NOTICE OF 30-DAY PERIOD FOR PUBLIC COMMENT

Preliminary Findings Regarding a Significant Modification to a Part 70 Operating Permit

for ANR Pipeline Company – Celestine Station in Dubois County

Significant Source Modification No.: 037-43099-00031
Significant Permit Modification No.: 037-43179-00031

The Indiana Department of Environmental Management (IDEM) has received an application from ANR Pipeline Company - Celestine Station, located at 146 South Celestine Road, Celestine, IN 47521, for a significant modification of its Part 70 Operating Permit issued on March 2, 2020. If approved by IDEM’s Office of Air Quality (OAQ), this proposed modification would allow ANR Pipeline Company - Celestine Station to make certain changes at its existing source. ANR Pipeline Company - Celestine Station has applied to replace eight (8) compressor engines (and ancilliary equipment) with two (2) compressor turbines (and ancilliary equipment).

The applicant intends to construct and operate new equipment that will emit air pollutants; therefore, the permit contains new or different permit conditions. In addition, some conditions from previously issued permits/approvals have been corrected, changed, or removed. These corrections, changes, and removals may include Title I changes (e.g., changes that add or modify synthetic minor emission limits). IDEM has reviewed this application and has developed preliminary findings, consisting of a draft permit and several supporting documents, which would allow the applicant to make this change.

A copy of the permit application and IDEM’s preliminary findings have been sent to:

Jasper-Dubois County Contractual Public Library
1116 Main St
Jasper, IN 47546

and

IDEM Southwest Regional Office
114 South 7th Street
P.O. Box 128
Petersburg, IN 47567-0128

A copy of the preliminary findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/.

A copy of the application and preliminary findings is also available via IDEM’s Virtual File Cabinet (VFC). To access VFC, please go to: http://www.in.gov/idem/ and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria.

How can you participate in this process?

The date that this notice is posted on IDEM’s website (https://www.in.gov/idem/5474.htm) marks the beginning of a 30-day public comment period. If the 30th day of the comment period falls on a day when IDEM offices are closed for business, all comments must be postmarked or delivered in person on the next business day that IDEM is open.
You may request that IDEM hold a public hearing about this draft permit. If adverse comments concerning the air pollution impact of this draft permit are received, with a request for a public hearing, IDEM will decide whether or not to hold a public hearing. IDEM could also decide to hold a public meeting instead of, or in addition to, a public hearing. If a public hearing or meeting is held, IDEM will make a separate announcement of the date, time, and location of that hearing or meeting. At a hearing, you would have an opportunity to submit written comments and make verbal comments. At a meeting, you would have an opportunity to submit written comments, ask questions, and discuss any air pollution concerns with IDEM staff.

Comments and supporting documentation, or a request for a public hearing should be sent in writing to IDEM at the address below. If you comment via e-mail, please include your full U.S. mailing address so that you can be added to IDEM’s mailing list to receive notice of future action related to this permit. If you do not want to comment at this time, but would like to receive notice of future action related to this permit application, please contact IDEM at the address below. Please refer to permit number SSM 037-43099-00031 and SPM 037-43179-00031 in all correspondence.

Comments should be sent to:

Wyman Clark  
IDEM, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
(800) 451-6027, ask for Wyman Clark or (317) 232-0029  
Or dial directly: (317) 232-0029  
Fax: (317) 232-6749 attn: Wyman Clark  
E-mail: wclark@idem.IN.gov

All comments will be considered by IDEM when we make a decision to issue or deny the permit. Comments that are most likely to affect final permit decisions are those based on the rules and laws governing this permitting process (326 IAC 2), air quality issues, and technical issues. IDEM does not have legal authority to regulate zoning, odor, or noise. For such issues, please contact your local officials.

For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: http://www.in.gov/idem/airquality/2356.htm; and the Citizens’ Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

What will happen after IDEM makes a decision?

Following the end of the public comment period, IDEM will issue a Notice of Decision stating whether the permit has been issued or denied. If the permit is issued, it may be different than the draft permit because of comments that were received during the public comment period. If comments are received during the public notice period, the final decision will include a document that summarizes the comments and IDEM’s response to those comments. If you have submitted comments or have asked to be added to the mailing list, you will receive a Notice of the Decision. The notice will provide details on how you may appeal IDEM’s decision, if you disagree with that decision. The final decision will also be available on the Internet at the address indicated above and will also be sent to the local library indicated above, the IDEM Regional Office indicated above, and the IDEM public file room on the 12th floor of the Indiana Government Center North, 100 N. Senate Avenue, Indianapolis, Indiana 46204-2251.

If you have any questions, please contact Wyman Clark of my staff at the above address.

Brian Williams, Section Chief  
Permits Branch  
Office of Air Quality
Ms. Ruth Jensen  
ANR Pipeline Company - Celestine Station  
13710 FNB Parkway Suite 300  
Omaha, NE 68154  

Re: 037-43179-00031  
Significant Permit Modification  

Dear Ms. Jensen:  

ANR Pipeline Company - Celestine Station was issued Part 70 Operating Permit Renewal No. T037-41537-00031 on March 2, 2020 for a stationary natural gas compressor station located at 146 S. Celestine Road, Celestine, Indiana 47521-0058. An application requesting changes to this permit was received on July 31, 2020. Pursuant to the provisions of 326 IAC 2-7-12, a Significant Permit Modification to this permit is hereby approved as described in the attached Technical Support Document.  

Please find attached the entire Part 70 Operating Permit as modified, including the following new attachment:  

Attachment D: 40 CFR 60, Subpart KKKK, Standards of Performance for Stationary Combustion Turbines new  

The permit references the below listed attachment(s). Since these attachments have been provided in previously issued approvals for this source, IDEM OAQ has not included a copy of these attachments with this modification:  

Attachment A: 40 CFR 60, Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines  
Attachment B: 40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines  
Attachment C: 40 CFR 63, Subpart DDDDD, Standards of Performance for Stationary Combustion Turbines  

Previously issued approvals for this source containing these attachments are available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/.  

Previously issued approvals for this source are also available via IDEM’s Virtual File Cabinet (VFC). To access VFC, please go to: http://www.in.gov/idem/ and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria.  


A copy of the permit is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/.  
A copy of the application and permit is also available via IDEM’s Virtual File Cabinet (VFC). To access
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VFC, please go to: http://www.in.gov/idem/ and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: https://www.in.gov/idem/airpermit/2358.htm; and the Citizens’ Guide to IDEM on the Internet at: https://www.in.gov/idem/6900.htm.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5.

If you have any questions regarding this matter, please contact Wyman Clark, Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251, or by telephone at (317) 232-0029 or (800) 451-6027, and ask for Wyman Clark or (317) 232-0029.

Sincerely,

Brian Williams, Section Chief
Permits Branch
Office of Air Quality

Attachments: Modified Permit and Technical Support Document

cc: File - Dubois County
Dubois County Health Department
U.S. EPA, Region 5
Compliance and Enforcement Branch
IDEM Southwest Regional Office
Part 70 Operating Permit
OFFICE OF AIR QUALITY

ANR Pipeline Company – Celestine Station
146 South Celestine Road
Celestine, Indiana 47521

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. 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 conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

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Issued by:
Brian Williams Section Chief
Permits Branch, Office of Air Quality

Issuance Date: March 2, 2020
Expiration Date: March 2, 2025

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<th>Significant Permit Modification No.: 037-43179-00031</th>
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Issued by:
Brian Williams, Section Chief
Permits Branch
Office of Air Quality

Issuance Date:
Expiration Date: March 2, 2025
TABLE OF CONTENTS

SECTION A  SOURCE SUMMARY ......................................................................................................... 5
  A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(14)][326 IAC 2-7-1(22)]
  A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(14)]
  A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(14)]
  A.4 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(14)]
  A.5 Part 70 Permit Applicability [326 IAC 2-7-2]

SECTION B  GENERAL CONDITIONS ................................................................................................... 9
  B.1 Definitions [326 IAC 2-7-1]
  B.2 Permit Term [326 IAC 2-7-5(2)][326 IAC 2-1.1-9.5][326 IAC 2-7-4(a)(1)(D)][IC 13-15-3-6(a)]
  B.3 Term of Conditions [326 IAC 2-1.1-9.5]
  B.4 Enforceability [326 IAC 2-7-7][IC 13-17-12]
  B.5 Severability [326 IAC 2-7-5(5)]
  B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(D)]
  B.7 Duty to Provide Information [326 IAC 2-7-5(E)]
  B.8 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(C)]
  B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]
  B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)][326 IAC 1-6-3]
  B.11 Emergency Provisions [326 IAC 2-7-16]
  B.12 Permit Shield [326 IAC 2-7-16][326 IAC 2-7-20][326 IAC 2-7-12]
  B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5][326 IAC 2-7-10.5]
  B.14 Termination of Right to Operate [326 IAC 2-7-10][326 IAC 2-7-4(a)]
  B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)][326 IAC 2-7-8(a)][326 IAC 2-7-9]
  B.16 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]
  B.17 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12]
  B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)][326 IAC 2-7-12(b)(2)]
  B.19 Operational Flexibility [326 IAC 2-7-20][326 IAC 2-7-10.5]
  B.20 Source Modification Requirement [326 IAC 2-7-10.5]
  B.21 Inspection and Entry [326 IAC 2-7-6][IC 13-14-2-2][IC 13-30-3-1][IC 13-17-3-2]
  B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]
  B.23 Annual Fee Payment [326 IAC 2-7-19][326 IAC 2-7-5(7)][326 IAC 2-1.1-7]
  B.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314][326 IAC 1-1-6]

SECTION C  SOURCE OPERATION CONDITIONS ............................................................................. 20
Emission Limitations and Standards [326 IAC 2-7-5(1)] .................................................................. 20
  C.1 Opacity [326 IAC 5-1]
  C.2 Open Burning [326 IAC 4-1][IC 13-17-9]
  C.3 Incineration [326 IAC 4-2][326 IAC 9-1-2]
  C.4 Fugitive Dust Emissions [326 IAC 6-4]
  C.5 Asbestos Abatement Projects [326 IAC 14-10][326 IAC 18][40 CFR 61, Subpart M]
  Testing Requirements [326 IAC 2-7-6(1)] .................................................................................. 22
  C.6 Performance Testing [326 IAC 3-6]
Compliance Requirements [326 IAC 2-1.1-11] .............................................................................. 22
  C.7 Compliance Requirements [326 IAC 2-1.1-11]
Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)] ......................... 22
  C.8 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]
C.9 Instrument Specifications [326 IAC 2-1.1-11][326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]

Corrective Actions and Response Steps [326 IAC 2-7-5][326 IAC 2-7-6] .................................. 23
C.10 Emergency Reduction Plans [326 IAC 1-5-2][326 IAC 1-5-3]
C.11 Risk Management Plan [326 IAC 2-7-5(12)][40 CFR 68]
C.12 Response to Excursions or Exceedances [326 IAC 2-7-5][326 IAC 2-7-6]
C.13 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]

Record Keeping and Reporting Requirements [326 IAC 2-7-5][326 IAC 2-7-19] ......................... 24
C.14 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]
C.15 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6][326 IAC 2-3]
C.16 General Reporting Requirements [326 IAC 2-7-5(3)(C)][326 IAC 2-1.1-11][326 IAC 2-2][326 IAC 2-3]

Stratospheric Ozone Protection .................................................................................................. 28
C.17 Compliance with 40 CFR 82 and 326 IAC 22-1

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS .................................................. 29
Emission Limitations and Standards [326 IAC 2-7-5(1)] ............................................................. 29
D.1.1 Particulate [326 IAC 6.5-1-2]
D.1.2 Nitrogen Oxides (NOx) Emissions [326 IAC 10-5-3(b)]
D.1.3 PSD Minor Limitation [326 IAC 2-2]
D.1.4 HAP Minor Limitation [326 IAC 2-4.1]
D.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

Compliance Determination Requirements [326 IAC 2-7-5(1)] .................................................. 31
D.1.6 Nitrogen Oxides (NOx) Control
D.1.7 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11][326 IAC 10-5-4]
D.1.8 Emissions Determination Requirements [326 IAC 2-7-5(1)]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19] .................... 32
D.1.9 Record Keeping Requirements
D.1.10 Reporting Requirements

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS .................................................. 35
Emission Limitations and Standards [326 IAC 2-7-5(1)] ............................................................. 35
D.2.1 Particulate Matter (Particulate Emission Limitations for Sources of Indirect Heating) [326 IAC 6-2-4]
D.2.2 Particulate [326 IAC 6.5-1-2]
D.2.3 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]
D.2.4 Material Requirements for Cold Cleaner Degreasers [326 IAC 8-3-8]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19] .................... 38
D.2.5 Record Keeping Requirements [326 IAC 8-3-8]

SECTION E.1 NSPS .................................................................................................................. 39
New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)] ......................... 39
E.1.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1][40 CFR 60, Subpart A]
E.1.2 Standards of Performance for Stationary Spark Ignition Internal Combustion Engines NSPS [326 IAC 10] [40 CFR 60, Subpart JJJJ]
E.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

Compliance Determination Requirements [326 IAC 2-7-5(1)] .................................................. 40
E.1.4 Testing Requirements [326 IAC 2-1.1-11][326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
SECTION E.2 NESHAP

National Emissions Standards for Hazardous Air Pollutants (NESHAP) Requirements


E.2.2 Stationary Reciprocating Internal Combustion Engines NESHAP [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

SECTION E.3 NESHAP

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements


E.3.2 NESHAP for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD] [326 IAC 20-95]

E.3.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

SECTION E.4 NSPS

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.4.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1][40 CFR 60, Subpart A]

E.4.2 Standards of Performance for Stationary Combustion Turbines NSPS [40 CFR 60, Subpart KKKK]

E.4.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

Compliance Determination Requirements [326 IAC 2-7-5(1)]

E.4.4 Testing Requirements [326 IAC 2-1.1-11][326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

CERTIFICATION

EMERGENCY OCCURRENCE REPORT

Part 70 Quarterly Report

Part 70 Quarterly Report

Part 70 Quarterly Report

QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Attachment A - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60, Subpart JJJJ]

Attachment B - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR 63, Subpart ZZZZ]

Attachment C - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR 63, Subpart DDDDD]

Attachment D - Standards of Performance for Stationary Combustion Turbines [40 CFR 60 Subpart KKKK]
SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.4 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(14)][326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary natural gas compressor station.

| Source Address:            | 146 S. Celestine Road, Celestine, Indiana 47521-0058 |
| General Source Phone Number: | (402) 492-7465 |
| SIC Code:                  | 4922 (Natural Gas Transmission) |
| County Location:           | Dubois |
| Source Location Status:    | Attainment for all criteria pollutants |
| Source Status:             | Part 70 Operating Permit Program |
|                           | Major Source, under PSD Rules |
|                           | Major Source, Section 112 of the Clean Air Act |
|                           | Not 1 of 28 Source Categories |

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(14)]

This stationary source consists of the following emission units and pollution control devices:

(a) Six (6) two-stroke lean burn natural gas-fired reciprocating internal combustion internal engine compressors, installed in 1957, identified as E01 through E06, exhausting to stacks S01 through S06, respectively, with a rated capacity of 2,000 Horsepower, each, and a heat input capacity of 17.54 million British thermal units per hour, each. [40 CFR 63, Subpart ZZZZ]

(b) One (1) two-stroke lean burn natural gas-fired reciprocating internal combustion engine compressor, installed in 1968, identified as E07, exhausting to stack S07, equipped with Low Emission Combustion (LEC) technology, with a rated capacity of 7,833 Horsepower and a heat input capacity of 61.2 million British thermal units per hour [40 CFR 63, Subpart ZZZZ]

(c) One (1) two-stroke lean burn natural gas-fired reciprocating internal combustion engine compressor, installed in 1968, identified as E08, exhausting to stack S08, equipped with Low Emission Combustion (LEC) technology, with a rated capacity of 10,833 Horsepower and a heat input capacity of 91.8 million British thermal units per hour. [40 CFR 63, Subpart ZZZZ]

(d) One (1) natural gas-fired Solar Mars 100 Compressor Turbine identified as E12, approved in 2021 for construction, with a maximum capacity of 16,082 hp (139.66 MMBtu/hr heat input), uncontrolled, and exhausting to stack S12. [40 CFR 60, Subpart KKKK]

(e) One (1) natural gas-fired Solar Mars 100 Compressor Turbine identified as E13, approved in 2021 for construction, with a maximum capacity of 16,082 (139.66 MMBtu/hr heat input), uncontrolled, and exhausting to stack S12. [40 CFR 60, Subpart KKKK]
A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(14)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) Combustion related activities, as follows:

(1) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:

(A) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.

(i) One (1) boiler, constructed in 1956, identified as B01, with a maximum heat input capacity of 4.184 MMBtu/hr; [40 CFR 63, Subpart DDDDD]

(ii) One (1) boiler, constructed in 1970, identified as B02, with a maximum heat input capacity of 4.184 MMBtu/hr; [40 CFR 63, Subpart DDDDD]

(iii) Eleven (11) catalytic space heaters, with a maximum heat input capacity of 0.576 MMBtu/hr, each, uncontrolled, and exhausting to the room.

(iv) One (1) natural gas-fired Aqua-Gas WB1200-48UH Fuel Gas Heater, identified as IA1 approved in 2021 for construction, with a maximum capacity of 1.20 MMBtu/hr heat input, uncontrolled, and exhausting to a separate stack.

(v) Thirty (30) natural gas-fired catalytic Space Heaters, identified as IA2 through IA31, approved in 2021 for construction, each with a maximum capacity of 0.0725 MMBtu/hr heat input, uncontrolled, and exhausting to the room.

(b) Activities associated with emergencies as follows:

(1) Emergency generators as follows:

(A) Natural gas turbines or reciprocating engines not exceeding sixteen thousand (16,000) horsepower.

(i) One (1) four-stroke rich burn natural gas-fired emergency generator, constructed in 2013, identified as E11, with a maximum capacity of 690 Horsepower and a maximum heat input capacity of 5.06 million British thermal units per hour, exhausting to stack S11.[40 CFR 60, Subpart JJJJJ][40 CFR 63, Subpart ZZZZZ]

(ii) One (1) natural gas-fired Waukesha VGF-L36GL Emergency Generator, identified as E14, approved in 2021 for construction, with a maximum capacity of 880 hp (6.83 MMBtu/hr heat input), uncontrolled, and exhausting to stack S14. [40 CFR 60, Subpart JJJJJ][40 CFR 63, Subpart ZZZZZ]

(c) Production related activities, including the following:

(1) Degreasing operations that do not exceed one hundred forty-five (145) gallons per twelve (12) months, except if subject to 326 IAC 20-6, as follows:
(A) One (1) cold cleaner degreaser, constructed in 2003, using no halogenated solvents

A.4 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(14)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) Fuel dispensing activities, as follows:

(1) A petroleum fuel other than gasoline dispensing facility, having a storage tank capacity less than or equal to ten thousand five hundred (10,500) gallons, and dispensing three thousand five hundred (3,500) gallons per day or less, as follows:

(A) One (1) diesel fuel storage tank, identified as T20, with a maximum capacity of 100 gallons.

(b) The following VOC and HAP storage containers:

(1) Storage tanks with capacity less than or equal to one thousand (1,000) gallons and annual throughputs equal to or less than twelve thousand (12,000) gallons, as follows:

(A) Two (2) condensate storage tanks, constructed in 2018, identified as T24 and T25, with a maximum capacity of 165 gallons.

(B) One (1) condensate storage tank, constructed prior to 1970, identified as T26, with a maximum capacity of 420 gallons.

(2) Vessels storing the following:

(A) Lubricating oils, as follows:

(i) One (1) lube oil tank and one (1) split lube/used oil tank, constructed in 1957, identified as T1 and T2, with a maximum capacity of 12,100 gallons, each.

(ii) One (1) lube oil tank, constructed in 1970, identified as T3, with a maximum capacity of 2,400 gallons.

(iii) One (1) lube oil tank, constructed in 1957, identified as T4, with a maximum capacity of 440 gallons.

(iv) One (1) used oil tank, constructed prior to 1970, identified as T19, with a maximum capacity of 727 gallons.

(v) One (1) lube oil tank, constructed prior to 1970, identified as T21, with a maximum capacity of 581 gallons.

(vi) One (1) maintenance oil tank, constructed prior to 1970, identified as T22, with a maximum capacity of 1,023 gallons.

(vii) One (1) used oil tank, constructed prior to 1970, identified as T23, with a maximum capacity of 419 gallons.

(B) One (1) wastewater storage tank, approved for construction in 2021, identified as IA32, with a maximum capacity of 1,200 gallons.

(c) Routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process, including the following:
(1) Purging of gas lines.
(2) Purging of vessels.

(d) An emission unit or activity whose potential uncontrolled emissions meet the exemption levels specified in 326 IAC 2-1.1-3(e)(1), as follows:

1. One (1) glycol/water tank, constructed in 1968, identified as T11, with a maximum capacity of 1,605 gallons.
2. One (1) glycol/water tank, constructed in 1968, identified as T12, with a maximum capacity of 3,382 gallons.
3. One (1) glycol/water tank, constructed in 1986, identified as T13, with a maximum capacity of 8,000 gallons.
4. One (1) glycol/water tank, constructed in 1985, identified as T14, with a maximum capacity of 2,000 gallons.

(e) For units with potential uncontrolled emissions of HAPs, that are not listed as insignificant in clauses (G) through (J) or defined as trivial in subdivision (42), an insignificant activity is any of the following:

1. Any unit, not regulated by a NESHAP, emitting greater than one (1) pound per day but less than twelve and five-tenths (12.5) pounds per day or two and five-tenths (2.5) tons per year of any combination of HAPs, as follows:
   (A) One (1) condensate storage tank, constructed in 1957, identified as T10, with a maximum capacity of 12,000 gallons.

(f) Venting from pneumatic actuators, dry seals, and blowdown associated with compressor turbines E12 and E13, approved in 2021 for construction.

A.5 Part 70 Permit Applicability [326 IAC 2-7-2]
This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);
(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).
SECTION B  GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]
Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-7-5(2)][326 IAC 2-1.1-9.5][326 IAC 2-7-4(a)(1)(D)][IC 13-15-3-6(a)]
(a) This permit, T037-41537-00031, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]
Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability [326 IAC 2-7-7][IC 13-17-12]
Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability [326 IAC 2-7-5(5)]
The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]
This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]
(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.
B.8 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:

(1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(35), and

(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) A "responsible official" is defined at 326 IAC 2-7-1(35).

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source’s compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region 5
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and
(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)][326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee’s control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

The Permittee shall implement the PMPs.

(b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.11 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the
affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ or Southwest Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Southwest Regional Office phone: (812) 380-2305; fax: (812) 380-2304.

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(8) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

B.12 Permit Shield [326 IAC 2-7-15][326 IAC 2-7-20][326 IAC 2-7-12]

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

(c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.

(d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:

(1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
(2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;

(3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and

(4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.

(e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).

(f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]

(g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5][326 IAC 2-7-10.5]

(a) All terms and conditions of permits established prior to T037-41537-00031 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised under 326 IAC 2-7-10.5, or

(3) deleted under 326 IAC 2-7-10.5.

(b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this Part 70 operating permit.

B.14 Termination of Right to Operate [326 IAC 2-7-10][326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)][326 IAC 2-7-8(a)][326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.16 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(42). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(b) A timely renewal application is one that is:

(1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source’s failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.
B.17 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12]
(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:
Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)][326 IAC 2-7-12(b)(2)]
(a) No Part 70 permit revision or notice shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.19 Operational Flexibility [326 IAC 2-7-20][326 IAC 2-7-10.5]
(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b) or (c) without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:
Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
and

United States Environmental Protection Agency, Region 5
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b)(1) and (c)(1). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-7-20(b)(1) and (c)(1).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(37)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

(1) A brief description of the change within the source;
(2) The date on which the change will occur;
(3) Any change in emissions; and
(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35).

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ or U.S. EPA is required.

(e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

(f) This condition does not apply to emission trades of SO₂ or NOₓ under 326 IAC 21.
B.20 Source Modification Requirement [326 IAC 2-7-10.5]
A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.21 Inspection and Entry [326 IAC 2-7-6][IC 13-14-2-2][IC 13-30-3-1][IC 13-17-3-2]
Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee’s right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee’s premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]
B.23 Annual Fee Payment [326 IAC 2-7-19][326 IAC 2-7-5(7)][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-8590 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314][326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.
SECTION C SOURCE OPERATION CONDITIONS

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.2 Open Burning [326 IAC 4-1][IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.3 Incineration [326 IAC 4-2][326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.4 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.5 Asbestos Abatement Projects [326 IAC 14-10][326 IAC 18][40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;
(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(c).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(d).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.
Testing Requirements  [326 IAC 2-7-6(1)]

C.6 Performance Testing  [326 IAC 3-6]

(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements  [326 IAC 2-1.1-11]

C.7 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements  [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

C.8 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]

(a) For new units:

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units shall be implemented on and after the date of initial start-up.

(b) For existing units:

Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance to begin such monitoring. If, due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

C.9 Instrument Specifications [326 IAC 2-1.1-11][326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale. The analog instrument shall be capable of measuring values outside of the normal range.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

**Corrective Actions and Response Steps [326 IAC 2-7-5][326 IAC 2-7-6]**

C.10 Emergency Reduction Plans [326 IAC 1-5-2][326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.11 Risk Management Plan [326 IAC 2-7-5(12)][40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.12 Response to Excursions or Exceedances [326 IAC 2-7-5][326 IAC 2-7-6]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or
(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall record the reasonable response steps taken.

C.13 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

C.14 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

(1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(33) (“Regulated pollutant, which is used only for purposes of Section 19 of this rule”) from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
The emission statement does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

C.15 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6][326 IAC 2-2][326 IAC 2-3]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following, where applicable:

(AA) All calibration and maintenance records.
(BB) All original strip chart recordings for continuous monitoring instrumentation.
(CC) Copies of all reports required by the Part 70 permit.

Records of required monitoring information include the following, where applicable:

(AA) The date, place, as defined in this permit, and time of sampling or measurements.
(BB) The dates analyses were performed.
(CC) The company or entity that performed the analyses.
(DD) The analytical techniques or methods used.
(EE) The results of such analyses.
(FF) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

(c) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A), 326 IAC 2-2-8 (b)(6)(B), 326 IAC 2-3-2 (l)(6)(A), and/or 326 IAC 2-3-2 (l)(6)(B)) that a “project” (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(yy)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

(1) Before beginning actual construction of the “project” (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, document and maintain the following records:

(A) A description of the project.
(B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.
(C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:

(i) Baseline actual emissions;

(ii) Projected actual emissions;

(iii) Amount of emissions excluded under section 326 IAC 2-2-1(pp)(2)(A)(iii) and/or 326 IAC 2-3-1 (kk)(2)(A)(iii); and

(iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.

(d) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A) and/or 326 IAC 2-3-2 (l)(6)(A)) that a “project” (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

(1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and

(2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.16 General Reporting Requirements [326 IAC 2-7-5(3)(C)][326 IAC 2-1.1-11][326 IAC 2-2][326 IAC 2-3]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

(e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any “project” (as defined in 326 IAC 2-2-1 (oo) and/or 326 IAC 2-3-1 (jj)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

1. The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (ww) and/or 326 IAC 2-3-1 (pp), for that regulated NSR pollutant, and

2. The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).

(f) The report for project at an existing emissions unit shall be submitted no later than sixty (60) days after the end of the year and contain the following:

1. The name, address, and telephone number of the major stationary source.

2. The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.

3. The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).

4. Any other information that the Permittee wishes to include in this report such as an explanation as to why the emissions differ from the preconstruction projection.

Reports required in this part shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(g) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.
C.17 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.
SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) Six (6) two-stroke lean burn natural gas-fired reciprocating internal combustion internal engine compressors, installed in 1957, identified as E01 through E06, exhausting to stacks S01 through S06, respectively, with a rated capacity of 2,000 Horsepower, each, and a heat input capacity of 17.54 million British thermal units per hour, each. [40 CFR 63, Subpart ZZZZ]

(b) One (1) two-stroke lean burn natural gas-fired reciprocating internal combustion engine compressor, installed in 1968, identified as E07, exhausting to stack S07, equipped with Low Emission Combustion (LEC) technology, with a rated capacity of 7,833 Horsepower and a heat input capacity of 61.2 million British thermal units per hour. [40 CFR 63, Subpart ZZZZ]

(c) One (1) two-stroke lean burn natural gas-fired reciprocating internal combustion engine compressor, installed in 1968, identified as E08, exhausting to stack S08, equipped with Low Emission Combustion (LEC) technology, with a rated capacity of 10,833 Horsepower and a heat input capacity of 91.8 million British thermal units per hour. [40 CFR 63, Subpart ZZZZ]

(d) One (1) natural gas-fired Solar Mars 100 Compressor Turbine identified as E12, approved in 2021 for construction, with a maximum capacity of 16,082 hp (139.66 MMBtu/hr heat input), uncontrolled, and exhausting to stack S12. [40 CFR 60, Subpart KKKK]

(e) One (1) natural gas-fired Solar Mars 100 Compressor Turbine identified as E13, approved in 2021 for construction, with a maximum capacity of 16,082 (139.66 MMBtu/hr heat input), uncontrolled, and exhausting to stack S12. [40 CFR 60, Subpart KKKK]

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Particulate [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a):

(a) Particulate emissions from Engines E01-E08 shall each not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

(b) Particulate matter emissions from Turbines E12 and E13 shall each not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

(c) The limits above in (a) and (b) shall cease to be effective after the date the last of the eight (8) two-stroke lean burn natural gas-fired reciprocating internal combustion internal engine compressors, identified as (E01 – E08) is made incapable of operation.

D.1.2 Nitrogen Oxides (NOx) Emissions [326 IAC 10-5-3(b)]

Pursuant to 326 IAC 10-5-3(b)(1), during the ozone season (time period between May 1 and September 30 of any year), the emissions of NOx from Emission Units E07 and E08 shall not exceed six and a half (6.5) and seven (7.0) grams per brake horsepower per hour (g/bhp-hr), respectively.
D.1.3 PSD Minor Limitation [326 IAC 2-2]

Pursuant to SSM No. 037-43099-00031, upon startup of either natural-gas-fired Solar Mars 100 Compressor Turbine, identified as (E12 and E13), the Permittee shall comply with the following limits:

(a) The total combined NOx emissions from E01 - E08 shall be less than 633.04 tons per twelve consecutive month period with compliance determined at the end of each month.

(b) The total combined CO emissions from E01 - E08 shall be less than 65.65 tons per twelve consecutive month period with compliance determined at the end of each month.

(c) The limits above in (a) and (b) shall cease to be effective after the date the last of the eight (8) two-stroke lean burn natural gas-fired reciprocating internal combustion engine compressors, identified as (E01 – E08) is made incapable of operation.

Compliance with these limits, shall limit the net emission increase from the 2021 turbine modification to less than forty (40) tons of NOx and to less than one hundred (100) tons of CO per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2021 Modification permitted under SSM No. 037-43099-00031.

D.1.4 HAP Minor Limitation [326 IAC 2-4.1]

Pursuant to SSM No. 037-43099-00031 and in order to render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA), upon startup of either natural-gas-fired Solar Mars 100 Compressor Turbine, identified as (E12 and E13), the Permittee shall comply with the following:

(a) The total emissions of formaldehyde from E01 - E08 shall not exceed 9.00 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The total emissions of any combination of HAPs from E01 - E08 shall not exceed 22.59 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The limits above in (a) and (b) shall cease to be effective after the date the last of the eight (8) two-stroke lean burn natural gas-fired reciprocating internal combustion engine compressors, identified as (E01 – E08) is made incapable of operation.

Compliance with these limits, combined with the potential to emit HAP from all other emission units at the source, shall limit the source-wide potential to emit any single HAP to less than 10 tons per twelve (12) consecutive month period and the source-wide potential to emit a combination of HAPs to less than 25 tons per twelve (12) consecutive month period, and shall render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA).

D.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for E01 through E06, E07, E08, E12, and E13 and any control devices. Section B - Preventive Maintenance Plan contains the Permittee’s obligation with regard to the preventive maintenance plan required by this condition.
Compliance Determination Requirements [326 IAC 2-7-5(1)]

D.1.6 Nitrogen Oxides (NOx) Control

In order to ensure compliance with Condition D.1.2, Low Emission Combustion (LEC) technology shall be in operation and control NOx emissions from Emission Units E07 and E08 at all times that the emission units are in operation during the ozone season from May 1st through September 30th of each year. Emission units E07 and E08 and corresponding LECs shall be in operation according to vendor specifications or according to operational parameters determined during stack test.

D.1.7 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11] [326 IAC 10-5-4]

(a) In order to demonstrate compliance with Condition D.1.2 the Permittee shall perform NOx emission testing of Emission Units E07 and E08, utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition.

(b) Pursuant to 326 IAC 10-5-4(2), the Permittee shall perform annual performance tests on Emission Units E07 and E08 using portable monitors using ASTM D6522-00 to show compliance with condition D.1.2 (annual performance tests using portable monitors are not required for a given Emission Unit during calendar years when a performance test required by subsection (a) of this Condition is performed on that unit). Alternatively, ANR can use a parametric monitoring program (as specified in 326 IAC 10-5-4(2)(B)) to periodically monitor the source’s compliance with the projected NOx emission rate, after obtaining prior approval from IDEM for the parameter ranges.

(c) In order to demonstrate the installation of the two (2) turbines is a minor project under 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), not later than 180 days after the startup of either turbine, the Permittee shall perform CO and NOx testing on either turbine E12 or E13, utilizing methods approved by the Commissioner. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.1.8 Emissions Determination Requirements [326 IAC 2-7-5(1)]

(a) In order to demonstrate compliance with D.1.3(a), the Permittee shall determine NOx emissions according to the following equation:

\[
E_{NOx} = \frac{\sum_{i=1}^{6}(W_{E_i}EFNOx_{E_1-6} + W_{E_7}EFNOx_{E_7} + W_{E_8}EFNOx_{E_8})}{453.6 \times 2000}
\]

Where:  
- \( E_{NOx} \) = Monthly NOx emissions, tons  
- \( W_{E_i} \) = Monthly Work Output for each Engine (E01 through E06), hp-hr  
- \( W_{E_7} \) = Monthly Work Output for Engine E07, hp-hr  
- \( W_{E_8} \) = Monthly Work Output for Engine E08, hp-hr  
- \( EFNOx_{E_1-6} \) = NOx Emission Factor for Engines E01 through E06 = 8.68 g/hp-hr*  
- \( EFNOx_{E_7} \) = NOx Emission Factor for Engine E07 = 2.75 g/hp-hr*  
- \( EFNOx_{E_8} \) = NOx Emission Factor for Engine E08 = 6.03 g/hp-hr*

(b) In order to demonstrate compliance with D.1.3(b), the Permittee shall determine CO emissions according to the following equation:
Where: 

- \( ECO \) = Monthly CO emissions, tons
- \( WE_i \) = Monthly Work Output for each Engine (E01 through E06), hp-hr
- \( WE_7 \) = Monthly Work Output for Engine E07, hp-hr
- \( WE_8 \) = Monthly Work Output for Engine E08, hp-hr
- \( EFCOE_{1-6} \) = CO Emission Factor for Engines E01 through E06 = 5.30 g/hp-hr*
- \( EFCOE_7 \) = CO Emission Factor for Engine E07 = 1.07 g/hp-hr*
- \( EFCOE_8 \) = CO Emission Factor for Engine E08 = 1.04 g/hp-hr*

(c) In order to demonstrate compliance with D.1.4(a), the Permittee shall determine single HAP (Formaldehyde) emissions according to the following equation:

\[
E_F = \frac{\sum_{i=1}^{6}(Q_{Ei}EFE_{Ei}) + Q_{E7}EFE_7 + Q_{E8}EFE_8}{2000}
\]

Where: 

- \( E_F \) = Monthly Formaldehyde emissions, tons
- \( Q_{Ei} \) = Monthly Heat Input for each Engine (E01 through E06), MMBtu
- \( Q_{E7} \) = Monthly Heat Input for Engine E07, MMBtu
- \( Q_{E8} \) = Monthly Heat Input for Engine E08, MMBtu
- \( EFE_{E1-6} \) = Formaldehyde Emission Factor for Engines E01 through E06 = 0.0552 lb/MMBtu*
- \( EFE_7 \) = Formaldehyde Emission Factor for Engine E07 = 0.0552 lb/MMBtu*
- \( EFE_8 \) = Formaldehyde Emission Factor for Engine E08 = 0.0552 lb/MMBtu*

(d) In order to demonstrate compliance with D.1.4 HAP(b), the Permittee shall determine total emissions of any combination of HAPs according to the following equation:

\[
E_{TH} = \frac{\sum_{i=1}^{6}(Q_{Ei}EFTHE_{Ei}) + Q_{E7}EFTHE_7 + Q_{E8}EFTHE_8}{2000}
\]

Where: 

- \( E_{TH} \) = Monthly Total HAP emissions, tons
- \( Q_{Ei} \) = Monthly Heat Input for each Engine (E01 through E06), MMBtu
- \( Q_{E7} \) = Monthly Heat Input for Engine E07, MMBtu
- \( Q_{E8} \) = Monthly Heat Input for Engine E08, MMBtu
- \( EFTHE_{E1-6} \) = Total HAP Emission Factor for Engines E01 through E06 = 0.0795 lb/MMBtu*
- \( EFTHE_7 \) = Total HAP Emission Factor for Engine E07 = 0.0795 lb/MMBtu*
- \( EFTHE_8 \) = Total HAP Emission Factor for Engine E08 = 0.0795 lb/MMBtu*

* Emission Factors shall be updated if/when more recent valid compliance demonstration data become available.

