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. 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 NOx 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 NOx emissions for the calendar quarter (tons);
    - vi. the total operating time (hours) of the emissions unit;
    - vii. the total operating time of the continuous NOx monitoring system while the emissions unit was in operation;
    - viii. results and dates of quarterly cylinder gas audits or linearity checks;
    - 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));

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Duke Energy Indiana, Madison Generating Station

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**Effective Date:** To be entered upon final issuance

- x. unless previously submitted, the results of any relative accuracy test audit showing the continuous NOx 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 NOx monitoring system, emissions unit, and/or control equipment;
- xii. the date, time, and duration of any downtime\*\* of the continuous NOx 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 x. and xii.

Each report shall address the operations conducted and data obtained during the previous calendar quarter. Data substitution procedures from 40 CFR 75 are not to be used for showing compliance with the short term OAC 3745-31-05(A)(3) rule-based or NSPS-based limitation(s) in this permit.

\*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 limitation.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-11 through OAC rule 3745-31-20, 40 CFR 60.7, and 40 CFR Part 75)

- (4) If using the fuel flow rate to stoichiometrically calculate the pound per hour emissions of NOx, 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.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-11 through OAC rule 3745-31-20, and 40 CFR Part 75)

- (5) 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 this Part.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-11 through OAC rule 3745-31-20, and 40 CFR Part 75)

- (6) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous dual-range CO 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. 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 dual-range CO 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 dual-range CO 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 dual-range CO 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 dual-range CO monitoring system, emissions unit, and/or control equipment;

- xii. the date, time, and duration of any downtime\*\* of the continuous dual-range CO 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 xi. and xii.

Each report shall address the operations conducted and data obtained during the previous calendar quarter. Data substitution procedures from 40 CFR 75 are not to be used for showing compliance with the short term OAC 3745-31-05(A)(3) rule-based or NSPS-based limitation(s) in this permit.

\*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 limitation.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-11 through OAC rule 3745-31-20, and 40 CFR 60.7)

- (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.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-11 through OAC rule 3745-31-20, and 40 CFR Part 75)

- (8) 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 this Part.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-11 through OAC rule 3745-31-20, and 40 CFR Part 75)

- (9) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous O<sub>2</sub> monitoring system:
  - a. 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 O<sub>2</sub> monitoring system downtime and malfunction while the emissions unit was on line.

- b. 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 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 total operating time (hours) of the emissions unit;
  - v. the total operating time of the continuous O<sub>2</sub> monitoring system while the emissions unit was in operation;
  - vi. results and dates of quarterly cylinder gas audits or linearity checks;
  - vii. unless previously submitted, results and dates of the relative accuracy test audit(s) (during appropriate quarter(s));
  - viii. unless previously submitted, the results of any relative accuracy test audit showing the continuous O<sub>2</sub> monitor out-of-control and the compliant results following any corrective actions;
  - ix. the date, time, and duration of any/each malfunction\* of the continuous O<sub>2</sub> monitoring system while the emissions unit was in operation;
  - x. the date, time, and duration of any downtime\* of the continuous O<sub>2</sub> monitoring system while the emissions unit was in operation; and
  - xi. the reason (if known) and the corrective actions taken (if any) for each event in ix. and x.

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

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

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-11 through OAC rule 3745-31-20, and 40 CFR Part 75)

- (10) 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 this Part.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-11 through OAC rule 3745-31-20, and 40 CFR Part 75)

- (11) The permittee shall submit annual reports that specify the total mercury and lead emissions from each combustion turbine, P001 through P008, for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for each combustion turbine, P001 through P008, in the annual Title V Fee Emissions Report.

(Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(A)(3))

- (12) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #14-04682, issued on 8/24/2004: e)(1) through e)(11). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

f) Testing Requirements

- (1) Compliance with the emission limitations in b)(1) and b)(2) shall be determined in accordance with the following methods:

a. Emission Limitations:

Hourly emissions from each combustion turbine shall not exceed:

- i. 10.0 pounds of VOC per hour;
- ii. 58.0 pounds of SO<sub>2</sub> per hour; and
- iii. 6.0 pounds of H<sub>2</sub>SO<sub>4</sub> per hour.

