



7/28/2014

Certified Mail

Elizabeth Gayne
DTI - Carlisle Compressor Station
5000 Dominion Blvd
Glen Allen, VA 23060

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 0661005002
Permit Number: P0117200
Permit Type: Administrative Modification
County: Noble

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

Dear Permit Holder:

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

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

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

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

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

How to give us feedback on your permitting experience

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

How to get an electronic copy of your permit

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

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

Sincerely,



Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: Ohio EPA-SEDO



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
DTI - Carlisle Compressor Station**

Facility ID:	0661005002
Permit Number:	P0117200
Permit Type:	Administrative Modification
Issued:	7/28/2014
Effective:	7/28/2014
Expiration:	8/17/2020



Division of Air Pollution Control
Permit-to-Install and Operate
for
DTI - Carlisle Compressor Station

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Final Permit-to-Install and Operate
DTI - Carlisle Compressor Station
Permit Number: P0117200
Facility ID: 0661005002
Effective Date: 7/28/2014

Authorization

Facility ID: 0661005002
Application Number(s): M0002869
Permit Number: P0117200
Permit Description: Administrative Modification to permit P0109370, issued 4/11/12, removes emission units serving the natural gas extraction process and corrects testing language; facility will operate only as a compression station
Permit Type: Administrative Modification
Permit Fee: \$400.00
Issue Date: 7/28/2014
Effective Date: 7/28/2014
Expiration Date: 8/17/2020
Permit Evaluation Report (PER) Annual Date: Apr 1 - Mar 31, Due May 15

This document constitutes issuance to:

DTI - Carlisle Compressor Station
between CR-45 and HWY 233
Caldwell, OH 43724

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

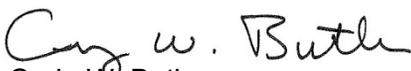
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

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

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Craig W. Butler
Director



Authorization (continued)

Permit Number: P0117200
Permit Description: Administrative Modification to permit P0109370, issued 4/11/12, removes emission units serving the natural gas extraction process and corrects testing language; facility will operate only as a compression station

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

Group Name: 1,380 HP NG Engines

Emissions Unit ID:	P001
Company Equipment ID:	c-101
Superseded Permit Number:	P0109370
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P002
Company Equipment ID:	c-102
Superseded Permit Number:	P0109370
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate
DTI - Carlisle Compressor Station
Permit Number: P0117200
Facility ID: 0661005002
Effective Date: 7/28/2014

A. Standard Terms and Conditions



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

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

2. Who is responsible for complying with this permit?

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

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

3. What records must I keep under this permit?

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

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

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

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

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

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

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

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



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

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

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

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

7. What reports must I submit under this permit?

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

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

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

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

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

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



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

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

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

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

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

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

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

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

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

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



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

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

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

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

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

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



Final Permit-to-Install and Operate

DTI - Carlisle Compressor Station

Permit Number: P0117200

Facility ID: 0661005002

Effective Date: 7/28/2014

B. Facility-Wide Terms and Conditions



Final Permit-to-Install and Operate

DTI - Carlisle Compressor Station

Permit Number: P0117200

Facility ID: 0661005002

Effective Date: 7/28/2014

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
 - b) For the purpose of a permit-to-operate *document*, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (1) The following emissions units contained in this permit are subject to 40 CFR Part 60, Subpart JJJJ, 40 CFR Part 63, Subpart ZZZZ, P001, Engine#1 and P002 Engine#2. Emissions units P001 and P002 are subject to applicable provisions in 40 CFR Part 60, Subpart A. The complete NSPS and NESHAP requirements may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website <http://ecfr.gpoaccess.gov> or by contacting the appropriate OHIO EPA District Office or local air agency.



Final Permit-to-Install and Operate
DTI - Carlisle Compressor Station
Permit Number: P0117200
Facility ID: 0661005002
Effective Date: 7/28/2014

C. Emissions Unit Terms and Conditions



1. Emissions Unit Group -1,380 HP NG Engines: P001,P002

EU ID	Operations, Property and/or Equipment Description
P001	Natural Gas Engine(1) 1,380 hp engine
P002	Natural Gas Engine (2) 1,380 hp engine

Operations, Property and/or Equipment Description:

1,380 Horse Power stationary, lean burn, natural gas or ethane fired engine controlled by an oxidation catalyst to control carbon monoxide and hazardous air pollutants. The Catalyst has a capture efficiency of 100% and a control efficiency of 35.5% for CO.