Record Keeping and Reporting Requirements  [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.9 Record Keeping Requirements

(a) To document the compliance status with 326 IAC 10-5-5(a) and Condition D.1.2 for engines E07 and E08, the Permittee shall maintain all records necessary to demonstrate compliance with the requirements of this rule. Each record shall be maintained for a period of two (2) calendar years at the plant at which the subject engine is located. The records shall be made available to the IDEM, OAQ and U.S. EPA upon request. The Permittee shall maintain the following records:

1. Identification and location of each engine subject to the requirements of this rule.
2. Calendar date of record.
(3) The number of hours the unit is operated during each ozone season compared to the projected operating hours.
(4) Type and quantity of fuel used.
(5) The results of all compliance tests.
(6) Monitoring data.
(7) Preventative maintenance.
(8) Corrective actions.

(b) To document the compliance status with Condition D.1.3, the Permittee shall maintain records of the following:

1. The date of startup of the first compressor turbine to be started up under SSM 037-43099-00031 (E12 or E13).
2. Monthly work output from E01 through E08 in hp-hr
3. Current NOx and CO emission factors for E01 through E08 in g/hp-hr and the sources of these emission factors

(c) To document the compliance status with Condition D.1.4, the Permittee shall maintain records of the following:

1. Monthly heat input to E01 through E08 in MMBtu
2. Current Formaldehyde and Total HAP emission factors for E01 through E08 in lb/MMBtu and the sources of these emission factors

(d) To document the compliance status with Condition D.1.3 and D.1.4, the Permittee shall maintain records of the date of the retirement of the last two-stroke lean burn natural gas-fired reciprocating internal combustion engine compressor (E01 through E08).

(e) The provisions in paragraphs (b) and (c) shall cease to be effective after the date that the last of the units to be retired (E01 through E08) is made incapable of operation.

(f) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.

### D.1.10 Reporting Requirements

(a) Pursuant to 326 IAC 10-5-5(b), the Permittee shall submit results of all compliance tests to IDEM, OAQ within forty-five (45) days after completion of the testing.

(b) A quarterly summary of the information to document the compliance status with Condition D.1.3(a and b) – PSD Minor Limitation shall be submitted not later than thirty (30) days after the end of the quarter being reported.

(c) A quarterly summary of the information to document the compliance status with Condition D.1.4(a and b) – HAP Minor Limitation shall be submitted not later than thirty (30) days after the end of the quarter being reported.

(d) The provisions in paragraphs (b) and (c) shall cease to be effective after the quarterly report for the quarter including the date that the last of the units to be retired (E01 through E08) has been made incapable of operation has been submitted.

(e) Section C - General Reporting Requirements contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee
does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
SECTION D.2  EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Insignificant Activities

(a) Combustion related activities, as follows:

(1) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:

(A) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.

(i) One (1) boiler, constructed in 1956, identified as B01, with a maximum heat input capacity of 4.184 MMBtu/hr; [40 CFR 63, Subpart DDDDD]

(ii) One (1) boiler, constructed in 1970, identified as B02, with a maximum heat input capacity of 4.184 MMBtu/hr; [40 CFR 63, Subpart DDDDD]

(iii) Two (2) catalytic space heaters, with a maximum heat input capacity of 0.576 MMBtu/hr, each, uncontrolled, and exhausting to the room.

(b) Activities associated with emergencies as follows:

(1) Emergency generators as follows:

(A) Natural gas turbines or reciprocating engines not exceeding sixteen thousand (16,000) horsepower.

(i) One (1) four-stroke rich burn natural gas-fired emergency generator, constructed in 2013, identified as E11, with a maximum capacity of 690 Horsepower and a maximum heat input capacity of 5.06 million British thermal units per hour, exhausting to stack S11. [40 CFR 60, Subpart JJJJ][40 CFR 63, Subpart ZZZZ]

(c) Combustion related activities, as follows:

(1) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:

(A) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.

(i) Nine (9) catalytic space heaters, with a maximum heat input capacity of 0.576 MMBtu/hr, each, uncontrolled and exhausting to the room.

(d) Production related activities, including the following:

(1) Degreasing operations that do not exceed one hundred forty-five (145) gallons per twelve (12) months, except if subject to 326 IAC 20-6, as follows:

(A) One (1) cold cleaner degreaser, constructed in 2003, using no halogenated solvents.

(e) Combustion related activities, as follows:
(1) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:

(A) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.

(i) One (1) natural gas-fired Aqua-Gas WB1200-48UH Fuel Gas Heater, identified as IA1, approved in 2021 for construction, with a maximum capacity of 1.20 MMBtu/hr heat input, uncontrolled, and exhausting to a separate stack.

(ii) Thirty (30) natural gas-fired catalytic Space Heaters, identified as IA2 through IA31, approved in 2021 for construction, each with a maximum capacity of 0.0725 MMBtu/hr heat input, uncontrolled, and exhausting to the room.

(f) Activities associated with emergencies as follows:

(1) Emergency generators as follows:

(A) Natural gas turbines or reciprocating engines not exceeding sixteen thousand (16,000) horsepower.

(i) One (1) natural gas-fired Waukesha VGF-L36GL Emergency Generator, identified as E14, approved in 2021 for construction, with a maximum capacity of 880 hp (6.83 MMBtu/hr heat input), uncontrolled, and exhausting to stack S14. [40 CFR 60, Subpart JJJJ][40 CFR 63, Subpart ZZZZ]

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Particulate Matter (Particulate Emission Limitations for Sources of Indirect Heating) [326 IAC 6-2-4]

(a) Pursuant to 326 IAC 6-2-4, after the last of compressor engines E01-E08 is rendered incapable of operation, particulate matter (PM) emissions from the one (1) new fuel gas heater (IA1) shall not exceed 0.6 pounds of PM per million British thermal units.

D.2.2 Particulate [326 IAC 6.5-1-2]

(a) Pursuant to 326 IAC 6.5-1-2(b)(3), particulate emissions from the boilers (B01 and B02) at this source shall each not exceed one-hundredth (0.01) grain per dry standard cubic foot (dscf).

(b) Pursuant to 326 IAC 6.5-1-2(a), particulate emissions from Emergency Generators E11 and E14, Space Heaters IA and IA2-31, Fuel Gas Heater IA1, and insignificant brazing, cutting, soldering and welding shall each not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

(c) The limits above in (a) and (b) shall cease to be effective after the date the last of the eight (8) two-stroke lean burn natural gas-fired reciprocating internal combustion internal engine compressors, identified as (E01 – E08) is made incapable of operation.
D.2.3 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Degreaser Control and Equipment Operating Requirements), the Permittee shall:

(a) Ensure the following control equipment and operating requirements are met:

(1) Equip the degreaser with a cover.

(2) Equip the degreaser with a device for draining cleaned parts.

(3) Close the degreaser cover whenever parts are not being handled in the degreaser.

(4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(5) Provide a permanent, conspicuous label that lists the operating requirements in subdivisions (3), (4), (6), and (7).

(6) Store waste solvent only in closed containers.

(7) Prohibit the disposal or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.

(b) Ensure the following additional control equipment and operating requirements are met:

(1) Equip the degreaser with one (1) of the following control devices if the solvent is heated to a temperature of greater than forty-eight and nine-tenths (48.9) degrees Celsius (one hundred twenty (120) degrees Fahrenheit):

   (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
   (B) A water cover when solvent used is insoluble in, and heavier than, water.
   (C) A refrigerated chiller.
   (D) Carbon adsorption.
   (E) An alternative system of demonstrated equivalent or better control as those outlined in clauses (A) through (D) that is approved by the department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.

(2) Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.

(3) If used, solvent spray:

   (A) must be a solid, fluid stream; and
   (B) shall be applied at a pressure that does not cause excessive splashing.

D.2.4 Material Requirements for Cold Cleaner Degreasers [326 IAC 8-3-8]

Pursuant to 326 IAC 8-3-8 (Material Requirements for Cold Cleaner Degreasers), the Permittee shall not operate a cold cleaning degreaser with a solvent that has a VOC composite partial vapor pressure that exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).
D.2.5 Record Keeping Requirements [326 IAC 8-3-8]

(a) To document the compliance status with Condition D.2.4, the Permittee shall maintain the following records for each purchase of solvent used in the cold cleaner degreasing operations. These records shall be retained on-site or accessible electronically for the most recent three (3) year period and shall be reasonably accessible for an additional two (2) year period.

1. The name and address of the solvent supplier.
2. The date of purchase (or invoice.bill dates of contract servicer indicating service date).
3. The type of solvent purchased.
4. The total volume of the solvent purchased.
5. The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

(b) Section C - General Record Keeping Requirements contains the Permittee’s obligations with regard to the records required by this condition.
SECTION E.1 NSPS

Emissions Unit Description:

Insignificant Activities

(b) Activities associated with emergencies as follows:

(1) Emergency generators as follows:

(A) Natural gas turbines or reciprocating engines not exceeding sixteen thousand (16,000) horsepower.

(i) One (1) four-stroke rich burn natural gas-fired emergency generator, constructed in 2013, identified as E11, with a maximum capacity of 690 Horsepower and a maximum heat input capacity of 5.06 million British thermal units per hour, exhausting to stack S11. [40 CFR 60, Subpart JJJJ][40 CFR 63, Subpart ZZZZ]

(ii) One (1) natural gas-fired Waukesha VGF-L36GL Emergency Generator identified as E14, approved in 2021 for construction, with a maximum capacity of 880 hp (6.83 MMBtu/hr heat input), uncontrolled, and exhausting to stack S14. [40 CFR 60, Subpart JJJJ][40 CFR 63, Subpart ZZZZ]

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.1.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1][40 CFR 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the emission units listed above, except as otherwise specified in 40 CFR Part 60, Subpart JJJJ.

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.1.2 Standards of Performance for Stationary Spark Ignition Internal Combustion Engines NSPS [326 IAC 10] [40 CFR 60, Subpart JJJJ]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart JJJJ (included as Attachment A to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above:

(1) 40 CFR 60.4230(a)(4)(iv)
(2) 40 CFR 60.4233(e)
E.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and any control devices. Section B - Preventive Maintenance Plan contains the Permittee’s obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC 2-7-5(1)]

E.1.4 Testing Requirements [326 IAC 2-1.1-11][326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

In order to demonstrate compliance with Condition E.1.2, the Permittee shall perform the testing required under 40 CFR 60, Subpart JJJJ, utilizing methods as approved by the Commissioner, including:

(a) Initial testing for E14 within 1 year of startup, and

(b) Continuing testing for E11 and E14 every 8760 hours or every three (3) years, whichever comes first, from the date of the most recent valid compliance demonstration.

Section C - Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition.
SECTION E.2  

NESHAP

Emissions Unit Description:

(a) Six (6) two-stroke lean burn natural gas-fired reciprocating internal combustion internal engine compressors, installed in 1957, identified as E01 through E06, exhausting to stacks S01 through S06, respectively, with a rated capacity of 2,000 Horsepower, each, and a heat input capacity of 17.54 million British thermal units per hour, each. [40 CFR 63, Subpart ZZZZ]

(b) One (1) two-stroke lean burn natural gas-fired reciprocating internal combustion engine compressor, installed in 1968, identified as E07, exhausting to stack S07, equipped with Low Emission Combustion (LEC) technology, with a rated capacity of 7,833 Horsepower and a heat input capacity of 61.2 million British thermal units per hour. [326 IAC 10-5] [40 CFR 63, Subpart ZZZZ]

(c) One (1) two-stroke lean burn natural gas-fired reciprocating internal combustion engine compressor, installed in 1970, identified as E08, exhausting to stack S08, equipped with Low Emission Combustion (LEC) technology, with a rated capacity of 10,833 Horsepower and a heat input capacity of 91.8 million British thermal units per hour. [326 IAC 10-5] [40 CFR 63, Subpart ZZZZ]

Insignificant Activities

(b) Activities associated with emergencies as follows:

(1) Emergency generators as follows:

(A) Natural gas turbines or reciprocating engines not exceeding sixteen thousand (16,000) horsepower.

(i) One (1) four-stroke rich burn natural gas-fired emergency generator, constructed in 2013, identified as E11, with a maximum capacity of 690 Horsepower and a maximum heat input capacity of 5.06 million British thermal units per hour, exhausting to stack S11. [40 CFR 60, Subpart JJJJJ][40 CFR 63, Subpart ZZZZ]

(ii) One (1) natural gas-fired Waukesha VGF-L36GL Emergency Generator identified as E14, approved in 2021 for construction, with a maximum capacity of 880 hp (6.83 MMBtu/hr heat input), uncontrolled, and exhausting to stack S14. [40 CFR 60, Subpart JJJJJ][40 CFR 63, Subpart ZZZZ]

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

National Emissions Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]


(a) Pursuant to 40 CFR 63.1 the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 63, Subpart ZZZZ.
(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana  46204-2251

E.2.2 Stationary Reciprocating Internal Combustion Engines NESHAP [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]
The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment B to the operating permit), which are incorporated by reference as 326 IAC 20-82, for the emission unit(s) listed above:

**Engines E01-E08**

(a) The following provisions of 40 CFR 63, Subpart ZZZZ are applicable to E01-E08 before the first of E12 or E13 is started up:

1. 40 CFR 63.6580
2. 40 CFR 63.6585
3. 40 CFR 63.6590(a)(1)(i)
4. 40 CFR 63.6590(b)(3)(i)
5. 40 CFR 63.6645(f)
6. 40 CFR 63.6670
7. 40 CFR 63.6675

(b) The following provisions of 40 CFR 63, Subpart ZZZZ are applicable to E01-E08 after the first of E12 or E13 is started up, but before the last of E01-E08 is rendered incapable of operation:

1. 40 CFR 63.6580
2. 40 CFR 63.6585
3. 40 CFR 63.6590(a)(1)(iii)
4. 40 CFR 63.6595(a)(1),(c)
5. 40 CFR 63.6603(a)
6. 40 CFR 63.6605
7. 40 CFR 63.6625(e)(5)
8. 40 CFR 63.6645(a)(2),(b)
9. 40 CFR 63.6650
10. 40 CFR 63.6655(a),(d),(e)(3)
11. 40 CFR 63.6660
12. 40 CFR 63.6665
13. 40 CFR 63.6670
14. 40 CFR 63.6675
15. Table 2d to Subpart ZZZZ of Part 63
16. Table 6 to Subpart ZZZZ of Part 63
17. Table 7 to Subpart ZZZZ of Part 63
18. Table 8 to Subpart ZZZZ of Part 63

(c) 40 CFR 63, Subpart ZZZZ is not applicable to E01-E08 after the last of E01-E08 is rendered incapable of operation.
Engine E11

(d) The following provisions of 40 CFR 63, Subpart ZZZZ are applicable to E11 before the first of E12 or E13 is started up:

1. 40 CFR 63.6580
2. 40 CFR 63.6585
3. 40 CFR 63.6590(a)(2)(i)
4. 40 CFR 63.6590(b)(1)(i)
5. 40 CFR 63.6665
6. 40 CFR 63.6670
7. 40 CFR 63.6675
8. Table 8 to Subpart ZZZZ of Part 63

(e) The following provisions of 40 CFR 63, Subpart ZZZZ are applicable to E11 after the first of E12 or E13 is started up, but before the last of E01-E08 is rendered incapable of operation:

1. 40 CFR 63.6580
2. 40 CFR 63.6585
3. 40 CFR 63.6590(a)(2)(iii),(c)(1)
4. 40 CFR 63.6665
5. 40 CFR 63.6670
6. 40 CFR 63.6675
7. Table 8 to Subpart ZZZZ of Part 63

(f) 40 CFR 63, Subpart ZZZZ is not applicable to E11 after the last of E01-E08 is rendered incapable of operation.

Engine E14

(g) 40 CFR 63, Subpart ZZZZ is not applicable to E14 before the first of E12 or E13 is started up.

(h) The following provisions of 40 CFR 63, Subpart ZZZZ are applicable to E14 after the first of E12 or E13 is started up, and continue to be applicable to E14 after the last of E01-E08 is rendered incapable of operation:

1. 40 CFR 63.6580
2. 40 CFR 63.6585
3. 40 CFR 63.6590(a)(2)(iii),(c)(1)
4. 40 CFR 63.6665
5. 40 CFR 63.6670
6. 40 CFR 63.6675
7. Table 8 to Subpart ZZZZ of Part 63
SECTION E.3  NESHAP

Emissions Unit Description:

Insignificant Activities

(a) Combustion related activities, as follows:

(1) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:

(A) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.

(i) One (1) boiler, constructed in 1956, identified as B01, with a maximum heat input capacity of 4.184 MMBtu/hr [40 CFR 63, Subpart DDDDD]

(ii) One (1) boiler, constructed in 1970, identified as B02, with a maximum heat input capacity of 4.184 MMBtu/hr [40 CFR 63, Subpart DDDDD]

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]


(a) Pursuant to 40 CFR 63.1 the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 63, Subpart DDDDD.

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.3.2 NESHAP for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD] [326 IAC 20-95]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart DDDDD (included as Attachment C to the operating permit), which are incorporated by reference as 326 IAC 20-95, for the emission unit(s) listed above:

(1) 40 CFR 63.7480
(2) 40 CFR 63.7485
(3) 40 CFR 7490(a)(1)
(4) 40 CFR 63.7490(d)
(5) 40 CFR 63.7495(b)
(6) 40 CFR 63.7499(l)
(7) 40 CFR 63.7500(a)(1)
(8) 40 CFR 63.7500(a)(3)
(9) 40 CFR 63.7500(e)
(10) 40 CFR 63.7500(f)
(12) 40 CFR 63.7505(a)
(13) 40 CFR 63.7510(e)
(14) 40 CFR 63.7510(j)
(15) 40 CFR 63.7515(d)
(16) 40 CFR 63.7515(g)
(17) 40 CFR 63.7530(e)
(18) 40 CFR 63.7530(f)
(19) 40 CFR 63.7540(a)
(20) 40 CFR 63.7540(a)(11)
(21) 40 CFR 63.7540(a)(13)
(22) 40 CFR 63.7545(a)
(23) 40 CFR 63.7545(b)
(24) 40 CFR 63.7545(e)
(25) 40 CFR 63.7550(a)
(26) 40 CFR 63.7550(b)
(27) 40 CFR 63.7550(c)
(28) 40 CFR 63.7550(h)(3)
(29) 40 CFR 63.7555(a)
(30) 40 CFR 63.7560
(31) 40 CFR 63.7565
(32) 40 CFR 63.7570
(33) 40 CFR 63.7575
(34) Table 9 to Subpart DDDDD
(35) Table 10 to Subpart DDDDD

E.3.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and any control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.
SECTION E.4 NSPS

Emissions Unit Description:

(d) One (1) natural-gas-fired Solar Mars 100 Compressor Turbine identified as E12, approved in 2021 for construction, with a maximum capacity of 16,082 hp (139.66 MMBtu/hr heat input), uncontrolled, and exhausting to stack S12. [40 CFR 60, Subpart KKKK]

(e) One (1) natural-gas-fired Solar Mars 100 Compressor Turbine identified as E13, approved in 2021 for construction, with a maximum capacity of 16,082 (139.66 MMBtu/hr heat input), uncontrolled, and exhausting to stack S12. [40 CFR 60, Subpart KKKK]

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.4.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1][40 CFR 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the emission units listed above, except as otherwise specified in 40 CFR Part 60, Subpart KKKK.

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204

E.4.2 Standards of Performance for Stationary Combustion Turbines NSPS [40 CFR 60, Subpart KKKK]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart KKKK (included as Attachment D to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above:

(1) 40 CFR 60.4300
(2) 40 CFR 60.4305
(3) 40 CFR 60.4315
(4) 40 CFR 60.4320(a)
(5) 40 CFR 60.4330(a)(2)
(6) 40 CFR 60.4333(a)
(7) 40 CFR 60.4360
(8) 40 CFR 60.4365(a)
(9) 40 CFR 60.4370
(10) 40 CFR 60.4375(b)
(11) 40 CFR 60.4385
(12) 40 CFR 60.4395
(13) 40 CFR 60.4400
E.4.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and any control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC 2-7-5(1)]

E.4.4 Testing Requirements [326 IAC 2-1.1-11][326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

In order to demonstrate compliance with Condition E.4.2, the Permittee shall perform the testing required under 40 CFR 60, Subpart KKKK, utilizing methods as approved by the Commissioner. The initial testing shall be conducted within sixty (60) days after achieving the maximum operation rate or within one hundred eighty (180) days after startup, whichever is earlier. Subsequent testing shall be conducted annually, or the frequency may be reduced to once every 2 years if the result of the previous test is less than or equal to 75% of the limit. Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.
This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

- [ ] Annual Compliance Certification Letter
- [ ] Test Result (specify)
- [ ] Report (specify)
- [ ] Notification (specify)
- [ ] Affidavit (specify)
- [ ] Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature: 
Printed Name: 
Title/Position: 
Phone: 
Date: 
This form consists of 2 pages

☐ This is an emergency as defined in 326 IAC 2-7-1(12)
  - The Permittee must notify the Office of Air Quality (OAQ), within four (4) daytime
    business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
  - The Permittee must submit notice in writing or by facsimile within two (2) working days
    (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:

Control Equipment:

Permit Condition or Operation Limitation in Permit:

Description of the Emergency:

Describe the cause of the Emergency:
<table>
<thead>
<tr>
<th><strong>Date/Time Emergency started:</strong></th>
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<tbody>
<tr>
<td><strong>Date/Time Emergency was corrected:</strong></td>
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</tr>
<tr>
<td><strong>Was the facility being properly operated at the time of the emergency?</strong></td>
<td>Y</td>
</tr>
<tr>
<td><strong>Type of Pollutants Emitted:</strong> TSP, PM-10, SO₂, VOC, NOₓ, CO, Pb, other:</td>
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<td><strong>Estimated amount of pollutant(s) emitted during emergency:</strong></td>
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<td><strong>Describe the steps taken to mitigate the problem:</strong></td>
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<td><strong>Describe the corrective actions/response steps taken:</strong></td>
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<tr>
<td><strong>Describe the measures taken to minimize emissions:</strong></td>
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<tr>
<td><strong>If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:</strong></td>
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</tbody>
</table>

Form Completed by: ________________________________

Title / Position: ________________________________

Date: ________________________________

Phone: ________________________________
# Part 70 Quarterly Report

Source Name: ANR Pipeline Company, Celestine Station  
Source Address: 146 South Celestine Road, Celestine, IN 47521  
Part 70 Permit No.: T037-41537-00031  
Facility: Engines E01 - E08 (Combined)  
Parameter: NOx emissions  
Limit: Shall not exceed 633.04 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

<table>
<thead>
<tr>
<th>QUARTER</th>
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<tbody>
<tr>
<td>Month</td>
<td>This Month (tons)</td>
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</table>

- [ ] No deviation occurred in this quarter.
- [ ] Deviation/s occurred in this quarter.  
  Deviation has been reported on:

Submitted by: ____________________________  
Title / Position: ____________________________  
Signature: ____________________________  
Date: ____________________________  
Phone: ____________________________
## Part 70 Quarterly Report

Source Name: ANR Pipeline Company, Celestine Station  
Source Address: 146 South Celestine Road, Celestine, IN 47521  
Part 70 Permit No.: T037-41537-00031  
Facility: Engines E01 - E08 (Combined)  
Parameter: CO emissions  
Limit: Shall not exceed 65.65 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

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<tr>
<th>QUARTER:</th>
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<tbody>
<tr>
<td>Month</td>
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☐ No deviation occurred in this quarter.  
☐ Deviation/s occurred in this quarter.  
Deviation has been reported on:

Submitted by: ____________________________  
Title / Position: ____________________________  
Signature: ____________________________  
Date: ____________________________  
Phone: ____________________________
Part 70 Quarterly Report

Source Name: ANR Pipeline Company, Celestine Station
Source Address: 146 South Celestine Road, Celestine, IN 47521
Part 70 Permit No.: T037-41537-00031
Facility: Engines E01 - E08 (Combined)
Parameter: Single HAP (Formaldehyde) emissions
Limit: Shall not exceed 9.00 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

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<tr>
<th>QUARTER:</th>
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<tr>
<td>Month</td>
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- □ No deviation occurred in this quarter.
- □ Deviation/s occurred in this quarter.
  Deviation has been reported on:

Submitted by: ____________________________
Title / Position: __________________________
Signature: ________________________________
Date: ________________________________
Phone: ________________________________
## Part 70 Quarterly Report

Source Name: ANR Pipeline Company, Celestine Station  
Source Address: 146 South Celestine Road, Celestine, IN 47521  
Part 70 Permit No.: T037-41537-00031  
Facility: Engines E01 - E08 (Combined)  
Parameter: Total emissions of a combination of HAPs  
Limit: Shall not exceed 22.59 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

<table>
<thead>
<tr>
<th>Month</th>
<th>This Month (tons)</th>
<th>Previous 11 Months (tons)</th>
<th>12 Month Total (tons)</th>
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- □ No deviation occurred in this quarter.
- □ Deviation/s occurred in this quarter.  
  Deviation has been reported on:

Submitted by: ____________________________  
Title / Position: ____________________________  
Signature: ____________________________  
Date: ____________________________  
Phone: ____________________________
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: ANR Pipeline Company - Celestine Compressor Station
Source Address: 146 South Celestine Road, Celestine, Indiana 47521-0058
Part 70 Permit No.: T037-41537-00031

Months: ________ to ________ Year: ________

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C-General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

<table>
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<tr>
<th>Permit Requirement (specify permit condition #)</th>
<th>Date of Deviation:</th>
<th>Duration of Deviation:</th>
<th>Number of Deviations:</th>
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<td>Response Steps Taken:</td>
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Form Completed by: ____________________________
Title / Position: ____________________________
Date: ____________________________
Phone: ____________________________
Introduction

§60.4300 What is the purpose of this subpart?

This subpart establishes emission standards and compliance schedules for the control of emissions from stationary combustion turbines that commenced construction, modification or reconstruction after February 18, 2005.

Applicability

§60.4305 Does this subpart apply to my stationary combustion turbine?

(a) If you are the owner or operator of a stationary combustion turbine with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, based on the higher heating value of the fuel, which commenced construction, modification, or reconstruction after February 18, 2005, your turbine is subject to this subpart. Only heat input to the combustion turbine should be included when determining whether or not this subpart is applicable to your turbine. Any additional heat input to associated heat recovery steam generators (HRSG) or duct burners should not be included when determining your peak heat input. However, this subpart does apply to emissions from any associated HRSG and duct burners.

(b) Stationary combustion turbines regulated under this subpart are exempt from the requirements of subpart GG of this part. Heat recovery steam generators and duct burners regulated under this subpart are exempted from the requirements of subparts Da, Db, and Dc of this part.

§60.4310 What types of operations are exempt from these standards of performance?

(a) Emergency combustion turbines, as defined in §60.4420(i), are exempt from the nitrogen oxides (NOx) emission limits in §60.4320.

(b) Stationary combustion turbines engaged by manufacturers in research and development of equipment for both combustion turbine emission control techniques and combustion turbine efficiency improvements are exempt from the NOx emission limits in §60.4320 on a case-by-case basis as determined by the Administrator.

(c) Stationary combustion turbines at integrated gasification combined cycle electric utility steam generating units that are subject to subpart Da of this part are exempt from this subpart.

(d) Combustion turbine test cells/stands are exempt from this subpart.
Emission Limits

§60.4315 What pollutants are regulated by this subpart?

The pollutants regulated by this subpart are nitrogen oxide (NOX) and sulfur dioxide (SO2).

§60.4320 What emission limits must I meet for nitrogen oxides (NOX)?

(a) You must meet the emission limits for NOX specified in Table 1 to this subpart.

(b) If you have two or more turbines that are connected to a single generator, each turbine must meet the emission limits for NOX.

§60.4325 What emission limits must I meet for NOX if my turbine burns both natural gas and distillate oil (or some other combination of fuels)?

You must meet the emission limits specified in Table 1 to this subpart. If your total heat input is greater than or equal to 50 percent natural gas, you must meet the corresponding limit for a natural gas-fired turbine when you are burning that fuel. Similarly, when your total heat input is greater than 50 percent distillate oil and fuels other than natural gas, you must meet the corresponding limit for distillate oil and fuels other than natural gas for the duration of the time that you burn that particular fuel.

§60.4330 What emission limits must I meet for sulfur dioxide (SO2)?

(a) If your turbine is located in a continental area, you must comply with either paragraph (a)(1), (a)(2), or (a)(3) of this section. If your turbine is located in Alaska, you do not have to comply with the requirements in paragraph (a) of this section until January 1, 2008.

(1) You must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO2 in excess of 110 nanograms per Joule (ng/J) (0.90 pounds per megawatt-hour (lb/MWh)) gross output;

(2) You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO2/J (0.060 lb SO2/MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement; or

(3) For each stationary combustion turbine burning at least 50 percent biogas on a calendar month basis, as determined based on total heat input, you must not cause to be discharged into the atmosphere from the affected source any gases that contain SO2 in excess of 65 ng SO2/J (0.15 lb SO2/MMBtu) heat input.

(b) If your turbine is located in a noncontinental area or a continental area that the Administrator determines does not have access to natural gas and that the removal of sulfur compounds would cause more environmental harm than benefit, you must comply with one or the other of the following conditions:

(1) You must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO2 in excess of 780 ng/J (6.2 lb/MWh) gross output, or

(2) You must not burn in the subject stationary combustion turbine any fuel which contains total sulfur with potential sulfur emissions in excess of 180 ng SO2/J (0.42 lb SO2/MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement.

[71 FR 38497, July 6, 2006, as amended at 74 FR 11861, Mar. 20, 2009]
General Compliance Requirements

§60.4333  What are my general requirements for complying with this subpart?

(a) You must operate and maintain your stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.

(b) When an affected unit with heat recovery utilizes a common steam header with one or more combustion turbines, the owner or operator shall either:

(1) Determine compliance with the applicable NOX emissions limits by measuring the emissions combined with the emissions from the other unit(s) utilizing the common heat recovery unit; or

(2) Develop, demonstrate, and provide information satisfactory to the Administrator on methods for apportioning the combined gross energy output from the heat recovery unit for each of the affected combustion turbines. The Administrator may approve such demonstrated substitute methods for apportioning the combined gross energy output measured at the steam turbine whenever the demonstration ensures accurate estimation of emissions related under this part.

Monitoring

§60.4335  How do I demonstrate compliance for NOX if I use water or steam injection?

(a) If you are using water or steam injection to control NOX emissions, you must install, calibrate, maintain and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water or steam to fuel being fired in the turbine when burning a fuel that requires water or steam injection for compliance.

(b) Alternatively, you may use continuous emission monitoring, as follows:

(1) Install, certify, maintain, and operate a continuous emission monitoring system (CEMS) consisting of a NOX monitor and a diluent gas (oxygen (O2) or carbon dioxide (CO2)) monitor, to determine the hourly NOX emission rate in parts per million (ppm) or pounds per million British thermal units (lb/MMBtu); and

(2) For units complying with the output-based standard, install, calibrate, maintain, and operate a fuel flow meter (or flow meters) to continuously measure the heat input to the affected unit; and

(3) For units complying with the output-based standard, install, calibrate, maintain, and operate a watt meter (or meters) to continuously measure the gross electrical output of the unit in megawatt-hours; and

(4) For combined heat and power units complying with the output-based standard, install, calibrate, maintain, and operate meters for useful recovered energy flow rate, temperature, and pressure, to continuously measure the total thermal energy output in British thermal units per hour (Btu/h).

§60.4340  How do I demonstrate continuous compliance for NOX if I do not use water or steam injection?

(a) If you are not using water or steam injection to control NOX emissions, you must perform annual performance tests in accordance with §60.4400 to demonstrate continuous compliance. If the NOX emission result from the performance test is less than or equal to 75 percent of the NOX emission limit for the turbine, you may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75 percent of the NOX emission limit for the turbine, you must resume annual performance tests.

(b) As an alternative, you may install, calibrate, maintain and operate one of the following continuous monitoring systems:
(1) Continuous emission monitoring as described in §§60.4335(b) and 60.4345, or

(2) Continuous parameter monitoring as follows:

(i) For a diffusion flame turbine without add-on selective catalytic reduction (SCR) controls, you must define parameters indicative of the unit's NOX formation characteristics, and you must monitor these parameters continuously.

(ii) For any lean premix stationary combustion turbine, you must continuously monitor the appropriate parameters to determine whether the unit is operating in low-NOX mode.

(iii) For any turbine that uses SCR to reduce NOX emissions, you must continuously monitor appropriate parameters to verify the proper operation of the emission controls.

(iv) For affected units that are also regulated under part 75 of this chapter, with state approval you can monitor the NOX emission rate using the methodology in appendix E to part 75 of this chapter, or the low mass emissions methodology in §75.19, the requirements of this paragraph (b) may be met by performing the parametric monitoring described in section 2.3 of part 75 appendix E or in §75.19(c)(1)(iv)(H).

§60.4345 What are the requirements for the continuous emission monitoring system equipment, if I choose to use this option?

If the option to use a NOX CEMS is chosen:

(a) Each NOX diluent CEMS must be installed and certified according to Performance Specification 2 (PS 2) in appendix B to this part, except the 7-day calibration drift is based on unit operating days, not calendar days. With state approval, Procedure 1 in appendix F to this part is not required. Alternatively, a NOX diluent CEMS that is installed and certified according to appendix A of part 75 of this chapter is acceptable for use under this subpart. The relative accuracy test audit (RATA) of the CEMS shall be performed on a lb/MMBtu basis.

(b) As specified in §60.13(e)(2), during each full unit operating hour, both the NOX monitor and the diluent monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid data point must be obtained with each monitor for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality assurance and maintenance activities are performed on the CEMS, a minimum of two valid data points (one in each of two quadrants) are required for each monitor to validate the NOX emission rate for the hour.