Applicable Compliance Methods:

The hourly emission limitations are based upon each emissions unit's PTE and the manufacturer's guaranteed emission data from the application submitted April 26, 1999 for PTI 14-04682.

If required, the permittee shall demonstrate compliance with the hourly VOC emission limitation through emission tests performed in accordance with Methods 1 through 4 and 25 of 40 CFR Part 60, Appendix A.

If required, the permittee shall demonstrate compliance with the hourly SO<sub>2</sub> emission limitation through emission tests performed in accordance with Methods 1 through 4 and 6 of 40 CFR Part 60, Appendix A.

If required, the permittee shall demonstrate compliance with the hourly H<sub>2</sub>SO<sub>4</sub> emission limitation through emission tests performed in accordance with Methods 1 through 4 and 8 of 40 CFR Part 60, Appendix A.

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

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-05(A)(3), and OAC rule 3745-31-11 through OAC rule 3745-31-20)

b. Emission Limitations:

196.0 pounds of NO<sub>x</sub> per hour, excluding periods of startup and shutdown;

83 pounds of NO<sub>x</sub> per startup and shutdown cycle when burning natural gas; and

130 pounds of NO<sub>x</sub> per startup and shutdown cycle when burning diesel fuel.

Applicable Compliance Method:

Ongoing compliance with the NO<sub>x</sub> emission limitations 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 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.

If required, the permittee shall demonstrate compliance with the hourly NO<sub>x</sub> emission limitations through emission tests performed in accordance with Methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A.

The NO<sub>x</sub> emission limitations per startup and shutdown cycle were established based on emission data contained in the modification application submitted in March 2001 for PTI 14-04682 issued as a modification on 8/24/2004 and the emission factors from the background document, Reference 16, for Stationary Gas Turbines in AP-42, Fifth Edition, Section 3.1, dated April 2000.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-11 through OAC rule 3745-31-20, 40 CFR 60.13, 40 CFR Part 60, Appendices B & F, and 40 CFR Part 75)

c. Emission Limitations:

54.0 pounds of CO per hour, excluding periods of startup and shutdown;

308 pounds of CO per startup and shutdown cycle when burning natural gas; and

354 pounds of CO per startup and shutdown cycle when burning diesel fuel.

Applicable Compliance Method:

Ongoing compliance with the CO emission limitations contained in this permit, 40 CFR Part 60, 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 through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

If required, the permittee shall demonstrate compliance with the hourly NOx emission limitations through emission tests performed in accordance with Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A.

The CO emission limitations per startup and shutdown cycle were established based on emissions data contained in the modification application submitted in March 2001 for PTI 14-04682 issued as a modification on 8/24/2004 and the emission factors from the background document, Reference 16, for Stationary Gas Turbines in AP-42, Fifth Edition, Section 3.1, dated April 2000.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-11 through OAC rule 3745-31-20, 40 CFR 60.13, 40 CFR Part 60, Appendices B & F)

d. Emission Limitations:

The total emissions from emissions units P001 through P008, combined, shall not exceed the following emissions limitations:

- i. 36.4 TPY of VOC based on a rolling, 12-month summation;
- ii. 60.5 TPY of PE/PM10 based on a rolling, 12-month summation;
- iii. 120.8 TPY of SO2 based on a rolling, 12-month summation;
- iv. 733.3 TPY of NOx based on a rolling, 12-month summation;
- v. 541.0 TPY of CO based on a rolling, 12-month summation;
- vi. 12.2 TPY of H2SO4 based on a rolling, 12-month summation;
- vii. 7.7 TPY of benzene\* based on a rolling, 12-month summation;
- viii. 0.00084 TPY of beryllium\* based on a rolling, 12-month summation; and
- ix. 0.012 TPY of arsenic\* based on a rolling, 12-month summation.

Applicable Compliance Methods:

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

Emission factors for PE/PM10, VOC, SO2, and H2SO4, are specified in the manufacturers guaranteed performance data contained in the application submitted April 26, 1999 for PTI 14-04682.