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a. b)(1)i, d)(3) – (6) and, e)(2).
 - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. None.
- b) Applicable Emissions Limitations and/or Control Requirements
 - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) as effective 11/30/01	Sulfur dioxide (SO ₂) emissions shall not exceed 0.0022 ton / rolling 12-month period. Particulate emissions (PE) emissions shall not exceed 0.0037 ton / rolling 12-month period. See b)(2)a. below
b.	OAC rule 3745-31-05(A)(3)(b) as effective 12/01/06	See b)(2)b. below



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	ORC 3704.03(T)	<p>The emissions limitations for carbon monoxide (CO), Nitrogen oxide (NOx) and Volatile organic compounds(VOC) are equivalent to the emissions limitations listed in 40 CFR Part 60, Subpart JJJJ and 40 CFR Part 63, Subpart ZZZZ.</p> <p>The emission limitation for CO in ORC 3704.03(T) is less stringent than the limitation listed under OAC rule 3745-31-05(F)</p>
d.	OAC rule 3745-31-05(F)	CO emissions shall not exceed 1.5 g/HP-hr
e.	<p>40 CFR Part 60, Subpart JJJJ (40 CFR 60.4230-60.4248)</p> <p>[In accordance with 40 CFR Part 60.4230(a)(4)(i) and 40 CFR 60, Subpart JJJJ, Table 1., this emissions unit is a 1,380 HP, lean burn, natural gas stationary spark internal combustion engine manufactured after July 1, 2010, for a new natural gas liquid gas extraction plant and is subject to the emissions limitations/controls measures specified in this section.]</p>	<p>NOx emissions shall not exceed 1.0 g/HP-hr, or 82 ppm at 15% O₂.</p> <p>CO emissions shall not exceed 2.0 g/HP-hr, or 270 ppm at 15% O₂.</p> <p>VOC emissions shall not exceed 0.7 g/HP-hr. or 60 ppm at 15% O₂.</p> <p>[40 CFR Part 60.4233(e), & 40 CFR 60, Subpart JJJJ, Table 1]</p> <p>The emission limitation for CO in 40 CFR Part 60, Subpart JJJJ is less stringent than the limitation listed under OAC rule 3745-31-05(F)</p>
f.	40 CFR Part 60.1-60.19 (60.4246)	Table 3 of 40 CFR 60. Subpart JJJJ – Applicability of General Provisions to Subpart JJJJ shows which parts of the General Provisions in 40 CFR Part 60.1-19 apply.
g.	<p>40 CFR Part 63, Subpart ZZZZ (40 CFR 63.6580 - 63.6590)</p> <p>[In accordance with 40 CFR 63.6590(a)(2)(iii), this emissions unit is a new stationary compression ignition internal combustion engine located at an area source of HAP emissions]</p>	<p>Pursuant to 40 CFR 63.6590(c), stationary compression ignition reciprocating internal combustion engines (RICE) located at an area source of HAP emissions must meet the requirements of this part by meeting the requirements of 40 CFR Part 60 Subpart JJJJ for compression ignition engines.</p> <p>Pursuant to 40 CFR 63.6665, the General Provisions in 40 CFR 63.1 through 63.15 do not apply to a stationary RICE located</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		at an area source of HAP emissions.
h.	OAC rule 3745-17-07(A)(1)	Visible emissions shall not exceed 20% opacity as a six-minute average, except as provided by rule.
h.	OAC rule 3745-17-10(B)(1)	Particulate emissions (PE) shall not exceed 0.020 lb/million Btu actual heat input. This emission limitation is less stringent than the limitation listed under OAC rule 3745-31-05(A)(3), until such time as U.S. EPA approves the December 1, 2006, version of OAC rule 3745-31-05 as part of the State Implementation Plan.
i.	OAC rule 3745-114-01(A) and ORC 3704.03(F)	See d)(3) through (6) below.

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by state regulations for NAAQS pollutant less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, then these emission limits/control measure no longer apply.