(c) Each fuel flowmeter shall be installed, calibrated, maintained, and operated according to the manufacturer's instructions. Alternatively, with state approval, fuel flowmeters that meet the installation, certification, and quality assurance requirements of appendix D to part 75 of this chapter are acceptable for use under this subpart.

(d) Each watt meter, steam flow meter, and each pressure or temperature measurement device shall be installed, calibrated, maintained, and operated according to manufacturer's instructions.

(e) The owner or operator shall develop and keep on-site a quality assurance (QA) plan for all of the continuous monitoring equipment described in paragraphs (a), (c), and (d) of this section. For the CEMS and fuel flow meters, the owner or operator may, with state approval, satisfy the requirements of this paragraph by implementing the QA program and plan described in section 1 of appendix B to part 75 of this chapter.

§60.4350 How do I use data from the continuous emission monitoring equipment to identify excess emissions?

For purposes of identifying excess emissions:

(a) All CEMS data must be reduced to hourly averages as specified in §60.13(h).
(b) For each unit operating hour in which a valid hourly average, as described in §60.4345(b), is obtained for both NOX and diluent monitors, the data acquisition and handling system must calculate and record the hourly NOX emission rate in units of ppm or lb/MBtu, using the appropriate equation from method 19 in appendix A of this part. For any hour in which the hourly average O2 concentration exceeds 19.0 percent O2 (or the hourly average CO2 concentration is less than 1.0 percent CO2), a diluent cap value of 19.0 percent O2 or 1.0 percent CO2 (as applicable) may be used in the emission calculations.

(c) Correction of measured NOX concentrations to 15 percent O2 is not allowed.

(d) If you have installed and certified a NOX diluent CEMS to meet the requirements of part 75 of this chapter, states can approve that only quality assured data from the CEMS shall be used to identify excess emissions under this subpart. Periods where the missing data substitution procedures in subpart D of part 75 are applied are to be reported as monitor downtime in the excess emissions and monitoring performance report required under §60.7(c).

(e) All required fuel flow rate, steam flow rate, temperature, pressure, and megawatt data must be reduced to hourly averages.

(f) Calculate the hourly average NOX emission rates, in units of the emission standards under §60.4320, using either ppm for units complying with the concentration limit or the following equation for units complying with the output based standard:

(1) For simple-cycle operation:

\[ E = \frac{(NOX)_h \times (HI)_h}{P} \quad \text{(Eq. 1)} \]

Where:

\( E \) = hourly NOX emission rate, in lb/MWh,

\( (NOX)_h \) = hourly NOX emission rate, in lb/MBtu,

\( (HI)_h \) = hourly heat input rate to the unit, in MMBtu/h, measured using the fuel flowmeter(s), e.g., calculated using Equation D-15a in appendix D to part 75 of this chapter, and

\( P \) = gross energy output of the combustion turbine in MW.

(2) For combined-cycle and combined heat and power complying with the output-based standard, use Equation 1 of this subpart, except that the gross energy output is calculated as the sum of the total electrical and mechanical energy generated by the combustion turbine, the additional electrical or mechanical energy (if any) generated by the steam turbine following the heat recovery steam generator, and 100 percent of the total useful thermal energy output that is not used to generate additional electricity or mechanical output, expressed in equivalent MW, as in the following equations:

\[ P = (Pe)_t + (Pe)_c + P_s + P_o \quad \text{(Eq. 2)} \]

Where:

\( P \) = gross energy output of the stationary combustion turbine system in MW.

\( (Pe)_t \) = electrical or mechanical energy output of the combustion turbine in MW,

\( (Pe)_c \) = electrical or mechanical energy output (if any) of the steam turbine in MW, and
Where:

\[
Ps = \frac{Q \cdot H}{3.413 \times 10^6 \text{ Btu/MW} \cdot \text{h}} \quad (\text{Eq. 3})
\]

Ps = useful thermal energy of the steam, measured relative to ISO conditions, not used to generate additional electric or mechanical output, in MW,

Q = measured steam flow rate in lb/h,

H = enthalpy of the steam at measured temperature and pressure relative to ISO conditions, in Btu/lb, and \(3.413 \times 10^6\) = conversion from Btu/h to MW.

Po = other useful heat recovery, measured relative to ISO conditions, not used for steam generation or performance enhancement of the combustion turbine.

(3) For mechanical drive applications complying with the output-based standard, use the following equation:

\[
E = \frac{(\text{NO}_x)_m}{\text{BL} \cdot \text{AL}} \quad (\text{Eq. 4})
\]

Where:

E = NO\(_x\) emission rate in lb/MWh,

\((\text{NO}_x)_m\) = NO\(_x\) emission rate in lb/h,

BL = manufacturer's base load rating of turbine, in MW, and

AL = actual load as a percentage of the base load.

(g) For simple cycle units without heat recovery, use the calculated hourly average emission rates from paragraph (f) of this section to assess excess emissions on a 4-hour rolling average basis, as described in §60.4380(b)(1).

(h) For combined cycle and combined heat and power units with heat recovery, use the calculated hourly average emission rates from paragraph (f) of this section to assess excess emissions on a 30 unit operating day rolling average basis, as described in §60.4380(b)(1).

§60.4355 How do I establish and document a proper parameter monitoring plan?

(a) The steam or water to fuel ratio or other parameters that are continuously monitored as described in §§60.4335 and 60.4340 must be monitored during the performance test required under §60.8, to establish acceptable values and ranges. You may supplement the performance test data with engineering analyses, design specifications, manufacturer's recommendations and other relevant information to define the acceptable parametric ranges more precisely. You must develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the NO\(_x\) emission controls. The plan must:

(1) Include the indicators to be monitored and show there is a significant relationship to emissions and proper operation of the NO\(_x\) emission controls,

(2) Pick ranges (or designated conditions) of the indicators, or describe the process by which such range (or designated condition) will be established,
(3) Explain the process you will use to make certain that you obtain data that are representative of the emissions or parameters being monitored (such as detector location, installation specification if applicable),

(4) Describe quality assurance and control practices that are adequate to ensure the continuing validity of the data,

(5) Describe the frequency of monitoring and the data collection procedures which you will use (e.g., you are using a computerized data acquisition over a number of discrete data points with the average (or maximum value) being used for purposes of determining whether an exceedance has occurred), and

(6) Submit justification for the proposed elements of the monitoring. If a proposed performance specification differs from manufacturer recommendation, you must explain the reasons for the differences. You must submit the data supporting the justification, but you may refer to generally available sources of information used to support the justification. You may rely on engineering assessments and other data, provided you demonstrate factors which assure compliance or explain why performance testing is unnecessary to establish indicator ranges. When establishing indicator ranges, you may choose to simplify the process by treating the parameters as if they were correlated. Using this assumption, testing can be divided into two cases:

(i) All indicators are significant only on one end of range (e.g., for a thermal incinerator controlling volatile organic compounds (VOC) it is only important to insure a minimum temperature, not a maximum). In this case, you may conduct your study so that each parameter is at the significant limit of its range while you conduct your emissions testing. If the emissions tests show that the source is in compliance at the significant limit of each parameter, then as long as each parameter is within its limit, you are presumed to be in compliance.

(ii) Some or all indicators are significant on both ends of the range. In this case, you may conduct your study so that each parameter that is significant at both ends of its range assumes its extreme values in all possible combinations of the extreme values (either single or double) of all of the other parameters. For example, if there were only two parameters, A and B, and A had a range of values while B had only a minimum value, the combinations would be A high with B minimum and A low with B minimum. If both A and B had a range, the combinations would be A high and B high, A low and B low, A high and B low, A low and B high. For the case of four parameters all having a range, there are 16 possible combinations.

(b) For affected units that are also subject to part 75 of this chapter and that have state approval to use the low mass emissions methodology in §75.19 or the NOX emission measurement methodology in appendix E to part 75, you may meet the requirements of this paragraph by developing and keeping on-site (or at a central location for unmanned facilities) a QA plan, as described in §75.19(e)(5) or in section 2.3 of appendix E to part 75 of this chapter and section 1.3.6 of appendix B to part 75 of this chapter.

§60.4360 How do I determine the total sulfur content of the turbine’s combustion fuel?

You must monitor the total sulfur content of the fuel being fired in the turbine, except as provided in §60.4365. The sulfur content of the fuel must be determined using total sulfur methods described in §60.4415. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than half the applicable limit, ASTM D4084, D4810, D5504, or D6228, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17), which measure the major sulfur compounds, may be used.

§60.4365 How can I be exempted from monitoring the total sulfur content of the fuel?

You may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO2/J (0.080 lb SO2/MMBtu) heat input for units located in continental areas and 180 ng SO2/J (0.42 lb SO2/MMBtu) heat input for units located in noncontinental areas or a continental area that the Administrator determines does not have access to natural gas and that the removal of sulfur compounds would cause more environmental harm than benefit. You must use one of the following sources of information to make the required demonstration:

(a) The fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for oil use in continental areas is 0.05 weight percent (500 ppmw) or less and 0.4 weight percent (4,000 ppmw) or less for noncontinental areas, the total sulfur content for natural gas use in continental areas is 20 grains of sulfur or less per 100 standard cubic feet and 140 grains of sulfur...
or less per 100 standard cubic feet for noncontinental areas, has potential sulfur emissions of less than less than 26 ng SO$_2$/J (0.060 lb SO$_2$/MMBtu) heat input for continental areas and has potential sulfur emissions of less than less than 180 ng SO$_2$/J (0.42 lb SO$_2$/MMBtu) heat input for noncontinental areas; or

(b) Representative fuel sampling data which show that the sulfur content of the fuel does not exceed 26 ng SO$_2$/J (0.060 lb SO$_2$/MMBtu) heat input for continental areas or 180 ng SO$_2$/J (0.42 lb SO$_2$/MMBtu) heat input for noncontinental areas. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to part 75 of this chapter is required.

§60.4370 How often must I determine the sulfur content of the fuel?

The frequency of determining the sulfur content of the fuel must be as follows:

(a) Fuel oil. For fuel oil, use one of the total sulfur sampling options and the associated sampling frequency described in sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of appendix D to part 75 of this chapter (i.e., flow proportional sampling, daily sampling, sampling from the unit's storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank).

(b) Gaseous fuel. If you elect not to demonstrate sulfur content using options in §60.4365, and the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel must be determined and recorded once per unit operating day.

(c) Custom schedules. Notwithstanding the requirements of paragraph (b) of this section, operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in paragraphs (c)(1) and (c)(2) of this section, custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in §60.4330.

(1) The two custom sulfur monitoring schedules set forth in paragraphs (c)(1)(i) through (iv) and in paragraph (c)(2) of this section are acceptable, without prior Administrative approval:

(i) The owner or operator shall obtain daily total sulfur content measurements for 30 consecutive unit operating days, using the applicable methods specified in this subpart. Based on the results of the 30 daily samples, the required frequency for subsequent monitoring of the fuel's total sulfur content shall be as specified in paragraph (c)(1)(ii), (iii), or (iv) of this section, as applicable.

(ii) If none of the 30 daily measurements of the fuel's total sulfur content exceeds half the applicable standard, subsequent sulfur content monitoring may be performed at 12-month intervals. If any of the samples taken at 12-month intervals has a total sulfur content greater than half but less than the applicable limit, follow the procedures in paragraph (c)(1)(iii) of this section. If any measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section.

(iii) If at least one of the 30 daily measurements of the fuel's total sulfur content is greater than half but less than the applicable limit, but none exceeds the applicable limit, then:

(A) Collect and analyze a sample every 30 days for 3 months. If any sulfur content measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section. Otherwise, follow the procedures in paragraph (c)(1)(iii)(B) of this section.

(B) Begin monitoring at 6-month intervals for 12 months. If any sulfur content measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section. Otherwise, follow the procedures in paragraph (c)(1)(iii)(C) of this section.

(C) Begin monitoring at 12-month intervals. If any sulfur content measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section. Otherwise, continue to monitor at this frequency.
(iv) If a sulfur content measurement exceeds the applicable limit, immediately begin daily monitoring according to paragraph (c)(1)(i) of this section. Daily monitoring shall continue until 30 consecutive daily samples, each having a sulfur content no greater than the applicable limit, are obtained. At that point, the applicable procedures of paragraph (c)(1)(ii) or (iii) of this section shall be followed.

(2) The owner or operator may use the data collected from the 720-hour sulfur sampling demonstration described in section 2.3.6 of appendix D to part 75 of this chapter to determine a custom sulfur sampling schedule, as follows:

(i) If the maximum fuel sulfur content obtained from the 720 hourly samples does not exceed 20 grains/100 scf, no additional monitoring of the sulfur content of the gas is required, for the purposes of this subpart.

(ii) If the maximum fuel sulfur content obtained from any of the 720 hourly samples exceeds 20 grains/100 scf, but none of the sulfur content values (when converted to weight percent sulfur) exceeds half the applicable limit, then the minimum required sampling frequency shall be one sample at 12 month intervals.

(iii) If any sample result exceeds half the applicable limit, but none exceeds the applicable limit, follow the provisions of paragraph (c)(1)(iii) of this section.

(iv) If the sulfur content of any of the 720 hourly samples exceeds the applicable limit, follow the provisions of paragraph (c)(1)(iv) of this section.

Reporting

§60.4375 What reports must I submit?

(a) For each affected unit required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content under this subpart, you must submit reports of excess emissions and monitor downtime, in accordance with §60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction.

(b) For each affected unit that performs annual performance tests in accordance with §60.4340(a), you must submit a written report of the results of each performance test before the close of business on the 60th day following the completion of the performance test.

§60.4380 How are excess emissions and monitor downtime defined for NOX?

For the purpose of reports required under §60.7(c), periods of excess emissions and monitor downtime that must be reported are defined as follows:

(a) For turbines using water or steam to fuel ratio monitoring:

(1) An excess emission is any unit operating hour for which the 4-hour rolling average steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable steam or water to fuel ratio needed to demonstrate compliance with §60.4320, as established during the performance test required in §60.8. Any unit operating hour in which no water or steam is injected into the turbine when a fuel is being burned that requires water or steam injection for NOX control will also be considered an excess emission.

(2) A period of monitor downtime is any unit operating hour in which water or steam is injected into the turbine, but the essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid.

(3) Each report must include the average steam or water to fuel ratio, average fuel consumption, and the combustion turbine load during each excess emission.

(b) For turbines using continuous emission monitoring, as described in §§60.4335(b) and 60.4345:
(1) An excess emission is any unit operating period in which the 4-hour or 30-day rolling average NO\textsubscript{X} emission rate exceeds the applicable emission limit in §60.4320. For the purposes of this subpart, a “4-hour rolling average NO\textsubscript{X} emission rate” is the arithmetic average of the average NO\textsubscript{X} emission rate in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given hour and the three unit operating hour average NO\textsubscript{X} emission rates immediately preceding that unit operating hour. Calculate the rolling average if a valid NO\textsubscript{X} emission rate is obtained for at least 3 of the 4 hours. For the purposes of this subpart, a “30-day rolling average NO\textsubscript{X} emission rate” is the arithmetic average of all hourly NO\textsubscript{X} emission data in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30-day average is calculated each unit operating day as the average of all hourly NO\textsubscript{X} emissions rates for the preceding 30 unit operating days if a valid NO\textsubscript{X} emission rate is obtained for at least 75 percent of all operating hours.

(2) A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NO\textsubscript{X} concentration, CO\textsubscript{2} or O\textsubscript{2} concentration, fuel flow rate, steam flow rate, steam temperature, steam pressure, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if you will use this information for compliance purposes.

(3) For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard.

(1) An excess emission is a 4-hour rolling unit operating hour average in which any monitored parameter does not achieve the target value or is outside the acceptable range defined in the parameter monitoring plan for the unit.

(2) A period of monitor downtime is a unit operating hour in which any of the required parametric data are either not recorded or are invalid.

§60.4385 How are excess emissions and monitoring downtime defined for SO2?

If you choose the option to monitor the sulfur content of the fuel, excess emissions and monitoring downtime are defined as follows:

(a) For samples of gaseous fuel and for oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the combustion turbine exceeds the applicable limit and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.

(b) If the option to sample each delivery of fuel oil has been selected, you must immediately switch to one of the other oil sampling options (i.e., daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.05 weight percent. You must continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and you must evaluate excess emissions according to paragraph (a) of this section. When all of the fuel from the delivery has been burned, you may resume using the as-delivered sampling option.

(c) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime ends on the date and hour of the next valid sample.

§60.4390 What are my reporting requirements if I operate an emergency combustion turbine or a research and development turbine?

(a) If you operate an emergency combustion turbine, you are exempt from the NO\textsubscript{X} limit and must submit an initial report to the Administrator stating your case.
(b) Combustion turbines engaged by manufacturers in research and development of equipment for both combustion turbine emission control techniques and combustion turbine efficiency improvements may be exempted from the NOx limit on a case-by-case basis as determined by the Administrator. You must petition for the exemption.

§60.4395 When must I submit my reports?

All reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period.

Performance Tests

§60.4400 How do I conduct the initial and subsequent performance tests, regarding NOX?

(a) You must conduct an initial performance test, as required in §60.8. Subsequent NOx performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test).

(1) There are two general methodologies that you may use to conduct the performance tests. For each test run:

(i) Measure the NOX concentration (in parts per million (ppm)), using EPA Method 7E or EPA Method 20 in appendix A of this part. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in appendix A of this part, and measure and record the electrical and thermal output from the unit. Then, use the following equation to calculate the NOX emission rate:

\[ E = \frac{1.194 \times 10^{-7} \times (NOX)_c \times Q_{std}}{P} \]  

(1.194 x 10^-7 = conversion constant, in lb/dscf-ppm)

Where:

\( \) = NOx emission rate, in lb/MWh

\( (NOX)_c \) = average NOX concentration for the run, in ppm

\( Q_{std} \) = stack gas volumetric flow rate, in dscf/hr

\( P \) = gross electrical and mechanical energy output of the combustion turbine, in MW (for simple-cycle operation), for combined-cycle operation, the sum of all electrical and mechanical output from the combustion and steam turbines, or, for combined heat and power operation, the sum of all electrical and mechanical output from the combustion and steam turbines plus all useful recovered thermal output not used for additional electric or mechanical generation, in MW, calculated according to §60.4350(f)(2); or

(ii) Measure the NOX and diluent gas concentrations, using either EPA Method 7E and 3A, or EPA Method 20 in appendix A of this part. Concurrently measure the heat input to the unit, using a fuel flowmeter (or flowmeters), and measure the electrical and thermal output of the unit. Use EPA Method 19 in appendix A of this part to calculate the NOX emission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in §60.4350(f) to calculate the NOX emission rate in lb/MWh.

(2) Sampling traverse points for NOX and (if applicable) diluent gas are to be selected following EPA Method 20 or EPA Method 1 (non-particulate procedures), and sampled for equal time intervals. The sampling must be performed with a traversing single-hole probe, or, if feasible, with a stationary multi-hole probe that samples each of the points sequentially. Alternatively, a multi-hole probe designed and documented to sample equal volumes from each hole may be used to sample simultaneously at the required points.

(3) Notwithstanding paragraph (a)(2) of this section, you may test at fewer points than are specified in EPA Method 1 or EPA Method 20 in appendix A of this part if the following conditions are met:
(i) You may perform a stratification test for NOX and diluent pursuant to

(A) [Reserved], or

(B) The procedures specified in section 6.5.6.1(a) through (e) of appendix A of part 75 of this chapter.

(ii) Once the stratification sampling is completed, you may use the following alternative sample point selection criteria for the performance test:

(A) If each of the individual traverse point NOX concentrations is within ±10 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±5ppm or ±0.5 percent CO₂ (or O₂) from the mean for all traverse points, then you may use three points (located either 16.7, 50.0 and 83.3 percent of the way across the stack or duct, or, for circular stacks or ducts greater than 2.4 meters (7.8 feet) in diameter, at 0.4, 1.2, and 2.0 meters from the wall). The three points must be located along the measurement line that exhibited the highest average NOX concentration during the stratification test; or

(B) For turbines with a NOX standard greater than 15 ppm @ 15% O₂, you may sample at a single point, located at least 1 meter from the stack wall or at the stack centroid if each of the individual traverse point NOX concentrations is within ±5 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±3ppm or ±0.3 percent CO₂ (or O₂) from the mean for all traverse points; or

(C) For turbines with a NOX standard less than or equal to 15 ppm @ 15% O₂, you may sample at a single point, located at least 1 meter from the stack wall or at the stack centroid if each of the individual traverse point NOX concentrations is within ±2.5 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±1ppm or ±0.15 percent CO₂ (or O₂) from the mean for all traverse points.

(b) The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. You may perform testing at the highest achievable load point, if at least 75 percent of peak load cannot be achieved in practice. You must conduct three separate test runs for each performance test. The minimum time per run is 20 minutes.

(1) If the stationary combustion turbine combuts both oil and gas as primary or backup fuels, separate performance testing is required for each fuel.

(2) For a combined cycle and CHP turbine systems with supplemental heat (duct burner), you must measure the total NOX emissions after the duct burner rather than directly after the turbine. The duct burner must be in operation during the performance test.

(3) If water or steam injection is used to control NOX with no additional post-combustion NOX control and you choose to monitor the steam or water to fuel ratio in accordance with §60.4335, then that monitoring system must be operated concurrently with each EPA Method 20 or EPA Method 7E run and must be used to determine the fuel consumption and the steam or water to fuel ratio necessary to comply with the applicable §60.4320 NOX emission limit.

(4) Compliance with the applicable emission limit in §60.4320 must be demonstrated at each tested load level. Compliance is achieved if the three-run arithmetic average NOX emission rate at each tested level meets the applicable emission limit in §60.4320.

(5) If you elect to install a CEMS, the performance evaluation of the CEMS may either be conducted separately or (as described in §60.4405) as part of the initial performance test of the affected unit.

(6) The ambient temperature must be greater than 0 °F during the performance test.
§60.4405   How do I perform the initial performance test if I have chosen to install a NOX-diluent CEMS?

If you elect to install and certify a NOX-diluent CEMS under §60.4345, then the initial performance test required under §60.8 may be performed in the following alternative manner:

(a) Perform a minimum of nine RATA reference method runs, with a minimum time per run of 21 minutes, at a single load level, within plus or minus 25 percent of 100 percent of peak load. The ambient temperature must be greater than 0 °F during the RATA runs.

(b) For each RATA run, concurrently measure the heat input to the unit using a fuel flow meter (or flow meters) and measure the electrical and thermal output from the unit.

(c) Use the test data both to demonstrate compliance with the applicable NOX emission limit under §60.4320 and to provide the required reference method data for the RATA of the CEMS described under §60.4335.

(d) Compliance with the applicable emission limit in §60.4320 is achieved if the arithmetic average of all of the NOX emission rates for the RATA runs, expressed in units of ppm or lb/MWh, does not exceed the emission limit.

§60.4410   How do I establish a valid parameter range if I have chosen to continuously monitor parameters?

If you have chosen to monitor combustion parameters or parameters indicative of proper operation of NOX emission controls in accordance with §60.4340, the appropriate parameters must be continuously monitored and recorded during each run of the initial performance test, to establish acceptable operating ranges, for purposes of the parameter monitoring plan for the affected unit, as specified in §60.4355.

§60.4415   How do I conduct the initial and subsequent performance tests for sulfur?

(a) You must conduct an initial performance test, as required in §60.8. Subsequent SO2 performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). There are three methodologies that you may use to conduct the performance tests.

(1) If you choose to periodically determine the sulfur content of the fuel combusted in the turbine, a representative fuel sample would be collected following ASTM D5287 (incorporated by reference, see §60.17) for natural gas or ASTM D4177 (incorporated by reference, see §60.17) for oil. Alternatively, for oil, you may follow the procedures for manual pipeline sampling in section 14 of ASTM D4057 (incorporated by reference, see §60.17). The fuel analyses of this section may be performed either by you, a service contractor retained by you, the fuel vendor, or any other qualified agency. Analyze the samples for the total sulfur content of the fuel using:

(i) For liquid fuels, ASTM D129, or alternatively D1266, D1552, D2622, D4294, or D5453 (all of which are incorporated by reference, see §60.17); or

(ii) For gaseous fuels, ASTM D1072, or alternatively D3246, D4084, D4468, D4810, D6228, D6667, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17).

(2) Measure the SO2 concentration (in parts per million (ppm)), using EPA Methods 6, 6C, 8, or 20 in appendix A of this part. In addition, the American Society of Mechanical Engineers (ASME) standard, ASME PTC 19-10-1981-Part 10, “Flue and Exhaust Gas Analyses,” manual methods for sulfur dioxide (incorporated by reference, see §60.17) can be used instead of EPA Methods 6 or 20. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in appendix A of this part, and measure and record the electrical and thermal output from the unit. Then use the following equation to calculate the SO2 emission rate:

\[
E = \frac{1.664 \times 10^{-7} \times [SO_2]_{a} \times Q_{m}}{P} \quad (\text{Eq. 6})
\]

Where:
E = SO₂ emission rate, in lb/MWh

\[ 1.664 \times 10^{-7} = \text{conversion constant, in lb/dscf-ppm} \]

\((\text{SO}_2)_{\text{c}}\) = average SO₂ concentration for the run, in ppm

\(Q_{\text{std}} = \text{stack gas volumetric flow rate, in dscf/hr} \)

\(P = \text{gross electrical and mechanical energy output of the combustion turbine, in MW (for simple-cycle operation), for combined-cycle operation, the sum of all electrical and mechanical output from the combustion and steam turbines, or, for combined heat and power operation, the sum of all electrical and mechanical output from the combustion and steam turbines plus all useful recovered thermal output not used for additional electric or mechanical generation, in MW, calculated according to §60.4350(f)(2); or} \)

(3) Measure the SO₂ and diluent gas concentrations, using either EPA Methods 6, 6C, or 8 and 3A, or 20 in appendix A of this part. In addition, you may use the manual methods for sulfur dioxide ASME PTC 19-10-1981-Part 10 (incorporated by reference, see §60.17). Concurrently measure the heat input to the unit, using a fuel flowmeter (or flowmeters), and measure the electrical and thermal output of the unit. Use EPA Method 19 in appendix A of this part to calculate the SO₂ emission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in §60.4350(f) to calculate the SO₂ emission rate in lb/MWh.

(b) [Reserved]

Definitions

§60.4420 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein will have the meaning given them in the Clean Air Act and in subpart A (General Provisions) of this part.

**Biogas** means gas produced by the anaerobic digestion or fermentation of organic matter including manure, sewage sludge, municipal solid waste, biodegradable waste, or any other biodegradable feedstock, under anaerobic conditions. Biogas is comprised primarily of methane and CO₂.

**Combined cycle combustion turbine** means any stationary combustion turbine which recovers heat from the combustion turbine exhaust gases to generate steam that is only used to create additional power output in a steam turbine.

**Combined heat and power combustion turbine** means any stationary combustion turbine which recovers heat from the exhaust gases to heat water or another medium, generate steam for useful purposes other than additional electric generation, or directly uses the heat in the exhaust gases for a useful purpose.

**Combustion turbine model** means a group of combustion turbines having the same nominal air flow, combustor inlet pressure, combustor inlet temperature, firing temperature, turbine inlet temperature and turbine inlet pressure.

**Combustion turbine test cell/stand** means any apparatus used for testing uninstalled stationary or uninstalled mobile (motive) combustion turbines.

**Diffusion flame stationary combustion turbine** means any stationary combustion turbine where fuel and air are injected at the combustor and are mixed only by diffusion prior to ignition.

**Duct burner** means a device that combusts fuel and that is placed in the exhaust duct from another source, such as a stationary combustion turbine, internal combustion engine, kiln, etc., to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a heat recovery steam generating unit.
Efficiency means the combustion turbine manufacturer’s rated heat rate at peak load in terms of heat input per unit of power output—based on the higher heating value of the fuel.

Emergency combustion turbine means any stationary combustion turbine which operates in an emergency situation. Examples include stationary combustion turbines used to produce power for critical networks or equipment, including power supplied to portions of a facility, when electric power from the local utility is interrupted, or stationary combustion turbines used to pump water in the case of fire or flood, etc. Emergency stationary combustion turbines do not include stationary combustion turbines used as peaking units at electric utilities or stationary combustion turbines at industrial facilities that typically operate at low capacity factors. Emergency combustion turbines may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are required by the manufacturer, the vendor, or the insurance company associated with the turbine. Required testing of such units should be minimized, but there is no time limit on the use of emergency combustion turbines.

Excess emissions means a specified averaging period over which either (1) the NOx emissions are higher than the applicable emission limit in §60.4320; (2) the total sulfur content of the fuel being combusted in the affected facility exceeds the limit specified in §60.4330; or (3) the recorded value of a particular monitored parameter is outside the acceptable range specified in the parameter monitoring plan for the affected unit.

Gross useful output means the gross useful work performed by the stationary combustion turbine system. For units using the mechanical energy directly or generating only electricity, the gross useful work performed is the gross electrical or mechanical output from the turbine/generator set. For combined heat and power units, the gross useful work performed is the gross electrical or mechanical output plus the useful thermal output (i.e., thermal energy delivered to a process).

Heat recovery steam generating unit means a unit where the hot exhaust gases from the combustion turbine are routed in order to extract heat from the gases and generate steam, for use in a steam turbine or other device that utilizes steam. Heat recovery steam generating units can be used with or without duct burners.

Integrated gasification combined cycle electric utility steam generating unit means a coal-fired electric utility steam generating unit that burns a synthetic gas derived from coal in a combined-cycle gas turbine. No solid coal is directly burned in the unit during operation.

ISO conditions means 288 Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.

Lean premix stationary combustion turbine means any stationary combustion turbine where the air and fuel are thoroughly mixed to form a lean mixture before delivery to the combustor. Mixing may occur before or in the combustion chamber. A lean premixed turbine may operate in diffusion flame mode during operating conditions such as startup and shutdown, extreme ambient temperature, or low or transient load.

Natural gas means a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth’s surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1,100 British thermal units (Btu) per standard cubic foot. Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, the Northern Mariana Islands, or offshore platforms.

Peak load means 100 percent of the manufacturer’s design capacity of the combustion turbine at ISO conditions.

Regenerative cycle combustion turbine means any stationary combustion turbine which recovers heat from the combustion turbine exhaust gases to preheat the inlet combustion air to the combustion turbine.

Simple cycle combustion turbine means any stationary combustion turbine which does not recover heat from the combustion turbine exhaust gases to preheat the inlet combustion air to the combustion turbine, or which does not
recover heat from the combustion turbine exhaust gases for purposes other than enhancing the performance of the combustion turbine itself.

_Stationary combustion turbine_ means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), heat recovery system, and any ancillary components and sub-components comprising any simple cycle stationary combustion turbine, any regenerative/recuperative cycle stationary combustion turbine, any combined cycle combustion turbine, and any combined heat and power combustion turbine based system. Stationary means that the combustion turbine is not self propelled or intended to be propelled while performing its function. It may, however, be mounted on a vehicle for portability.

_Unit operating day_ means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

_Unit operating hour_ means a clock hour during which any fuel is combusted in the affected unit. If the unit combusts fuel for the entire clock hour, it is considered to be a full unit operating hour. If the unit combusts fuel for only part of the clock hour, it is considered to be a partial unit operating hour.

_ Useful thermal output_ means the thermal energy made available for use in any industrial or commercial process, or used in any heating or cooling application, i.e., total thermal energy made available for processes and applications other than electrical or mechanical generation. Thermal output for this subpart means the energy in recovered thermal output measured against the energy in the thermal output at 15 degrees Celsius and 101.325 kilopascals of pressure.

[71 FR 38497, July 6, 2006, as amended at 74 FR 11861, Mar. 20, 2009]

**Table 1 to Subpart KKKK of Part 60—Nitrogen Oxide EmissionLimits for New Stationary Combustion Turbines**

<table>
<thead>
<tr>
<th>Combustion turbine type</th>
<th>Combustion turbine heat input at peak load (HHV)</th>
<th>NOx emission standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>New turbine firing natural gas, electric generating</td>
<td>≤ 50 MMBtu/h</td>
<td>42 ppm at 15 percent O$_2$ or 290 ng/J of useful output (2.3 lb/MWh).</td>
</tr>
<tr>
<td>New turbine firing natural gas, mechanical drive</td>
<td>≤ 50 MMBtu/h</td>
<td>100 ppm at 15 percent O$_2$ or 690 ng/J of useful output (5.5 lb/MWh).</td>
</tr>
<tr>
<td>New turbine firing natural gas</td>
<td>&gt; 50 MMBtu/h and ≤ 850 MMBtu/h</td>
<td>25 ppm at 15 percent O$_2$ or 150 ng/J of useful output (1.2 lb/MWh).</td>
</tr>
<tr>
<td>New, modified, or reconstructed turbine firing natural gas</td>
<td>&gt; 850 MMBtu/h</td>
<td>15 ppm at 15 percent O$_2$ or 54 ng/J of useful output (0.43 lb/MWh).</td>
</tr>
<tr>
<td>New turbine firing fuels other than natural gas, electric generating</td>
<td>≤ 50 MMBtu/h</td>
<td>96 ppm at 15 percent O$_2$ or 700 ng/J of useful output (5.5 lb/MWh).</td>
</tr>
<tr>
<td>New turbine firing fuels other than natural gas, mechanical drive</td>
<td>≤ 50 MMBtu/h</td>
<td>150 ppm at 15 percent O$_2$ or 1.100 ng/J of useful output (8.7 lb/MWh).</td>
</tr>
<tr>
<td>Combustion turbine type</td>
<td>Combustion turbine heat input at peak load (HHV)</td>
<td>NO\textsubscript{X} emission standard</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>New turbine firing fuels other than natural gas</td>
<td>&gt; 50 MMBtu/h and ≤ 850 MMBtu/h</td>
<td>74 ppm at 15 percent O\textsubscript{2} or 460 ng/J of useful output (3.6 lb/MWh).</td>
</tr>
<tr>
<td>New, modified, or reconstructed turbine firing fuels other than natural gas</td>
<td>&gt; 850 MMBtu/h</td>
<td>42 ppm at 15 percent O\textsubscript{2} or 160 ng/J of useful output (1.3 lb/MWh).</td>
</tr>
<tr>
<td>Modified or reconstructed turbine</td>
<td>≤ 50 MMBtu/h</td>
<td>150 ppm at 15 percent O\textsubscript{2} or 1,100 ng/J of useful output (8.7 lb/MWh).</td>
</tr>
<tr>
<td>Modified or reconstructed turbine firing natural gas</td>
<td>&gt; 50 MMBtu/h and ≤ 850 MMBtu/h</td>
<td>42 ppm at 15 percent O\textsubscript{2} or 250 ng/J of useful output (2.0 lb/MWh).</td>
</tr>
<tr>
<td>Modified or reconstructed turbine firing fuels other than natural gas</td>
<td>&gt; 50 MMBtu/h and ≤ 850 MMBtu/h</td>
<td>96 ppm at 15 percent O\textsubscript{2} or 590 ng/J of useful output (4.7 lb/MWh).</td>
</tr>
<tr>
<td>Turbines located north of the Arctic Circle (latitude 66.5 degrees north), turbines operating at less than 75 percent of peak load, modified and reconstructed offshore turbines, and turbine operating at temperatures less than 0 °F</td>
<td>≤ 30 MW output</td>
<td>150 ppm at 15 percent O\textsubscript{2} or 1,100 ng/J of useful output (8.7 lb/MWh).</td>
</tr>
<tr>
<td>Turbines located north of the Arctic Circle (latitude 66.5 degrees north), turbines operating at less than 75 percent of peak load, modified and reconstructed offshore turbines, and turbine operating at temperatures less than 0 °F</td>
<td>&gt; 30 MW output</td>
<td>96 ppm at 15 percent O\textsubscript{2} or 590 ng/J of useful output (4.7 lb/MWh).</td>
</tr>
<tr>
<td>Heat recovery units operating independent of the combustion turbine</td>
<td>All sizes</td>
<td>54 ppm at 15 percent O\textsubscript{2} or 110 ng/J of useful output (0.86 lb/MWh).</td>
</tr>
</tbody>
</table>
Source Description and Location

Source Name: ANR Pipeline Company – Celestine Station  
Source Location: 146 South Celestine Road, Celestine, IN 47521  
County: Dubois  
SIC Code: 4922 (Transportation of Natural Gas via Pipeline)  
Operation Permit No.: T 037-41537-00031  
Operation Permit Issuance Date: March 2, 2020  
Significant Source Modification No.: 037-43099-00031  
Significant Permit Modification No.: 037-43179-00031  
Permit Reviewer: Wyman Clark

Existing Approvals

The source was issued Part 70 Operating Permit Renewal No. 037-41537-00031 on March 2, 2020. There have been no subsequent approvals issued.

