NOTICE OF 30-DAY PERIOD FOR PUBLIC COMMENT

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

Preliminary Findings Regarding a Title IV (Acid Rain) Permit Renewal

for General Motors LLC Fort Wayne Assembly in Allen County

Significant Source Modification No.: 003-43453-00036
Significant Permit Modification No.: 003-43572-00036

The Indiana Department of Environmental Management (IDEM) has received an application from General Motors LLC Fort Wayne Assembly, located at 12200 Lafayette Center Road, Roanoke, IN 46783, for a significant modification of its Part 70 Operating Permit issued on December 2, 2019. If approved by IDEM’s Office of Air Quality (OAQ), this proposed modification would allow General Motors LLC Fort Wayne Assembly to make certain changes at its existing source. General Motors LLC Fort Wayne Assembly has applied to install two (2) natural gas-fired Powerhouse Boilers, identified as Boiler 1 and Boiler 2, each with a maximum heat input rate of 31.51 MMBtu/hour and forty-two (42) natural gas-fired heating units, with a total heat input capacity of 56.39 MMBtu/hour.

The applicant intends to construct and operate these 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:

Allen County Public Library
900 Library Plaza
Fort Wayne, Indiana 46082

A copy of the preliminary findings is available on the Internet at: [http://www.in.gov/ai/appfiles/idem-caats/](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/](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](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 numbers SSM No. 003-43453-00036 and SPM No. 003-43572-00036 in all correspondence.

**Comments should be sent to:**

Aida DeGuzman  
IDEM, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
(800) 451-6027, ask for Aida DeGuzman or (317) 233-4972  
Or dial directly: (317) 233-4972  
Fax: (317) 232-6749 attn: Aida DeGuzman  
E-mail: adeguzma@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](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](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, 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 Aida DeGuzman of my staff at the above address.

Josiah K. Balogun, Section Chief  
Permits Branch  
Office of Air Quality
Dear Mr. Wade:

General Motors LLC Fort Wayne Assembly was issued Part 70 Operating Permit Renewal No. T003-41020-00036 on December 2, 2019 for a stationary automobile and light duty truck assembly plant, located at 12200 Lafayette Center Road, Roanoke, IN 46783. An application requesting changes to this permit was received on November 5, 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 I: 40 CFR Part 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

The permit references the below listed attachments. 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 Part 60, Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units
Attachment B - 40 CFR Part 60, Subpart MM - Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations
Attachment C - 40 CFR Part 60, Subpart III - Standards of Performance for Compression Ignition Internal Combustion Engines
Attachment D - 40 CFR Part 60, Subpart JJJJ - Standards of Performance for Spark Ignition Internal Combustion Engines
Attachment F - 40 CFR Part 63, Subpart III - Surface Coating of Automobiles and Light-Duty Trucks NESHAP

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

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 Aida DeGuzman, 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) 233-4972 or (800) 451-6027, and ask for Aida DeGuzman or (317) 233-4972.

Sincerely,

Josiah K. Balogun, Section Chief
Permits Branch
Office of Air Quality

Attachments: Modified Permit and Technical Support Document

cc: File - Allen County
Allen County Health Department
U.S. EPA, Region 5
Compliance and Enforcement Branch
Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

General Motors, LLC - Fort Wayne Assembly
12200 Lafayette Center Road
Roanoke, Indiana 46783

(herin 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.

<table>
<thead>
<tr>
<th>Operation Permit No.: T003-41020-00036</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master Agency Interest ID.: 14990</td>
</tr>
</tbody>
</table>

Issued by/Original Signed by: Josiah Balogun, Section Chief, Permits Branch Office of Air Quality

Issuance Date: December 2, 2019

Expiration Date: December 2, 2024

Significant Permit Modification No.: 003-43572-00036

Issued by: Josiah Balogun, Section Chief, Permits Branch Office of Air Quality

Issuance Date: December 2, 2019

Expiration Date: December 2, 2024
## TABLE OF CONTENTS

**SECTION A  SOURCE SUMMARY** ................................................................. 8
  A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(14)][326 IAC 2-7-1(22)]
  A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]
  A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)][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** ......................................................... 21
  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(6)(D)]
  B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]
  B.8 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(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 2-7-15][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** ........................................... 31
  Emission Limitations and Standards [326 IAC 2-7-5(1)] ........................................... 31
    C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]
    C.2 Opacity [326 IAC 5-1]
    C.3 Open Burning [326 IAC 4-1][IC 13-17-9]
    C.4 Incineration [326 IAC 4-2][326 IAC 9-1-2]
    C.5 Fugitive Dust Emissions [326 IAC 6-4]
    C.6 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]
    C.7 Stack Height [326 IAC 1-7]
    C.8 Asbestos Abatement Projects [326 IAC 14-10][326 IAC 18][40 CFR 61, Subpart M]
  Testing Requirements [326 IAC 2-7-6(1)] ............................................................ 33
    C.9 Performance Testing [326 IAC 3-6]
  Compliance Requirements [326 IAC 2-1.1-11] ...................................................... 33
    C.10 Compliance Requirements [326 IAC 2-1.1-11]
Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)] ...................... 33
C.11 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)] [40 CFR 64] [326 IAC 3-8]
C.12 Instrument Specifications [326 IAC 2-1-11] [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] ................................. 34
C.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]
C.14 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]
C.15 Response to Excursions or Exceedances [40 CFR 64] [326 IAC 3-8] [326 IAC 2-7-5] [326 IAC 2-7-6]
C.16 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(3)] [326 IAC 2-7-19] ................ 37
C.17 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.18 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2] [326 IAC 2-3]
C.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 2-3] [40 CFR 64] [326 IAC 3-8]

Stratospheric Ozone Protection ................................................................................................. 40
C.20 Compliance with 40 CFR 82 and 326 IAC 22-1

SECTION D.1 EMISSION UNIT OPERATION CONDITIONS ................................................................. 41
Emission Limitations and Standards [326 IAC 2-7-5(1)] .............................................................. 41
D.1.1 Prevention of Significant Deterioration (PSD) - Best Available Control Technology for Nitrogen Oxides (NOx) [326 IAC 2-2]
D.1.2 NOx PSD Credit Limitations [326 IAC 2-2]
D.1.3 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]
D.1.4 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]
D.1.5 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]
D.1.6 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] .................. 43
D.1.7 Continuous Emission Monitoring [326 IAC 2-2] [326 IAC 3-5] [40 CFR 60, Subpart Db]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19] ............... 44
D.1.8 Record Keeping Requirements
D.1.9 Reporting Requirements