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

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to SO₂ and PE from this air contaminant source since the uncontrolled potential to emit SO₂ and PE is less than 10 tons/yr.

c. The permittee shall comply with the applicable requirements of 40 CFR Part 60 Subpart JJJJ, including the following sections:

60.4243(b)(1) and (b)(2)(ii)	Compliance Demonstration
60.4234	Duration of Compliance
60.4236	Deadline for importing & installing



c) Operational Restrictions

- (1) The permittee shall burn only natural gas or ethane in this emissions unit.
- (2) The permittee shall comply with the applicable restrictions of 40 CFR Part 60 Subpart JJJJ, including the following sections:

60.4243(e)	Alternate fuel
60.4243(g)	Air-to- Fuel ratio controllers

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (2) The permittee shall comply with the applicable restrictions of 40 CFR Part 60 Subpart JJJJ, including the following sections:

60.4245(a)1-4,(b), (c) and (d)	Recordkeeping
--------------------------------	---------------

- (3) The PTIO application for this emissions unit, P001 and P002 were evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The Toxic Air Contaminant Statute, ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled Review of New Sources of Air Toxic Emissions, Option A, as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour work week, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices; or



ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., X hours per day and Y days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or worst case toxic contaminant(s):

Toxic Contaminant: Formaldehyde

TLV (mg/m³): 0.2211

Maximum Hourly Emission Rate (lbs/hr): 1.34 pounds per hour for Formaldehyde.

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 40.41

MAGLC (ug/m³): 87.55

The permittee, has demonstrated that emissions of formaldehyde from emissions unit(s) P001 and P002 were calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the Toxic Air Contaminant Statute, ORC 3704.03(F).

(4) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;



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

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

- (5) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F):
 - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the Toxic Air Contaminant Statute, ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
 - d. the documentation of the initial evaluation of compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- (6) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.



e) Reporting Requirements

- (1) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
- (2) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual Permit Evaluation Report (PER). If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.
- (3) The permittee shall comply with the applicable restrictions of 40 CFR Part 60 Subpart JJJJ, including the following sections:

60.4245(c) and (d)	Reporting requirements
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f) Testing Requirements

- (1) To demonstrate compliance with the emission standards specified in §60.4233(e), you must demonstrate compliance according to one of the following methods:
 - a. Purchasing an engine certified according to procedures specified in 40 CFR Subpart JJJJ, for the same model year and demonstrating compliance according to one of the methods specified in paragraph §60.4243(b).
 - i. If the permittee operates and maintains the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, the permittee must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required.
 - ii. If the permittee does not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine, and the permittee must keep a maintenance plan and records of conducted consistent with good air pollution control practice for minimizing emissions. In addition, the permittee must conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.
 - b. Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in §60.4233(e) and according to the requirements



specified in §60.4244, as applicable. The permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the permittee must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

- (2) If the permittee chooses to demonstrate compliance with the emission standards specified in §60.4233(e) by performing a stack test, the permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the procedures specified in 40 CFR §60.4244, 40 CFR Part 60 Subpart JJJJ Table 2, and the following requirements.
 - a. Conduct performance testing in the following manner:
 - i. if the permittee is purchasing an engine certified according to procedures specified in 40 CFR Subpart JJJJ but does not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions an initial performance test shall be performed to demonstrate compliance with the mass emissions limitations in §60.4233(e) for VOC, NO_x, and CO, within 1 year of startup. In addition, subsequent performance testing will be conducted every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance with the mass emissions limitations in §60.4233(e) for VOC, NO_x, and CO; or
 - ii. if the permittee is purchasing a non-certified engine, an initial performance test shall be performed to demonstrate compliance with the mass emissions limitations in §60.4233(e) for VOC, NO_x, and CO, within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of the emissions unit. In addition, subsequent performance testing will be conducted every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance with the mass emissions limitations in §60.4233(e) for VOC, NO_x, and CO.
 - b. If the stationary internal combustion engine is rebuilt, or undergoes major repair or maintenance the permittee shall conduct subsequent performance test.
 - c. Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 of 40 CFR Part 60, Subpart JJJJ.
 - d. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be



conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

- e. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
 - f. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency
- (3) Compliance with the emission limitations in (b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation:

SO₂ emissions shall not exceed 0.0022 ton / rolling 12-month period.