County Attainment Status

The source is located in Dubois County.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO₂</td>
<td>Better than national standards.</td>
</tr>
<tr>
<td>CO</td>
<td>Unclassifiable or attainment effective November 15, 1990.</td>
</tr>
<tr>
<td>O₃</td>
<td>Unclassifiable or attainment effective January 16, 2018, for the 2015 8-hour ozone standard.</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>Unclassifiable or attainment effective April 15, 2015, for the 2012 annual PM₂.₅ standard.</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>Unclassifiable or attainment effective December 13, 2009, for the 2006 24-hour PM₂.₅ standard.</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>Unclassifiable effective November 15, 1990.</td>
</tr>
<tr>
<td>NO₂</td>
<td>Unclassifiable or attainment effective January 29, 2012, for the 2010 NO₂ standard.</td>
</tr>
<tr>
<td>Pb</td>
<td>Unclassifiable or attainment effective December 31, 2011, for the 2008 lead standard.</td>
</tr>
</tbody>
</table>

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NOₓ) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOₓ emissions are considered when evaluating the rule applicability relating to ozone. Dubois County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOₓ emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) PM₂.₅
Dubois County has been classified as attainment for PM₂.₅. Therefore, direct PM₂.₅, SO₂, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
(c) Other Criteria Pollutants
Dubois County has been classified as attainment or unclassifiable in Indiana for all the other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this type of operation is not one (1) of the twenty-eight (28) listed source categories under 326 IAC 2-2-1(ff)(1), 326 IAC 2-3-2(g), or 326 IAC 2-7-1(22)(B), and there is no applicable New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

The fugitive emissions of hazardous air pollutants (HAP) are counted toward the determination of Part 70 Permit applicability and source status under Section 112 of the Clean Air Act (CAA).

Greenhouse Gas (GHG) Emissions

On June 23, 2014, in the case of Utility Air Regulatory Group v. EPA, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources “previously classified as ‘Major’ based solely on greenhouse gas emissions.”

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHG emissions to determine operating permit applicability or PSD applicability to a source or modification.

Source Status - Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

<table>
<thead>
<tr>
<th>Source-Wide Emissions Prior to Modification (ton/year)</th>
<th>PM₁</th>
<th>PM₁₀¹</th>
<th>PM₂₅¹.₂</th>
<th>SO₂</th>
<th>NOₓ</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP³</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PTE of Entire Source Excluding Fugitive Emissions*</td>
<td>43.57</td>
<td>55.15</td>
<td>55.15</td>
<td>0.70</td>
<td>2,694.52</td>
<td>139.35</td>
<td>446.78</td>
<td>62.47</td>
<td>89.92</td>
</tr>
<tr>
<td>Title V Major Source Thresholds</td>
<td>NA</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>PSD Major Source Thresholds</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Emission Offset Major Source Thresholds</td>
<td>---</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>
### Source-Wide Emissions Prior to Modification (ton/year)

<table>
<thead>
<tr>
<th>Source</th>
<th>PM(^{1})</th>
<th>PM(_{10}) (^{1})</th>
<th>PM(_{2.5}) (^{1,2})</th>
<th>SO(_{2})</th>
<th>NO(_{x})</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP(^{3})</th>
<th>Total HAPs</th>
</tr>
</thead>
</table>

1. Under the Part 70 Permit program (40 CFR 70), PM\(_{10}\) and PM\(_{2.5}\), not particulate matter (PM), are each considered as a "regulated air pollutant."
2. PM\(_{2.5}\) listed is direct PM\(_{2.5}\).
3. Single highest source-wide HAP is Formaldehyde.
4. Taken from T037-41537-00031

*Fugitive HAP emissions are always included in the source-wide emissions.*

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because PSD regulated pollutants, NO\(_{x}\), and CO, are emitted at rates of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) This existing source is a major source of HAP, as defined in 40 CFR 63.2, because HAP emissions are equal to or greater than ten (10) tons per year for a single HAP and equal to or greater than twenty-five (25) tons per year for a combination of HAPs.

(c) These emissions are based on the TSD of Part 70 Renewal No. 037-41537-00031, issued on March 2, 2020.

### Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed an application, submitted by ANR Pipeline Company – Celestine Station on July 31, 2020, relating to replacing eight (8) compressor engines and ancillary equipment with two (2) compressor turbines and ancillary equipment.

The following is a list of the new emission units and pollution control device(s):

(a) One (1) natural-gas-fired Solar Mars 100 Compressor Turbine identified as E12, approved in 2021 for construction, with a maximum capacity of 16,082 hp (139.66 MMBtu/hr heat input), uncontrolled, and exhausting to stack S12. [40 CFR 60, Subpart KKKK]

(b) One (1) natural-gas-fired Solar Mars 100 Compressor Turbine identified as E13, approved in 2021 for construction, with a maximum capacity of 16,082 (139.66 MMBtu/hr heat input), uncontrolled, and exhausting to stack S12. [40 CFR 60, Subpart KKKK]

(c) Combustion related activities, as follows:

(1) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:

(A) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.

(iv) One (1) natural-gas-fired Aqua-Gas WB1200-48UH Fuel Gas Heater identified as IA1, approved in 2021 for construction, with a maximum capacity of 1.20 MMBtu/hr heat input, uncontrolled, and exhausting to a separate stack.

(v) Thirty (30) natural-gas-fired catalytic Space Heaters identified as IA2 through IA31, approved in 2021 for construction, each with a maximum capacity of 0.0725 MMBtu/hr heat input, uncontrolled, and exhausting to the room.

(d) Activities associated with emergencies as follows:
(1) Emergency generators as follows:
   (A) Natural gas turbines or reciprocating engines not exceeding sixteen thousand (16,000) horsepower.
   (ii) One (1) natural-gas-fired Waukesha VGF-L36GL Emergency Generator identified as E14, approved in 2021 for construction, with a maximum capacity of 880 hp (6.83 MMBtu/hr heat input), uncontrolled, and exhausting to stack S14. [40 CFR 60, Subpart JJJJ][40 CFR 63, Subpart ZZZZ]

(e) The following VOC and HAP storage containers:

(2) Vessels storing the following:
   (B) One (1) wastewater storage tank, approved for construction in 2021. identified as IA32, with a maximum capacity of 1,200 gallons.

(f) Venting from pneumatic actuators, dry seals, and blowdown associated with compressor turbines E12 and E13, approved in 2021 for construction.

The new emission units [listed above as items (a) through (c)] will be constructed at an existing PSD major source. After their construction is complete, these new units will replace the following existing units, which will be retired:

The following is a list of units existing under TV Renewal 037-41537-00031, which will be retired once the new emission units are constructed and startup is commenced:

(a) Six (6) two-stroke lean burn natural gas-fired reciprocating internal combustion internal engine compressors, installed in 1957, identified as E01 through E06, exhausting to stacks S01 through S06, respectively, with a rated capacity of 2,000 Horsepower, each, and a heat input capacity of 17.54 million British thermal units per hour, each. [40 CFR 63, Subpart ZZZZ]

(b) One (1) two-stroke lean burn natural gas-fired reciprocating internal combustion engine compressor, installed in 1968, identified as E07, exhausting to stack S07, equipped with Low Emission Combustion (LEC) technology, with a rated capacity of 7,833 Horsepower and a heat input capacity of 61.2 million British thermal units per hour [40 CFR 63, Subpart ZZZZ]

(c) One (1) two-stroke lean burn natural gas-fired reciprocating internal combustion engine compressor, installed in 1968, identified as E08, exhausting to stack S08, equipped with Low Emission Combustion (LEC) technology, with a rated capacity of 10,833 Horsepower and a heat input capacity of 91.8 million British thermal units per hour. [40 CFR 63, Subpart ZZZZ]

(d) Combustion related activities, as follows:
   (1) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:
   (A) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.
      (i) One (1) boiler, constructed in 1956, identified as B01, with a maximum heat input capacity of 4.184 MMBtu/hr; [40 CFR 63, Subpart DDDDD]
      (ii) One (1) boiler, constructed in 1970, identified as B02, with a maximum heat input capacity of 4.184 MMBtu/hr; [40 CFR 63, Subpart DDDDD]
      (iii) Two (2) catalytic space heaters, with a maximum heat input capacity of 0.05 MMBtu/hr, each, uncontrolled, and exhausting to the room.
(e) Activities associated with emergencies as follows:

(1) Emergency generators as follows:

(A) Natural gas turbines or reciprocating engines not exceeding sixteen thousand (16,000) horsepower.

(i) One (1) four-stroke rich burn natural gas-fired emergency generator, constructed in 2013, identified as E11, with a maximum capacity of 690 Horsepower and a maximum heat input capacity of 5.06 million British thermal units per hour, exhausting to stack S11.[40 CFR 60, Subpart JJJJ][40 CFR 63, Subpart ZZZZ]

(f) Fuel dispensing activities, as follows:

(1) A petroleum fuel other than gasoline dispensing facility, having a storage tank capacity less than or equal to ten thousand five hundred (10,500) gallons, and dispensing three thousand five hundred (3,500) gallons per day or less, as follows:

(A) One (1) diesel fuel storage tank, identified as T20, with a maximum capacity of 100 gallons.

(g) The following VOC and HAP storage containers:

(1) Storage tanks with capacity less than or equal to one thousand (1,000) gallons and annual throughputs equal to or less than twelve thousand (12,000) gallons, as follows

(A) Two (2) condensate storage tanks, constructed in 2018, identified as T24 and T25, with a maximum capacity of 165 gallons.

(B) One (1) condensate storage tank, constructed prior to 1970, identified as T26, with a maximum capacity of 420 gallons.

(2) Vessels storing the following:

(A) Lubricating oils, as follows:

(i) One (1) lube oil tank and one (1) split lube/used oil tank, constructed in 1957, identified as T1 and T2, with a maximum capacity of 12,100 gallons, each.

(ii) One (1) lube oil tank, constructed in 1970, identified as T3, with a maximum capacity of 2,400 gallons.

(iii) One (1) lube oil tank, constructed in 1957, identified as T4, with a maximum capacity of 440 gallons.

(iv) One (1) used oil tank, constructed prior to 1970, identified as T19, with a maximum capacity of 727 gallons.

(v) One (1) lube oil tank, constructed prior to 1970, identified as T21, with a maximum capacity of 581 gallons.

(vi) One (1) maintenance oil tank, constructed prior to 1970, identified as T22, with a maximum capacity of 1,023 gallons.

(vii) One (1) used oil tank, constructed prior to 1970, identified as T23, with a maximum capacity of 419 gallons.
(h) An emission unit or activity whose potential uncontrolled emissions meet the exemption levels specified in 326 IAC 2-1.1-3(e)(1), as follows:

1. One (1) glycol/water tank, constructed in 1968, identified as T11, with a maximum capacity of 1,605 gallons.
2. One (1) glycol/water tank, constructed in 1968, identified as T12, with a maximum capacity of 3,382 gallons.
3. One (1) glycol/water tank, constructed in 1986, identified as T13, with a maximum capacity of 8,000 gallons.
4. One (1) glycol/water tank, constructed in 1985, identified as T14, with a maximum capacity of 2,000 gallons.

After the retirement of the units listed above potential emissions of all PSD regulated pollutants will be less than the PSD major threshold and single and total HAPs will be less than the major source thresholds, and ANR Pipeline Company – Celestine Compressor Station can apply to modify their Part 70 Operating Permit to reflect that they are a PSD minor source and area source of HAPs.

### Enforcement Issues

There are no pending enforcement actions related to this modification.

### Emission Calculations

See Appendix A of this Technical Support Document for detailed emission calculations.

### Permit Level Determination – Part 70 Modification to an Existing Source

Pursuant to 326 IAC 2-1.1-1(12), Potential to Emit is defined as “the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency.”

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>E12 Solar Mars 100 Turbine3</td>
<td>4.04</td>
<td>4.04</td>
<td>4.04</td>
<td>0.44</td>
<td>33.60</td>
<td>8.61</td>
<td>113.20</td>
<td>0.43</td>
<td>0.63</td>
</tr>
<tr>
<td>E12 Solar Mars 100 Turbine3</td>
<td>4.04</td>
<td>4.04</td>
<td>4.04</td>
<td>0.44</td>
<td>33.60</td>
<td>8.61</td>
<td>113.20</td>
<td>0.43</td>
<td>0.63</td>
</tr>
<tr>
<td>IA1 - Fuel Gas Heater</td>
<td>0.01</td>
<td>0.04</td>
<td>0.04</td>
<td>0.00</td>
<td>0.63</td>
<td>0.03</td>
<td>0.43</td>
<td>0.00</td>
<td>0.01</td>
</tr>
<tr>
<td>IA2-31 - Space Heaters (30 each at 0.0725 MMBtu/hr)</td>
<td>0.02</td>
<td>0.07</td>
<td>0.07</td>
<td>0.01</td>
<td>0.93</td>
<td>0.05</td>
<td>0.78</td>
<td>0.00</td>
<td>0.02</td>
</tr>
<tr>
<td>E14 Waukesha VGF-L36GL Emergency Generator</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.00</td>
<td>0.97</td>
<td>0.49</td>
<td>1.94</td>
<td>0.09</td>
<td>0.13</td>
</tr>
<tr>
<td>IA32 - Wastewater Tank</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.02</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Equipment Leaks (fugitive emissions)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.76</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Venting</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>17.68</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total PTE Before Controls of the New Emission Units</td>
<td>8.12</td>
<td>8.20</td>
<td>8.20</td>
<td>0.88</td>
<td>69.73</td>
<td>35.49</td>
<td>229.55</td>
<td>0.96</td>
<td>1.41</td>
</tr>
</tbody>
</table>
### PTE Before Controls of the New Emission Units (ton/year)

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>PM</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}$$^{1}$</th>
<th>SO$_2$</th>
<th>NO$_X$</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP$^{2}$</th>
<th>Total HAPs</th>
</tr>
</thead>
</table>

$^{1}$PM$_{2.5}$ listed is direct PM$_{2.5}$.

$^{2}$Formaldehyde is the highest single HAP.

$^{3}$Turbine emissions based on 200 Start up / shut down cycles per year and 180 low-load hours per year.

Appendix A of this TSD reflects the detailed potential emissions of the modification.

(a) **Approval to Construct**

Pursuant to 326 IAC 2-7-10.5(g)(4), a Significant Source Modification is required because this modification has the potential to emit nitrogen oxides (NOx) and VOC at equal to or greater than twenty-five (25) tons per year.

Pursuant to 326 IAC 2-7-10.5(g)(7), a Significant Source Modification is required because this modification has a potential to emit equal to or greater than one hundred (100) tons per year of carbon monoxide (CO).

(b) **Approval to Operate**

Pursuant to 326 IAC 2-7-12(d)(1), this change to the permit is being made through a Significant Permit Modification because this modification does not qualify as a Minor Permit Modification or as an Administrative Amendment.

### PSD Emissions Increase

(a) **Actual to Potential (ATP) Applicability Test**

Since this project only involves the construction of new emissions units and/or emissions units considered new for this evaluation, an Actual to Potential (ATP) applicability test, specified in 326 IAC 2-2-2(d)(4), is used to determine if the project results in a Significant Emissions Increase.

(b) **New Emissions Units Only**

Pursuant to 326 IAC 2-2-1(t)(1), a new emissions unit is any emissions unit that is, or will be, newly constructed and that has existed for less than two (2) years from the date the emissions unit first operated.

(A) The following proposed emissions unit(s) are considered as new emissions units for this evaluation.

1. One (1) natural gas-fired Solar Mars 100 Compressor Turbine identified as E12, approved in 2021 for construction, with a maximum capacity of 16,082 hp (139.66 MMBtu/hr heat input), uncontrolled, and exhausting to stack S12.

2. One (1) natural gas-fired Solar Mars 100 Compressor Turbine identified as E13, approved in 2021 for construction, with a maximum capacity of 16,082 hp (139.66 MMBtu/hr heat input), uncontrolled, and exhausting to stack S12.

3. One (1) natural gas-fired Waukesha VGF-L36GL Emergency Generator identified as E14, approved in 2021 for construction, with a maximum capacity of 880 hp (6.83 MMBtu/hr heat input), uncontrolled, and exhausting to stack S14.
(5) One (1) natural gas-fired Aqua-Gas WB1200-48UH Fuel Gas Heater identified as IA1 approved in 2021 for construction, with a maximum capacity of 1.20 MMBtu/hr heat input, uncontrolled, and exhausting to stack S15.

(6) Thirty (30) natural gas-fired catalytic space heaters identified as IA2 through IA31, approved in 2021 for construction, each with a maximum capacity of 0.0725 MMBtu/hr heat input, uncontrolled, and exhausting to the room.

c) Baseline Actual Emissions
For a new emissions unit, the baseline actual emissions for purposes of determining the Emissions Increase that will result from the initial construction and operation of the unit shall equal zero (0) and thereafter, for all other purposes, shall equal the unit's potential to emit.

d) Actual to Potential (ATP) Summary
The Emissions Increase of the project is the sum of the difference between the potential to emit (PTE) from each new emissions unit following completion of the project and the baseline actual emissions of these units before the project.

\[ \text{ATP}_{\text{new unit}} = \text{PTE}_{\text{new unit}} - \text{Baseline Emissions}_{\text{new unit}} \]

See Appendix A of this Technical Support Document for detailed emission calculations.

1. New Units for SSM 037-43099-00031

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>PM</th>
<th>PM(_{10})</th>
<th>PM(_{2.5})</th>
<th>SO(_2)</th>
<th>NO(_X)</th>
<th>VOC</th>
<th>CO</th>
<th>GHGs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed New Units</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E12 Solar Mars 100 Turbine(^3)</td>
<td>4.04</td>
<td>4.04</td>
<td>4.04</td>
<td>0.44</td>
<td>33.60</td>
<td>8.61</td>
<td>113.20</td>
<td>71,630</td>
</tr>
<tr>
<td>E12 Solar Mars 100 Turbine(^3)</td>
<td>4.04</td>
<td>4.04</td>
<td>4.04</td>
<td>0.44</td>
<td>33.60</td>
<td>8.61</td>
<td>113.20</td>
<td>71,630</td>
</tr>
<tr>
<td>Insignificant New Units</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IA1 - Fuel Gas Heater</td>
<td>0.01</td>
<td>0.04</td>
<td>0.04</td>
<td>0.00</td>
<td>0.63</td>
<td>0.03</td>
<td>0.43</td>
<td>615</td>
</tr>
<tr>
<td>IA2-31 - Space Heaters (30 each at 0.0725 MMBtu/hr)</td>
<td>0.02</td>
<td>0.07</td>
<td>0.07</td>
<td>0.01</td>
<td>0.93</td>
<td>0.05</td>
<td>0.78</td>
<td>1,116</td>
</tr>
<tr>
<td>E14 Waukesha VGF-L36GL Emergency Generator</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.00</td>
<td>0.97</td>
<td>0.49</td>
<td>1.94</td>
<td>200</td>
</tr>
<tr>
<td>IA32 - Wastewater Tank</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Equipment Leaks (fugitive emissions)(^3)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.76</td>
<td>-</td>
</tr>
<tr>
<td>Venting</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>17.68</td>
<td>-</td>
</tr>
<tr>
<td>Project Emissions Increase (PEI)(^2)</td>
<td>8.12</td>
<td>8.20</td>
<td>8.20</td>
<td>0.88</td>
<td>69.73</td>
<td>35.49</td>
<td>229.55</td>
<td>174,352</td>
</tr>
<tr>
<td>Significant Emission Rate (SER)</td>
<td>25</td>
<td>15</td>
<td>10</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>100</td>
<td>75,000</td>
</tr>
<tr>
<td>PEI &gt; SER?</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
<td>NA(^4)</td>
</tr>
</tbody>
</table>

Notes:
1. Fugitive emissions are not part of PSD applicability analysis.
2. Excludes fugitive emissions (compressor stations are not one of the named source categories that include fugitive emissions).
3. Turbine emissions based on 200 Start up / shut down cycles per year and 180 low-load hours per year.
4. 75,000 tons per year threshold for GHGs is for determining whether the project is subject to regulation as defined at 326 IAC 2-2-1(zz), not a significant emissions increase as defined at 326 IAC 2-2-1(xx)

The project emissions for NO\(_X\) and CO are each above the applicable PSD significant thresholds. Therefore, the project is a significant emissions increase for NO\(_X\) and CO.
(e) Netting Applicability Test

The source performed a netting analysis, specified in 326 IAC 2-2-2(d)(1) and (d)(2), to demonstrate that the modification is not subject to PSD major review for the project NOx and CO emissions. Under 326 IAC 2-2-1(ii), “net emissions increase” is defined as follows:

(ii) "Net emissions increase", with respect to any regulated NSR pollutant emitted by a major stationary source, means the following:

(1) The amount by which the sum of the following exceeds zero (0):

(A) The increase in emissions from a particular physical change or change in the method of operation at a stationary source as calculated under section 2(d) of this rule.

(B) Any other increases and decreases in actual emissions at the major stationary source that are contemporaneous with the particular change and are otherwise creditable. Baseline actual emissions for calculating increases and decreases under this clause shall be determined as provided in subsection (e), except that subsection (e)(1)(C) and (e)(2)(D) shall not apply.

(2) An increase or decrease in actual emissions is contemporaneous with the increase from the particular change only if it occurs between the following:

(A) The date five (5) years before construction of the particular change commences.

(B) The date that the increase from the particular change occurs.

(3) An increase or decrease in actual emissions is creditable only if the department has not relied on the increase or decrease in actual emissions in issuing a permit to the source under 40 CFR Part 52.21* or this rule and the permit is in effect when the increase in actual emissions from the particular change occurs.

(4) An increase or decrease in actual emissions of sulfur dioxide, PM, or nitrogen oxides that occurs before the applicable minor source baseline date is creditable only if it is required to be considered in calculating the amount of maximum allowable increases remaining available.

(5) An increase in actual emissions is creditable only to the extent that a new level of actual emissions exceeds the old level.

(6) A decrease in actual emissions is creditable only to the extent that:

(A) the old level of actual emissions or the old level of allowable emissions, whichever is lower, exceeds the new level of actual emissions;

(B) it is enforceable as a practical matter at and after the time that actual construction on the particular change begins; and

(C) it has approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change.
(7) An increase that results from the physical change at a source occurs when the emissions unit on which construction occurred becomes operational and begins to emit a particular pollutant. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period not to exceed one hundred eighty (180) days.

(8) Subsection (b)(1) shall not apply for determining creditable increases and decreases.

For this netting analysis, the source has considered the project emissions increases described above (see ATP Summary), and identified contemporaneous increases and decreases associated with this project:

2. Contemporaneous Changes

A. Phase 1 - Startup Transition Limits

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>PM</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}$</th>
<th>SO$_{2}$</th>
<th>NO$_{X}$</th>
<th>VOC</th>
<th>CO</th>
<th>GHGs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Emissions Increase (PEI) of new units for SSM 43099 ATP</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>69.73</td>
<td>-</td>
<td>229.55</td>
<td>-</td>
</tr>
</tbody>
</table>

| Compression Engine E01 | 98.23 | 13.13 |
| Compression Engine E02 | 73.64 | 9.84  |
| Compression Engine E03 | 74.38 | 9.94  |
| Compression Engine E04 | 78.19 | 10.45 |
| Compression Engine E05 | 91.60 | 12.24 |
| Compression Engine E06 | 79.71 | 10.65 |
| Compression Engine E07 | 167.03 | 128.96 |
| Compression Engine E08 | 0.00  | 0.00  |
| Total Baseline Actual Emissions | 662.78 | 195.21 |

| Projected Actual Emissions for Existing Compressor Engines E01-E08 | 98.23 | 13.13 |
| Compression Engine E01 | 73.64 | 9.84  |
| Compression Engine E02 | 74.38 | 9.94  |
| Compression Engine E03 | 78.19 | 10.45 |
| Compression Engine E04 | 91.60 | 12.24 |
| Compression Engine E05 | 79.71 | 10.65 |
| Compression Engine E06 | 167.03 | 128.96 |
| Compression Engine E07 | 0.00  | 0.00  |
| Total Projected Actual Emission | 662.78 | 195.21 |

| ATPA for Existing Compressor Engines | 0.00  | 0.00  |

| Project Emissions Increase for Phase 1 (ATP-APTA)$^*$ | 69.73 | 229.55 |

| Phase 1 Limits for E01 through E08$^{2,3}$ | 633.04 | 65.65 |
B. Net of all Changes Following E01 through E08 Shutdown

<table>
<thead>
<tr>
<th></th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>GHGs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Emissions Increase</td>
<td></td>
<td>69.73</td>
<td></td>
<td></td>
<td>229.55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sum of contemporaneous increases and decreases</td>
<td></td>
<td>29.74</td>
<td></td>
<td></td>
<td>129.56</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net emission increase (NEI)</td>
<td></td>
<td>39.99</td>
<td></td>
<td></td>
<td>99.99</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSD Significant Level</td>
<td></td>
<td>40</td>
<td></td>
<td></td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is NEI Significant</td>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
- No other contemporaneous changes in the last 5 years
- 1. January 2012 - December 2013 baseline period
- 2. Limits = Baseline Emissions of Engines E01 through E08 + SER - PEI - 0.01
- 3. No limits during transition needed for PM, PM10, PM2.5, VOC, or SO2 because the PTE of the new units < PSD Modification Threshold

(f) Conclusion
Pursuant to 326 IAC 2-2-2(d)(1), if a project causes a significant emission increase, it is a major modification only if it also results in a significant net emissions increase. The Permittee has provided information as part of the application for this approval showing that, based on Actual to Projected Actual test in 326 IAC 2-2-2, this modification to an existing major PSD stationary source is not a major modification as defined at 326 IAC 2-2-1(dd) because the net emissions increase, as defined at 326 IAC 2-2-1(ii), of each PSD regulated pollutant is less than the PSD significant levels levels (i.e., the modification does not cause a net emissions increase). The applicant will be required to keep records and report in accordance with 326 IAC 2-2-8 (Prevention of Significant Deterioration (PSD) Requirements: Source Obligation).

Startup Transition Limitations
Pursuant to SSM No. 037-43099-00031, upon startup of either natural-gas-fired Solar Mars 100 Compressor Turbine, identified as (E12 and E13), the Permittee shall comply with the following limits:

(a) The total combined NOx emissions from E01 - E08 shall be less than 633.04 tons per twelve consecutive month period with compliance determined at the end of each month.

(b) The total combined CO emissions from E01 - E08 shall be less than 65.65 tons per twelve consecutive month period with compliance determined at the end of each month.

(c) The limits above in (a) and (b) shall cease to be effective after the date the last of the eight (8) two-stroke lean burn natural gas-fired reciprocating internal combustion internal engine compressors, identified as (E01 – E08) is made incapable of operation.

Compliance with these limits, shall limit the net emission increase from the 2021 turbine modification to less than forty (40) tons of NOx and to less than one hundred (100) tons of CO per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2021 Modification permitted under SSM No. 037-43099-00031.

PTE of the Entire Source After Issuance of the Part 70 Modification
This project has two phases:
(a) Phase 1: the period before the last of engines E01-E08 is made incapable of operation. Within Phase 1:

1. Before the startup of either compressor turbine E12 or E13. None of the new units will be operational. Emissions will be unchanged from those described above in the TSD section "Source Status - Existing Source" and summarized in the table "Source-Wide Emissions Prior to Modification (ton/year)".

2. After the startup of either compressor turbine E12 or E13. Emissions will be as described below in this TSD section and summarized in the table: "Phase 1. Source-Wide Emissions After Startup of Either Turbine E12 or E13 (ton/year)"

(b) Phase 2: the period after the last of compressor engines E01-E08 is made incapable of operation. Emissions will be as described below in this TSD section and summarized in the table "Phase 2. Source-Wide Emissions After the Last of Engines E01 - E08 is Rendered Incapable of Operation (ton/year)"

The tables above and below summarize the after-issuance source-wide potential to emit, reflecting all limits, of the emission units for the two phases. Any control equipment is considered federally enforceable only after issuance of the Part 70 source and/or permit modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

| Phase 1. Source-Wide Emissions After Startup of Either Turbine E12 or E13 (ton/year) |
|---------------------------------|-----|-----|------|------|------|-----|-----|-----|
|                                | PM1 | PM10 | PM2.5 | SO2  | NOx  | VOC | CO  | Single HAPs |
| Total PTE of Entire Source Excluding Fugitives* | 51.69 | 63.35 | 63.35 | 1.59 | 711.99 | 175.60 | 305.38 | 9.99 | 24.99|
| Title V Major Source Thresholds | NA  | 100  | 100   | 100  | 100  | 100 | 100 | 10 |
| PSD Major Source Thresholds    | 250 | 250  | 250   | 250  | 250  | 250 | 250 | -- |
| Emission Offset Major Source Thresholds | --- | NA   | NA    | NA   | NA   | NA | NA | NA |

(d) Under this modification during Phase 1, this existing major PSD stationary source will continue to be major under 326 IAC 2-2 because one or more pollutants, NOx and CO, have emissions equal to or greater than the PSD major source threshold.

(e) Under this modification during Phase 1, after startup of either turbine E12 or E13, this existing major source of HAP will become an area source of HAP, as defined in 40 CFR 63.2, because HAP emissions will be less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source will be an area source under Section 112 of the Clean Air Act (CAA).
### Phase 2. Source-Wide Emissions After Issuance (ton/year)

<table>
<thead>
<tr>
<th></th>
<th>PM₁</th>
<th>PM₁₀</th>
<th>PM₂.₅₁,₂</th>
<th>SO₂</th>
<th>NOₓ</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP³</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PTE of Entire Source Excluding Fugitives*</td>
<td>8.16</td>
<td>8.37</td>
<td>8.37</td>
<td>0.90</td>
<td>71.96</td>
<td>38.84</td>
<td>231.42</td>
<td>0.96</td>
<td>2.28</td>
</tr>
<tr>
<td>Title V Major Source Thresholds</td>
<td>NA</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>10</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>PSD Major Source Thresholds</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>Emission Offset Major Source Thresholds</td>
<td>---</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

(f) Under this modification during Phase 2, this existing major PSD stationary source will become minor under 326 IAC 2-2 because the emissions of each PSD regulated pollutant will be less than the PSD major source thresholds.

(g) Under this modification during Phase 2, this existing source of HAP, which was major under Phase 1 before startup of either turbine E12 or E13 and minor under Phase 1 after startup of either turbine E12 or E13, will be an area source of HAP, as defined in 40 CFR 63.2, because HAP emissions will be less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source will be an area source under Section 112 of the Clean Air Act (CAA).

### Federal Rule Applicability Determination

Due to the modification at this source, federal rule applicability has been reviewed as follows:

#### New Source Performance Standards (NSPS):

(a) The requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units 40 CFR 60, Subpart Dc and 326 IAC 12, are not included in the permit for fuel gas heater IA1 and space heaters IA2 through IA31, even though the units were constructed after June 9, 1989 and are steam generating units as defined at 40 CFR 60.41c, because the fuel gas heater IA1 has a maximum heat input capacity of 1.20 MMBtu/hr and space heaters IA2 through IA31 each have a maximum heat input capacity of 0.0725 MMBtu/hr, which are below the applicability threshold of 10 MMBtu/hr for Subpart Dc.

(b) The requirements of the New Source Performance Standard for Stationary Combustion Turbines 40 CFR 60, Subpart GG and 326 IAC 12, are not included in the permit for ANR Pipeline Company – Celestine Station, because Solar Mars 100 Turbines E12 and E13 are regulated under 40 CFR 60 Subpart KKKK and pursuant to 40 CFR 60.4305(b) of Subpart GG sources regulated under 40 CFR 60 KKKK are exempt from 40 CFR 60 Subpart GG.

(c) Emergency Generator E14, with an engine power of 880 hp, approved for construction in 2021, is subject to the New Source Performance Standards for Stationary Spark Ignition Internal Combustion Engines 40 CFR 60, Subpart JJJJ and 326 IAC 12, because it is a stationary spark ignition RICE that commenced construction after June 12, 2006.

Emergency Generator E14 is subject to the following portions of Subpart JJJJ.

(1) 40 CFR 60.4230(a)(4)(iv)
(2) 40 CFR 60.4233(e)
(3) 40 CFR 60.4234
(4) 40 CFR 60.4237(a)
(5) 40 CFR 60.4243(b)(2)(ii)
(6) 40 CFR 60.4243(d)
The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the Emergency Generator E14 except as otherwise specified in 40 CFR 60, Subpart JJJJ.

(d) Solar Mars 100 Turbines E12 and E13 (each with a maximum heat input of 139.66 MMBtu/hr) are subject to the New Source Performance Standards for Stationary Combustion Turbines. 40 CFR 60, Subpart KKKK and 326 IAC 12, because they each have a maximum heat input equal to or greater than 10 MMBtu/hr.

Solar Mars 100 Turbines E12 and E13 are subject to the following portions of Subpart KKKK.

(1) 40 CFR 60.4300
(2) 40 CFR 60.4305
(3) 40 CFR 60.4315
(4) 40 CFR 60.4320(a)
(5) 40 CFR 60.4330(a)(2)
(6) 40 CFR 60.4333(a)
(7) 40 CFR 60.4360
(8) 40 CFR 60.4365(a)
(9) 40 CFR 60.4370
(10) 40 CFR 60.4375(b)
(11) 40 CFR 60.4385
(12) 40 CFR 60.4395
(13) 40 CFR 60.4400
(14) 40 CFR 60.4420
(15) Table 1 to Subpart KKKK of Part 60

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the Solar Mars 100 Turbines E12 and E13 except as otherwise specified in 40 CFR 60, Subpart KKKK.

(e) The requirements of the New Source Performance Standards for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced after September 18, 2015, 40 CFR 60, Subpart OOOOa and 326 IAC 12, are not included in the permit for ANR Pipeline Company – Celestine Station because the source does not meet the 40 CFR 60.5430a definition of the Crude Oil and Natural Gas Production source category, which does not include the point of custody transfer to the natural gas transmission and storage segment.

(f) There are no other New Source Performance Standards (40 CFR Part 60) and 326 IAC 12 included in the permit for this proposed modification.

**National Emission Standards for Hazardous Air Pollutants (NESHAP):**

(a) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPS) from Oil and Natural Gas Production Facilities 40 CFR 63 Subpart HH and 326 IAC 20-30 are not included in the permit for ANR Pipeline -- Celestine Station because the source does not process,
upgrade, or store natural gas prior to the point at which natural gas enters the natural gas transmission and storage source category or is delivered to a final end user.