\*The emission factors as specified in AP-42, Fifth Edition, Section 3.1 "Stationary Gas Turbines", updated in April 2000 are 0.000011 pound of arsenic per million Btu, 0.000055 pound of benzene per million Btu, and 0.0000031 pound of beryllium per million Btu, from diesel fuel-fired turbines.

The emission factor as specified in AP-42, Fifth Edition, Section 3.1 "Stationary Gas Turbines", updated in April 2000 is 0.000012 pound of benzene per million Btu, from natural gas-fired turbines.

The emission factor for beryllium and arsenic when natural gas is burned is insignificant based upon the manufacturer's guaranteed emission data contained in the application submitted April 26, 1999 for PTI 14-04682.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-05(D), and OAC rule 3745-31-11 through OAC rule 3745-31-20)

e. Emission Limitations:

0.15 TPY of lead emissions; and

0.0023 TPY of mercury emissions.

Applicable Compliance Methods:

The lead and mercury emission limitations specified above were determined by multiplying the maximum fuel usage capacity of the equipment, as provided by the manufacturer in the application submitted April 26, 1999 for PTI 14-04682, by the pollutant specific emission factor found in AP-42, Fifth Edition, Section 3.1, "Stationary Gas Turbines", updated in April 2000, by the maximum heat content of the fuel, and dividing by 2000 pounds per ton. The emission factors as specified in the above referenced AP-42 are 0.000014 pound of lead per million Btu and 0.0000012 pound of mercury per million Btu, from diesel fuel-fired turbines.

The emission factor for mercury and lead when natural gas is burned is insignificant based upon the manufacturer's guaranteed emission data contained in the application submitted April 26, 1999 for PTI 14-04682.

(Authority for term: OAC rule 3745-77-07(C)(1))

f. Emission Limitations:

When burning natural gas, NOx emissions shall not exceed 15 ppm by volume, at 15% oxygen, on a dry basis, as a 1-hour average, at full load;

When burning diesel fuel, NOx emissions shall not exceed 42 ppm by volume, at 15% oxygen, on a dry basis, as a 1-hour average, at full load; and

When burning natural gas at full load, NOx emissions shall not exceed 12 ppm by volume, at 15% oxygen, on a dry basis, based on a rolling, 12-month summation of the average monthly NOx emissions, in ppm by volume.

Applicable Compliance Methods:

Ongoing compliance with the NOx emissions limitations 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 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.

If required, the permittee shall demonstrate compliance with the non-rolling ppm NOx emission limitations through emission tests performed in accordance with Method 1 through 4 and 7 of 40 CFR Part 60, Appendix A.

(Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR 60.13, 40 CFR Part 60, Appendices B & F, and 40 CFR Part 75)

g. Emission Limitation:

0.008 pound of PE/PM10 per million Btu.

Applicable Compliance Method

The hourly emission limitation is based upon each emissions unit's PTE and the manufacturer's guaranteed emission data from the application submitted April 26, 1999 for PTI 14-04682.

If required, the permittee shall demonstrate compliance with the PE/PM10 emission limitation through emission tests performed in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A.

(Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-11 through OAC rule 3745-31-20)

h. Emission Limitation:

0.0456 pound of SO2 per million Btu when burning diesel fuel.

Applicable Compliance Method:

Compliance with the allowable sulfur dioxide emission limitation shall be demonstrated by the information collected and recorded in d)(4) and the equation listed below.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6 of 40 CFR Part 60, Appendix A.

Sulfur dioxide emissions from liquid fuel samples shall be calculated as follows:

$$ER = [(1 \times 10^6) / H] \times D \times S \times 1.974$$

where:

ER = the emission rate in pounds of sulfur dioxide per MMBtu;

H = the heat content of the liquid fuel in Btu per gallon;

D = the density of the liquid fuel in pounds per gallon; and

S = the decimal fraction of sulfur in the liquid fuel.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-18-04(E), and OAC rule 3745-18-04(F)(2))

i. Emission Limitation:

Visible particulate emissions (PE) from any stack associated with the combustion turbines shall not exceed 10% opacity, as a 6-minute average, when burning natural gas.