SECTION D.2 EMISSION UNIT OPERATION CONDITIONS ................................................................. 46
Emission Limitations and Standards [326 IAC 2-7-5(1)] .............................................................. 46
D.2.1 Prevention of Significant Deterioration (PSD) - Best Available Control Technology for Volatile Organic Compounds (VOC) [326 IAC 2-2-3]
D.2.2 Automobile and Light Duty Truck Coating Operations [326 IAC 8-2-2] [326 IAC 8-1-2]
D.2.3 Miscellaneous Metal Coating Operations [326 IAC 8-2-9]
D.2.4 Work Practices [326 IAC 8-2-9]
D.2.5 Particulate Emission Limitations, Work Practices, and Control Technologies [326 IAC 6-3-2(d)]
D.2.6 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

Compliance Determination Requirements [326 IAC 2-7-5(1)] .................................................... 47
D.2.7 PSD VOC BACT Compliance Equation
D.2.8 Volatile Organic Compounds (VOC) [326 IAC 8-1-2] [326 IAC 8-1-4]
D.2.9 PM and VOC Controls
D.2.10 Testing Requirements

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-5(1)] ....................... 50
D.2.11 Thermal Oxidizer Temperature [40 CFR 64]
D.2.12 Parametric Monitoring [40 CFR 64]
Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19] .......... 51
D.2.13 Record Keeping Requirements
D.2.14 Reporting Requirements

SECTION D.3 EMISSION UNIT OPERATION CONDITIONS ................................................................. 53

Emission Limitations and Standards [326 IAC 2-7-5(1)] .......................................................... 53
D.3.1 Prevention of Significant Deterioration (PSD) - Best Available Control Technology for Volatile Organic Compounds (VOC) [326 IAC 2-2-3]
D.3.2 Automobile and Light Duty Truck Coating Operations [326 IAC 8-2-2][326 IAC 8-1-2]
D.3.3 Particulate Emission Limitations, Work Practices, and Control Technologies [326 IAC 6-3-2(d)]
D.3.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

Compliance Determination Requirements [326 IAC 2-7-5(1)] .................................................... 54
D.3.5 VOC PSD BACT Compliance Equation
D.3.6 Volatile Organic Compounds (VOC)
D.3.7 PM and VOC Controls
D.3.8 Testing Requirements [326 IAC 2-1.1-11]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)] ............................. 55
D.3.9 Thermal Oxidizer Temperature [40 CFR 64]
D.3.10 Parametric Monitoring [40 CFR 64]
D.3.11 Monitoring [40 CFR 64]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19] .................... 56
D.3.12 Record Keeping Requirements
D.3.13 Reporting Requirements

SECTION D.4 EMISSION UNIT OPERATION CONDITIONS ................................................................ 58

Emission Limitations and Standards [326 IAC 2-7-5(1)] .......................................................... 58
D.4.1 Prevention of Significant Deterioration (PSD) - Best Available Control Technology for Volatile Organic Compounds (VOC) [326 IAC 2-2-3]
D.4.2 Automobile and Light Duty Truck Coating Operations [326 IAC 8-2-2][326 IAC 8-1-2]
D.4.3 Particulate Emission Limitations, Work Practices, and Control Technologies [326 IAC 6-3-2(d)]
D.4.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

Compliance Determination Requirements [326 IAC 2-7-5(1)] .................................................... 59
D.4.5 PSD VOC BACT Compliance Equation
D.4.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-2][326 IAC 8-1-4]
D.4.7 PM and VOC Controls
D.4.8 Testing Requirements [326 IAC 2-1.1-11]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)] ............................. 60
D.4.9 Catalytic Oxidizer Temperature [40 CFR 64]
D.4.10 Parametric Monitoring [40 CFR 64]
D.4.11 Monitoring [40 CFR 64]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19] .................... 61
D.4.12 Record Keeping Requirements
D.4.13 Reporting Requirements

SECTION D.5 EMISSION UNIT OPERATION CONDITIONS ................................................................. 63

Emission Limitations and Standards [326 IAC 2-7-5(1)] .......................................................... 63
D.5.1 Particulate Matter Limitations for Process Operations [326 IAC 6-3-2]
D.5.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]
SECTION D.6 EMISSION UNIT OPERATION CONDITIONS

Emission Limitations and Standards [326 IAC 2-7-5(1)] .......................................................... 64
D.6.1 Prevention of Significant Deterioration (PSD) Best Available Control Technology (BACT) [326 IAC 2-2-3][326 IAC 8-1-6]
D.6.2 Opacity Limits [326 IAC 5-1]
D.6.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

Compliance Determination Requirements [326 IAC 2-7-5(1)] .......................................................... 65
D.6.4 Testing Requirements [326 IAC 2-1.1-11]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19] ............... 65
D.6.5 Record Keeping Requirements

SECTION D.7 FACILITY OPERATION CONDITIONS

Emission Limitations and Standards [326 IAC 2-7-5(1)] .......................................................... 67
D.7.1 PM2.5 PSD Credit Limitations [326 IAC 2-2]
D.7.2 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]
D.7.3 Automobile and Light Duty Truck Coating Operations [326 IAC 8-2-2]
D.7.4 Miscellaneous Metal Coating Operations [326 IAC 8-2-9]
D.7.5 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]
D.7.6 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

Compliance Determination Requirements [326 IAC 2-7-5(1)]fuel transfer ......................................................... 68
D.7.7 Volatile Organic Compounds (VOC) Compliance Equation
D.7.8 Operation of Particulate and VOC Controls
D.7.9 Testing Requirements [326 IAC 2-1.1-11]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)] ..................... 71
D.7.10 Thermal Oxidizer Temperature [40 CFR 64]
D.7.11 Parametric Monitoring [40 CFR 64]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19] ............... 72
D.7.12 Record Keeping Requirements
D.7.13 Reporting Requirements

SECTION D.8 EMISSION UNIT OPERATION CONDITIONS

Emission Limitations and Standards [326 IAC 2-7-5(1)] .......................................................... 77
D.8.1 Prevention of Significant Deterioration (PSD) Minor Limit [326 IAC 2-2]
D.8.2 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 326 IAC 6-2-4]
D.8.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19] ............... 78
D.8.4 Record Keeping Requirements
D.8.5 Reporting Requirements

SECTION D.9 EMISSION UNIT OPERATION CONDITIONS

Emission Limitations and Standards [326 IAC 2-7-5(1)] .......................................................... 79
D.9.1 Gasoline Dispensing Facilities [326 IAC 8-4-6]
D.9.2 Leaks from Transports and Vapor Collection Systems; Records [326 IAC 8-4-9]
D.9.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