(b) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPS) from Oil from Natural Gas Transmission and Storage Facilities 40 CFR 63 Subpart HHH and 326 IAC 20-31 are not included in the permit for ANR Pipeline -- Celestine Station because the source does not include any glycol dehydration units, therefore pursuant to 40 CFR 46.1270(c), the source is not subject to the subpart.

(c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Stationary Combustion Turbines 40 CFR 63, Subpart YYYY and 326 IAC 20-90 are not included in the permit for Solar Mars 100 natural-gas-fired turbine compressors E12 and E13, since the rule only applies to major sources of HAPs and:

(1) Solar Mars 100 natural-gas-fired turbine compressors E12 and E13 will not operate in Phase 1 before startup of either turbine E12 or E13,

(2) ANR Pipeline Company -- Celestine Station will take limits to avoid being a major source of HAPs in Phase 1 after startup of either turbine E12 or E13, and

(3) In Phase 2, ANR Pipeline Company -- Celestine Station will not have the potential to emit any single HAPs at greater than or equal to 10 tons/year nor will it have the potential to emit total combined HAPs at greater than or equal to 25 tons per year.

Therefore, Solar Mars 100 natural-gas-fired turbine compressors E12 and E13 will only operate when ANR Pipeline Company - Celestine Station is an Area Source of HAPs.

(d) The following table summarizes the applicability of the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63, Subpart ZZZZ to Emergency Generators E11 and E14 during the various periods of this permit:

<table>
<thead>
<tr>
<th>Phase</th>
<th>Period</th>
<th>HAP Status of Source</th>
<th>Status of E11</th>
<th>Status of E14</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Before startup of either E12 or E13</td>
<td>Major</td>
<td>Major Provisions Apply</td>
<td>Not Operating, ZZZZ does not apply</td>
</tr>
<tr>
<td>1</td>
<td>After startup of either E12 or E13</td>
<td>Synthetic Minor</td>
<td>Area Source Provisions Apply</td>
<td>Area Source Provisions Apply</td>
</tr>
<tr>
<td>2</td>
<td>All of Phase 2</td>
<td>Naturally Minor</td>
<td>Not Operating, ZZZZ does not apply</td>
<td>Area Source Provisions Apply</td>
</tr>
</tbody>
</table>

**Engines E01-E08**

(e) The following provisions of 40 CFR 63, Subpart ZZZZ are applicable to E01-E08 before the first of E12 or E13 is started up:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(1)(i)
(4) 40 CFR 63.6590(b)(3)(i)
(5) 40 CFR 63.6645(f)
(6) 40 CFR 63.6670
(7) 40 CFR 63.6675

(f) The following provisions of 40 CFR 63, Subpart ZZZZ are applicable to E01-E08 after the first of E12 or E13 is started up, but before the last of E01-E08 is rendered incapable of operation:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(1)(iii)
(4) 40 CFR 63.6595(a)(1),(c)
(5) 40 CFR 63.6603(a)
(6) 40 CFR 63.6605
(7) 40 CFR 63.6625(e)(5)
(8) 40 CFR 63.6645(a)(2),(b)
(9) 40 CFR 63.6650
(10) 40 CFR 63.6655(a),(d),(e)(3)
(11) 40 CFR 63.6660
(12) 40 CFR 63.6665
(13) 40 CFR 63.6670
(14) 40 CFR 63.6675
(15) Table 2d to Subpart ZZZZ of Part 63
(16) Table 6 to Subpart ZZZZ of Part 63
(17) Table 7 to Subpart ZZZZ of Part 63
(18) Table 8 to Subpart ZZZZ of Part 63

(g) 40 CFR 63, Subpart ZZZZ is not applicable to E01-E08 after the last of E01-E08 is rendered incapable of operation.

Engine E11

(h) The following provisions of 40 CFR 63, Subpart ZZZZ are applicable to E11 before the first of E12 or E13 is started up:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(2)(i)
(4) 40 CFR 63.6590(b)(1)(i)
(5) 40 CFR 63.6665
(6) 40 CFR 63.6670
(7) 40 CFR 63.6675
(8) Table 8 to Subpart ZZZZ of Part 63

(i) The following provisions of 40 CFR 63, Subpart ZZZZ are applicable to E11 after the first of E12 or E13 is started up, but before the last of E01-E08 is rendered incapable of operation:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(2)(iii),(c)(1)
(4) 40 CFR 63.6665
(5) 40 CFR 63.6670
(6) 40 CFR 63.6675
(7) Table 8 to Subpart ZZZZ of Part 63

(j) 40 CFR 63, Subpart ZZZZ is not applicable to E11 after the last of E01-E08 is rendered incapable of operation.

Engine E14

(k) 40 CFR 63, Subpart ZZZZ is not applicable to E14 before the first of E12 or E13 is started up.

(l) The following provisions of 40 CFR 63, Subpart ZZZZ are applicable to E14 after the first of E12 or E13 is started up, and continue to be applicable to E14 after the last of E01-E08 is rendered incapable of operation:
(m) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDD and 326 IAC 20-95 are not included in the permit for fuel gas heater IA1, since the source will not be a major source of HAP emissions in Phase 1, after the startup of turbine E12 or E13 or Phase 2 when IA1 will be in operation.

The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDD and 326 IAC 20-95 are not included in the permit for the natural gas-fired space heaters, IA2 through IA31 since these units are not boilers or process heaters as defined at 40 CFR 63.7575.

(n) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63, Subpart JJJJJJ are not included in the permit for fuel gas heater IA1 and space heaters IA2 through IA31 because these units are not boilers as defined at 40 CFR 63.11237. The requirements of Subpart JJJJJJ are not included in the permit for boilers B01 and B02 because B01 and B02 or gas-fired boilers, and Subpart JJJJJJ does not apply to gas-fired boilers.

(o) There are no other National Emission Standards for Hazardous Air Pollutants under 40 CFR 63, 326 IAC 14 and 326 IAC 20 included for this proposed modification.

Compliance Assurance Monitoring (CAM):

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each pollutant-specific emission unit that meets the following criteria:

1. has a potential to emit before controls equal to or greater than the major source threshold for the regulated pollutant involved;

2. is subject to an emission limitation or standard for that pollutant (or a surrogate thereof); and

3. uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

(b) Pursuant to 40 CFR 64.2(b)(1)(i), emission limitations or standards proposed after November 15, 1990 pursuant to a NSPS or NESHAP under Section 111 or 112 of the Clean Air Act are exempt from the requirements of CAM. Therefore, an evaluation was not conducted for any emission limitations or standards proposed after November 15, 1990 pursuant to a NSPS or NESHAP under Section 111 or 112 of the Clean Air Act.

Each of the new emissions units at this source does not use a control device, as defined in 40 CFR 64.1. Note that low-NOx combustion design features are not considered control devices because the use of combustion or other process design features or characteristics are excluded from the 40 CFR 64.1 definition. Based on this evaluation, the requirements of 40 CFR Part 64, CAM, are not applicable to any of the new units as part of this Part 70 permit modification.
Due to this modification, state rule applicability has been reviewed as follows:

### 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset)
Pursuant to SSM No. 037-43099-00031, upon the startup of either natural-gas-fired Solar Mars 100 Compressor Turbine E12 or E13, the Permittee shall comply with the following limits:

(a) The total combined NOx emissions from E01 - E08 shall not exceed 633.04 tons per twelve consecutive month period with compliance determined at the end of each month.

(b) The total combined CO emissions from E01 - E08 shall not exceed 65.65 tons per twelve consecutive month period with compliance determined at the end of each month.

(c) The limits in paragraphs (a) - (b) shall cease to be effective after the date that the last compression turbine (E12 or E13) is made incapable of operation.

Compliance with these limits, shall limit the Net Emissions Increase of SSM No. 037-43099-00031 to less than forty (40) tons of NOx and one hundred (100) tons of CO per twelve (12) consecutive month period and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to SSM No. 037-43099-00031.

### 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The provisions of 326 IAC 2-4.1 apply to any owner or operator who constructs or reconstructs a major source of hazardous air pollutants (HAP), as defined in 40 CFR 63.41, after July 27, 1997, unless the major source has been specifically regulated under or exempted from regulation under a NESHAP that was issued pursuant to Section 112(d), 112(h), or 112(j) of the Clean Air Act (CAA) and incorporated under 40 CFR 63. On and after June 29, 1998, 326 IAC 2-4.1 is intended to implement the requirements of Section 112(g)(2)(B) of the Clean Air Act (CAA).

#### Before Startup of E12 or E13
None of the new equipment (the Project) will be operational before the startup of either natural-gas-fired Solar Mars 100 Compressor Turbine E12 or E13. As discussed in renewal T037-41537-00031, none of the existing equipment is subject to 326 IAC 2-4.1.

#### After Startup of either Turbine E12 or E13
As discussed in PTE of the Entire Source After Issuance of the Part 70 Modification, paragraphs (e) and (g), after the startup of either Turbine E12 or E13, The operation of this source will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

### 326 IAC 2-7-6(5) (Annual Compliance Certification)
The U.S. EPA Federal Register 79 FR 54978 notice does not exempt Title V Permittees from the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D), but the submittal of the Title V annual compliance certification to IDEM satisfies the requirement to submit the Title V annual compliance certifications to EPA. IDEM does not intend to revise any permits since the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D) still apply, but Permittees can note on their Title V annual compliance certifications that submission to IDEM has satisfied reporting to EPA per Federal Register 79 FR 54978. This only applies to Title V Permittees and Title V compliance certifications.

### 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.
326 IAC 6.5 (Particulate Matter Limitations Except Lake County)
This source (located in Dubois County) is located in one of the counties listed in 326 IAC 6.5, but is not one of the sources specifically listed in 326 IAC 6.5-2 through 326 IAC 6.5-10.

(a) During Phase 1 (before the last of engines E01-E08 is made incapable of operation), the source-wide PTE of PM is 10 tons per year or more. Therefore, this source is subject to the requirements of 326 IAC 6.5-1-2 because the source-wide actual emissions of PM can be 10 tons per year or more.

(i) Pursuant to 326 IAC 6.5-1-2(a), particulate emissions from Engines E01-E08 shall each not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

(ii) Pursuant to 326 IAC 6.5-1-2(a), particulate emissions from Turbines E12 and E13 shall each not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

(iii) Pursuant to 326 IAC 6.5-1-2(b)(3), particulate emissions from the boilers (B01 and B02) at this source shall each not exceed one-hundredth (0.01) grain per dry standard cubic foot (dscf).

(iv) Pursuant to 326 IAC 6.5-1-2(a), particulate emissions from Emergency Generators E11 and E14, Space Heaters IA and IA2-31, Fuel Gas Heater IA, and insignificant brazing, cutting, soldering and welding shall each not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

(b) During Phase 2 (after the last of engines E01-E08 is made incapable of operation), the source-wide PTE of PM will be less than 10 tons per year. Therefore, this source will not be subject to the requirements of 326 IAC 6.5-1-2 during Phase 2 because the source-wide actual emissions of PM cannot be 10 tons per year or more.

(i) The limits above in (a)(i) - (a)(iv) shall cease to be effective after the date the last of the eight (8) two-stroke lean burn natural gas-fired reciprocating internal combustion internal engine compressors, identified as (E01 – E08) is made incapable of operation.

326 IAC 6.8 (Particulate Matter Limitations for Lake County)
Pursuant to 326 IAC 6.8-1-1(a), this source (located in Dubois County) is not subject to the requirements of 326 IAC 6.8 because it is not located in Lake County.

326 IAC 10-1 (Nitrogen Oxides Control in Clark and Floyd Counties)
This source (located in Dubois County) is not subject to the requirements of 326 IAC 10-1 because it is not located in Clark or Floyd Counties.

326 IAC 20 (Hazardous Air Pollutants)
Pursuant to SSM No. 037-43099-00031 and in order to render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA), upon startup of either natural-gas-fired Solar Mars 100 Compressor Turbine, identified as (E12 or E13), the Permittee shall comply with the following:

(a) The total emissions of formaldehyde from E01 - E08 shall not exceed 9.00 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The total emissions of any combination of HAPs from E01 - E08 shall not exceed 22.59 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
The limits above in (a) and (b) shall cease to be effective after the date the last of the eight (8) two-stroke lean burn natural gas-fired reciprocating internal combustion internal engine compressors, identified as (E01 – E08) is made incapable of operation.

Compliance with these limits, combined with the potential to emit HAP from all other emission units at the source, shall limit the source-wide potential to emit any single HAP to less than 10 tons per twelve (12) consecutive month period and the source-wide potential to emit a combination of HAPs to less than 25 tons per twelve (12) consecutive month period, and shall render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA).

State Rule Applicability – Individual Facilities

Due to this modification, state rule applicability has been reviewed as follows:

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

(a) Pursuant to 326 IAC 6-2-1(e), this rule does not apply if a particulate limitation established in 326 IAC 6-2 is inconsistent with applicable limitations contained in 326 IAC 6.5, because the limitations in 326 IAC 6.5 prevail. As discussed above, in the "State Rule Applicability - Entire Source" section, 326 IAC 6.5 applies to the entire source during Phase 1, therefore, 326 IAC 6-2 does not apply to any of the source’s individual facilities during Phase 1.

(b) As discussed above, in the "State Rule Applicability - Entire Source" section, 326 IAC 6.5 does not apply during Phase 2 (after the last of compressor engines E01-E08 is rendered incapable of operation), so 326 IAC 6-2 may apply to individual facilities at the source during Phase 2:

(i) The nine remaining old catalytic space heaters (IA) and the thirty (30) new catalytic space heaters (IA2 - IA31) exhaust to the rooms they are heating and thus do not meet the 326 IAC 1-2-19 definition of “Combustion for indirect heating”, which is “the combustion of fuel to produce usable heat that is to be transferred through a heat-conducting materials barrier or by a heat storage medium to a material to be heated so that the material being heated is not contacted by, and adds no substance to the products of combustion.” 326 IAC 6-2 does not apply to catalytic space heaters IA, and IA2 - IA32 during Phase 2.

(ii) Combustion gases from the one (1) new fuel gas heater (IA1) exhaust separately from the fuel gas being heated. The fuel gas being heated is not contacted by, and adds no substance to the products of combustion. Thus, 326 IAC 6-2 applies to fuel gas heater IA1 during Phase 2.

326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating)

Pursuant to 326 IAC 6-2-1(d), indirect heating facilities which received permit to construct after September 21, 1983 are subject to the requirements of 326 IAC 6-2-4. This includes new fuel gas heater IA1 and the nine (9) remaining space gas heaters (IA) for which 326 IAC 6-2 is applicable during Phase 2.

The particulate matter emissions (Pt) shall be limited by the following equation:

\[ Pt = \frac{1.09}{Q^{0.26}} \]

Where:

\[ Pt = \] Pounds of particulate matter emitted per million British thermal units (lb/MMBtu).

\[ Q = \] Total source maximum operating capacity rating in MMBtu/hr heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the
facility's permit application, except when some lower capacity is contained in the
facility's operation permit; in which case, the capacity specified in the operation.

Pursuant to 326 IAC 6-2-4(a), for Q less than 10 MMBtu/hr, Pt shall not exceed 0.6 lb/MMBtu.

<table>
<thead>
<tr>
<th>Facility</th>
<th>Construction Date (Removal Date)</th>
<th>Operating Capacity (MMBtu/hr)</th>
<th>Q (MMBtu/hr)</th>
<th>Calculated Pt (lb/MMBtu)</th>
<th>Particulate Limitation, (Pt) (lb/MMBtu)</th>
<th>PM PTE based on AP-42 (lb/MMBtu)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units Operating Prior to 9/21/1983</td>
<td>0.00</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>1 fuel gas heater IA1</td>
<td>2021</td>
<td>1.20</td>
<td>1.20</td>
<td>1.04</td>
<td>0.6</td>
<td>0.002</td>
</tr>
</tbody>
</table>

Where: $Q = \text{Includes the capacity (MMBtu/hr) of the new unit(s) and the capacities for those unit(s) which were in operation at the source at the time the new unit(s) was constructed.}$

Note: Emission units shown in strikethrough were subsequently removed from the source. The effect of removing these units on “Q” is shown in the year the boiler was removed.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

(a) Pursuant to 326 IAC 6-3-1(c), this rule does not apply if a particulate limitation that is as stringent as or more stringent than the particulate limitation established in 326 IAC 6-3 is established in 326 IAC 6.5. As discussed above, in the "State Rule Applicability - Entire Source" section, 326 IAC 6.5 applies to the entire source during Phase 1, therefore, 326 IAC 6-3 does not apply to any of the source's individual facilities during Phase 1.

(b) As discussed above, in the "State Rule Applicability - Entire Source" section, 326 IAC 6.5 does not apply during Phase 2 (after the last of compressor engines E01 is rendered incapable of operation), so 326 IAC 6-3 may apply to individual facilities at the source during Phase 2. The facilities to which 326 IAC 6-3 may potentially apply during Phase 2 include the one (1) new fuel gas heater (IA1), the thirty (30) new catalytic space heaters (IA2 - IA31), the two (2) new compressor turbines (E12 and E13), and the nine (9) remaining old space heaters (IA). All of these facilities burn natural gas. Pursuant to 326 IAC 1-2-59, liquid and gaseous fuels and combustion air are not considered as part of the process weight. So anything that combusts natural gas at this source would be exempt from the requirements of 6-3 because they do not have particulate emissions related to a process. Thus 326 IAC 6-3 does not apply to any of the facilities at this source during Phase 2.

326 IAC 7-1.1 Sulfur Dioxide Emission Limitations

None of the emission units constructed under SSM 037-43099-00031 are subject to 326 IAC 326 IAC 7-1.1 because the entire project has a potential to emit (or limited potential to emit) sulfur dioxide (SO2) of less than 25 tons per year or 10 pounds per hour.

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)

Even though the emission units constructed under SSM 037-43099-00031 are constructed after January 1, 1980, they are not subject to the requirements of 326 IAC 8-1-6 because the unlimited VOC potential emissions of each of the units is less than twenty-five (25) tons per year.

326 IAC 9-1 (Carbon Monoxide Emission Limits)

The requirements of 326 IAC 9-1 do not apply to any of the units constructed under SSM 037-43099-00031, because this source does not operate a catalyst regeneration petroleum cracking system or a petroleum fluid coker, grey iron cupola, blast furnace, basic oxygen steel furnace, or other ferrous metal smelting equipment.
326 IAC 10-2 (NOx Emissions from Large Affected Units)
The requirements of 326 IAC 10-2 do not apply to compressor turbines E12 and E13 because neither has a design heat input capacity greater than two hundred fifty (250) MMBtu per hour.

The requirements of 326 IAC 10-2 do not apply to Emergency Generator E14 because it does not have a design heat input capacity greater than two hundred fifty (250) MMBtu per hour, it does not have a nameplate capacity greater than twenty five (25) MWe, nor has it ever produced electricity for sale.

326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Categories)
The requirements of 326 IAC 10-3 do not apply to any of the units constructed under SSM 037-43099-00031, since none of these units are blast furnaces, gas-fired boilers, Portland cement kilns, or facilities specifically listed under 326 IAC 10-3-1(a)(2).

326 IAC 10-5 (Nitrogen Oxide Reduction Program for Internal Combustion Engines (ICE))
The requirements of 326 IAC 10-5 do not apply to Turbines E12, or E13 or to Emergency Generator E14 because they are not large NOx SIP call engines.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to assure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source’s failure to take the appropriate corrective actions within a specific time period.

(a) The Compliance Determination Requirements applicable to this modification are as follow:

Testing Requirements:

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Control Device</th>
<th>Timeframe for Testing</th>
<th>Pollutant/ Parameter</th>
<th>Frequency of Testing</th>
<th>Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressor Turbine E12</td>
<td>-</td>
<td>60/180(^1)</td>
<td>NOx</td>
<td>Annual(^2)</td>
<td>40 CFR 60 Subpart KKKK</td>
</tr>
<tr>
<td>Compressor Turbine E13</td>
<td>-</td>
<td>60/180(^1)</td>
<td>NOx</td>
<td>Annual(^2)</td>
<td>40 CFR 60 Subpart KKKK</td>
</tr>
<tr>
<td>Compressor Turbine E12 or E13</td>
<td>-</td>
<td>60/180(^1)</td>
<td>CO, NOx</td>
<td>One Time</td>
<td>326 IAC 2-2</td>
</tr>
<tr>
<td>Emergency Generator E14</td>
<td>-</td>
<td>1 year(^3)</td>
<td>NOx</td>
<td>Once every 3 years or every 8,760 hours</td>
<td>40 CFR 60, Subpart JJJJ</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>VOC</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CO</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1. No later than 60 days after achieving the maximum operation rate or 180 days after startup, whichever is earlier.
2. Pursuant to 40 CFR 60.4340(a), if the result of the previous test is less than or equal to 75% of the limit, test frequency may be reduced to once every 2 years.
3. No later than 1 year after startup.

(1) IDEM OAQ has determined that testing of the natural gas-fired fuel heater IA1 and the natural gas-fired space heaters IA2-31 is not required at this time to determine compliance with the PM emission limits. IDEM has the authority to require testing at a later time if necessary to demonstrate compliance with any applicable requirement.

Emissions Determination Requirements

In order to demonstrate compliance with Phase 1 PSD minor limits, the Permittee shall determine NOx emissions according to the following equation:

\[
E_{NOx} = \frac{\sum_{i=1}^{6}(W_{Ei}EFNOXE_{i-6} + W_{E7}EFNOXE_{7} + W_{E8}EFNOXE_{8})}{453.6 \times 2000}
\]

Where

- \( E_{NOx} = \) Monthly NOx emissions, tons
- \( W_{Ei} = \) Monthly Work Output for each Engine (E01 through E06), hp-hr
- \( W_{E7} = \) Monthly Work Output for Engine E07, hp-hr
- \( W_{E8} = \) Monthly Work Output for Engine E08, hp-hr
- \( EFNOXE_{1-6} = \) NOx Emission Factor for Engines E01 through E06 = 8.68 g/hp-hr
- \( EFNOXE_{7} = \) NOx Emission Factor for Engine E07 = 2.75 g/hp-hr
- \( EFNOXE_{8} = \) NOx Emission Factor for Engine E08 = 6.03 g/hp-hr

In order to demonstrate compliance with Phase 1 PSD minor limits, the Permittee shall determine CO emissions according to the following equation:

\[
E_{CO} = \frac{\sum_{i=1}^{6}(W_{Ei}EFCOE_{i-6} + W_{E7}EFCOE_{7} + W_{E8}EFCOE_{8})}{453.6 \times 2000}
\]

Where

- \( E_{CO} = \) Monthly CO emissions, tons
- \( W_{Ei} = \) Monthly Work Output for each Engine (E01 through E06), hp-hr
- \( W_{E7} = \) Monthly Work Output for Engine E07, hp-hr
- \( W_{E8} = \) Monthly Work Output for Engine E08, hp-hr
- \( EFCOE_{1-6} = \) CO Emission Factor for Engines E01 through E06 = 5.30 g/hp-hr
- \( EFCOE_{7} = \) CO Emission Factor for Engine E07 = 1.07 g/hp-hr
- \( EFCOE_{8} = \) CO Emission Factor for Engine E08 = 1.04 g/hp-hr

In order to demonstrate compliance Phase 1 HAP limits, the Permittee shall determine single HAP (Formaldehyde) emissions according to the following equation:

\[
E_{F} = \frac{\sum_{i=1}^{6}(Q_{Ei}EFFE_{i-6}) + Q_{E7}EFFE_{7} + Q_{E8}EFFE_{8}}{2000}
\]

Where

- \( E_{F} = \) Monthly Formaldehyde emissions, tons
- \( Q_{Ei} = \) Monthly Heat Input for each Engine (E01 through E06), MMBtu
- \( Q_{E7} = \) Monthly Heat Input for Engine E07, MMBtu
- \( Q_{E8} = \) Monthly Heat Input for Engine E08, MMBtu
- \( EFFE_{1-6} = \) Formaldehyde Emission Factor for Engines E01 through E06 = 0.0552 lb/MMBtu
- \( EFFE_{7} = \) Formaldehyde Emission Factor for Engine E07 = 0.0552 lb/MMBtu
- \( EFFE_{8} = \) Formaldehyde Emission Factor for Engine E08 = 0.0552 lb/MMBtu

In order to demonstrate compliance with Phase 1 HAP limits, the Permittee shall determine Total HAP emissions according to the following equation:

\[
E_{TH} = \frac{\sum_{i=1}^{6}(Q_{Ei}EFTHE_{i-6}) + Q_{E7}EFTHE_{7} + Q_{E8}EFTHE_{8}}{2000}
\]

Where

- \( E_{TH} = \) Monthly Total HAP emissions, tons
QE = Monthly Heat Input for each Engine (E01 through E06), MMBtu
QE7 = Monthly Heat Input for Engine E07, MMBtu
QE8 = Monthly Heat Input for Engine E08, MMBtu
EFTHE1-6 = Total HAP Emission Factor for Engines E01 through E06 = 0.0795 lb/MMBtu
EFTHE7 = Total HAP Emission Factor for Engine E07 = 0.0795 lb/MMBtu
EFTHE8 = Total HAP Emission Factor for Engine E08 = 0.0795 lb/MMBtu

(b) The Compliance Monitoring Requirements all phases of this permit applicable to this proposed modification are as follows:

There are no compliance monitoring requirements applicable to this modification.

### Proposed Changes

As part of this permit approval, the permit may contain new or different permit conditions and some conditions from previously issued permits/approvals may have been corrected, changed, or removed. These corrections, changes, and removals may include Title I changes.

1. The following changes listed below are due to the proposed modification. Deleted language appears as strikethrough text and new language appears as **bold** text (these changes may include Title I changes):

   ...

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(14)]

This stationary source consists of the following emission units and pollution control devices:

   ...

   (d) One (1) natural gas-fired Solar Mars 100 Compressor Turbine identified as E12, approved in 2021 for construction, with a maximum capacity of 16,082 hp (139.66 MMBtu/hr heat input), uncontrolled, and exhausting to stack S12. [40 CFR 60, Subpart KKKK]

   (e) One (1) natural gas-fired Solar Mars 100 Compressor Turbine identified as E13, approved in 2021 for construction, with a maximum capacity of 16,082 (139.66 MMBtu/hr heat input), uncontrolled, and exhausting to stack S12. [40 CFR 60, Subpart KKKK]

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(14)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

1. Combustion related activities, as follows:

   (1) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:

   (A) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.

   ...

   (iii) Eleven (11) catalytic space heaters, with a maximum heat input capacity of 0.576 MMBtu/hr, each, **uncontrolled**, and exhausting to the room.
(iv) One (1) natural gas-fired Aqua-Gas WB1200-48UH Fuel Gas Heater, identified as IA1 approved in 2021 for construction, with a maximum capacity of 1.20 MMBtu/hr heat input, uncontrolled, and exhausting to a separate stack.

(v) Thirty (30) natural gas-fired catalytic Space Heaters, identified as IA2 through IA31, approved in 2021 for construction, each with a maximum capacity of 0.0725 MMBtu/hr heat input, uncontrolled, and exhausting to the room.

(b) Activities associated with emergencies as follows:

(1) Emergency generators as follows:

(A) Natural gas turbines or reciprocating engines not exceeding sixteen thousand (16,000) horsepower.

... 

(ii) One (1) natural gas-fired Waukesha VGF-L36GL Emergency Generator identified as E14, approved in 2021 for construction, with a maximum capacity of 880 hp (6.83 MMBtu/hr heat input), uncontrolled, and exhausting to stack S14. [40 CFR 60, Subpart JJJJ][40 CFR 63, Subpart ZZZZ]

... 

A.4 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(14)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

... 

(b) The following VOC and HAP storage containers:

... 

(2) Vessels storing the following:

... 

(B) One (1) wastewater storage tank, approved for construction in 2021, identified as IA32, with a maximum capacity of 1,200 gallons.

... 

(f) Venting from pneumatic actuators, dry seals, and blowdown associated with compressor turbines E12 and E13, approved in 2021 for construction.

... 

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)][326 IAC 1-6-3]

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.

(ba) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

... 

(cb) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35).

(dc) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.
SECTION D.1  EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

... 

(d) One (1) natural-gas-fired Solar Mars 100 Compressor Turbine identified as E12, approved in 2021 for construction, with a maximum capacity of 16,082 hp (139.66 MMBtu/hr heat input), uncontrolled, and exhausting to stack S12. [40 CFR 60, Subpart KKKK]

(e) One (1) natural-gas-fired Solar Mars 100 Compressor Turbine identified as E13, approved in 2021 for construction, with a maximum capacity of 16,082 (139.66 MMBtu/hr heat input), uncontrolled, and exhausting to stack S12. [40 CFR 60, Subpart KKKK]

... 

Emission Limitations and Standards  [326 IAC 2-7-5(1)]

D.1.1 Particulate [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a), particulate:

(a) Particulate emissions from the eight (8) engines Engines E01-E08 shall each not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

(b) Particulate matter emissions from Turbines E12 and E13 shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

(c) The limits above in (a) and (b) shall cease to be effective after the date the last of the eight (8) two-stroke lean burn natural gas-fired reciprocating internal combustion internal engine compressors, identified as (E01 – E08) is made incapable of operation.

... 

D.1.3 PSD Minor Limitation [326 IAC 2-2]

Pursuant to SSM No. 037-43099-00031, upon startup of either natural-gas-fired Solar Mars 100 Compressor Turbine, identified as (E12 and E13), the Permittee shall comply with the following limits:

(a) The total combined NOx emissions from E01 - E08 shall be less than 633.04 tons per twelve consecutive month period with compliance determined at the end of each month.

(b) The total combined CO emissions from E01 - E08 shall be less than 65.65 tons per twelve consecutive month period with compliance determined at the end of each month.

(c) The limits above in (a) and (b) shall cease to be effective after the date the last of the eight (8) two-stroke lean burn natural gas-fired reciprocating internal combustion engine compressors, identified as (E01 – E08) is made incapable of operation.
Compliance with these limits, shall limit the net emission increase from the 2021 turbine modification to less than forty (40) tons of NOx and to less than one hundred (100) tons of CO per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2021 Modification permitted under SSM No. 037-43099-00031.

D.1.4 HAP Minor Limitation [326 IAC 2-4.1]

Pursuant to SSM No. 037-43099-00031 and in order to render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA), upon startup of either natural-gas-fired Solar Mars 100 Compressor Turbine, identified as (E12 and E13), the Permittee shall comply with the following:

(a) The total emissions of formaldehyde from E01 - E08 shall not exceed 9.00 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The total emissions of any combination of HAPs from E01 - E08 shall not exceed 22.59 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The limits above in (a) and (b) shall cease to be effective after the date the last of the eight (8) two-stroke lean burn natural gas-fired reciprocating internal combustion engine compressors, identified as (E01 – E08) is made incapable of operation.

Compliance with these limits, combined with the potential to emit HAP from all other emission units at the source, shall limit the source-wide potential to emit any single HAP to less than 10 tons per twelve (12) consecutive month period and the source-wide potential to emit a combination of HAPs to less than 25 tons per twelve (12) consecutive month period, and shall render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA).

D.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for E01 through E06, E07, E08, E12, and E13 and any control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC2-7-5(1)]

D.1.46 Nitrogen Oxides (NOx) Control

... 

D.1.57 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11][326 IAC 10-5-4]

... 

(c) In order to demonstrate the installation of the two (2) turbines is a minor project under 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), not later than 180 days after the startup of either turbine, the Permittee shall perform CO and NOx testing on either turbine E12 or E13, utilizing methods approved by the Commissioner. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.
D.1.8 Emissions Determination Requirements [326 IAC 2-7-5(1)]

(a) In order to demonstrate compliance with Condition D.1.3(a), the Permittee shall determine NOx emissions according to the following equation:

\[
E_{NOx} = \frac{\sum_{i=1}^{6}(W_{Ei})EFNOx_{E1-6} + W_{E7}EFNOx_{E7} + W_{E8}EFNOx_{E8}}{453.6 * 2000}
\]

Where:
- \( E_{NOx} \) = Monthly NOx emissions, tons
- \( W_{Ei} \) = Monthly Work Output for each Engine (E01 through E06), hp-hr
- \( W_{E7} \) = Monthly Work Output for Engine E07, hp-hr
- \( W_{E8} \) = Monthly Work Output for Engine E08, hp-hr
- \( EFNOx_{E1-6} \) = NOx Emission Factor for Engines E01 through E06 = 8.68 g/hp-hr
- \( EFNOx_{E7} \) = NOx Emission Factor for Engine E07 = 2.75 g/hp-hr
- \( EFNOx_{E8} \) = NOx Emission Factor for Engine E08 = 6.03 g/hp-hr

(b) In order to demonstrate compliance with Condition D.1.3(b), the Permittee shall determine CO emissions according to the following equation:

\[
E_{CO} = \frac{\sum_{i=1}^{6}(W_{Ei})EFCO_{E1-6} + W_{E7}EFCO_{E7} + W_{E8}EFCO_{E8}}{453.6 * 2000}
\]

Where:
- \( E_{CO} \) = Monthly CO emissions, tons
- \( W_{Ei} \) = Monthly Work Output for each Engine (E01 through E06), hp-hr
- \( W_{E7} \) = Monthly Work Output for Engine E07, hp-hr
- \( W_{E8} \) = Monthly Work Output for Engine E08, hp-hr
- \( EFCO_{E1-6} \) = CO Emission Factor for Engines E01 through E06 = 5.30 g/hp-hr
- \( EFCO_{E7} \) = CO Emission Factor for Engine E07 = 1.07 g/hp-hr
- \( EFCO_{E8} \) = CO Emission Factor for Engine E08 = 1.04 g/hp-hr

(c) In order to demonstrate compliance with Condition D.1.4(a), the Permittee shall determine single HAP (Formaldehyde) emissions according to the following equation:

\[
E_F = \frac{\sum_{i=1}^{6}(Q_{Ei})EFF_{E1-6} + Q_{E7}EFF_{E7} + Q_{E8}EFF_{E8}}{2000}
\]

Where:
- \( E_F \) = Monthly Formaldehyde emissions, tons
- \( Q_{Ei} \) = Monthly Heat Input for each Engine (E01 through E06), MMBtu
- \( Q_{E7} \) = Monthly Heat Input for Engine E07, MMBtu
- \( Q_{E8} \) = Monthly Heat Input for Engine E08, MMBtu
- \( EFF_{E1-6} \) = Formaldehyde Emission Factor for Engines E01 through E06 = 0.0552 lb/MMBtu
- \( EFF_{E7} \) = Formaldehyde Emission Factor for Engine E07 = 0.0552 lb/MMBtu
- \( EFF_{E8} \) = Formaldehyde Emission Factor for Engine E08 = 0.0552 lb/MMBtu

(d) In order to demonstrate compliance with Condition D.1.4(b), the Permittee shall determine total emissions of any combination of HAPs according to the following equation:

\[
E_{TH} = \frac{\sum_{i=1}^{6}(Q_{Ei})EFTH_{E1-6} + Q_{E7}EFTH_{E7} + Q_{E8}EFTH_{E8}}{2000}
\]

Where:
- \( E_{TH} \) = Monthly Total HAP emissions, tons
- \( Q_{Ei} \) = Monthly Heat Input for each Engine (E01 through E06), MMBtu
- \( Q_{E7} \) = Monthly Heat Input for Engine E07, MMBtu
\[ Q_{E8} = \text{Monthly Heat Input for Engine E08, MMBtu} \]
\[ EFTH_{E1-E6} = \text{Total HAP Emission Factor for Engines E01 through E06} = 0.0795 \text{ lb/MMBtu}^* \]
\[ EFTH_{E7} = \text{Total HAP Emission Factor for Engine E07} = 0.0795 \text{ lb/MMBtu}^* \]
\[ EFTH_{E8} = \text{Total HAP Emission Factor for Engine E08} = 0.0795 \text{ lb/MMBtu}^* \]

* Emission Factors shall be updated if/when more recent valid compliance demonstration data become available.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

D.1.69 Record Keeping Requirements

(a) To document the compliance status with 326 IAC 10-5-5(a), and Condition D.1.2 for engines E07 and E08, the Permittee shall maintain all records necessary to demonstrate compliance with the requirements of this rule. Each record shall be maintained for a period of two (2) calendar years at the plant at which the subject engine is located. The records shall be made available to the IDEM, OAQ and U.S. EPA upon request. The Permittee shall maintain the following records:

... (b) To document the compliance status with Condition D.1.3, the Permittee shall maintain records of the following:

(1) The date of startup of the first compressor turbine to be started up under SSM 037-43099-00031 (E12 or E13).
(2) Monthly work output from E01 through E08 in hp-hr
(3) Current NOx and CO emission factors for E01 through E08 in g/hp-hr and the sources of these emission factors

(c) To document the compliance status with Condition D.1.4, the Permittee shall maintain records of the following:

(1) Monthly heat input to E01 through E08 in MMBtu
(2) Current Formaldehyde and Total HAP emission factors for E01 through E08 in lb/MMBtu and the sources of these emission factors.