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Method 9.

(Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(A)(3))

j. Emission Limitation:

When burning diesel fuel, visible PE from the stacks serving these emissions units shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method

Compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Method 9.

(Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)(a))

k. Fuel Usage Restrictions:

The maximum annual natural gas usage rate for emissions units P001 through P008, combined, shall not exceed 20,300,000,000 cubic feet per rolling, 12-month period.

The maximum annual diesel fuel usage rate for emissions units P001 through P008, combined, shall not exceed 34,000,000 gallons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the fuel usage restrictions may be demonstrated by the information collected and recorded in d)(2).

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Duke Energy Indiana, Madison Generating Station

**Permit Number:** P0105343

**Facility ID:** 1409000896

**Effective Date:** To be entered upon final issuance

- (2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #14-04682, issued on 8/24/2004: f)(1)a. through f)(1)k. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

g) Miscellaneous Requirements

- (1) None.

**2. Emissions Unit Group - EDG Group P009 - P010: P009 and P010.**

EU ID	Operations, Property and/or Equipment Description
P009	1.5 Megawatt emergency Diesel generator No.1
P010	1.5 Megawatt emergency Diesel generator No. 2

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rules 3745-31-11 through 3745-31-20; and 40 CFR Part 52.21. Attainment Provisions for Prevention of Significant Deterioration (PSD)	See b)(2)b.i.-iv. and c)(1).
b.	OAC rule 3745-31-05(D) (PTI 14-04682 Modification 8/24/2004); Synthetic Minor for VOC to avoid Emissions Offsets.	See b)(2)b.v. and c)(1).
c.	OAC rule 3745-31-05(A)(3) (PTI 14-04682 Modification 8/24/2004)	See b)(2)a.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A), OAC rule 3745-17-11(B)(5)(b), OAC rule 3745-18-06(G), and OAC rule 3745-31-05(D).
d.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) from the stack serving each diesel generator shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
e.	OAC rule 3745-17-11(B)(5)(b)	PE from each diesel generator shall not exceed 0.062 pound per million Btu of actual heat content.
f.	OAC rule 3745-18-06(G)	Emissions of sulfur dioxide (SO <sub>2</sub> ) from each diesel generator shall not exceed 0.5 pound per million Btu of actual heat input.

(2) Additional Terms and Conditions

a. Emissions from each diesel generator, P009 & P010, shall not exceed:

- i. 8.61 pounds of SO<sub>2</sub> per hour;
- ii. 55.07 pounds of nitrogen oxides (NO<sub>x</sub>) per hour;
- iii. 14.63 pounds of carbon monoxide (CO) per hour; and
- iv. 1.55 pounds of volatile organic compounds (VOC) per hour.

The hourly emission limitations represent the potentials to emit (PTE) for each diesel generator, P009 & P010. Therefore, no additional monitoring, recordkeeping or reporting requirements are required to demonstrate compliance with these emission limitations.

b. Emissions from each diesel generator, P009 & P010, shall not exceed:

- i. 0.27 ton per year (TPY) of PE, based upon a rolling, 12-month summation of the monthly emissions;
- ii. 2.15 TPY of SO<sub>2</sub>, based upon a rolling, 12-month summation of the monthly emissions;
- iii. 13.77 TPY of NO<sub>x</sub>, based upon a rolling, 12-month summation of the monthly emissions;
- iv. 3.66 TPY of CO, based upon a rolling, 12-month summation of the monthly emissions; and
- v. 0.39 TPY of VOC, based upon a rolling, 12-month summation of the monthly emissions.

c) Operational Restrictions

(1) The maximum annual operating hours for each diesel generator, P009 & P010, shall not exceed 499 hours, based upon a rolling, 12-month summation of the operating hours.