SECTION E.1 NSPS

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)] ............... 80
E.1.2 Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units NSPS [40 CFR Part 60, Subpart Db]
SECTION E.2 NSPS

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

E.2.2 Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations [40 CFR Part 60, Subpart MM]

SECTION E.3 NSPS

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

E.3.1 General Provisions Relating to New Source Performance Standards [40 CFR 60, Subpart A][326 IAC 12-1]
E.3.2 New Standards of Performance for Compression Ignition Internal Combustion Engines NSPS [40 CFR 60, Subpart III]

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 [40 CFR 60, Subpart A][326 IAC 12-1]
E.4.2 New Standards of Performance for Spark Ignition Internal Combustion Engines NSPS [40 CFR 60, Subpart JJJJ]

SECTION E.5 NESHAP

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


SECTION E.6 NESHAP

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

E.6.2 Surface Coating of Automobiles and Light-Duty Trucks NESHAP [40 CFR Part 63, Subpart III]
E.6.3 Surface Coating of Miscellaneous Metal Parts and Products NESHAP [40 CFR 63, Subpart MMMM]

SECTION E.7 NESHAP

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

E.7.2 National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR 63, Subpart ZZZZ]

SECTION E.8 NESHAP

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

E.8.2 National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers [40 CFR 63, Subpart DDDDD][326 IAC 20-95]
SECTION E.9 NSPS

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


E.9.2 Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR Part 60, Subpart Dc]

CERTIFICATION

EMERGENCY OCCURRENCE REPORT

Part 70 Quarterly Report

Part 70 Quarterly Report

Part 70 Quarterly Report

Part 70 Quarterly Report

Part 70 Quarterly Report

Part 70 Quarterly Report

Part 70 Quarterly Report

QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Attachment A -40 CFR Part 60, Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

Attachment B -40 CFR Part 60, Subpart MM - Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations

Attachment C -40 CFR Part 60, Subpart IIII - Standards of Performance for Compression Ignition Internal Combustion Engines

Attachment D - 40 CFR Part 60, Subpart JJJJJ - Standards of Performance for Spark Ignition Internal Combustion Engines


Attachment F - 40 CFR Part 63, Subpart IIII - Surface Coating of Automobiles and Light-Duty Trucks NESHAP


Attachment I - 40 CFR Part 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
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.3 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 automobile and light duty truck assembly plant.

- **Source Address:** 12200 Lafayette Center Road, Roanoke, Indiana 46783
- **General Source Phone Number:** 260-673-2345
- **SIC Code:** 3711 (Motor Vehicles and Passenger Car Bodies)
- **County Location:** Allen
- **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 Part 70 Source Definition [326 IAC 2-7-1(22)]

General Motors LLC has two plants in Roanoke, Indiana:

(a) General Motors assembly plant (ID # 003-00036), located at 12200 Lafayette Road, Roanoke.

(b) General Motors warehouse (ID # 003-00094), located at 12808 Stonebridge Road, Roanoke.

IDEM, OAQ finds that the assembly plant and the warehouse meet all three parts of the major source definition and, therefore, are part of the same major source.

This determination was made in this permitting action, Part 70 Operating Renewal No. T 003-41020-00036.

A.3 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:

**General Motors LLC – Lafayette Center Road**

(a) Facility-wide natural gas usage, including combustion units described as follows:

(1) One (1) natural gas/landfill gas fired boiler, identified as 004, constructed in 1992 and modified in 2011 to combust landfill gas, with a maximum heat input capacity of 228 MMBtu/hr for natural gas and landfill gas, using low NOx burners and flue gas recirculation as control, and exhausting to stack 01;

Under 40 CFR 60, Subpart Db, this boiler is considered an affected facility.

Under 40 CFR 63, Subpart DDDDD, this boiler is considered an affected facility.

(2) One (1) natural gas-fired boiler, identified as 005, constructed in 1993, with a maximum heat input capacity of 228 MMBtu/hr, using low NOx burners and flue gas recirculation as control, and exhausting to stack 01;

Under 40 CFR 60, Subpart Db, this boiler is considered an affected facility.
Under 40 CFR 63, Subpart DDDDD, this boiler is considered an affected facility.

(3) Fifty-six (56) space heaters and process heaters using natural gas, identified as 007, with a total heat input capacity of 50.6 MMBtu/hr, using no control, and exhausting to various stacks denoted as stack 13; and

(4) Twenty (20) natural gas fired air supply house burners, constructed in 2001, identified as MOD 1 through MOD 10 (each mod air supply house contains two burners), with emissions exhausted through their respective booth stacks denoted as SO4, and each burner heat input rated at 12.6 MMBtu per hour.

(5) Two (2) natural gas-fired Powerhouse Boilers, identified as Boiler 1 and Boiler 2, each with a maximum heat input rate of 31.51 MMBtu/hour, approved in 2020 for construction.

(6) Forty-two (42) natural gas-fired heating units, with a total heat input capacity of 56.39 MMBtu/hour, approved in 2020 for construction:

<table>
<thead>
<tr>
<th>Emission Unit/ID</th>
<th>Heat Input Capacity</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Space Heater</td>
<td>ACU 101</td>
<td>0.810 Administration Roof</td>
</tr>
<tr>
<td>Space Heater</td>
<td>ACU 102</td>
<td>0.540 Administration Roof</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-1</td>
<td>1.200 Pad Mounted on Ground</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-1</td>
<td>0.950 J Dock Column 34-37</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-2</td>
<td>0.950 J Dock Column 34-37</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-3</td>
<td>0.800 F Dock Column L47</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-4</td>
<td>0.950 E Dock Column L39-L40</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-5</td>
<td>0.800 D Dock Column L34-L35</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-6</td>
<td>0.950 C Dock Column L23-L25</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-7</td>
<td>0.800 104 Dock A-33</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-8</td>
<td>0.800 DOR325 Column K7</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-9</td>
<td>0.800 DOR326 Column K7</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-10</td>
<td>0.950 N. of Test Door Col. G2</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-11</td>
<td>0.800 S. of Test Door Col. E1</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-12</td>
<td>0.800 N Dock Column U15</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-13</td>
<td>0.800 M Dock Column X7</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-14</td>
<td>0.800 Old Tin Shop Dock Col. C1</td>
</tr>
<tr>
<td>Space Heater</td>
<td>ASH-135</td>
<td>4.754 Roof Near Column F-8</td>
</tr>
<tr>
<td>Space Heater</td>
<td>ASH-138</td>
<td>6.867 Roof Near Column G-6</td>
</tr>
<tr>
<td>Space Heater</td>
<td>ASH-3</td>
<td>5.811 Paint Shop Roof Near Column S2</td>
</tr>
<tr>
<td>Space Heater</td>
<td>ASH-4</td>
<td>5.811 Paint Shop Roof Near Column S8</td>
</tr>
<tr>
<td>Space Heater</td>
<td>ASH-5</td>
<td>0.740 Paint Shop Roof Near Column S3</td>
</tr>
<tr>
<td>Space Heater</td>
<td>ASH-6</td>
<td>0.740 Paint Shop Roof Near Column S7</td>
</tr>
<tr>
<td>Space Heater</td>
<td>ASH-33</td>
<td>3.170 Paint Shop Roof Near Column U1</td>
</tr>
<tr>
<td>Space Heater</td>
<td>ASH-34</td>
<td>3.170 Paint Shop Roof Near Column U3</td>
</tr>
</tbody>
</table>
### Emission Unit/ID, Heat Input Capacity, Location