(d) To document the compliance status with Condition D.1.3 and D.1.4, the Permittee shall maintain records of the date of the retirement of the last two-stroke lean burn natural gas-fired reciprocating internal combustion engine compressor (E01 through E08).

(e) The provisions in paragraphs (b) and (c) shall cease to be effective after the date that the last of the units to be retired (E01 through E08) is made incapable of operation.

(bf) Section C - General Record Keeping Requirements contains the Permittee’s obligation with regard to the records required by this condition.

D.1.710 Reporting Requirements

(a) Pursuant to 326 IAC 10-5-5(b), the Permittee shall submit results of all compliance tests to IDEM, OAQ within forty-five (45) days after completion of the testing.
(b) A quarterly summary of the information to document the compliance status with Condition D.1.3(a and b) – PSD Minor Limitation shall be submitted not later than thirty (30) days after the end of the quarter being reported.

(c) A quarterly summary of the information to document the compliance status with Condition D.1.4(a and b) – HAP Minor Limitation shall be submitted not later than thirty (30) days after the end of the quarter being reported.

(d) The provisions in paragraphs (b) and (c) shall cease to be effective after the quarterly report for the quarter including the date that the last of the units to be retired (E01 through E08) has been made incapable of operation has been submitted.

(e) Pursuant to 326 IAC 10-5-5(b), the Permittee shall submit results of all compliance tests to IDEM, OAQ within forty-five (45) days after completion of the testing. Section C - General Reporting Requirements contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35).
SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Insignificant Activities

(a) Combustion related activities, as follows:

(1) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:

(A) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.

...  

(iii) Eleven (11) Two (2) catalytic space heaters, with a maximum heat input capacity of 0.576 MMBtu/hr, each, uncontrolled, and exhausting to the room.

...  

(c) Combustion related activities, as follows:

(1) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:

(A) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.

(i) Nine (9) catalytic space heaters, with a maximum heat input capacity of 0.576 MMBtu/hr, each, uncontrolled and exhausting to the room.

(cd) Production related activities, including the following:

(1) Degreasing operations that do not exceed one hundred forty-five (145) gallons per twelve (12) months, except if subject to 326 IAC 20-6, as follows:

(A) One (1) cold cleaner degreaser, constructed in 2003, using no halogenated solvents.

(e) Combustion related activities, as follows:

(1) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:

(A) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.

(i) One (1) natural-gas-fired Aqua-Gas WB1200-48UH Fuel Gas Heater, identified as IA1, approved in 2021 for construction, with a maximum capacity of 1.20 MMBtu/hr heat input, uncontrolled, and exhausting a separate stack.

(ii) Thirty (30) natural gas-fired catalytic Space Heaters, identified as IA2 through IA31, approved in 2021 for construction, each with a
maximum capacity of 0.0725 MMBtu/hr heat input, uncontrolled, and exhausting to the room.

(f) Activities associated with emergencies as follows:

(1) Emergency generators as follows:

(A) Natural gas turbines or reciprocating engines not exceeding sixteen thousand (16,000) horsepower.

(i) One (1) natural gas-fired Waukesha VGF-L36GL Emergency Generator, identified as E14, approved in 2021 for construction, with a maximum capacity of 880 hp (6.83 MMBtu/hr heat input), uncontrolled, and exhausting to stack S14. [40 CFR 60, Subpart JJJJ][40 CFR 63, Subpart ZZZZ]

(Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Particulate Matter (Particulate Emission Limitations for Sources of Indirect Heating) [326 IAC 6-2-4]

(a) Pursuant to 326 IAC 6-2-4, after the last of compressor engines E01-E08 is rendered incapable of operation, particulate matter (PM) emissions from the one (1) new fuel gas heater (IA1) shall not exceed 0.6 pounds of PM per million British thermal units.

D.2.2 Particulate [326 IAC 6.5-1-2]

(a) Pursuant to 326 IAC 6.5-1-2(b)(3), particulate emissions from the boilers (B01 and B02) at this source shall each not exceed one-hundredth (0.01) grain per dry standard cubic foot (dscf).

(b) Pursuant to 326 IAC 6.5-1-2(a), particulate emissions from the one (1) generator, space heaters Emergency Generators E11 and E14, Space Heaters IA and IA2-31, Fuel Gas Heater IA1, and insignificant brazing, cutting, soldering and welding shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

(c) The limits above in (a) and (b) shall cease to be effective after the date the last of the eight (8) two-stroke lean burn natural gas-fired reciprocating internal combustion internal engine compressors, identified as (E01 – E08) is made incapable of operation.

D.2.23 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

...
SECTION E.1 NSPS

Emissions Unit Description:

Insignificant Activities

(b) Activities associated with emergencies as follows:

(1) Emergency generators as follows:

(A) Natural gas turbines or reciprocating engines not exceeding sixteen thousand (16,000) horsepower.

(ii) One (1) natural gas-fired Waukesha VGF-L36GL Emergency Generator identified as E14, approved in 2021 for construction, with a maximum capacity of 880 hp (6.83 MMBtu/hr heat input), uncontrolled, and exhausting to stack S14. [40 CFR 60, Subpart JJJJ][40 CFR 63, Subpart ZZZZ]

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

E.1.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1][40 CFR 60, Subpart A]

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2551

E.1.2 Standards of Performance for Stationary Spark Ignition Internal Combustion Engines NSPS [326 IAC 10] [40 CFR 60, Subpart JJJJ]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart JJJJ (included as Attachment A to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above:

E.1.3 Preventive Maintenance Plan [326 IAC 6-32-7-5(12)]
E.1.4 Testing Requirements [326 IAC 2-1.1-11][326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

In order to demonstrate compliance with Condition E.1.2, the Permittee shall perform the testing required under 40 CFR 63, Subpart JJJJ, utilizing methods as approved by the Commissioner, including:

(a) **Initial testing for E14 within 1 year of startup, and**

(b) **Continuing testing for E11 and E14 every 8760 hours or every three (3) years, whichever comes first, from the date of the most recent valid compliance demonstration.**

Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

---

**SECTION E.2 NESHAP**

**Emissions Unit Description:**

...  

**Insignificant Activities**

(b) **Activities associated with emergencies as follows:**

(1) **Emergency generators as follows:**

(A) Natural gas turbines or reciprocating engines not exceeding sixteen thousand (16,000) horsepower.

...  

(ii) **One (1) natural gas-fired Waukesha VGF-L36GL Emergency Generator identified as E14, approved in 2021 for construction, with a maximum capacity of 880 hp (6.83 MMBtu/hr heat input), uncontrolled, and exhausting to stack S14. [40 CFR 60, Subpart JJJJ][40 CFR 63, Subpart ZZZZ]**

...  

**E.2.2 Stationary Reciprocating Internal Combustion Engines NESHAP [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]**

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment B to the operating permit), which are incorporated by reference as 326 IAC 20-82, for the emission unit(s) listed above:

(1) 40 CFR 63.6580  
(2) 40 CFR 63.6585  
(3) 40 CFR 63.6590(a)(1)(i)  
(4) 40 CFR 63.6590(a)(2)(i)  
(5) 40 CFR 63.6590(b)(1)(i)  
(6) 40 CFR 63.6590(b)(3)(i)  
(7) 40 CFR 63.6645(f)
Engines E01-E08:

(a) The following provisions of 40 CFR 63, Subpart ZZZZ are applicable to E01-E08 before the first of E12 or E13 is started up:

1. 40 CFR 63.6580
2. 40 CFR 63.6585
3. 40 CFR 63.6590(a)(1)(i)
4. 40 CFR 63.6590(b)(3)(i)
5. 40 CFR 63.6645(f)
6. 40 CFR 63.6670
7. 40 CFR 63.6675

(b) The following provisions of 40 CFR 63, Subpart ZZZZ are applicable to E01-E08 after the first of E12 or E13 is started up, but before the last of E01-E08 is rendered incapable of operation:

1. 40 CFR 63.6580
2. 40 CFR 63.6585
3. 40 CFR 63.6590(a)(1)(iii)
4. 40 CFR 63.6595(a)(1),(c)
5. 40 CFR 63.6603(a)
6. 40 CFR 63.6605
7. 40 CFR 63.6625(e)(5)
8. 40 CFR 63.6645(a)(2),(b)
9. 40 CFR 63.6650
10. 40 CFR 63.6655(a),(d),(e)(3)
11. 40 CFR 63.6660
12. 40 CFR 63.6665
13. 40 CFR 63.6670
14. 40 CFR 63.6675
15. Table 2d to Subpart ZZZZ of Part 63
16. Table 6 to Subpart ZZZZ of Part 63
17. Table 7 to Subpart ZZZZ of Part 63
18. Table 8 to Subpart ZZZZ of Part 63

(c) 40 CFR 63, Subpart ZZZZ is not applicable to E01-E08 after the last of E01-E08 is rendered incapable of operation.

Engine E11

(d) The following provisions of 40 CFR 63, Subpart ZZZZ are applicable to E11 before the first of E12 or E13 is started up:

1. 40 CFR 63.6580
2. 40 CFR 63.6585
3. 40 CFR 63.6590(a)(2)(i)
4. 40 CFR 63.6590(b)(1)(i)
5. 40 CFR 63.6665
6. 40 CFR 63.6670
7. 40 CFR 63.6675
8. Table 8 to Subpart ZZZZ of Part 63
(e) The following provisions of 40 CFR 63, Subpart ZZZZ are applicable to E11 after the first of E12 or E13 is started up, but before the last of E01-E08 is rendered incapable of operation:

1. 40 CFR 63.6580
2. 40 CFR 63.6585
3. 40 CFR 63.6590(a)(2)(iii),(c)(1)
4. 40 CFR 63.6665
5. 40 CFR 63.6670
6. 40 CFR 63.6675
7. Table 8 to Subpart ZZZZ of Part 63

(f) 40 CFR 63, Subpart ZZZZ is not applicable to E11 after the last of E01-E08 is rendered incapable of operation.

Engine E14

(g) 40 CFR 63, Subpart ZZZZ is not applicable to E14 before the first of E12 or E13 is started up.

(h) The following provisions of 40 CFR 63, Subpart ZZZZ are applicable to E14 after the first of E12 or E13 is started up, and continue to be applicable to E14 after the last of E01-E08 is rendered incapable of operation:

1. 40 CFR 63.6580
2. 40 CFR 63.6585
3. 40 CFR 63.6590(a)(2)(iii),(c)(1)
4. 40 CFR 63.6665
5. 40 CFR 63.6670
6. 40 CFR 63.6675
7. Table 8 to Subpart ZZZZ of Part 63

E.3.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and any control devices.

Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.
SECTION E.4  NSPS

Emissions Unit Description:

(d) One (1) natural-gas-fired Solar Mars 100 Compressor Turbine identified as E12, approved in 2021 for construction, with a maximum capacity of 16,082 hp (139.66 MMBtu/hr heat input), uncontrolled, and exhausting to stack S12. [40 CFR 60, Subpart KKKK]

(e) One (1) natural-gas-fired Solar Mars 100 Compressor Turbine identified as E13, approved in 2021 for construction, with a maximum capacity of 16,082 (139.66 MMBtu/hr heat input), uncontrolled, and exhausting to stack S12. [40 CFR 60, Subpart KKKK]

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.4.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1][40 CFR 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the emission units listed above, except as otherwise specified in 40 CFR Part 60, Subpart KKKK.

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCl 1003
Indianapolis, Indiana 46204

E.4.2 Standards of Performance for Stationary Combustion Turbines NSPS [40 CFR 60, Subpart KKKK]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart KKKK (included as Attachment D to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above:

(1) 40 CFR 60.4300
(2) 40 CFR 60.4305
(3) 40 CFR 60.4315
(4) 40 CFR 60.4320(a)
(5) 40 CFR 60.4330(a)(2)
(6) 40 CFR 60.4330(a)
(7) 40 CFR 60.4360
(8) 40 CFR 60.4365(a)
(9) 40 CFR 60.4370
(10) 40 CFR 60.4375(b)
(11) 40 CFR 60.4385
(12) 40 CFR 60.4395
(13) 40 CFR 60.4400
(14) 40 CFR 60.4420
(15) Table 1 to Subpart KKKK of Part 60
E.4.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and any control devices. Section B - Preventive Maintenance Plan contains the Permittee’s obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC 2-7-5(1)]]

E.4.4 Testing Requirements [326 IAC 2-1.1-11][326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

In order to demonstrate compliance with Condition E.4.2, the Permittee shall perform the testing required under 40 CFR 60, Subpart KKKK, utilizing methods as approved by the Commissioner. The initial testing shall be conducted within sixty (60) days after achieving the maximum operation rate or within one hundred eighty (180) days after startup, whichever is earlier. Subsequent testing shall be conducted annually, or the frequency may be reduced to once every 2 years if the result of the previous test is less than or equal to 75% of the limit. Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: ANR Pipeline Company, Celestine Station
Source Address: 146 South Celestine Road, Celestine, IN 47521
Part 70 Permit No.: T037-41537-00031
Facility: Engines E01 - E08 (Combined)
Parameter: NOx emissions
Limit: Shall not exceed 633.04 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

<table>
<thead>
<tr>
<th>QUARTER:</th>
<th>YEAR:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month</td>
<td>This Month (tons)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
 Deviation has been reported on:
Indiana Department of Environmental Management
Office of Air Quality
Compliance and Enforcement Branch

Part 70 Quarterly Report

Source Name: ANR Pipeline Company, Celestine Station
Source Address: 146 South Celestine Road, Celestine, IN 47521
Part 70 Permit No.: T037-41537-00031
Facility: Engines E01 - E08 (Combined)
Parameter: CO emissions
Limit: Shall not exceed 65.65 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

<table>
<thead>
<tr>
<th>QUARTER:</th>
<th>YEAR:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month</td>
<td>This Month (tons)</td>
</tr>
</tbody>
</table>

□ No deviation occurred in this quarter.

□ Deviation/s occurred in this quarter.
   Deviation has been reported on:

Submitted by: ________________________________
Title / Position: ________________________________
Signature: ________________________________
Date: ________________________________
Phone: ________________________________
## Part 70 Quarterly Report

**Source Name:** ANR Pipeline Company, Celestine Station  
**Source Address:** 146 South Celestine Road, Celestine, IN 47521  
**Part 70 Permit No.:** T037-41537-00031  
**Facility:** Engines E01 - E08 (Combined)  
**Parameter:** Single HAP (Formaldehyde) emissions  
**Limit:** Shall not exceed 9.00 tons per twelve (12) consecutive month period, with compliance determined at the end of each month  

<table>
<thead>
<tr>
<th>QUARTER</th>
<th>YEAR</th>
<th>Month</th>
<th>This Month (tons)</th>
<th>Previous 11 Months (tons)</th>
<th>12 Month Total (tons)</th>
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</tr>
</tbody>
</table>

- No deviation occurred in this quarter.  
- Deviation/s occurred in this quarter.  
  Deviation has been reported on:

**Submitted by:**  
**Title / Position:**  
**Signature:**  
**Date:**  
**Phone:**  

---

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**  
**OFFICE OF AIR QUALITY**  
**COMPLIANCE AND ENFORCEMENT BRANCH**
ANR Pipeline Company – Celestine Station
Celestine, Indiana
Permit Reviewer: Wyman Clark

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

<table>
<thead>
<tr>
<th>Source Name:</th>
<th>ANR Pipeline Company, Celestine Station</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Address:</td>
<td>146 South Celestine Road, Celestine, IN 47521</td>
</tr>
<tr>
<td>Part 70 Permit No.:</td>
<td>T037-41537-00031</td>
</tr>
<tr>
<td>Facility:</td>
<td>Engines E01 - E08 (Combined)</td>
</tr>
<tr>
<td>Parameter:</td>
<td>Total emissions of a combination of HAPs</td>
</tr>
<tr>
<td>Limit:</td>
<td>Shall not exceed 22.59 tons per twelve (12) consecutive month period, with compliance determined at the end of each month</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>QUARTER:</th>
<th>YEAR:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month</td>
<td>This Month (tons)</td>
</tr>
<tr>
<td></td>
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</tr>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
  Deviation has been reported on:

Submitted by: _________________________________
Title / Position: _______________________________
Signature: _________________________________
Date: _________________________________
Phone: _________________________________

...
(2) IDEM, OAQ has included Attachment D to contain the most recent versions of New Source Performance Standard (NSPS). 40 CFR Part 60, Subpart KKKK,

Additional Changes

IDEM, OAQ made additional changes to the permit as described below in order to update the language to match the most current version of the applicable rule, to eliminate redundancy within the permit, and to provide clarification regarding the requirements of these conditions.

These permit changes include model updates to standard permit language that are applicable to this source.

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on July 31, 2020. Additional information was received on August 10, 2020; August 28, 2020; September 8, 2020; September 23, 2020; October 19, 2020; January 11, 2021; January 13, 2021; January 20, 2021, and January 21, 2021.

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 037-43099-00031. The operation of this proposed modification shall be subject to the conditions of the attached proposed Significant Permit Modification No. 037-43179-00031.

The staff recommends to the Commissioner that the Part 70 Significant Source Modification and Significant Permit Modification be approved.

IDEM Contact

(a) If you have any questions regarding this permit, please contact Wyman Clark, Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251, or by telephone at (317) 232-0029 or (800) 451-6027, and ask for Wyman Clark or (317) 232-0029.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: http://www.in.gov/idem/airquality/2356.htm; and the Citizens’ Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.
### Phase 1. PTE Summary

**Company Name:** ANR Pipeline Company - Celestine Compressor Station  
**Address:** 146 S. Celestine Road South, Celestine, IN 47521  
**TV SSM No.:** 037-43099-00031  
**TV SPM No.:** 037-43179-00031  
**Reviewer:** Wyman Clark  
**Date:** 12/21/2020

#### Phase 1 - Uncontrolled/Unlimited Potential to Emit (tons/yr)

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5 *</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old Units (from TV Renewal 037-41537-00031)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compressor Engines (E01-E06)</td>
<td>17.70</td>
<td>22.27</td>
<td>22.27</td>
<td>0.27</td>
<td>1461.22</td>
<td>55.31</td>
<td>177.93</td>
</tr>
<tr>
<td>Compressor Engine (E07-E08)</td>
<td>25.73</td>
<td>32.37</td>
<td>32.37</td>
<td>0.39</td>
<td>1224.10</td>
<td>80.42</td>
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<tr>
<td>Emergency Generator (E11)</td>
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<td>0.03</td>
<td>0.03</td>
<td>0.00</td>
<td>2.90</td>
<td>0.04</td>
<td>4.88</td>
</tr>
<tr>
<td>Condensate Tank (T10)</td>
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<td>--</td>
<td>--</td>
<td>--</td>
<td>2.75</td>
<td>--</td>
</tr>
<tr>
<td>Natural Gas Combustion</td>
<td>0.12</td>
<td>0.48</td>
<td>0.48</td>
<td>0.04</td>
<td>6.31</td>
<td>0.35</td>
<td>5.30</td>
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<tr>
<td>Degreaser</td>
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<td>0.49</td>
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<td>Diesel Tank</td>
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<td>--</td>
<td>7456-04</td>
<td>--</td>
</tr>
<tr>
<td>Glycol/Water tanks</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>545E-05</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Emissions from Old Units Prior to Modification</strong></td>
<td>43.57</td>
<td>55.15</td>
<td>55.15</td>
<td>0.70</td>
<td>2694.52</td>
<td>139.35</td>
<td>446.78</td>
</tr>
<tr>
<td>New Units (for SSM 037-43099-00031)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E12 Solar Mars 100 Turbine</td>
<td>4.04</td>
<td>4.04</td>
<td>4.04</td>
<td>0.44</td>
<td>33.60</td>
<td>8.61</td>
<td>113.20</td>
</tr>
<tr>
<td>E13 Solar Mars 100 Turbine</td>
<td>4.04</td>
<td>4.04</td>
<td>4.04</td>
<td>0.44</td>
<td>33.60</td>
<td>8.61</td>
<td>113.20</td>
</tr>
<tr>
<td>IA1 - Fuel Gas Heater</td>
<td>0.01</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>3.09E-03</td>
<td>0.63</td>
<td>0.03</td>
</tr>
<tr>
<td>IA2-31 - Space Heaters (30 each at 0.0725 MMBtu/hr)</td>
<td>0.02</td>
<td>0.07</td>
<td>0.07</td>
<td>0.07</td>
<td>0.93</td>
<td>0.95</td>
<td>0.76</td>
</tr>
<tr>
<td>E14 Waukesha VGF-L36GL Emergency Generator</td>
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<td>1.22E-03</td>
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<td>0.49</td>
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<td>IA32 - Wastewater Tank</td>
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<td>0.02</td>
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<tr>
<td>Equipment Leaks (Fugitive Emissions)</td>
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<td>--</td>
<td>0.76</td>
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<tr>
<td>Venting</td>
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<td>--</td>
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<td>17.68</td>
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</tr>
<tr>
<td><strong>Emissions from New Units (SSM 037-43099-00031)</strong></td>
<td>8.12</td>
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<td>69.73</td>
<td>35.49</td>
<td>229.55</td>
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<tr>
<td><strong>Total</strong></td>
<td>51.69</td>
<td>63.35</td>
<td>63.35</td>
<td>1.59</td>
<td>2764.25</td>
<td>174.84</td>
<td>676.33</td>
</tr>
</tbody>
</table>

* PM2.5 listed is direct PM2.5  
1 Fugitive emissions are not part of PSD applicability analysis.  
2 Excludes fugitive emissions (compressor stations are not one of the named source categories that include fugitive emissions).  
3 Turbine emissions based on 200 Start up / shut down cycles per year and 180 low-load hours per year.

#### Phase 1 - Potential to Emit after Issuance (tons/yr)

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5 *</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old Units (from TV Renewal 037-41537-00031)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Compressor Engines (E01-E06)</td>
<td>17.70</td>
<td>22.27</td>
<td>22.27</td>
<td>0.27</td>
<td>1461.22</td>
<td>55.31</td>
<td>177.93</td>
</tr>
<tr>
<td>Compressor Engine (E07-E08)</td>
<td>25.73</td>
<td>32.37</td>
<td>32.37</td>
<td>0.39</td>
<td>1224.10</td>
<td>80.42</td>
<td>268.67</td>
</tr>
<tr>
<td>Emergency Generator (E11)</td>
<td>0.01</td>
<td>0.03</td>
<td>0.03</td>
<td>0.00</td>
<td>2.90</td>
<td>0.04</td>
<td>4.88</td>
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<td>Condensate Tank (T10)</td>
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<td>2.75</td>
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</tr>
<tr>
<td>Natural Gas Combustion</td>
<td>0.12</td>
<td>0.48</td>
<td>0.48</td>
<td>0.04</td>
<td>6.31</td>
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<td>Degreaser</td>
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<td>0.49</td>
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<tr>
<td>Diesel Tank</td>
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<td>7456-04</td>
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<tr>
<td>Glycol/Water tanks</td>
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<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>545E-05</td>
<td>--</td>
</tr>
<tr>
<td><strong>Emissions from Old Units Prior to Modification</strong></td>
<td>43.57</td>
<td>55.15</td>
<td>55.15</td>
<td>0.70</td>
<td>2694.52</td>
<td>139.35</td>
<td>446.78</td>
</tr>
<tr>
<td>New Units (for SSM 037-43099-00031)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>E12 Solar Mars 100 Turbine</td>
<td>4.04</td>
<td>4.04</td>
<td>4.04</td>
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<td>E13 Solar Mars 100 Turbine</td>
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<td>0.44</td>
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<td>113.20</td>
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<tr>
<td>IA1 - Fuel Gas Heater</td>
<td>0.01</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>3.09E-03</td>
<td>0.63</td>
<td>0.03</td>
</tr>
<tr>
<td>IA2-31 - Space Heaters (30 each at 0.0725 MMBtu/hr)</td>
<td>0.02</td>
<td>0.07</td>
<td>0.07</td>
<td>0.07</td>
<td>0.93</td>
<td>0.95</td>
<td>0.76</td>
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<tr>
<td>E14 Waukesha VGF-L36GL Emergency Generator</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>1.22E-03</td>
<td>0.97</td>
<td>0.49</td>
<td>1.94</td>
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<td>IA32 - Wastewater Tank</td>
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<td>--</td>
<td>17.68</td>
<td>--</td>
</tr>
<tr>
<td><strong>Emissions from New Units (SSM 037-43099-00031)</strong></td>
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<td>8.20</td>
<td>8.20</td>
<td>0.88</td>
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<td>35.49</td>
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<td><strong>Total</strong></td>
<td>51.69</td>
<td>63.35</td>
<td>63.35</td>
<td>1.59</td>
<td>2764.25</td>
<td>174.84</td>
<td>676.33</td>
</tr>
</tbody>
</table>

* PM2.5 listed is direct PM2.5  
1 Fugitive emissions are not part of PSD applicability analysis.  
2 Excludes fugitive emissions (compressor stations are not one of the named source categories that include fugitive emissions).  
3 Turbine emissions based on 200 Start up / shut down cycles per year and 180 low-load hours per year.
## Phase I - Uncontrolled/Unlimited Potential to Emit (tonnes/yr)

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Old Units (from TV Renewal 037-41527-00031)</th>
<th>New Units (for SSM 037-43099-00021)</th>
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<tr>
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<td>Engine E07- E08</td>
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## Phase 1 - Potential to Emit after Issuance (tonnes/yr)

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<th>Emission Unit</th>
<th>Engines E01- E06</th>
<th>Engines E07- E08</th>
<th>Engine E11</th>
<th>Tank T10</th>
<th>Combustion IA</th>
<th>Degreasers</th>
<th>Turbine E12</th>
<th>Turbine E13</th>
<th>Fuel Gas Heaters IA1</th>
<th>Space Heaters IA2- 31</th>
<th>Emergency Generator E14</th>
<th>Total HAP</th>
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### Appendix A: Emission Calculations

**Phase I - Hazardous Air Pollutant Summary**

**Company Name:** ANR Pipeline Company - Celestene Compressor Station  
**Address:** 144 S. Celestene Road South, Celestene, IN 47921  
**TV SSM No.:** 037-43099-00031  
**TV SPM No.:** 037-43179-00031  
**Reviewer:** Wyman Clark  
**Date:** 13/21/2020
## Appendix A: Emission Calculations
### ATP Analysis and Phase 1 Startup Transition Limits

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<th>Unlimited Potential to Emit (tpy)</th>
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<td>E12 Solar Mars 100 Turbine&lt;sup&gt;3&lt;/sup&gt;</td>
<td>4.04</td>
</tr>
<tr>
<td>E13 Solar Mars 100 Turbine&lt;sup&gt;3&lt;/sup&gt;</td>
<td>4.04</td>
</tr>
<tr>
<td>IA1 - Fuel Gas Heater</td>
<td>0.01</td>
</tr>
<tr>
<td>IA2-31 - Space Heaters (30 each at 0.0725 MMbtu/hr)</td>
<td>0.02</td>
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<td>E14 Wasqueasha YGF-L36GL Emergency Generator</td>
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<td>IA32 - Wastewater Tank</td>
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<td>Equipment Leaks (fugitive emissions)&lt;sup&gt;1&lt;/sup&gt;</td>
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Notes:
1. Fugitive emissions are not part of PSD applicability analysis.
2. Excludes fugitive emissions (compressor stations are not one of the named source categories that include fugitive emissions).
3. Turbine emissions based on 200 Start up / shut down cycles per year and 180 low-load hours per year.
4. 75,000 tons per year threshold for GHGs is for determining whether the project is subject to regulation as defined at 326 IAC 2-2-1(zz), not a significant emissions increase as defined at 326 IAC 2-2-1(xx)

### 2. Contemporaneous Changes
#### A. Phase 1 - Startup Transition Limits

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<th>PM</th>
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<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>GHGs</th>
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*No other contemporaneous changes in last 5 years
1. Fugitive emissions are not part of PSD applicability analysis.
2. Excludes fugitive emissions (compressor stations are not one of the named source categories that include fugitive emissions).
3. Turbine emissions based on 200 Start up / shut down cycles per year and 180 low-load hours per year.
4. 475,000 tons per year threshold for GHGs is for determining whether the project is subject to regulation as defined at 326 IAC 2-2-1(zz), not a significant emissions increase as defined at 326 IAC 2-2-1(xx)
5. Limits on Engines E01 through E08 = Baseline Actual Emissions + Significance Levels (except for HAPs) - 0.01 tons/year
6. No limits during transition needed for PM, PM10, PM2.5, VOC, or SO2 because the PTE of the new units < PSD Modification Threshold
### Phase 2. PTE Summary

**Company Name:** ANR Pipeline Company - Celestine Compressor Station  
**Address:** 146 S. Celestine Road South, Celestine, IN 47521  
**TV SSM No.:** 037-43099-00031  
**TV SPM No.:** 037-43179-00031  
**Reviewer:** Wyman Clark  
**Date:** 12/21/2020

#### Phase 2 - Uncontrolled/Unlimited Potential to Emit (tons/yr)

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<td>0.17</td>
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<td>2.23</td>
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<td>4.04</td>
<td>4.04</td>
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<td>33.60</td>
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<td>113.20</td>
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<td>E13 Solar Mars 100 Turbine</td>
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<td>4.04</td>
<td>4.04</td>
<td>0.44</td>
<td>33.60</td>
<td>8.61</td>
<td>113.20</td>
</tr>
<tr>
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<td>0.04</td>
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<td>0.63</td>
<td>0.03</td>
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<td>IA2-31 - Space Heaters (30 each at 0.0725 MMBtu/hr)</td>
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<td>0.01</td>
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<td>0.05</td>
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<td>IA32 - Wastewater Tank</td>
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<td>38.84</td>
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1 Fugitive emissions are not part of PSD applicability analysis.  
2 Turbine emissions based on 200 Start up / shut down cycles per year and 160 low-load hours per year.

#### Phase 2 - Potential to Emit after Issuance (tons/yr)

<table>
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<th>Emission Unit</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5 *</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
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<tbody>
<tr>
<td>Condensate Tank (T10)</td>
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<td>--</td>
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<td>2.75</td>
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<tr>
<td>Degreaser</td>
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<td>0.17</td>
<td>0.01</td>
<td>2.23</td>
<td>0.12</td>
<td>1.67</td>
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<td><strong>New Units (for SSM 037-43099-00031)</strong></td>
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<td>E12 Solar Mars 100 Turbine</td>
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<td>4.04</td>
<td>0.44</td>
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<td>IA1 - Fuel Gas Heater</td>
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<td>0.63</td>
<td>0.03</td>
<td>0.43</td>
</tr>
<tr>
<td>IA2-31 - Space Heaters (30 each at 0.0725 MMBtu/hr)</td>
<td>0.02</td>
<td>0.07</td>
<td>0.07</td>
<td>0.01</td>
<td>0.93</td>
<td>0.05</td>
<td>0.76</td>
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<tr>
<td>E14 Waukesha VGF-L36GL Emergency Generator</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>1.22E-03</td>
<td>0.97</td>
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<td>IA32 - Wastewater Tank</td>
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<td>0.76</td>
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<tr>
<td><strong>Venting</strong></td>
<td>--</td>
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<td>--</td>
<td>--</td>
<td>17.68</td>
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<tr>
<td><strong>Total</strong></td>
<td>8.16</td>
<td>8.37</td>
<td>8.37</td>
<td>0.90</td>
<td>71.96</td>
<td>38.84</td>
<td>231.42</td>
</tr>
</tbody>
</table>

*PM2.5 listed is direct PM2.5

1 Fugitive emissions are not part of PSD applicability analysis.
2 Turbine emissions based on 200 Start up / shut down cycles per year and 160 low-load hours per year.
### Phases 1 & 2 - Uncontrolled/Uncontrolled Potential to Emit Report

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Task ID</th>
<th>Contribution %</th>
<th>Degasser</th>
<th>Turbine E12</th>
<th>Turbine E13</th>
<th>Fuel Gas Heater A1</th>
<th>Emergency Generator A4</th>
<th>Total HAP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organic HAPs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>Alcohols</td>
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<td>Ketones</td>
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<td>Aromatic</td>
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<tr>
<td><strong>Inorganic HAPs</strong></td>
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<td></td>
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<tr>
<td><strong>Product Streams</strong></td>
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<td></td>
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<td></td>
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<tr>
<td><strong>Organic HAPs</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>Inorganic HAPs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

### Phases 1 & 2 - Potential to Emit after Process Interventions

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Task ID</th>
<th>Contribution %</th>
<th>Degasser</th>
<th>Turbine E12</th>
<th>Turbine E13</th>
<th>Fuel Gas Heater A1</th>
<th>Emergency Generator A4</th>
<th>Total HAP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organic HAPs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Inorganic HAPs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Product Streams</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Phase 2 - Sampling Summary

- **Phase 2 - Uncontrolled/Uncontrolled Potential to Emit Report**
- **Phase 2 - Uncontrolled/Uncontrolled Potential to Emit Report**
- **Phase 2 - Potential to Emit after Process Interventions**
- **Phase 2 - Potential to Emit after Process Interventions**

### Notes
- Company Name: ABB Pipeline Company - Celebrity Compressor Station
- Address: 146 S. Celeste Road South, Celeste, TX 75421
- TV SW Score: 027-43799-00031
- Revisions: 037-43179-00031
- Date: 12/21/2009

---

**Page 5 of 31, TSD App. A**
### Appendix A: Emission Calculations  
**Solar Mars 100 Turbines (E12 and E13)**

**Company Name:** ANR Pipeline Company - Celestine Compressor Station  
**Address:** 146 S. Celestine Road South, Celestine, IN 47521  
**TV SSM No.:** 037-43099-00031  
**TV SPM No.:** 037-43179-00031  
**Reviewer:** Wyman Clark  
**Date:** 12/21/2020

| Horsepower | 16,078 hp (0 °F) |
| Total Heat Input | 125.82 MMBtu/hr (LHV, 0 °F) |
| Maximum Heat Input (at 0 °F) | 139.66 MMBtu/hr (HHV, 0 °F) |
| Operating Hours | 8760 hr/yr |
| Fuel Consumption | 1199.43 MMscf/yr (based on 0 °F) |

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor</th>
<th>Emission Rate</th>
<th>Emission Factor Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>15.00</td>
<td>0.060 LHV</td>
<td>0.75</td>
</tr>
<tr>
<td>CO</td>
<td>25.00</td>
<td>0.061 LHV</td>
<td>7.66</td>
</tr>
<tr>
<td>GHGs</td>
<td>117.1</td>
<td>LHV</td>
<td>16,354</td>
</tr>
<tr>
<td>PM</td>
<td>0.0066</td>
<td>HHV</td>
<td>0.92</td>
</tr>
<tr>
<td>PM&lt;sub&gt;10&lt;/sub&gt;</td>
<td>0.0066</td>
<td>HHV</td>
<td>0.92</td>
</tr>
<tr>
<td>PM&lt;sub&gt;2.5&lt;/sub&gt;</td>
<td>0.0066</td>
<td>HHV</td>
<td>0.92</td>
</tr>
<tr>
<td>VOC</td>
<td>0.00</td>
<td>HHV</td>
<td>0.88</td>
</tr>
<tr>
<td>SO&lt;sub&gt;2&lt;/sub&gt; (Average Annual)</td>
<td>0.000714</td>
<td>HHV</td>
<td>0.44</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>0.00071</td>
<td>HHV</td>
<td>0.10</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>0.000004</td>
<td>HHV</td>
<td>0.0001</td>
</tr>
<tr>
<td>Acrolein</td>
<td>0.000040</td>
<td>HHV</td>
<td>0.01</td>
</tr>
<tr>
<td>Benzene</td>
<td>0.000006</td>
<td>HHV</td>
<td>0.001</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>0.000032</td>
<td>HHV</td>
<td>0.004</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>0.000001</td>
<td>HHV</td>
<td>0.0002</td>
</tr>
<tr>
<td>Propylene Oxide</td>
<td>0.000002</td>
<td>HHV</td>
<td>0.0003</td>
</tr>
<tr>
<td>Toluene</td>
<td>0.000029</td>
<td>HHV</td>
<td>0.004</td>
</tr>
<tr>
<td>Xylenes</td>
<td>0.000064</td>
<td>HHV</td>
<td>0.009</td>
</tr>
</tbody>
</table>

**Total HAPs**: 0.00103 HHV | 0.14 | 0.63 | AP-42 Table 3.1-3 (400) |

1. Maximum hourly emission rate based on normal operation at 0 °F. Heat input, fuel consumption, and emissions increase as temperature decreases, and for the purpose of this application, hourly emissions are characterized by Solar emissions data for 0 °F.
2. Annual emission rate based on combination of potential operating modes as provided on following page for NOx, CO, and VOC. The operating modes are 180 hours at low load (low load hours are based on <50% load) and 200 startups and shutdowns per year. The remainder of the hours per year are based on emissions at normal load (0 °F). Normal operation is considered to be 50%-100% load. All other pollutants are based on horsepower and brake specific fuel consumption at 0 °F.
3. HHV heat input based on HHV=1.11*LHV
4. VOC based on 20% of vendor data for unburned hydrocarbon.