Applicable Compliance Method:

Compliance shall be determined by the following calculation:

Compliance with the SO₂ limitation shall be demonstrated by the following calculation based on the emissions factors and operational parameters provided in the permittee's application:

$$(0.00588 \text{ lb/ mmBTU}^1)(1,195 \text{ BTU/scf}^2)(8,431 \text{ scf/hr}^2)(1 \text{ mmBTU}/1,000,000 \text{ BTU})(8,760 \text{ hr/yr}) (1\text{yr}/12 \text{ months})(\text{ton}/2000\text{lb}) = 0.0022 \text{ ton/month over a 12-month rolling period.}$$

a. Emissions Limitation:

PE emissions shall not exceed 0.0037 ton / rolling 12-month period.

Applicable Compliance Method:

Compliance with the PE limitation shall be demonstrated by the following calculation based on the emissions factors and operational parameters provided in the permittee's application:

$$(0.0099871 \text{ lb/ mmBTU}^3)(1,195 \text{ BTU/scf}^2)(8,431 \text{ scf/hr}^2)(1 \text{ mmBTU}/1,000,000 \text{ BTU})(8,760 \text{ hr/yr}) (1\text{yr}/12 \text{ months})(\text{ton}/2000\text{lb})$$

¹ 0.000588 lb/mmBTU is the SO₂ emission factor from AP-42 Table 1.4-2 (7/98)

² From permittee's application



=0.0037 ton/month over a 12-month rolling period.

b. Emissions Limitation:

CO emissions shall not exceed 1.5 g/HP-hr.

Applicable Compliance Method:

If required, carbon monoxide emissions shall be determined according to test Methods 1 - 4, and 10 as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

c. Emissions Limitation:

Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, visible particulate emissions shall be determined according to U.S. EPA Method 9.

d. Emissions Limitations:

NO_x emissions shall not exceed 1.0 g/HP-hr or 82 ppmvd at 15% O₂.

Applicable Compliance Method:

If required, NO_x emissions shall be determined according to USEPA test Methods¹ or 1A of 40 CFR part 60, Appendix A or ASTM Method D6522–00(2005) ; Method 3, 3A, or 3B^b of 40 CFR part 60, appendix A or ASTM Method D6522–00(2005) ; Method 7E of 40 CFR part 60, appendix A, Method D6522–00(2005), and Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17) . See f)(1) and f)(2).

See Section C.1.g)(1) below.

e. Emissions Limitations:

CO emissions shall not exceed 2.0 g/HP-hr, or 270 ppm at 15% O₂.

Applicable Compliance Method:

If required, carbon monoxide emissions shall be determined according to USEPA test Methods¹ or 1A of 40 CFR part 60, Appendix A or ASTM Method D6522–00(2005); Method 3, 3A, or 3B^b of 40 CFR part 60, appendix A or ASTM Method D6522–00(2005); and Method 10 of 40 CFR part 60, appendix A, ASTM Method

³ 0.0099871 lb/mmBTU is the PE emission factor from AP-42 Table 1.4-2 (7/98)



Final Permit-to-Install and Operate

DTI - Carlisle Compressor Station

Permit Number: P0117200

Facility ID: 0661005002

Effective Date: 7/28/2014

D6522-00(2005), Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17) ;. See f)(1) and f)(2).

f. Emissions Limitations:

VOC emissions shall not exceed 0.7 g/HP-hr or 60 ppmvd at 15% O₂.

Applicable Compliance Method:

If required, volatile organic compound emissions shall be determined according to USEPA test Methods Method 1 or 1A of 40 CFR part 60, Appendix A ; Method 3, 3A, or 3B of 40 CFR part 60, appendix A or ASTM Method D6522-00(2005); and Methods 25A and 18 of 40 CFR part 60, appendix A, Method 25A with the use of a methane cutter as described in 40 CFR 1065.265, Method 18 or 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17) See f)(1) and f)(2).

g. Emission Limitation:

PE shall not exceed 0.020 lb/MMbtu actual heat input.

Applicable Compliance Method:

If required, particulate emissions shall be determined according to test Methods 1 - 5, as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources," and the procedures specified in OAC rule 3745-17-03(B)(9). Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

g) Miscellaneous Requirements

- (1) Initial emissions testing for emissions units P001 and P002 was performed on 3/29/11.