<table>
<thead>
<tr>
<th>Emission Unit/ID</th>
<th>Heat Input Capacity</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Space Heater</td>
<td>6.075 MMBtu/hour</td>
<td>Paint Shop Roof Near Column U7 Powerhouse Generator Rm</td>
</tr>
<tr>
<td>Space Heater</td>
<td>0.250 MMBtu/hour</td>
<td>Powerhouse Generator Rm</td>
</tr>
<tr>
<td>Space Heater</td>
<td>0.250 MMBtu/hour</td>
<td>Powerhouse Generator Rm</td>
</tr>
<tr>
<td>Space Heater</td>
<td>0.250 MMBtu/hour</td>
<td>Powerhouse Generator Rm</td>
</tr>
<tr>
<td>Space Heater</td>
<td>0.250 MMBtu/hour</td>
<td>Cooling Tower Pump Rm</td>
</tr>
<tr>
<td>Space Heater</td>
<td>0.250 MMBtu/hour</td>
<td>Cooling Tower Pump Rm</td>
</tr>
<tr>
<td>Space Heater</td>
<td>0.250 MMBtu/hour</td>
<td>Cooling Tower Pump Rm</td>
</tr>
<tr>
<td>Space Heater</td>
<td>0.250 MMBtu/hour</td>
<td>WWT Filter Press Rm</td>
</tr>
<tr>
<td>Space Heater</td>
<td>0.250 MMBtu/hour</td>
<td>Waste Treatment Area</td>
</tr>
<tr>
<td>Space Heater</td>
<td>0.250 MMBtu/hour</td>
<td>Waste Treatment Area</td>
</tr>
<tr>
<td>Space Heater</td>
<td>0.400 MMBtu/hour</td>
<td>Filter Press Dumpster Room</td>
</tr>
<tr>
<td>Space Heater</td>
<td>0.400 MMBtu/hour</td>
<td>Filter Press Dumpster Room</td>
</tr>
<tr>
<td>Space Heater</td>
<td>0.400 MMBtu/hour</td>
<td>NW Storage Overhead Door</td>
</tr>
<tr>
<td>Space Heater</td>
<td>0.400 MMBtu/hour</td>
<td>Oil/Grease Room next to N. Overhead Door</td>
</tr>
<tr>
<td>Space Heater</td>
<td>0.400 MMBtu/hour</td>
<td>West Overhead Door</td>
</tr>
</tbody>
</table>

(b) One (1) ELPO Dipping System, identified as 006, constructed in 1985, using natural gas thermal incinerators identified as #1 through #3 on the drying ovens as VOC control, and exhausting to stack 02;

Under 40 CFR 60, Subpart MM, this is considered an affected facility.

Under 40 CFR 63, Subpart IIII, this is considered an affected facility.

(c) One (1) Underbody Robotic Sealer Operation, identified as Stone Guard Sealer, approved in 2012 for operation, using no controls, and exhausting indoors;

Under 40 CFR 63, Subpart IIII, this unit is considered an affected facility.

(d) One (1) Primer Surfacer System, identified as 010, constructed in 1994 and modified in 2010, using a natural gas fired regenerative thermal oxidizer with a maximum heat input capacity of 16 MMBtu/hr as VOC control, and water wash as PM control, and exhausting to stack 03. The Primer Surfacer System also includes applicators that purge internally through valves located inside the robot into a gun box. Additionally, the robotic bells purge into a gun box within the booth. The booth is an enclosed manufacturing unit, which is directed to the control device described above;

Under 40 CFR 60, Subpart MM, this is considered an affected facility.

Under 40 CFR 63, Subpart IIII, this is considered an affected facility.
(e) One (1) Topcoat System, identified as 008, constructed in 1985, approved in 2015 for modification, using ten (10) natural gas fired catalytic oxidizers identified as #1 - #10 on the drying ovens as VOC control, with the maximum heat input capacity of oxidizers #1 - #7 being 7.5 MMBtu/hr each, and the maximum heat input capacity of oxidizers #8 - #10 being 9.5 MMBtu/hr each, using waterwash as PM control, and exhausting to stack 04;

Under 40 CFR 60, Subpart MM, this is considered an affected facility.

Under 40 CFR 63, Subpart III, this is considered an affected facility.

(f) Miscellaneous sealers/adhesives/additives/solvents, identified as 009, constructed in 1985, using no controls, and exhausting to stacks 07 and 08;

Under 40 CFR 63, Subpart III, this is considered an affected facility.

(g) One (1) Final Repair Operation, identified as 012, constructed in 1985, using dry filters for particulate control, and exhausting to stack 06 and spot repair stalls;

Under 40 CFR 63, Subpart III, this is considered an affected facility.

(h) One (1) Maintenance Paint Operation, identified as 013, constructed in 1985, using no control, and exhausting to stack 10;

Under 40 CFR 63, Subpart III, this is considered an affected facility.

(i) One (1) Gasoline Fill Operation, identified as 014, constructed in 1985, including tanks 8 and 9, each with a capacity of 20,000 gallons. The vehicles being fueled is equipped with an Onboard Refueling Vapor Recovery (ORVR) System as VOC control; and

Under 40 CFR 60, Subpart JJJJ, these four (4) generators are considered affected facilities.

Under 40 CFR 63, Subpart ZZZZ, these four (4) generators are considered affected facilities.

(k) The following equipment approved in 2015 for construction to accommodate the T1 Full Size Truck Project:

(1) One (1) Electrodeposition (ELPO Dipping) System, identified as 20, constructed in 2015 and approved in 2017 for modification, using one (1) natural gas-fired regenerative thermal oxidizer (RTO), with a maximum heat input capacity of 10 million British thermal units per hour (MMBtu/hr) as VOC control for the tank and oven, and exhausting through stack 020. The ELPO oven has 14 zones with a combined maximum heat input capacity of 79.5 MMBtu/hr.