<table>
<thead>
<tr>
<th>HAPs</th>
<th>Emission Factor</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3-Butadiene</td>
<td>4.30E-07</td>
<td>AP-42 Table 3.1-3 (400)</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>4.00E-05</td>
<td>AP-42 Table 3.1-3 (400)</td>
</tr>
<tr>
<td>Acrolein</td>
<td>6.40E-05</td>
<td>AP-42 Table 3.1-3 (400)</td>
</tr>
<tr>
<td>Benzene</td>
<td>1.20E-05</td>
<td>AP-42 Table 3.1-3 (400)</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>3.20E-05</td>
<td>AP-42 Table 3.1-3 (400)</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>7.10E-04</td>
<td>AP-42 Table 3.1-3 (400)</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>1.50E-06</td>
<td>AP-42 Table 3.1-3 (400)</td>
</tr>
<tr>
<td>PAH</td>
<td>2.20E-06</td>
<td>AP-42 Table 3.1-3 (400)</td>
</tr>
<tr>
<td>Propylene Oxide</td>
<td>2.90E-05</td>
<td>AP-42 Table 3.1-3 (400)</td>
</tr>
<tr>
<td>Toluene</td>
<td>3.30E-05</td>
<td>AP-42 Table 3.1-3 (400)</td>
</tr>
<tr>
<td>Xylenes</td>
<td>6.40E-05</td>
<td>AP-42 Table 3.1-3 (400)</td>
</tr>
</tbody>
</table>

**Total**: 1.03E-03
Appendix A: Emission Calculations
Solar Mars 100 Turbines (E12 and E13) - Emission Rates

Company Name: ANR Pipeline Company - Celestine Compressor Station
Address: 146 S. Celestine Road South, Celestine, IN 47521
TV SSM No.: 037-43099-00031
TV SPM No.: 037-43179-00031
Reviewer: Wyman Clark
Date: 12/21/2020

Emission Rates per Operating Mode

<table>
<thead>
<tr>
<th>Operating Mode</th>
<th>Units</th>
<th>NOx</th>
<th>CO</th>
<th>VOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Load @ 32°F¹</td>
<td>lb/hr</td>
<td>7.18</td>
<td>7.29</td>
<td>0.83</td>
</tr>
<tr>
<td>Low Temp (&lt;0 °F)¹</td>
<td>lb/hr</td>
<td>7.55</td>
<td>7.66</td>
<td>0.88</td>
</tr>
<tr>
<td>Low-Load (&lt;40%)²</td>
<td>lb/hr</td>
<td>14.00</td>
<td>851.00</td>
<td>48.60</td>
</tr>
<tr>
<td>Startup/ Shutdown³</td>
<td>lb/event</td>
<td>2.00</td>
<td>40.00</td>
<td>5.00</td>
</tr>
</tbody>
</table>

¹ Based on vendor performance data; values in italics based on AP-42 emission factors.
² VOC is based on 20 percent of unburned hydrocarbons per Solar Product Information Letter 168.
³ Conservatively based on 20 grains sulfur per 100 standard cubic feet of natural gas for maximum short-term emissions.

Potential Annual Emissions Per Turbine

<table>
<thead>
<tr>
<th>Operating Mode</th>
<th>Operating Time</th>
<th>NOx</th>
<th>CO</th>
<th>VOC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cycles</td>
<td>hr/yr</td>
<td>ton/hr</td>
<td>ton/hr</td>
</tr>
<tr>
<td>Normal Load @ 32 °F</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Low Temp (&lt;0 °F)</td>
<td>8513</td>
<td>32.14</td>
<td>32.61</td>
<td>3.74</td>
</tr>
<tr>
<td>Low-Load (&lt;40%)²</td>
<td>180</td>
<td>1.26</td>
<td>76.59</td>
<td>4.37</td>
</tr>
<tr>
<td>Startup/ Shutdown³</td>
<td>200</td>
<td>67</td>
<td>0.20</td>
<td>4.00</td>
</tr>
<tr>
<td>Total</td>
<td>8,760</td>
<td>33.60</td>
<td>113.20</td>
<td>8.61</td>
</tr>
</tbody>
</table>

Emission Rates During Normal Operation (g/hp-hr)¹

<table>
<thead>
<tr>
<th>Emission Point ID / Model</th>
<th>NOx</th>
<th>CO</th>
<th>VOC</th>
<th>SO₂³</th>
<th>PM₁₀ / PM₂.₅</th>
<th>CH₂O</th>
</tr>
</thead>
<tbody>
<tr>
<td>E12 and E13 / Solar Mars 100</td>
<td>0.21</td>
<td>0.22</td>
<td>0.02</td>
<td>0.22</td>
<td>0.03</td>
<td>0.003</td>
</tr>
</tbody>
</table>

¹ Based on vendor performance data: values in italics based on AP-42 emission factors.
² VOC is based on 20 percent of unburned hydrocarbons per Solar Product Information Letter 168.
³ Conservatively based on 20 grains sulfur per 100 standard cubic feet of natural gas for maximum short-term emissions.
### Appendix A: Emission Calculations

#### Emissions from Venting - Solar Mars 100 Turbines (E12 and E13)

<table>
<thead>
<tr>
<th>Component</th>
<th>Emission Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Continuous During Operation</strong></td>
<td></td>
</tr>
<tr>
<td>Pneumatic Actuator (Total for number of units)</td>
<td>57.00 scf/hr, 52.72 lb/hr, 0.11 ton/yr</td>
</tr>
<tr>
<td>Dry Seals (Total for number of units)</td>
<td>120.00 scf/hr, 110.99 lb/hr, 0.23 ton/yr</td>
</tr>
<tr>
<td><strong>Intermittent During Startup/Shutdown</strong></td>
<td></td>
</tr>
<tr>
<td>Electric Starter (Total for number of units)</td>
<td>0 scf/hr, 0 lb/hr, 0 ton/yr</td>
</tr>
<tr>
<td>Blowdowns (Total for number of units)</td>
<td>290,119 scf, 268,336 lb, 11,358 ton</td>
</tr>
</tbody>
</table>

**Total:** 29,161 scf, 17.68 lb, 17.22 ton

1. Emission rates per event instead of per hour
2. CH₄ and CO₂ emission rates based on 92.49 vol% CH₄ and 0.190 vol% CO₂ in natural gas
3. Conversion based on densities of GHG as provided in 40 CFR 98.233(v)
4. Based on 40 CFR 98 Subpart A Global Warming Potentials
5. Conservative estimate based on 1 blowdown per shutdown. It is not expected that a blowdown will occur after each shutdown.
6. Based on a 0.015 ratio of VOC to methane as calculated from gas composition.

---

**Volume fractions obtained from a gas composition from AXP 2019 Yearly Avg Gas Compositions - Celestine**

<table>
<thead>
<tr>
<th>Component</th>
<th>Volume Fraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH₄</td>
<td>0.9249</td>
</tr>
<tr>
<td>CO₂</td>
<td>0.0019</td>
</tr>
</tbody>
</table>

**Densities per 40 CFR 98.233(v):**

<table>
<thead>
<tr>
<th>Component</th>
<th>Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH₄</td>
<td>0.0192 kg/scf</td>
</tr>
<tr>
<td>CO₂</td>
<td>0.0526 kg/scf</td>
</tr>
</tbody>
</table>

2.20462 lb/kg

**GWP per 40 CFR 98 Subpart A:**

25 lb GHGs/lb CH₄
## Appendix A: Emission Calculations
### Fugitive Emissions from Leaks - Solar Mars 100 Turbines (E12 and E13)

**Company Name:** ANR Pipeline Company - Celestine Compressor Station  
**Address:** 146 S. Celestine Road South, Celestine, IN 47521  
**TV SSM No.:** 037-43099-00031  
**TV SPM No.:** 037-43179-00031  
**Reviewer:** Wyman Clark  
**Date:** 12/21/2020

Number of Compressors: 2  
Annual Operating Hours: 8760  
Percent of Leaking Compressor Service Components: 2%

<table>
<thead>
<tr>
<th>Component</th>
<th>Average Number of Leaking Components¹</th>
<th>Emission Factor²</th>
<th>Total Emission Rate (2 compressors)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>component leaks / compressor</td>
<td>scf/hr / component</td>
<td>scf/hr</td>
</tr>
<tr>
<td>Compressor Service</td>
<td></td>
<td></td>
<td>135.64</td>
</tr>
<tr>
<td>Valve</td>
<td>9</td>
<td>14.84</td>
<td>12.86</td>
</tr>
<tr>
<td>Connector</td>
<td>23</td>
<td>5.59</td>
<td>6.91</td>
</tr>
<tr>
<td>Open-Ended Line</td>
<td>0.40</td>
<td>17.27</td>
<td>7.14</td>
</tr>
<tr>
<td>Pressure Relief Valve</td>
<td>0.18</td>
<td>39.66</td>
<td>13.00</td>
</tr>
<tr>
<td>Meter</td>
<td>0.04</td>
<td>19.33</td>
<td>0.77</td>
</tr>
<tr>
<td>Non-Compressor Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valve</td>
<td>0.60</td>
<td>6.42</td>
<td>3.85</td>
</tr>
<tr>
<td>Connector</td>
<td>0.82</td>
<td>5.71</td>
<td>4.68</td>
</tr>
<tr>
<td>Open-Ended Line</td>
<td>0.59</td>
<td>11.27</td>
<td>6.65</td>
</tr>
<tr>
<td>Pressure Relief Valve</td>
<td>0.12</td>
<td>2.01</td>
<td>0.24</td>
</tr>
<tr>
<td>Meter</td>
<td>0.01</td>
<td>2.93</td>
<td>0.03</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td></td>
<td></td>
<td>50.42</td>
</tr>
</tbody>
</table>

1. Estimated component leaks per compressor based on projected equipment counts for the project. Values represent both compressor turbines.  
2. Percent of leaking compressor service components is based on actual survey data for ANR compressor stations. Recent surveys indicated a leaking component rate of less than 1%. Therefore, 2% is a conservative estimate.  
3. Emission factors from 40 CFR 98 Subpart W Table W-3  
4. CH₄ and CO₂ emission rates based on 92.49 vol% CH₄ and 0.19 vol% CO₂ in natural gas  
5. Conversion based on densities of GHG as provided in 40 CFR 98.233(v)  
6. Based on a 0.015 ratio of VOC to methane as calculated from gas composition.

Volume fractions obtained from a gas composition from AXP 2019 Yearly Avg Gas Compositions - Celestine  
0.9249 CH₄  
0.0019 CO₂  

Densities per 40 CFR 98.233(v):  
0.0192 kg/scf CH₄  
0.0526 kg/scf CO₂  
2.20462 lb/kg  

GWP per 40 CFR 98 Subpart A:  
25 lb GHGs/lb CH₄
### Emission Calculations

**Company Name:** ANR Pipeline Company - Celestine Compressor Station  
**Address:** 146 S. Celestine Road South, Celestine, IN 47521  
**TV S,M,N:** 037-43099-00031  
**TV SPM No.:** 037-43179-00031  
**Reviewers:** Wyman Clark  
**Date:** 10/01/00

#### Emission Calculations

**Horsepower:** 880 hp  
**Brake Specific Fuel Consumption:** 7758 Btu/Bhp-hr (HHV)  
**Total Heat Input:** 6.83 MMbtu/hr  
**Operating Hours:** 500 hr/yr  
**Natural Gas Heat Content:** 1020 Btu/MMbtu  
**Fuel Consumption:** 3.35 MMbtu/hr

### Emission Factor

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor</th>
<th>Emission Rate</th>
<th>Emission Factor Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>0.25 grains S / 100 scf</td>
<td>0.0571 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>PM</td>
<td>0.010 lb/hr</td>
<td>0.017 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>CO</td>
<td>0.06 lb/hr</td>
<td>0.04 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>SO2</td>
<td>0.000714 lb/hr</td>
<td>0.000714 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>VOC</td>
<td>0.94 lb/hr</td>
<td>0.49 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
</tbody>
</table>

**Total HAPs**

### HAPs

<table>
<thead>
<tr>
<th>HAPs</th>
<th>Emission Factor</th>
<th>Emission Rate</th>
<th>Emission Factor Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>0.19 lb/hr</td>
<td>0.37 lb/hr</td>
<td>Vendor Data</td>
</tr>
<tr>
<td>1,1,2-Tetrachloroethane</td>
<td>4.04E-05 lb/hr</td>
<td>9.22E-05 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>1,1-Dichloroethane</td>
<td>2.73E-04 lb/hr</td>
<td>8.38E-04 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>Benzene</td>
<td>1.13E-06 lb/hr</td>
<td>2.83E-06 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>Benzo(a)pyrene</td>
<td>4.18E-07 lb/hr</td>
<td>7.98E-07 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>Benzo(a)anthracene</td>
<td>1.25E-05 lb/hr</td>
<td>2.13E-05 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>Biphosphorus</td>
<td>2.28E-04 lb/hr</td>
<td>4.06E-04 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>Carbon Tetrachloride</td>
<td>2.81E-04 lb/hr</td>
<td>5.08E-04 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>Chlorobenzene</td>
<td>3.04E-05 lb/hr</td>
<td>5.19E-05 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>Chloroform</td>
<td>2.98E-05 lb/hr</td>
<td>5.08E-05 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>Cyclohexane</td>
<td>6.93E-07 lb/hr</td>
<td>1.18E-06 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>Ethylene Glycol</td>
<td>3.97E-05 lb/hr</td>
<td>6.78E-05 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>Ethylene Chloride</td>
<td>4.50E-05 lb/hr</td>
<td>7.58E-05 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>Fluoranthene</td>
<td>1.11E-05 lb/hr</td>
<td>1.89E-05 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>Fluorene</td>
<td>5.87E-06 lb/hr</td>
<td>9.68E-06 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>Methanol</td>
<td>2.38E-05 lb/hr</td>
<td>4.27E-05 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>Methylene Chloride</td>
<td>1.13E-05 lb/hr</td>
<td>1.89E-05 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>3.05E-05 lb/hr</td>
<td>5.08E-05 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>Phthalic Anhydride</td>
<td>2.38E-05 lb/hr</td>
<td>4.27E-05 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>Pyrene</td>
<td>2.39E-05 lb/hr</td>
<td>4.05E-05 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>Tetrachloroethene</td>
<td>2.48E-06 lb/hr</td>
<td>4.23E-06 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
<tr>
<td>Vinyl Chloride</td>
<td>1.49E-05 lb/hr</td>
<td>2.54E-05 lb/hr</td>
<td>AP-42 Table 3.2-2 (7/00) - 4SLB</td>
</tr>
</tbody>
</table>

**Total HAPs**

<table>
<thead>
<tr>
<th>Emission Factor</th>
<th>Emission Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>5.40E-02 lb/hr</td>
</tr>
</tbody>
</table>

**Emission Rate Source**

**Total Heat Input:** 6.83 MMBtu/hr  
**Brake Specific Fuel Consumption:** 7758 Btu/Bhp-hr (HHV)  
**Horsepower:** 880 hp  
**Operating Hours:** 500 hr/yr  
**Natural Gas Heat Content:** 1020 Btu/MMbtu  
**Fuel Consumption:** 3.35 MMbtu/hr

**Appendix A:** Emission Calculations

---

**Page 10 of 31, TSD App. A**
Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: ANR Pipeline Company - Celestine Compressor Station
Address: 146 S. Celestine Road South, Celestine, IN 47521
TV SSM No.: 037-43099-00031
TV SPM No.: 037-43179-00031
Reviewer: Wyman Clark
Date: 12/21/2020

Includes:

<table>
<thead>
<tr>
<th>Description</th>
<th>Unit ID</th>
<th>Number</th>
<th>Unit Rating</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Gas Heater</td>
<td>B1</td>
<td>1</td>
<td>1.2</td>
<td>1.2</td>
</tr>
</tbody>
</table>

Heat Input Capacity

<table>
<thead>
<tr>
<th>MMBlu/hr</th>
<th>HHV</th>
<th>Potential Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2</td>
<td></td>
<td>1020 10.3</td>
</tr>
</tbody>
</table>

### Pollutant Emission Factors

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM*</th>
<th>PM10*</th>
<th>NOx</th>
<th>SO2</th>
<th>CO</th>
<th>VOC</th>
<th>GHBs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</td>
<td>1.9</td>
<td>7.6</td>
<td>7.6</td>
<td>0.6</td>
<td>5.5</td>
<td>84</td>
<td>119,442</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>9.76E-03</td>
<td>0.04</td>
<td>0.04</td>
<td>3.09E-03</td>
<td>0.63</td>
<td>0.03</td>
<td>0.43</td>
</tr>
</tbody>
</table>

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined. PM2.5 emission factor is filterable and condensable PM2.5 combined.

**Emission Factors for NOx: 0.120 lb/MMBlu based on vendor data

Methodology

All emission factors are based on normal firing.

- **MMBlu = 1,000,000 Btu**
- **MMCF = 1,000,000 Cubic Feet of Gas**

Emission Factors are from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) = Heat Input Capacity (MMBlu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

### HAPS Calculations

**HAPS - Organics**

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMCF</th>
<th>Benzene</th>
<th>Dichlorobenzene</th>
<th>Formaldehyde</th>
<th>Hexane</th>
<th>Toluene</th>
<th>Total - Organics</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1E-03</td>
<td>1.2E-03</td>
<td>7.5E-02</td>
<td>1.8E+00</td>
<td>3.4E-03</td>
<td></td>
<td>9.70E-03</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>1.08E-05</td>
<td>6.18E-06</td>
<td>3.86E-04</td>
<td>9.28E-03</td>
<td>1.75E-05</td>
<td>9.70E-03</td>
</tr>
</tbody>
</table>

**HAPS - Metals**

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMCF</th>
<th>Lead</th>
<th>Cadmium</th>
<th>Chromium</th>
<th>Manganese</th>
<th>Nickel</th>
<th>Total - Metals</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0E-04</td>
<td>1.1E-03</td>
<td>1.4E-03</td>
<td>3.8E-04</td>
<td>2.1E-03</td>
<td></td>
<td>9.72E-03</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>2.58E-06</td>
<td>5.67E-06</td>
<td>7.21E-06</td>
<td>1.96E-06</td>
<td>1.08E-05</td>
<td>2.82E-05</td>
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<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Total HAPs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.72E-03</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Worst HAP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.28E-03</td>
</tr>
</tbody>
</table>

Methodology is the same as above.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.
Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: ANR Pipeline Company - Celestine Compressor Station
Address: 146 S. Celestine Road South, Celestine, IN 47521
TV SSM No.: 037-43099-00031
TV SPM No.: 037-43179-00031
Reviewer: Wyman Clark
Date: 12/21/2020

<table>
<thead>
<tr>
<th>Description</th>
<th>Unit ID Number</th>
<th>MMBtu/hr</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Space heaters</td>
<td>30</td>
<td>0.0725</td>
<td>2.18</td>
</tr>
</tbody>
</table>

Heat Input Capacity

<table>
<thead>
<tr>
<th>Description</th>
<th>MMBtu/hr</th>
<th>Potential Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mmBtu</td>
<td>mmBtu/MMCF/MMCF/yr</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.2</td>
<td>1020</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/MMCF</th>
<th>PM*</th>
<th>PM10*</th>
<th>PM2.5*</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>GHGs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1.9</td>
<td>7.6</td>
<td>7.6</td>
<td>0.6</td>
<td>100</td>
<td>5.5</td>
<td>84</td>
<td>119442</td>
</tr>
<tr>
<td><strong>see below</strong></td>
<td></td>
<td>1.77E-02</td>
<td>0.07</td>
<td>0.07</td>
<td>5.60E-03</td>
<td>0.93</td>
<td>0.05</td>
<td>0.78</td>
<td>1,116</td>
</tr>
<tr>
<td><strong>see below</strong></td>
<td></td>
<td>1.76E-02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined. PM2.5 emission factor is filterable and condensable PM2.5 combined.**
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32**

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**HAPS Calculations**

**HAPS - Organics**

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMcf</th>
<th>Benzene</th>
<th>Dichlorobenzene</th>
<th>Formaldehyde</th>
<th>Hexane</th>
<th>Toluene</th>
<th>Total - Organics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.1E-03</td>
<td>1.2E-03</td>
<td>7.5E-02</td>
<td>1.8E+00</td>
<td>3.4E-03</td>
<td></td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>1.96E-05</td>
<td>1.12E-05</td>
<td>7.00E-04</td>
<td>1.68E-02</td>
<td>3.18E-05</td>
<td>1.76E-02</td>
</tr>
</tbody>
</table>

**HAPS - Metals**

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMcf</th>
<th>Lead</th>
<th>Cadmium</th>
<th>Chromium</th>
<th>Manganese</th>
<th>Nickel</th>
<th>Total - Metals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5.0E-04</td>
<td>1.1E-03</td>
<td>1.4E-03</td>
<td>3.8E-04</td>
<td>2.1E-03</td>
<td></td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>4.67E-06</td>
<td>1.03E-05</td>
<td>1.31E-05</td>
<td>3.55E-06</td>
<td>1.96E-05</td>
<td>5.12E-05</td>
</tr>
</tbody>
</table>

Total HAPs = 1.76E-02

Worst HAP = 1.68E-02

Methodology is the same as above.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.
Appendix A: Emission Calculations
Wastewater Tank (IA32)

Company Name: ANR Pipeline Company - Celestine Compressor Station
Address: 146 S. Celestine Road South, Celestine, IN 47521
TV SSM No.: 037-43099-00031
TV SPM No.: 037-43179-00031
Reviewer: Wyman Clark
Date: 12/21/2020

Volume 1,200 gallons
Turnovers 12
Net throughput 14,400 gal/year
Operating Hours 8,760 hr/yr

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Losses</th>
<th>Emission Rate</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Working</td>
<td>Breathing</td>
<td>lb/year</td>
</tr>
<tr>
<td>VOC</td>
<td>21.2</td>
<td>15.60</td>
<td>36.80</td>
</tr>
</tbody>
</table>

Notes:
Louisville, KY meteorological data (from TANKS database) used in emissions calculations
Vertical tank, unheated and above ground
Double Walled
Tank Diameter 5'10"
Tank Height 6'
### Appendix A: Emission Calculations

**Reciprocating Internal Combustion Engines - Natural Gas from TV Renewal 037-41537-00031**  
**2-Stroke Lean-Burn (2SLB) Engines**

**Company Name:** ANR Pipeline Company - Celestine Compressor Station  
**Address:** 146 S. Celestine Road South, Celestine, IN 47521  
**TV SSM No.:** 037-43099-00031  
**TV SPM No.:** 037-43179-00031  
**Reviewer:** Wyman Clark  
**Date:** 12/21/2020

Includes:

<table>
<thead>
<tr>
<th>Description</th>
<th>Unit ID Number</th>
<th>HP</th>
<th>MMBtu/hr</th>
<th>MMBtu/hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooper-Bessemer Mod. GMWA8</td>
<td>E01-E06</td>
<td>6</td>
<td>2000</td>
<td>17.54</td>
</tr>
</tbody>
</table>

- **Maximum Heat Input Capacity (MMBtu/hr):** 105.24  
- **Maximum Hours Operated per Year (hr/yr):** 8760  
- **Potential Fuel Usage (MMBtu/yr):** 921902.4  
- **High Heat Value (MMBtu/MMscf):** 1020  
- **Potential Fuel Usage (MMcf/yr):** 903.83  

#### Criteria Pollutants

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor (lb/MMBtu)</th>
<th>Potential Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM*</td>
<td>3.84E-02</td>
<td>17.70</td>
</tr>
<tr>
<td>PM10*</td>
<td>4.83E-02</td>
<td>22.27</td>
</tr>
<tr>
<td>PM2.5*</td>
<td>4.83E-02</td>
<td>22.27</td>
</tr>
<tr>
<td>SO2</td>
<td>5.88E-04</td>
<td>0.271</td>
</tr>
<tr>
<td>NOx</td>
<td>3.17E+00</td>
<td>1461.22</td>
</tr>
<tr>
<td>VOC</td>
<td>3.86E-01</td>
<td>55.31</td>
</tr>
<tr>
<td>CO</td>
<td>1.20E-01</td>
<td>177.93</td>
</tr>
</tbody>
</table>

* PM emission factor is for filterable PM-10. PM10 emission factor is filterable PM10 + condensable PM.  
PM2.5 emission factor is filterable PM2.5 + condensable PM.

#### Hazardous Air Pollutants (HAPs)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor (lb/MMBtu)</th>
<th>Potential Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaldehyde</td>
<td>7.76E-03</td>
<td>3.577</td>
</tr>
<tr>
<td>Acrolein</td>
<td>7.78E-03</td>
<td>3.586</td>
</tr>
<tr>
<td>Benzene</td>
<td>1.94E-03</td>
<td>0.894</td>
</tr>
<tr>
<td>1,3-Butadiene</td>
<td>8.20E-04</td>
<td>0.378</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>1.08E-04</td>
<td>0.050</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>5.52E-02</td>
<td>25.445</td>
</tr>
<tr>
<td>Methanol</td>
<td>2.48E-03</td>
<td>1.143</td>
</tr>
<tr>
<td>Methylene Chloride</td>
<td>1.47E-04</td>
<td>0.068</td>
</tr>
<tr>
<td>Hexane</td>
<td>4.45E-04</td>
<td>0.205</td>
</tr>
<tr>
<td>Toluene</td>
<td>9.63E-04</td>
<td>0.444</td>
</tr>
<tr>
<td>2,2,4-Trimethylpentane</td>
<td>8.46E-04</td>
<td>0.390</td>
</tr>
<tr>
<td>Total PAH**</td>
<td>1.34E-04</td>
<td>0.062</td>
</tr>
</tbody>
</table>

**Total 36.24**

HAP pollutants consist of the twelve highest HAPs included in AP-42 Table 3.2-1.  
**PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)**

#### Methodology

Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-1  
Potential Fuel Usage (MMBtu/yr) = [Maximum Heat Input Capacity (MMBtu/hr)] * [Maximum Hours Operating per Year (hr/yr)]  
Potential Emissions (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2000 lb/ton]

#### Abbreviations

- **PM = Particulate Matter**  
- **NOx = Nitrous Oxides**  
- **CO2 = Cabon Dioxide**  
- **PM10 = Particulate Matter (<10 um)**  
- **VOC = Volatile Organic Compounds**  
- **CH4 = Methane**  
- **SO2 = Sulfur Dioxide**  
- **CO = Carbon Monoxide**  
- **N2O = Nitrous Oxide**  
- **CO2e = CO2 equivalent emissions**
Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Natural Gas from TV Renewal 037-41537-00031
2-Stroke Lean-Burn (2SLB) Engines

Company Name: ANR Pipeline Company - Celestine Compressor Station
Address: 146 S. Celestine Road South, Celestine, IN 47521
TV SSM No.: 037-43099-00031
TV SPM No.: 037-43179-00031
Reviewer: Wyman Clark
Date: 12/21/2020

Includes:

<table>
<thead>
<tr>
<th>Description</th>
<th>Unit ID</th>
<th>HP</th>
<th>MMBtu/hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooper-Bessemer Mod. 16W330</td>
<td>E07</td>
<td>7833</td>
<td>61.2</td>
</tr>
<tr>
<td>Cooper-Bessemer Mod. 16Z330</td>
<td>E08</td>
<td>10833</td>
<td>91.8</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>153</td>
</tr>
</tbody>
</table>

Maximum Heat Input Capacity (MMBtu/hr) 153.00
Maximum Hours Operated per Year (hr/yr) 8760
Potential Fuel Usage (MMBtu/yr) 1340280
High Heat Value (MMBtu/MMscf) 1020
Potential Fuel Usage (MMcf/yr) 1314.00

Criteria Pollutants

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor (lb/MMBtu)</th>
<th>Potential Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM&lt;sub&gt;1&lt;/sub&gt;</td>
<td>3.84E-02</td>
<td>25.73</td>
</tr>
<tr>
<td>PM&lt;sub&gt;10&lt;/sub&gt;</td>
<td>4.83E-02</td>
<td>32.37</td>
</tr>
<tr>
<td>PM&lt;sub&gt;2.5&lt;/sub&gt;</td>
<td>4.83E-02</td>
<td>32.37</td>
</tr>
<tr>
<td>SO&lt;sub&gt;2&lt;/sub&gt;</td>
<td>5.88E-04</td>
<td>0.39</td>
</tr>
<tr>
<td>NO&lt;sub&gt;x&lt;/sub&gt;</td>
<td>1.20E-01</td>
<td>1224.10</td>
</tr>
<tr>
<td>VOC</td>
<td>3.86E-01</td>
<td>80.42</td>
</tr>
<tr>
<td>CO</td>
<td></td>
<td>258.67</td>
</tr>
</tbody>
</table>

Notes:
1. PM emission factor is for filterable PM-10. PM10 emission factor is filterable PM<sub>10</sub> + condensable PM.
2. NO<sub>x</sub> emission factors from vendor performance guarantees incorporated into the permit pursuant to 326 IAC 10-5-3(b) and are subject to stack testing.

Hazardous Air Pollutants (HAPs)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor (lb/MMBtu)</th>
<th>Potential Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaldehyde</td>
<td>7.76E-03</td>
<td>5.200</td>
</tr>
<tr>
<td>Acrolein</td>
<td>7.78E-03</td>
<td>5.214</td>
</tr>
<tr>
<td>Benzene</td>
<td>1.94E-03</td>
<td>1.300</td>
</tr>
<tr>
<td>1,3-Butadiene</td>
<td>8.20E-04</td>
<td>0.550</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>1.08E-04</td>
<td>0.072</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>5.52E-02</td>
<td>36.902</td>
</tr>
<tr>
<td>Methanol</td>
<td>2.49E-03</td>
<td>1.662</td>
</tr>
<tr>
<td>Methylene Chloride</td>
<td>1.47E-04</td>
<td>0.099</td>
</tr>
<tr>
<td>Hexane</td>
<td>4.45E-04</td>
<td>0.298</td>
</tr>
<tr>
<td>Toluene</td>
<td>9.63E-04</td>
<td>0.645</td>
</tr>
<tr>
<td>2,2,4-Trimethylpentane</td>
<td>8.46E-04</td>
<td>0.567</td>
</tr>
<tr>
<td>Total PAH**</td>
<td>1.34E-04</td>
<td>0.090</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>52.69</td>
</tr>
</tbody>
</table>

HAP pollutants consist of the twelve highest HAPs included in AP-42 Table 3.2-1.
**PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

Methodology

Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-1
Potential Fuel Usage (MMBtu/yr) = [Maximum Heat Input Capacity (MMBtu/hr)] * [Maximum Hours Operating per Year (hr/yr)]
Potential Emissions (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2000 lb/ton]

Abbreviations

PM = Particulate Matter
PM<sub>10</sub> = Particulate Matter (<10 um)
SO<sub>2</sub> = Sulfur Dioxide
CO<sub>2</sub> = Carbon Dioxide
N0<sub>x</sub> = Nitrous Oxides
VOC = Volatile Organic Compounds
CH<sub>4</sub> = Methane
CO<sub>2e</sub> = CO<sub>2</sub> equivalent emissions
# Appendix A: Emission Calculations

## Reciprocating Internal Combustion Engines - Natural Gas from TV Renewal 037-41537-00031

### 4-Stroke Rich-Burn (4SRB) Engines

**Company Name:** ANR Pipeline Company - Celestine Compressor Station  
**Address:** 146 S. Celestine Road South, Celestine, IN 47521  
**TV SSM No.:** 037-43099-00031  
**TV SPM No.:** 037-43179-00031  
**Reviewer:** Wyman Clark  
**Date:** 12/21/2020

Includes:  
<table>
<thead>
<tr>
<th>Description</th>
<th>Unit ID</th>
<th>HP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caterpillar 3412 TA emergency generator</td>
<td>E11</td>
<td>690</td>
</tr>
</tbody>
</table>

| Maximum Output Horsepower Rating (hp) | 690 |
| Brake Specific Fuel Consumption (BSFC) (Btu/hp-hr) | 7600 |
| Maximum Hours Operated per Year (hr/yr) | 500 |
| Potential Fuel Usage (MMBtu/yr) | 2622 |
| High Heat Value (MMBtu/MMscf) | 1020 |
| Potential Fuel Usage (MMcf/yr) | 2.57 |

### Criteria Pollutants

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor (lb/MMBtu)</th>
<th>Potential Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM*</td>
<td>9.50E-03</td>
<td>1.65E-03</td>
</tr>
<tr>
<td>PM10*</td>
<td>1.94E-02</td>
<td>3.67E-03</td>
</tr>
<tr>
<td>PM2.5*</td>
<td>1.94E-02</td>
<td>3.67E-03</td>
</tr>
<tr>
<td>SO2</td>
<td>5.88E-04</td>
<td>1.21E-04</td>
</tr>
<tr>
<td>NOx</td>
<td>2.21E+00</td>
<td>4.42E-04</td>
</tr>
<tr>
<td>VOC</td>
<td>2.96E+00</td>
<td>5.91E-04</td>
</tr>
<tr>
<td>CO</td>
<td>3.72E+00</td>
<td>7.43E-04</td>
</tr>
</tbody>
</table>

*PM emission factor is for filterable PM-10.  PM10 emission factor is filterable PM10 + condensable PM.  
PM2.5 emission factor is filterable PM2.5 + condensable PM.