(Authority for term: OAC rule 3745-77-07(A)(1) and OAC rule 3745-31-05(D))

(2) The quality of diesel fuel burned in diesel generators P009 & P010 shall have a combination of heat and sulfur content that is sufficient to comply with the allowable SO<sub>2</sub> emission limitation.

(Authority for term: OAC rule 3745-77-07(A)(1), OAC rule 3745-31-05(D), and OAC rule 3745-31-11 through OAC rule 3745-31-20)

(3) The permittee shall burn only diesel fuel in each diesel generator, P009 & P010. For the purpose of this permit, the term "diesel fuel" shall be considered to be any low sulfur fuel oil that is burned as defined in 40 CFR Part 72.2.

(Authority for term: OAC rule 3745-77-07(A)(1), OAC rule 3745-31-05(D), and OAC rule 3745-31-11 through OAC rule 3745-31-20)

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information for each diesel generator, P009 & P010:

- a. The operating hours for each month; and
- b. The rolling, 12-month summation of the operating hours.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-05(D), and OAC rule 3745-31-11 through OAC rule 3745-31-20)

(2) For each day during which the permittee burns a fuel other than diesel fuel, the permittee shall maintain a record of the type and quantity of the fuel burned in emissions units P009 & P010.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-05(D), and OAC rule 3745-31-11 through OAC rule 3745-31-20)

(3) The permittee shall maintain records of the oil burned in emissions units P009 and P010 in accordance with either Option 1 or Option 2 described below:

Option 1:

For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the fuel oil type (number 2, 4, or 6), the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/MMBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the Director.

Option 2:

The permittee shall maintain records of the oil burned in each emissions units, P009 and P010, in accordance with either Alternative 1 or Alternative 2 described below:

Alternative 1:

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For each shipment of oil received for burning in each emissions units, P009 and P010, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/MMBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in emissions units, P009 and P010, for each day when each emissions unit is in operation. If additional fuel oil is added to the tank(s) serving each emissions units, P009 and P010, on a day when each emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the fuel oil burned in each emissions units, P009 and P010. A representative grab sample of oil does not need to be collected on days when each emissions units, P009 and P010, is only operated for the purpose of "test firing." The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/MMBtu). The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as ASTM methods D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the Director.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-05(D), OAC rule 3745-31-11 through OAC rule 3745-31-20, OAC rule 3745-18-04(E)(3) and OAC rule 3745-18-04(I))

- (4) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install #14-04682, issued on 8/24/2004: d)(1) through d)(3). The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

- a. Each day when a fuel other than diesel was burned in each diesel generator, P009 & P010;
- b. Any exceedances of the rolling, 12-month hours of operation limitation; and
- c. Any exceedance of the allowable pounds of SO<sub>2</sub>/MMBtu actual heat input limitation.

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

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-15-03(B)(1)(a), and OAC rule 3745-15-03(C))

- (2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #14-04682, issued on 8/24/2004: e)(1). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

f) Testing Requirements

- (1) Compliance with the emission limitations in b)(1) and b)(2) shall be determined in accordance with the following methods:

- a. Emission Limitations:

- 8.61 pounds of SO<sub>2</sub> per hour;

- 55.07 pounds of nitrogen oxides (NO<sub>x</sub>) per hour;

- 14.63 pounds of carbon monoxide (CO) per hour; and

- 1.55 pounds of volatile organic compounds (VOC) per hour.

- Applicable Compliance Methods:

- The hourly SO<sub>2</sub> emission limitation was established by multiplying the emission factor of 1.01(S) pound of SO<sub>2</sub> per million Btu (where "S" is the % sulfur in the diesel fuel) by the emissions unit's maximum heat input capacity of 17.21 million Btu per hour.

- The hourly NO<sub>x</sub> emission limitation was established by multiplying the emission factor of 3.2 pounds of NO<sub>x</sub> per million Btu by the emissions unit's maximum heat input capacity of 17.21 million Btu per hour.

- The hourly CO emission limitation was established by multiplying the emission factor of 0.85 pound of CO per million Btu by the emissions unit's maximum heat input capacity of 17.21 million Btu per hour.