Under 40 CFR 60, Subpart MM, this is considered an affected facility.

Under 40 CFR 63, Subpart III, this is considered an affected facility.

(2) Miscellaneous Sealers and Adhesives application, identified as 022, approved in 2015 for construction, using the Primer Surfacer, 010 RTO for VOC control, and exhausting to stacks 07 and 08.
(3) Miscellaneous natural gas-fired equipment, identified as 021, with no controls.

(i) Five (5) ASH Paint Heaters, each with a maximum heat input capacity of 12.5 MMBtu/hr, all venting inside the building.

(ii) Three (3) Hot Water Generators, located at the paint area, each with a maximum heat input capacity of 8.0 MMBtu/hr, all venting through stack D 21a.

(iii) One (1) Locker Room Heater, located at the paint area, with a maximum heat input capacity of 0.875 MMBtu/hr, venting inside the building.

(iv) One (1) Door Heater, located at the paint area, with a maximum heat input capacity of 0.058 MMBtu/hr, venting inside the building.

(v) Eight (8) Unit Heaters, located at the paint area, each with a maximum heat input capacity of 0.058 MMBtu/hr, all venting inside the building.

(vi) Fourteen (14) ELPO Oven Convection Zones, each with a maximum heat input capacity of 3.0 MMBtu/hr, all venting through stack 020.

(vii) Fourteen (14) ELPO Oven Radiant Zones, each with a maximum heat input capacity of 3.0 MMBtu/hr, all venting through stack 020.

(viii) Forty-three (43) Dock Door Heaters, located at the Body Shop and Material Room, thirty-seven (37) with a maximum heat input capacity of 0.40 MMBtu/hr, each, and six (6) with a maximum heat input capacity of 0.60 MMBtu/hr, each, all venting inside the building.

(ix) Twenty-six (26) ASH Heaters, located at the Body Shop and Material Room, twenty (20) with a maximum heat input capacity of 1.805 MMBtu/hr, each, four (4) with a maximum heat input capacity of 1.9 MMBtu/hr, each, and two (2) with a maximum heat input capacity of 2.0 MMBtu/hr, each, all venting inside the building.

(l) Four (4) natural gas-fired dock door heaters, identified as DUH-56, DUH-88, DUH-40, and DUH-57, approved in 2016 for construction, each with a maximum heat input capacity of 0.40 MMBtu/hr, and exhausting indoors.

(m) Fourteen (14) natural gas-fired space heaters, identified as UH-1 through UH-14, approved in 2016 for construction, each with a maximum heat input capacity of 0.40 MMBtu/hr, and exhausting indoors.

(n) One (1) natural gas-fired boiler, identified as BU-2, approved in 2016 for construction, with a maximum heat input capacity of 0.645 MMBtu/hr, and exhausting indoors. [Under 40 CFR 63, Subpart DDDDD, this boiler is considered an affected facility.]

(o) Forty-two (42) natural gas-fired Paint Shop & Body Shop Building Air Handling Units, exhausting indoors. The following units utilize steam from boilers ID 004 and 005 and are currently not listed in the permit since they do not emit any air pollutant:

(1) Paint Bld ASH #3, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 6.631 MMBtu/hr.

(2) Paint Bld ASH #4, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 6.631 MMBtu/hr.
(3) Paint Bld ASH #5, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.266 MMBtu/hr.

(4) Paint Bld ASH #6, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.266 MMBtu/hr.

(5) Paint Bld ASH #16, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.989 MMBtu/hr.

(6) Paint Bld ASH #17, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.989 MMBtu/hr.

(7) Paint Bld ASH #18, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 6.631 MMBtu/hr.

(8) Paint Bld ASH #19, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 8.0 MMBtu/hr.

(9) Paint Bld ASH #20, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 8.0 MMBtu/hr.

(10) Paint Bld ASH #21, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 6.631 MMBtu/hr.

(11) Paint Bld ASH #33, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 3.617 MMBtu/hr.

(12) Paint Bld ASH #34, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 3.617 MMBtu/hr.

(13) Paint Bld ASH #35, approved for construction in 2016, with a maximum heat input capacity of 4.219 MMBtu/hr.

(14) Paint Bld ASH #36, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.989 MMBtu/hr.

(15) Paint Bld ASH #37, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.447 MMBtu/hr.

(16) Bodyshop ACU #1, approved in 2016 for construction, with a maximum heat input capacity of 0.75 MMBtu/hr.

(17) Bodyshop ACU #2, approved in 2016 for construction, with a maximum heat input capacity of 0.35 MMBtu/hr.
(18) Bodyshop ACU #3, approved in 2016 for construction, with a maximum heat input capacity of 0.35 MMBtu/hr.

(19) Mod Obs ASH #1, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 4.0 MMBtu/hr.

(20) Mod Obs ASH #2, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas with a maximum heat input capacity of 24.0 MMBtu/hr.

(21) Mod Obs ASH #3, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 4.0 MMBtu/hr.

(22) Mod Obs ASH #4, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 4.0 MMBtu/hr.

(23) Mod Obs ASH #5, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 4.0 MMBtu/hr.

(24) Mod Obs ASH #6, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 4.0 MMBtu/hr.

(25) Mod Obs ASH #7, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 4.0 MMBtu/hr.

(26) Mod Obs ASH #8, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 4.0 MMBtu/hr.

(27) Mod Obs ASH #9, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 4.0 MMBtu/hr.

(28) Mod Obs ASH #10, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 4.0 MMBtu/hr.

(29) 206 ASH, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 7.5 MMBtu/hr.

(30) Prime Cleanroom ASH, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 3.0 MMBtu/hr.

(31) 216 ASH #1 (SE), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.5 MMBtu/hr.
(32) 216 ASH #2 (SW), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.5 MMBtu/hr.

(33) 216 ASH #3 (NE), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.5 MMBtu/hr.

(34) 216 ASH #4 (NW), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.5 MMBtu/hr.

(35) 217 ASH #1 (SE), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 2.0 MMBtu/hr.

(36) 217 ASH #2 (SW), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 2.0 MMBtu/hr.

(37) 217 ASH #3 (NW), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.5 MMBtu/hr.

(38) 217 ASH #4 (NE), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.5 MMBtu/hr.

(39) 241 ASH #1 (SE), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 3.0 MMBtu/hr.

(40) 241 ASH #2 (SW), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 8.0 MMBtu/hr.

(41) 243 ASH #1 (NE), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 3.0 MMBtu/hr.

(42) 243 ASH #2 (NW), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 8.0 MMBtu/hr.

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 has the following insignificant activities, as defined in 326 IAC 2-7-1(21).