### Hazardous Air Pollutants (HAPs)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor (lb/MMBtu)</th>
<th>Potential Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaldehyde</td>
<td>2.79E-03</td>
<td>3.65E-03</td>
</tr>
<tr>
<td>Acrolein</td>
<td>2.63E-03</td>
<td>3.45E-03</td>
</tr>
<tr>
<td>Benzene</td>
<td>1.58E-03</td>
<td>2.07E-03</td>
</tr>
<tr>
<td>1,3-Butadiene</td>
<td>6.63E-04</td>
<td>8.55E-04</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>2.05E-02</td>
<td>2.69E-02</td>
</tr>
<tr>
<td>Methanol</td>
<td>3.06E-03</td>
<td>4.01E-03</td>
</tr>
<tr>
<td>Total PAH**</td>
<td>1.41E-04</td>
<td>1.85E-04</td>
</tr>
<tr>
<td>Toluene</td>
<td>5.58E-04</td>
<td>7.32E-04</td>
</tr>
<tr>
<td>Xylene</td>
<td>1.95E-04</td>
<td>2.56E-04</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4.21E-02</strong></td>
<td></td>
</tr>
</tbody>
</table>

HAP pollutants consist of the nine highest HAPs included in AP-42 Table 3.2-3.  
**PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

### Methodology

Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-3  
Potential Fuel Usage (MMBtu/yr) = [Maximum Output Horsepower Rating (hp)] * [Brake Specific Fuel Consumption (Btu/hp-hr)] * [Maximum Hours Operated per Year (hr/yr)] / [1000000 Btu/MMBtu]  
Potential Emissions (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2000 lb/ton]

### Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>Particulate Matter</td>
<td>NOx</td>
<td>Nitrous Oxides</td>
</tr>
<tr>
<td>PM10</td>
<td>Particulate Matter (&lt;10 um)</td>
<td>VOC</td>
<td>Volatile Organic Compounds</td>
</tr>
<tr>
<td>SO2</td>
<td>Sulfur Dioxide</td>
<td>CO</td>
<td>Carbon Monoxide</td>
</tr>
<tr>
<td>CH4</td>
<td>Methane</td>
<td>N2O</td>
<td>Nitrous Oxide</td>
</tr>
<tr>
<td>CO2</td>
<td>Carbon Dioxide</td>
<td>CO2e</td>
<td>CO2 equivalent emissions</td>
</tr>
</tbody>
</table>

CO2e = CO2 equivalent emissions
Appendix A: Emission Calculations
Condensate Storage Tank from TV Renewal 037-41537-00031

Company Name: ANR Pipeline Company - Celestine Compressor Station
Address: 146 S. Celestine Road South, Celestine, IN 47521
TV SSM No.: 037-43099-00031
TV SPM No.: 037-43179-00031
Reviewer: Wyman Clark
Date: 12/21/2020

Unit description: Fixed conical roof tank, capacity 12,000 gallon, constructed in 1957

<table>
<thead>
<tr>
<th>VOC Potential to Emit</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(lb/hr)</td>
</tr>
<tr>
<td>Tank T10</td>
<td>0.628</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VOC PTE</th>
<th>Benzene</th>
<th>Ethylbenzene</th>
<th>n-Hexane</th>
<th>Toluene</th>
<th>Xylenes</th>
<th>Total HAP PTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(tpy)</td>
<td>wt % of VOC</td>
<td>(tpy)</td>
<td>wt % of VOC</td>
<td>(tpy)</td>
<td>wt % of VOC</td>
<td>(tpy)</td>
</tr>
<tr>
<td>2.75</td>
<td>5%</td>
<td>0.14</td>
<td>5%</td>
<td>0.14</td>
<td>5%</td>
<td>0.14</td>
</tr>
</tbody>
</table>

Methodology
VOC emissions estimate provided by the source using EPA TANKS 4.09 software. Worst case assumption that condensate properties are the same as gasoline RVP10.
Worst case HAP content provided by the source.
Appendix A: Emissions Calculations
Natural Gas Combustion Only from TV Renewal 037-41537-00031
MM BTU/HR <100

Company Name: ANR Pipeline Company - Celestine Compressor Station
Address: 146 S. Celestine Road South, Celestine, IN 47521
TV SSM No.: 037-43099-00031
TV SPM No.: 037-43179-00031
Reviewer: Wyman Clark
Date: 12/21/2020

Includes: Unit Rating Total
<table>
<thead>
<tr>
<th>Description</th>
<th>Unit ID Number</th>
<th>MMBtu/hr</th>
<th>MMBtu/hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler B01-B01</td>
<td>2</td>
<td>4.184</td>
<td>8.368</td>
</tr>
<tr>
<td>Space heaters</td>
<td>--</td>
<td>1.1</td>
<td>6.336</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>14.7</td>
<td></td>
</tr>
</tbody>
</table>

Heat Input Capacity

<table>
<thead>
<tr>
<th>Heat Input Capacity</th>
<th>HHV</th>
<th>Potential Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMBtu/hr</td>
<td>MMBlu</td>
<td>MMCF/yr</td>
</tr>
<tr>
<td>14.7</td>
<td>1020</td>
<td>126.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/MMCF</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM*</td>
<td>1.9</td>
<td>1.20E-01</td>
</tr>
<tr>
<td>PM10*</td>
<td>7.6</td>
<td>0.48</td>
</tr>
<tr>
<td>direct PM2.5*</td>
<td>7.6</td>
<td>0.48</td>
</tr>
<tr>
<td>SO2</td>
<td>0.6</td>
<td>3.79E-02</td>
</tr>
<tr>
<td>NOx</td>
<td>100</td>
<td>6.31</td>
</tr>
<tr>
<td>VOC</td>
<td>5.5</td>
<td>0.35</td>
</tr>
<tr>
<td>CO</td>
<td>84</td>
<td>5.30</td>
</tr>
</tbody>
</table>

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined. PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology
All emission factors are based on normal firing.

MMBu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) = Heat Input Capacity (MMBu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

<table>
<thead>
<tr>
<th>HAPs - Organics</th>
<th>Emission Factor in lb/MMcfc</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>2.1E-03</td>
<td>1.33E-04</td>
</tr>
<tr>
<td>Dichlorobenzene</td>
<td>1.2E-03</td>
<td>7.58E-05</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>7.5E-02</td>
<td>4.74E-03</td>
</tr>
<tr>
<td>Hexane</td>
<td>1.8E+00</td>
<td>1.14E-01</td>
</tr>
<tr>
<td>Toluene</td>
<td>3.4E-03</td>
<td>2.15E-04</td>
</tr>
<tr>
<td>Total - Organics</td>
<td></td>
<td>1.19E-01</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HAPs - Metals</th>
<th>Emission Factor in lb/MMcfc</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>5.0E-04</td>
<td>3.16E-05</td>
</tr>
<tr>
<td>Cadmium</td>
<td>1.1E-03</td>
<td>6.95E-05</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.4E-03</td>
<td>8.84E-05</td>
</tr>
<tr>
<td>Manganese</td>
<td>3.8E-04</td>
<td>2.40E-05</td>
</tr>
<tr>
<td>Nickel</td>
<td>2.1E-03</td>
<td>1.33E-04</td>
</tr>
<tr>
<td>Total - Metals</td>
<td></td>
<td>3.46E-04</td>
</tr>
</tbody>
</table>

Methodology is the same as above.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.
In order for the degreaser to qualify as an insignificant activity under the listing in 326 IAC 2-7-1(21)(J)(vi)(DD), the source shall use solvents "the use of which, for all cleaners and solvents combined, does not exceed one hundred forty-five (145) gallons per twelve (12) months".

Based on a review of the solvents most widely supplied for the industry by Crystal Clean and Safety-Kleen, the following PTE is based on the following conservative estimates:

The solvent has a maximum density of 6.7 lb/gal.
The solvent used in the degreaser contains 100% VOC and up to 0.2% HAP (tetrachloroethylene).

Uncontrolled Potential Emissions (per each degreaser)

<table>
<thead>
<tr>
<th>6.7</th>
<th>lb/gal x</th>
<th>100</th>
<th>% VOC x</th>
<th>145</th>
<th>gal/yr ÷ 2000</th>
<th>lb/ton = 0.49</th>
<th>tons VOC per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.49 tpy VOC x</td>
<td>0.2 % HAP</td>
<td>= 0.001 tons HAP per year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix A: Emissions Calculations
Diesel Storage Tank and Vehicle Fueling from TV Renewal 037-41537-00031

Company Name: ANR Pipeline Company - Celestine Compressor Station
Address: 146 S. Celestine Road South, Celestine, IN 47521
TV SSM No.: 037-43099-00031
TV SPM No.: 037-43179-00031
Reviewer: Wyman Clark
Date: 12/21/2020

includes: One (1) aboveground diesel storage tank with a capacity of 100 gallons.

Tank loading losses:

\[ L_L = \frac{12.46 \text{ (SPM)}}{T} \text{ (lb/1,000 gal)} \quad \text{source: Equation (1), AP-42 Chapter 5.2, assumes no vapor controls} \]

where

\[ S = \text{saturation factor, 1.45 for splash loading AP-42 Table 5.2-1)} \]
\[ P = \text{true vapor pressure, 0.012 psia (from data in AP-42 Table 7.1-2)} \]
\[ M = \text{product molecular weight, 130 for No. 2 distillate oils (AP-42 Table 7.1-2)} \]
\[ T = \text{product temperature, 540 °R (assumed worst case 80 °F)} \]

\[ L_L = 5.22E-02 \text{ (lb/1,000 gal)} \]

Vehicle refueling losses:

\[ E_R = 264.2[-5.909 - 0.0949 (\Delta T) + 0.0884 (T_D) + 0.485 (RVP)] \quad \text{source: Equation (6), AP-42 Chapter 5.2} \]

where

\[ \Delta T = \text{difference between temperature of fuel in vehicle tank and temperature of dispensed fuel, worst case estimate 0 °F} \]
\[ T_D = \text{Temperature of dispensed fuel, 80 °F, as above} \]
\[ RVP = 1.5, \text{estimated from AP-42 Figure 7.1-15 (using A=12.31 from regression of data in Table 7.1-2, and S estimated equal to 3 Table 13-71, Perry's Chemical Engineers' Handbook, 6th ed.)} \]

\[ E_R = 499 \text{ (mg/L)} \]
\[ = 4.17 \text{ (lb/1,000 gal)} \]

Diesel Throughput = 50.0 gallons/month
Diesel Throughput = 0.30 kgal/yr

Volatile Organic Compounds (VOC)

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Emission Factor (lb/kgal of throughput)</th>
<th>PTE of VOC (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LL, Filling storage tank (splash filling)</td>
<td>5.22E-02</td>
<td>7.83E-06</td>
</tr>
<tr>
<td>Tank breathing and emptying*</td>
<td>5.22E-02</td>
<td>7.83E-06</td>
</tr>
<tr>
<td>ER, Vehicle refueling (displaced losses - uncontrolled)</td>
<td>4.17</td>
<td>6.25E-04</td>
</tr>
<tr>
<td>Spillage**</td>
<td>0.70</td>
<td>1.05E-04</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>7.46E-04</td>
</tr>
</tbody>
</table>

Methodology
The diesel throughput was provided by the source.
* Tank breathing and emptying losses assumed equal to splash filling losses because the breathing loss entry in AP-42, Table 5.2-7 is for underground tanks and TANKS program does not calculate values for tanks less than 500 gallons.
** Spillage losses assumed the same as gasoline, AP-45, Table 5.2-7

Diesel Throughput (kgal/yr) = [Diesel Throughput (gallons/month)] * [12 months/yr] * [kgal/1000 gal]
PTE of VOC (tons/yr) = [Diesel Throughput (kgal/yr)] * [Total Emission Factor (lb/kgal)] * [ton/2000 lb]

Hazardous Air Pollutants (HAPs)
The MSDS for diesel fuel provided by the source does not identify any HAPs in the product

Abbreviations
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compounds
PTE = Potential to Emit
### Louisville, KY Meteorological Data (Tbl 7.1-7)

<table>
<thead>
<tr>
<th>Average</th>
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</thead>
<tbody>
<tr>
<td>$T_{AX}$</td>
<td>66.1°F</td>
</tr>
<tr>
<td>$T_{AN}$</td>
<td>46.2°F</td>
</tr>
<tr>
<td>$I$</td>
<td>1216 Btu/ft²-day</td>
</tr>
</tbody>
</table>

$u = 0.39$ tank solar absorptance, Tbl 7.1-6 (specular aluminum, good condition)

### Horizontal tanks

<table>
<thead>
<tr>
<th>Largest (T9)</th>
<th>$L = 19.33$ ft</th>
<th>$D = 8$ ft</th>
<th>$T_{AX} = 516.2°R$, Eqn 1-27, Ch 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>$T_{A} = 517.5°R$, Eqn 1-28, Ch 7</td>
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<tr>
<td>$T_{LA} = 520.6°R$, Eqn 1-26, Ch 7</td>
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<td></td>
</tr>
</tbody>
</table>

$M = 62$ lb/lb-mole, ethylene glycol

$Q = 8000$ gal/yr = 190.5 bbl/yr Note: petroleum barrel is 42 gallons

### Throughput provided by the source

| $A = 17.68$ Regression of data in Table 3-8, Perry's 6th ed | $B = 12.700$ |
| $x = 0.225$ mole fraction of glycol in 50% by weight water solution |

The tank contents are a mixture of a VOC with a non-VOC (water), so the emission estimate must use partial pressure instead of the VOC single-component vapor pressure

\[
p_{VA} = x_{PVA} = 2.74E-04 \text{ psia, Eqn 1-24, Ch 7 (}P_{VA}=\exp(A-B/T_{LA})\text{ and Raoult's Law}
\]

\[
\Delta T_{x} = 27.6 °R, \text{ Eqn 1-8, AP-42 Ch 7}
\]

\[
\Delta P_{x} = 0.06 \text{ psia, assumed, Note 3 for Eqn 1-7}
\]

| $K_{P} = 0.05$ Eqn 1-7, AP-42 Ch 7 | $K_{P} = 1.00$ Eqn 1-20, AP-42 Ch 7 |
| $W_{L} = 3.05E-06$ lb/ft³, Eqn 1-21, AP-42 Ch7 |

### Storage Losses (breathing losses)

| single tank $L_{S} = 0.03$ lb/yr, Eqn 1-4, AP-42 Ch 7 |
| Total breathing losses, $L_{B} = 0.11$ lb/yr, worst case estimate for four glycol tanks is four times the loss for the largest tank (T9) |

### Working Losses

| turnovers = 1 per year, estimated from volume of largest tank (T9), $K_{P}$ does not change with throughput based on smaller tanks |
| $K_{L} = 1.00$ Fig 7.1-18, notes to Eqn1-35 |
| working loss product factor, organic liquids other than crude oil, pg. 7.1-19 |
| $L_{w} = 3.24E-03$ lb/yr, Eqn 1-29, AP-42 Ch 7 |

### Total Losses

| $L_{T} = 0.11$ lb/yr, Eqn 1-1, AP-42 Ch 7 |
| $= 5.45E-05$ tons/yr |

### Hazardous Air Pollutants (HAPs)

VOC is 100% ethylene glycol, so HAP PTE is the same as VOC PTE.

\[
\text{HAP PTE} = 5.45E-05 \text{ tons/yr}
\]
<table>
<thead>
<tr>
<th>Year</th>
<th>Unit ( \text{tons/yr} )</th>
<th>Unit ( \text{tons/yr} )</th>
<th>Unit ( \text{tons/yr} )</th>
<th>Unit ( \text{tons/yr} )</th>
<th>Annual Average ( \text{tons/yr} )</th>
<th>Total ( \text{tons/yr} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>Cooper</td>
<td>GMWA-8</td>
<td>2012</td>
<td>2012</td>
<td>2012</td>
<td>2012</td>
</tr>
<tr>
<td>2013</td>
<td>38.83</td>
<td>31.13</td>
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<td>12.78</td>
<td>33.60</td>
<td>56.40</td>
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<td>2014</td>
<td>41.32</td>
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<tr>
<td>2015</td>
<td>35.36</td>
<td>28.63</td>
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<td>40.32</td>
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<td>56.40</td>
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<td>33.60</td>
<td>56.40</td>
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<td>2022</td>
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**Total:** 345.24 tons/yr
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<th>Unit</th>
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<th>Model</th>
<th>Year</th>
<th>Average (2-Year Period)</th>
<th>Annual Average (tons/yr)</th>
<th>Operation</th>
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<th>Annual Average (tons/yr)</th>
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<td>7551-A-01</td>
<td>Cooper</td>
<td>GMWA-8</td>
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<td>Total</td>
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<td>Emission Factors</td>
<td>Total HAPs</td>
<td>Total HAPs</td>
<td>Total HAPs</td>
<td>Total HAPs</td>
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<td>0.00</td>
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</tr>
</tbody>
</table>
### Emission Factors-Sources

**NOx**
- **ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/94**
- **ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/94**
- **ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/94**
- **ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/94**
- **ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/94**

**CO**
- **ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/94**
- **ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/94**
- **ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/94**
- **ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/94**
- **ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/94**

**VOC**
- **AP-42 3.2.1-700, 25LB**
- **AP-42 3.2.1, 700, 25LB**
- **AP-42 3.2.1, 700, 25LB**
- **AP-42 3.2.1, 700, 25LB**
- **AP-42 3.2.1, 700, 25LB**

**PM10**
- **AP-42 3.2.1, 700, 25LB**
- **AP-42 3.2.1, 700, 25LB**
- **AP-42 3.2.1, 700, 25LB**
- **AP-42 3.2.1, 700, 25LB**
- **AP-42 3.2.1, 700, 25LB**

**SO2**
- **AP-42 3.2.1, 700, 25LB**
- **AP-42 3.2.1, 700, 25LB**
- **AP-42 3.2.1, 700, 25LB**
- **AP-42 3.2.1, 700, 25LB**
- **AP-42 3.2.1, 700, 25LB**

### Notes:
- NOx and CO emission factors calculated using: \( E/(hp-hr) \) \* (rated hp) \* (lb / 453.6 g) \* (max rated throughput in scf/hr / 1000000) = lb / MMscf
- To be conservative, instead of using the torque percentages to calculate the hp, the rated horsepower was used in EF calculations beginning in RY 2007.
- PM10, VOC, and SO2 emission factors for engines developed using 1,020 Btu/scf.
### Engine Information

<table>
<thead>
<tr>
<th>Unit</th>
<th>Manufacturer</th>
<th>Model</th>
<th>Fuel Usage (MMcf/yr)</th>
<th>Rounded Fuel Usage (MMcf/yr)</th>
<th>HP-HRS per year</th>
<th>Annual Operation (hrs/yr)</th>
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<td>Cooper</td>
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</table>

Fuel usage for the emergency generator was determined by hours * heat input(mmBtu) /1020 (Btu/scf); Heat input was obtained from permit.

### Emissions

<table>
<thead>
<tr>
<th>Unit</th>
<th>CO (lbs/MMcf)</th>
<th>NOx (lbs/MMcf)</th>
<th>SO2 (lbs/MMcf)</th>
<th>VOC (lbs/MMcf)</th>
<th>PM10 (tons/yr)</th>
<th>PM2.5 (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7551-A-01</td>
<td>252.90</td>
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<td>122</td>
<td>49</td>
<td>0.00</td>
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<tr>
<td>7551-A-02</td>
<td>252.90</td>
<td>389.25</td>
<td>0.00</td>
<td>122</td>
<td>49</td>
<td>0.00</td>
</tr>
<tr>
<td>7551-A-04</td>
<td>252.90</td>
<td>389.25</td>
<td>0.00</td>
<td>122</td>
<td>49</td>
<td>0.00</td>
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<tr>
<td>7551-A-06</td>
<td>252.90</td>
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<td>7551-A-08</td>
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### Emission Factors-Sources

<table>
<thead>
<tr>
<th>Unit</th>
<th>NOx Source</th>
<th>CO Source</th>
<th>SO2 Source</th>
<th>VOC Source</th>
<th>PM10 Source</th>
<th>PM2.5 Source</th>
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</thead>
<tbody>
<tr>
<td>7551-A-01</td>
<td>ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/30/04</td>
<td>ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/30/04</td>
<td>ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/30/04</td>
<td>ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/30/04</td>
<td>ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/30/04</td>
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<td>ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/30/04</td>
<td>ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/30/04</td>
<td>ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/30/04</td>
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<tr>
<td>7551-A-04</td>
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<td>ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/30/04</td>
<td>ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/30/04</td>
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<td>ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/30/04</td>
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<td>ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/30/04</td>
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</table>

### Notes:
- NOx and CO emission factors calculated using EFs (g/hr-hp) * (rated hp) / (1Btu / 453.6 g) / max rated throughput in scfh / 1000000 = lbs/MMcf
- To be conservative, instead of using the torque percentage to calculate the hp, the rated horsepower was used in EF calculations beginning in FY 2007.
- PM10, VOC, and SO2 emission factors for engines developed using AP-42, 3.2-1, 7/00.
Fuel Usage

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<th>Heat Input (MMBtu)</th>
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<td>Cooper</td>
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<td>49</td>
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Note: Fuel usage for the emergency generator was determined by: hours (hr/year)/1020 (Btu/scf) * heat input (MMBtu). Heat input was obtained from permit.

### Emission Factors

#### Engine Information

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<tr>
<th>Unit</th>
<th>Manufacturer</th>
<th>Model</th>
<th>Engine HP</th>
<th>HR/Year</th>
<th>Heat Input (MMBtu)</th>
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### Emissions

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<tr>
<th>Unit</th>
<th>NOx (lb/MMscf)</th>
<th>CO (lb/MMscf)</th>
<th>VOC (lb/MMscf)</th>
<th>PM10 (ton/yr)</th>
<th>SO2 (lb/MMscf)</th>
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**TOTAL:** 306.62 lb/MMscf

#### Emission Factors-Sources

### NOx

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<tr>
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<td>43.857713</td>
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<tr>
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<td>32.148154</td>
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<td>5.161667</td>
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### VOC

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### PM10

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### SO2

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**TOTAL:** 0.32 lb/MMscf

### Notes:
- NOx and CO emission factors calculated using: EF (lb/MMscf) * (rated hp) / (1 lb/453.6 g) / (max rated throughput in scfh / 7500000) = lb/MMscf.
- To be conservative, emissions from units operating under the less-than-95% torque were calculated using the torque percentage by the rated horsepower was used in EF calculations beginning in FY 2007.
- PM10, VOC, and SO2 emission factors for engines developed using 1,020 Btu/scf of fuel.
- NOx emission factors for 7551-B-07 were annualized by weighted average of the percentage of the year that each emission factor was employed.
- Emissions (lbs) are from 2014 SAP Data.
**Engine Information**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Manufacturer</th>
<th>Model</th>
<th>Fuel Usage (MMcf/yr)</th>
<th>Rounded Fuel Usage (MMcf/yr)</th>
<th>HP-HRS per year</th>
<th>Annual Operation</th>
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**Emission Factors**

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<tr>
<th>Unit</th>
<th>NOx (lb/hr)</th>
<th>CO (lb/MMcf)</th>
<th>VOC (lb/MMcf)</th>
<th>PM2.5 (lb/MMcf)</th>
<th>PM10 (lb/MMcf)</th>
<th>PM Condensable (lb/MMcf)</th>
<th>PM TOTAL (lb/MMcf)</th>
<th>SO2 (lb/MMcf)</th>
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**Emissions**

<table>
<thead>
<tr>
<th>Unit</th>
<th>NOx (tons/yr)</th>
<th>CO (tons/yr)</th>
<th>VOC (tons/yr)</th>
<th>PM2.5 (tons/yr)</th>
<th>PM10 (tons/yr)</th>
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<th>PM TOTAL (tons/yr)</th>
<th>SO2 (tons/yr)</th>
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<td>0.2068</td>
<td>0.0193</td>
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**Emission Factors-Sources**

- **NOx**: ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/04
- **CO**: ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/04
- **VOC**: ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/04
- **PM2.5**: ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/04
- **PM10**: ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/04
- **SO2**: ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/04

**SO2**: ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/04

**PM2.5**: ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/04

**PM10**: ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/04

- **NOx**: ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/04
- **CO**: ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/04
- **VOC**: ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/04
- **PM2.5**: ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/04
- **PM10**: ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/04
- **SO2**: ASSET data collected on unit 7 at New Windsor @ 87% torque and 94 Speed 5/5/04

**Ozone season monitoring 7/2/2008 at 96% load**

**Defiance Unit 9, 91% speed and on go 9/15/04**

**ANR NOx Test, 12/1/2007, Station 7551, Unit 7 - 3 Run Average**

**manufacturer**

**Reviewers**: Wyman Clark

**Date**: 12/21/2020
### Engine Information

<table>
<thead>
<tr>
<th>Unit</th>
<th>Manufacturer</th>
<th>Model</th>
<th>Fuel Usage (MMBtu/yr)</th>
<th>Rounded Fuel Usage (MMBtu/yr)</th>
<th>hP-HRS per year</th>
<th>Annual Operation (hr/yr)</th>
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### Emission Factors

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<th>Unit</th>
<th>NO(_x) (g/hp-hr)</th>
<th>CO (g/hp-hr)</th>
<th>VOC (lb/MMBtu)</th>
<th>PM(_x) (lb/MMBtu)</th>
<th>PM(_x) (lb/MMBtu)</th>
<th>PM Condensable (lb/MMBtu)</th>
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<th>SO(_x) (lb/MMBtu)</th>
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### Emissions

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<tr>
<th>Unit</th>
<th>NO(_x) ( tons/yr )</th>
<th>CO (lb/MMBtu)</th>
<th>VOC (lb/MMBtu)</th>
<th>PM(_x) (lb/MMBtu)</th>
<th>PM(_x) (lb/MMBtu)</th>
<th>PM Condensable (lb/MMBtu)</th>
<th>PM TOTAL (lb/MMBtu)</th>
<th>SO(_x) (lb/MMBtu)</th>
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Total includes significant and insignificant sources.
Appendix A: Emission Calculations
2019 Air Emission Inventory Report

Company Name: ANR Pipeline Company - Celestine Compressor Station
Address: 146 S. Celestine Road South, Celestine, IN 47521
TV SSM No.: 037-43099-00031
TV SPM No.: 037-43179-00031
Reviewer: Wyman Clark
Date: 12/21/2020

CELESTINE COMP STN Annual Emission Report for 2019
Report Generated: 5/4/2020

State: IN

TPY Criteria Emission Summary by Source

<table>
<thead>
<tr>
<th>Source</th>
<th>Carbon Monoxide</th>
<th>Nitrogen Oxides (NOx)</th>
<th>PM10</th>
<th>Sulfur Dioxide</th>
<th>VOC</th>
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<td><strong>127.24</strong></td>
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Report Printed: 5/04/2020

CELESTINE COMP STN Annual Emission Report for 2019
Report Generated: 5/4/2020

State: IN

Criteria & HAP Emission Summary

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<th>Criteria Pollutant</th>
<th>Lb/Yr</th>
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<td>Nitrogen Oxides (NOx)</td>
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<td>Sulfur Dioxide</td>
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Hazardous Air

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<td>Methylene Chloride</td>
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### Appendix A: Emission Calculations

#### 2017 Air Emission Inventory Report

**Company Name:** ANR Pipeline Company – Calexico Compressor Station  
**Address:** 145 S. Calexico Road South, Calexico, CA 92231  
**TV SSN No.:** 037-42999-0031  
**TV SWN No.:** 037-41792-0031  
**Reviewer:** Wyman Clarke  
**Date:** 12/01/2020

#### Emission Factors

**Sources**

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<th>Unit</th>
<th>Manufacturer Model</th>
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<th>CO (g/hp-hr)</th>
<th>VOC (lb/MMscf)</th>
<th>PM (lb/MMscf)</th>
<th>PM Condensable (lb/MMscf)</th>
<th>PM TOTAL (lb/MMscf)</th>
<th>SO2 (lbs/yr)</th>
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<td>38.168</td>
<td>38.168</td>
<td>10.16B</td>
<td>49.2762</td>
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<tr>
<td>7551-A-05</td>
<td>GMWA-8</td>
<td>6.24</td>
<td>11.16</td>
<td>172</td>
<td>38.168</td>
<td>38.168</td>
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**Total Emissions**  

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<th>Unit</th>
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<th>VOC (MMcf/yr)</th>
<th>PM (tons/yr)</th>
<th>PM Condensable (tons/yr)</th>
<th>PM TOTAL (tons/yr)</th>
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<td>0.4818</td>
<td>2.2917</td>
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**Total:** 72.3651  
**13.2360**  
**5.6440**  
**1.8100**  
**1.8100**  
**0.4818**  
**2.2917**  
**0.0293**  

**Note:** Total includes significant and insignificant sources.

#### Emission Factors-Source

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<td>VOC</td>
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**Note:** Emission Factors for PMv and PMc are for PM total.

#### Engine Information

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<th>Unit Manufacturer</th>
<th>Unit Model</th>
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<th>VOC (lb/MMscf)</th>
<th>PMv (lb/MMscf)</th>
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**Note:** Rounded Fuel Usage

### Appendix C: Engine Information

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**Note:** Rounded Fuel Usage
January 22, 2021

Ruth Jensen
ANR Pipeline Company - Celestine Station
13710 FNB Parkway
Omaha, NE 68154

Re: Public Notice
ANR Pipeline Company - Celestine Station
Permit Level: Title V - Significant Source
Modification (Minor PSD/EO) &
Title V - Significant Permit Modification
Permit Number: 037-43099-00031 &
037-43179-00031

Dear Ms. Ruth Jensen:

Enclosed is the Notice of 30-Day Period for Public Comment for your draft air permit.

Our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person. The Notice of 30-Day Period for Public Comment has also been sent to the OAQ Permits Branch Interested Parties List and, if applicable, your Consultant/Agent and/or Responsible Official/Authorized Individual.

The preliminary findings, including the draft permit, technical support document, emission calculations, and other supporting documents, are available electronically at:

IDEM's online searchable database: [http://www.in.gov/apps/idem/caats/](http://www.in.gov/apps/idem/caats/) . Choose Search Option by Permit Number, then enter permit 43099 & 43179

and

IDEM's Virtual File Cabinet (VFC): [http://www.IN.gov/idem](http://www.IN.gov/idem). Enter VFC in the search box, then search for permit documents using a variety of criteria, such as Program area, date range, permit #, Agency Interest Number, or Source ID.

The Public Notice period will begin the date the Notice is published on the IDEM Official Public Notice website. Publication has been requested and is expected within 2-3 business days. You may check the exact Public Notice begins and ends date here: [https://www.in.gov/idem/5474.htm](https://www.in.gov/idem/5474.htm)

Please note that as of April 17, 2019, IDEM is no longer required to publish the notice in a newspaper.

OAQ has submitted the draft permit package to the Jasper-Dubois County Contractual Public Library, 1116 Main Street in Jasper, IN 47546. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.
Please review the draft permit documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to Wyman Clark, Indiana Department of Environmental Management, Office of Air Quality, 100 N. Senate Avenue, Indianapolis, Indiana, 46204 or call (800) 451-6027, and ask for extension 2-0029 or dial (317) 232-0029.

Sincerely,

Kathy Bourquein

Kathy Bourquein
Permits Branch
Office of Air Quality

Enclosures
PN Applicant Cover Letter access via website 8/10/2020
January 22, 2021

To: Jasper-Dubois County Contractual Public Library

From: Jenny Acker, Branch Chief
Permits Branch
Office of Air Quality

Subject: Important Information to Display Regarding a Public Notice for an Air Permit

Applicant Name: ANR Pipeline Company – Celestine Station
Permit Number: 037-43099-00031 & 037-43179-00031

Enclosed is a copy of important information to make available to the public. This proposed project is regarding a source that may have the potential to significantly impact air quality. Librarians are encouraged to educate the public to make them aware of the availability of this information. The following information is enclosed for public reference at your library:

- Notice of a 30-day Period for Public Comment
- Draft Permit and Technical Support Document

You will not be responsible for collecting any comments from the citizens. Please refer all questions and request for the copies of any pertinent information to the person named below.

Members of your community could be very concerned in how these projects might affect them and their families. Please make this information readily available until you receive a copy of the final package.

If you have any questions concerning this public review process, please contact Joanne Smiddle-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185. Questions pertaining to the permit itself should be directed to the contact listed on the notice.
Notice of Public Comment

January 22, 2021
ANR Pipeline Company – Celestine Station
037-43099-00031 & 037-43179-00031

Dear Concerned Citizen(s):

You have been identified as someone who could potentially be affected by this proposed air permit. The Indiana Department of Environmental Management, in our ongoing efforts to better communicate with concerned citizens, invites your comment on the draft permit.

Enclosed is a Notice of Public Comment, which has posted on IDEM’s Public Notice website at https://www.in.gov/idem/5474.htm.

The application and supporting documentation for this proposed permit have been placed at the library indicated in the Notice. These documents more fully describe the project, the applicable air pollution control requirements and how the applicant will comply with these requirements.

If you would like to comment on this draft permit, please contact the person named in the enclosed Public Notice. Thank you for your interest in the Indiana’s Air Permitting Program.

Please Note: If you feel you have received this Notice in error, or would like to be removed from the Air Permits mailing list, please contact Joanne Smiddie-Brush with the Air Permits Administration Section at 1-800-451-6027, ext. 3-0185 or via e-mail at JBRUSH@IDEM.IN.GOV. If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.

Enclosure
PN AAA Cover Letter 2/28/2020
AFFECTED STATE NOTIFICATION OF PUBLIC COMMENT PERIOD
DRAFT INDIANA AIR PERMIT

January 22, 2021
A 30-day public comment period has been initiated for:

Permit Number:  037-43099-00031 & 037-43179-00031
Applicant Name:  ANR Pipeline Company – Celestine Station
Location:  Celestine, Dubois County, Indiana

The public notice, draft permit and technical support documents can be accessed via the IDEM Air Permits Online site at:
http://www.in.gov/ai/appfiles/idem-caats/

Questions or comments on this draft permit should be directed to the person identified in the public notice by telephone or in writing to:

Indiana Department of Environmental Management
Office of Air Quality, Permits Branch
100 North Senate Avenue
Indianapolis, IN  46204

Questions or comments regarding this email notification or access to this information from the EPA Internet site can be directed to Chris Hammack at chammack@idem.IN.gov or (317) 233-2414.

Affected States Notification 1/9/2017
Mail Code 61-53

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<th>KBOURQUE ANR PIPELINE CO CELESTINE COMPRESSOR STA 037-43099-00031 &amp; 037-43179-00031 (draft)</th>
<th>AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING</th>
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<tbody>
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<td>Name and address of Sender</td>
<td>Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204</td>
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<td>Type of Mail:</td>
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<th>Rest. Del. Fee</th>
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<td>1</td>
<td></td>
<td>Ruth Jensen  ANR Pipeline Co Celestine Compressor Station 13710 FNB Pkwy Omaha NE 681545200 (Source CAATS)</td>
<td></td>
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<tr>
<td>2</td>
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<td>Keith Mossman  Director ANR PIPELINE CO CELESTINE COMPRESSOR STA 2099 Holy Grove Rd Sardis MS 38666 (RO CAATS)</td>
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<tr>
<td>3</td>
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<td>Dubois County Commissioners One Courthouse Square Jasper IN 47546 (Local Official)</td>
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<td>John Blair  800 Adams Ave Evansville IN 47713 (Affected Party)</td>
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Total number of pieces Listed by Sender

Total number of Pieces Received at Post Office

Postmaster, Per (Name of Receiving employee)

The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50,000 per occurrence. The maximum indemnity payable on Express mail merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See Domestic Mail Manual R900, S913, and S921 for limitations of coverage on insured and COD mail. See International Mail Manual for limitations on coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.