The hourly VOC emission limitation was established by multiplying the emission factor of 0.09 pound of VOC per million Btu by the emissions unit's maximum heat input capacity of 17.21 million Btu per hour.

The emission factors specified above for each pollutant were obtained from AP-42, Fifth Edition, Chapter 3, Section 3.4, "Large Stationary Diesel Engines", Table 3.4-1, 10/96.

If required, the permittee shall demonstrate compliance with the hourly SO<sub>2</sub> emission limitation through emission tests performed in accordance with Methods 1 through 4 and 6 of 40 CFR Part 60, Appendix A.

If required, the permittee shall demonstrate compliance with the hourly NO<sub>x</sub> emission limitation through emission tests performed in accordance with Methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A.

If required, the permittee shall demonstrate compliance with the hourly CO emission limitation through emission tests performed in accordance with Methods 1 thorough 4 and 10 of 40 CFR Part 60, Appendix A.

If required, the permittee shall demonstrate compliance with the hourly VOC emission limitation through emission tests performed in accordance with Methods 1 through 4 and 25 of 40 CFR Part 60, Appendix A.

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

(Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-31-05(A)(3))

b. Emission Limitations:

0.27 ton per year (TPY) of PE, based upon a rolling, 12-month summation of the monthly emissions;

2.15 TPY of SO<sub>2</sub>, based upon a rolling, 12-month summation of the monthly emissions;

13.77 TPY of NO<sub>x</sub>, based upon a rolling, 12-month summation of the monthly emissions;

3.66 TPY of CO, based upon a rolling, 12-month summation of the monthly emissions; and

0.39 TPY of VOC, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Methods

Compliance with the annual emission limitations for the pollutants specified above are ensured if compliance is maintained with the restricted annual hours of operation (i.e. 499 hours per rolling, 12-month period). The annual emission limitations were calculated by multiplying the hourly emission limitations (for each

pollutant respectively) by the restricted annual hours of operation, and dividing by 2000 pounds per ton.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-05(D), and OAC rule 3745-31-11 through OAC rule 3745-31-20)

c. Emission Limitations:

PE from each diesel generator shall not exceed 0.062 pound per million Btu of actual heat content.

Applicable Compliance Method:

Compliance may be based upon an emission factor of 0.062 pound PE per million Btu specified in AP-42, Fifth Edition, Chapter 3, Section 3.4, "Large Stationary Diesel Engines", Table 3.4-2, 10/96.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

(Authority for term: OAC rules 3745-77-07(C)(1) and 3745-17-11(B)(5)(b))

d. Emissions Limitation:

Emissions of sulfur dioxide (SO<sub>2</sub>) from each diesel generator shall not exceed 0.5 pound per million Btu of actual heat input.

Applicable Compliance Method:

Compliance with the SO<sub>2</sub> emission limitation shall be demonstrated by the recordkeeping requirements specified in d)(3).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6 of 40 CFR Part 60, Appendix A.

Sulfur dioxide emissions from liquid fuel samples shall be calculated as follows:

$$ER = [(1 \times 10^6) / H] \times D \times S \times 1.974$$

where:

ER = the emission rate in pounds of sulfur dioxide per MMBtu;

H = the heat content of the liquid fuel in Btu per gallon;

D = the density of the liquid fuel in pounds per gallon; and

S = the decimal fraction of sulfur in the liquid fuel.

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-18-04(E), and OAC rule 3745-18-04(F)(2))

e. Emission Limitation:

Visible particulate emissions (PE) from the stack serving each diesel generator shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Method 9.

(Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)(a))

f. Operating Hour Restriction:

The maximum annual operating hours for each diesel generator shall not exceed 499 hours, based upon a rolling, 12-month summation of the operating hours.

Applicable Compliance Method:

Compliance with the operating hour restriction shall be demonstrated by the recordkeeping requirements specified in d)(1).

(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-31-05(D), and OAC rule 3745-31-11 through OAC rule 3745-31-20)

- (2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #14-04682, issued on 8/24/2004: f)(1)a. through f)(1)f. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

g) Miscellaneous Requirements

- (1) None.