(a) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring, buffing, polishing, abrasive blasting, pneumatic conveying, and woodworking operations [326 IAC 6-3-2].

(b) One (1) Body Shop - Grinding and Machining, associated with the T1 Full Size Truck Project, approved in 2015 for construction.

(c) One (1) Pre-Treatment System, associated with the T1 Full Size Truck Project, approved in
(d) Storage tanks, identified as 1 (solvent/thinner), 2 (solvent/thinner), 7 (automatic transmission fluid), and two (2) 18,900 gallon waste purge solvent tanks, all constructed after July 23, 1984.

Under 40 CFR 63, Subpart III, tanks 1, 2, and the two waste purge solvent tank are considered affected facilities. Tank 7 is not subject to 40 CFR 63, Subpart III.

(e) Space heaters, process heaters, or boilers using natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.

(f) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.

(g) The following VOC and HAP storage containers:

(1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughput less than 12,000 gallons.

Under 40 CFR 63, Subpart EEEE, these storage tanks storing “Organic liquids” as defined in 40 CFR 63.2406 are considered an affected facility.

(2) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.

Under 40 CFR 63, Subpart EEEE, these storage tanks storing “Organic liquids” as defined in 40 CFR 63.2406 are considered an affected facility.

(h) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment [326 IAC 6-3-2].

(i) Closed loop heating and cooling systems.

(j) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.

(k) Any operation using aqueous solutions containing less than 1% by weight of VOCs, excluding HAPs.

(l) Noncontact cooling tower systems with natural draft cooling towers not regulated under a NESHAP.

(m) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.

(n) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection or trim material recovery device such as a bag filter or cyclone [326 IAC 6-3-2].

(o) Paved and unpaved roads and parking lots with public access.

(p) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.

(q) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
(r) On-site fire and emergency response training approved by the department.

(s) Diesel generators not exceeding 1600 horsepower:

(1) One (1) diesel-fired emergency generator, identified as Emergency Generator 2, constructed in 1985, with a maximum output rating of 415 horsepower, using no controls, and exhausting through Stack EG2.

Under 40 CFR 63, Subpart ZZZZ, Emergency Generator 2 is considered an affected facility.

(2) One (1) diesel-fired emergency generator, identified as Emergency Generator 3, constructed in 1985, with a maximum output rating of 415 horsepower, using no controls, and exhausting through Stack EG3.

Under 40 CFR 63, Subpart ZZZZ, Emergency Generator 3 is considered an affected facility.

(3) One (1) diesel-fired emergency generator, identified as Emergency Generator 5, constructed in 1985, with a maximum output rating of 415 horsepower, using no controls, and exhausting through Stack EG5.

Under 40 CFR 63, Subpart ZZZZ, Emergency Generator 5 is considered an affected facility.

(4) One (1) diesel-fired emergency generator, identified as Emergency Generator PHDZL, constructed in 1985, with a maximum output rating of 1515 horsepower, using no controls, and exhausting through Stack EGPHDZL.

Under 40 CFR 63, Subpart ZZZZ, Emergency Generator PHDZL is considered an affected facility.

(t) Other emergency equipment as follows: Stationary fire pumps.

(1) One (1) diesel-fired stationary fire pump engine, identified as Fire Pump 1, constructed in 1985, with a maximum output rating of 302 horsepower, using no controls, and exhausting through Stack FP1.

Under 40 CFR 63, Subpart ZZZZ, Fire Pump 1 is considered an affected facility.

(2) One (1) diesel-fired stationary fire pump engine, identified as Fire Pump 2, constructed in 2014, with a maximum output rating of 121 horsepower, using no controls, and each exhausting through Stack FP2.

Under 40 CFR 60, Subpart IIII, Fire Pump 2 is considered an affected facility. Under 40 CFR 63, Subpart ZZZZ, Fire Pump 2 is considered an affected facility.

(u) A laboratory as defined in 326 IAC 2-7(21)(G).

(v) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.

(w) Other activities or categories with emissions less than insignificant thresholds:

(1) Fluorocarbon R-134A Storage Tanks (Main Plant);
(2) Sulfuric Acid Storage Tank (Wastewater Treatment Plant);

(3) Grinding Operations (Light Duty Truck Body Shop) [326 IAC 6-3-2];

(4) Pre-phosphate Washers (Light Duty Truck Assembly Line);

(5) Multi-stage Phosphate Systems (Light Duty Truck Assembly Line);

(6) Feather Dusters (Light Duty Truck Assembly Line);

(7) Vehicle washers prior to shipping (Light Duty Truck Assembly Line);

(8) Spot sanding and painting (Light Duty Truck Assembly Line);

(9) Bulk Storage Material Transferring Equipment; i.e. pumps, valves, pipes, flanges, etc. (Light Duty Truck Assembly Line);

(10) Vehicle Fluid Fill Operations; i.e. engine oil, windshield, transmission, engine coolant, power steering fluid, brake fluid, and air conditioning refrigerant (Light Duty Truck Assembly Line);

(11) Engine Sub-assembly Lines (Light Duty Truck Assembly Line);

(12) Radiator Sub-assembly Lines (Light Duty Truck Assembly Line);

(13) Trim Assembly Lines (Light Duty Truck Assembly Line);

(14) Maintenance Shops (Light Duty Truck Assembly Line);

(15) Gasoline/Diesel Tank Assembly Areas (Light Duty Truck Assembly Line);

(16) Mechanical Repair Stalls (Light Duty Truck Assembly Line);

(17) Final Vehicle Inspection (Care Building);

(18) Wastewater Treatment Plant;

(19) Storage Tanks;

(20) Body Washers;

(21) Mig Welding [326 IAC 6-3-2]; and

(22) Diesel Pumps.

(x) Twelve (12) parts washers that use water-based material containing no VOC or HAPs.

(y) One (1) diesel-fired emergency generator, identified as Emergency Generator 9, constructed in 2016, approved in 2018 for construction, with a maximum output rating of 689 horsepower, EPA Certified engine with 2.53 L/cylinder displacement, using no controls, and exhausting through Stack EG9.

Under 40 CFR 60, Subpart IIII, Emergency Generator 9 is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, Emergency Generator 9 is considered an affected facility.

(z) One (1) natural gas-fired emergency generator, identified as Emergency Generator 6,
constructed in 2016, approved in 2018 for construction, with a maximum output rating of 194 horsepower, EPA Certified engine with 0.68 L/cylinder displacement, using no controls, and exhausting through Stack EG6.

Under 40 CFR 60, Subpart JJJJ, Emergency Generator 6 is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, Emergency Generator 6 is considered an affected facility.

(aa) One (1) natural gas-fired emergency generator, identified as Emergency Generator 7, constructed in 2017, approved in 2018 for construction, with a maximum output rating of 131.6 horsepower, EPA Certified engine with 0.68 L/cylinder displacement, using no controls, and exhausting through Stack EG7.

Under 40 CFR 60, Subpart JJJJ, Emergency Generator 7 is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, Emergency Generator 7 is considered an affected facility.

(bb) One (1) natural gas-fired emergency generator, identified as Emergency Generator 8, constructed in 2017, approved in 2018 for construction, with a maximum output rating of 131.6 horsepower, EPA Certified engine with 0.68 L/cylinder displacement, using no controls, and exhausting through Stack EG8.

Under 40 CFR 60, Subpart JJJJ, Emergency Generator 8 is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, Emergency Generator 8 is considered an affected facility.

(cc) Repair activities: Heat exchanger cleaning and repair.

(dd) Methanol windshield washer fluid storage tank, with a capacity of 10,000 gallons.

Under 40 CFR 63, Subpart EEEE, this storage tank storing “Organic liquids” as defined in 40 CFR 63.2406 is considered an affected facility.

General Motors LLC - Stonebridge Road

(a) Four (4) diesel-fired emergency generators, identified as LOC Emergency Generators 1-4, each with a maximum output rating of 909 HP, constructed in 2018 with no controls, exhausting outdoors.

Under 40 CFR 60, Subpart IIII, this generator is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, this generator is considered an affected facility.

(b) Five (5) natural gas-fired heated make-up air units, identified as MAU-1 through MAU-5, constructed in 2018, with a combined heat input capacity of 13.48 MMBtu per hour, uncontrolled, and exhausting outdoors.

(c) Four (4) Diesel fuel storage tanks, identified as T1 through T4, constructed in 2018, each with a maximum capacity of 550 gallons.

(d) Paved Roads

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, T003-41020-00036, 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 V  
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) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:
DRAFT

(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.

(b) 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:

(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.

(c) 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).

(d) 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 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

(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 T003-41020-00036 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 combined permit, all previous registrations and permits are superseded by this combined new source review and 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
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 V
   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.

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

Entire Source

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

C.1  Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2  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 as determined in 326 IAC 5-1-4.

(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.3  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.4  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.5  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.6  Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the attached plan as in Attachment A. The provisions of 326 IAC 6-5 are not federally enforceable.

C.7  Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

C.8  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.9 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.10 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.11 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)][40 CFR 64][326 IAC 3-8]

(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 within 90 days of 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) For monitoring required by CAM, at all times, the Permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(d) For monitoring required by CAM, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

C.12 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.13 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.14 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.15 Response to Excursions or Exceedances [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5][326 IAC 2-7-6]
(I) Upon detecting an excursion where a response step is required by the D Section, or an exceedance of a limitation, not subject to CAM, 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.

(II) CAM Response to excursions or exceedances.

(a) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the 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 emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(b) 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, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

(b) If the Permittee identifies a failure to achieve compliance with an emission limitation, subject to CAM, or standard, subject to CAM, for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify the IDEM, OAQ and, if necessary, submit a proposed significant permit modification to this permit.
to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

(c) Based on the results of a determination made under paragraph (II)(a)(2) of this condition, the EPA or IDEM, OAQ may require the Permittee to develop and implement a Quality Improvement Plan (QIP). The Permittee shall develop and implement a QIP if notified to in writing by the EPA or IDEM, OAQ.

(d) Elements of a QIP:
The Permittee shall maintain a written QIP, if required, and have it available for inspection. The plan shall conform to 40 CFR 64.8 b (2).

(e) If a QIP is required, the Permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the IDEM, OAQ if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.

(f) Following implementation of a QIP, upon any subsequent determination pursuant to paragraph (II)(c) of this condition the EPA or the IDEM, OAQ may require that the Permittee make reasonable changes to the QIP if the QIP is found to have:

   (1) Failed to address the cause of the control device performance problems; or
   (2) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(g) Implementation of a QIP shall not excuse the Permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.

(h) CAM recordkeeping requirements.

   (1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)(c) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

   (2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

C.16 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.17 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
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

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.18 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 the 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(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 the 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.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)][326 IAC 2-1.1-11][326 IAC 2-2][326 IAC 2-3][40 CFR 64][326 IAC 3-8]

(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.

On and after the date by which the Permittee must use monitoring that meets the requirements
of 40 CFR Part 64 and 326 IAC 3-8, the Permittee shall submit CAM reports to the IDEM, OAQ.

A report for monitoring under 40 CFR Part 64 and 326 IAC 3-8 shall include, at a minimum, the
information required under paragraph (a) of this condition and the following information, as
applicable:

(1) Summary information on the number, duration and cause (including unknown cause, if
applicable) of excursions or exceedances, as applicable, and the corrective actions
taken;

(2) Summary information on the number, duration and cause (including unknown cause, if
applicable) for monitor downtime incidents (other than downtime associated with zero
and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as
specified in Section C-Response to Excursions or Exceedances. Upon completion of a
QIP, the owner or operator shall include in the next summary report documentation that
the implementation of the plan has been completed and reduced the likelihood of
similar levels of excursions or exceedances occurring.

The Permittee may combine the Quarterly Deviation and Compliance Monitoring Report and a
report pursuant to 40 CFR 64 and 326 IAC 3-8.

(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
DRAFT

(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.

Stratospheric Ozone Protection

C.20 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 EMISSION UNIT OPERATION CONDITIONS

Emission Unit Description:

(a) Facility-wide natural gas usage, including combustion units described as follows:

(1) One (1) natural gas/landfill gas fired boiler, identified as 004, constructed in 1992 and modified in 2011 to combust landfill gas, with a maximum heat input capacity of 228 MMBtu/hr for natural gas and landfill gas, using low NOX burners and flue gas recirculation as control, and exhausting to stack 01;

Under 40 CFR 60, Subpart Db, this boiler is considered an affected facility.

Under 40 CFR 63, Subpart DDDDD, this boiler is considered an affected facility.

(2) One (1) natural gas-fired boiler, identified as 005, constructed in 1993, with a maximum heat input capacity of 228 MMBtu/hr, using low NOX burners and flue gas recirculation as control, and exhausting to stack 01;

Under 40 CFR 60, Subpart Db, this boiler is considered an affected facility.

Under 40 CFR 63, Subpart DDDDD, this boiler is considered an affected facility.

(3) Fifty-six (56) space heaters and process heaters using natural gas, identified as 007, with a total heat input capacity of 50.6 MMBtu/hr, using no control, and exhausting to various stacks denoted as stack 13; and

(4) Twenty (20) natural gas fired air supply house burners, constructed in 2001, identified as MOD 1 through MOD 10 (each mod air supply house contains two burners), with emissions exhausted through their respective booth stacks denoted as SO4, and each burner heat input rated at 12.6 MMBtu per hour.

(5) Two (2) natural gas-fired Powerhouse Boilers, identified as Boiler 1 and Boiler 2, each with a maximum heat input rate of 31.51 MMBtu/hour, approved in 2020 for construction.

Under 40 CFR 60, Subpart Dc, these boilers are considered affected facilities.

Under 40 CFR 63, Subpart DDDDD, these boilers are considered affected facilities.

(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 Prevention of Significant Deterioration (PSD) - Best Available Control Technology for Nitrogen Oxides (NOx) [326 IAC 2-2]

Pursuant to Permit PSD (02) No. 1575, issued on November 30, 1984; PSD CP (003) No. 2000, issued on September 9, 1991; and 326 IAC 2-2-3 (Control Technology Review; Requirements), the Permittee shall comply with the following PSD BACT:
(a) The NOx emissions from Boiler 004 shall not exceed 0.098 pound/MMBtu input from the combustion of natural gas.

(b) The use of Flue gas recirculation and low NOx burners are considered PSD BACT for this emission unit.

Compliance with this limitation, shall satisfy the requirements of 326 IAC 2-2, PSD.

**D.1.2 NOx PSD Credit Limitations [326 IAC 2-2]**

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the Permittee shall comply with the following:

(a) The NOx emissions from Boiler 005 shall not exceed 100 pounds per million cubic feet (lb/MMCF) of natural gas.

(b) The total natural gas usage to Boiler 005 shall not exceed 1,902.2 million cubic feet (MMCF) per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits is equivalent to 95.1 tons of NOx emissions per year, with a reduction of 65 tons per year of NOx from the removal of two (2) coal-fired boilers Nos. 1 and 2, shall limit the net emission increase from this boiler to less than the PSD significant emission rate (SER) of 40 tons of NOx per year and renders the requirements of 326 IAC 2-2 Prevention of Significant Deterioration not applicable to the 1992 modification permitted under CP003-2524.

**D.1.3 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]**

In order to render the requirements of 326 IAC 2-2 not applicable, and pursuant to SSM No. 003-12830-00036, issued March 5, 2001, the Permittee shall comply with the following:

(a) NOx emissions from the twenty (20) natural gas-fired burners (MOD 1 - MOD 10) shall not exceed 100 pounds of NOx per million standard cubic feet of natural gas.

(b) The natural gas usage for the twenty (20) natural gas-fired burners (MOD 1 - MOD 10) shall not exceed six hundred ten (610) million cubic feet of natural gas per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits shall limit the NOx emissions from the twenty (20) natural gas-fired burners (MOD 1 - MOD 10) to less than forty (40) tons per year and render the requirements of 326 IAC 2-2, PSD not applicable to this 2001 modification.

**D.1.4 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]**

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the Permittee shall comply with the following:

1. The natural gas usage to Powerhouse Boilers, identified as Boiler 1 and Boiler 2, shall not exceed 309.744 MMCF (309,744,000 cubic feet) per twelve (12) consecutive month period with compliance determined at the end of each month.

2. The nitrogen oxides (NOx) emissions from the Powerhouse Boilers, identified as Boiler 1 and Boiler 2 shall not exceed 100 pounds per million cubic feet (lb/MMCF) of natural gas.

Compliance with these limits, shall limit emissions from Boiler 1 and Boiler 2, combined with the potential to emit NOx from the other forty (42) natural gas-fired heating units (ACU-101, ACU-102, HV-1 through HV-14, ASH-3 through ASH-6, ASH 33 though ASH-35, ASH-135, ASH-138 and UH-15 though UH-30) shall limit NOx emissions to less than 40 tons per year and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2020 modification.
D.1.5 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), particulate matter (PM) emissions from the boilers shall not exceed the limits in pound per million Btu (lb/MMBtu) heat input listed in the following table:

<table>
<thead>
<tr>
<th>Emission Unit/ID</th>
<th>Heat Input Rate (MMBtu/hour)</th>
<th>PM Emission Limits (lb/MMBtu)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler 004</td>
<td>228</td>
<td>0.22</td>
</tr>
<tr>
<td>Boiler 005</td>
<td>228</td>
<td>0.20</td>
</tr>
<tr>
<td>Powerhouse Boiler 1</td>
<td>31.51</td>
<td>0.21</td>
</tr>
<tr>
<td>Powerhouse Boiler 2</td>
<td>31.51</td>
<td>0.21</td>
</tr>
</tbody>
</table>

D.1.6 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for Boiler 004, Boiler 005, Boiler 1 and Boiler 2. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

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

D.1.7 Continuous Emission Monitoring [326 IAC 2-2][326 IAC 3-5][40 CFR 60, Subpart Db]

(a) Pursuant to 326 IAC 2-2, 326 IAC 3-5, and 326 IAC 12, the Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment and shall continuously monitor and record the following parameters to demonstrate compliance with Condition D.1.1 and D.1.5 for Boilers 004 and 005:

(1) Nitrogen oxide concentration for Boilers 004 and 005, and

(2) Opacity for Boilers 004 and 005, unless the Permittee uses one of the following to meet compliance monitoring requirements:

(A) Boiler 004 and Boiler 005 use a PM CEMS to monitor PM emissions; or

(B) Boiler 004 and Boiler 005 burn only liquid (excluding residual oil) or gaseous fuels with potential SO2 emissions of 0.060 lb/MMBtu or less and do not use a post-combustion technology to reduce SO2 or PM emissions.

(C) Boiler 004 and Boiler 005 do not use post-combustion technology (except a wet scrubber) for reducing PM, SO2, or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.30 weight percent sulfur, and is operated such that emissions of CO to the atmosphere from Boiler 004 and Boiler 005 are maintained at levels less than or equal to 0.15 lb/MMBtu on a steam generating unit operating day average basis. The Permittee shall demonstrate compliance by the following:

(i) A CO CEM shall be installed, certified, maintained, and operated in accordance with Condition D.1.6(c) and (d).

(ii) The Permittee shall calculate the one (1) hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the boiler. The twenty-four (24) hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.
(iii) The Permittee shall evaluate the preceding twenty-four (24) hour average CO emission level each steam generating unit operating day excluding periods of boiler startup, shutdown, or malfunction. If the twenty-four (24) hour average CO emission level is greater than 0.15 lb/MMBtu, the Permittee shall initiate an investigation of the relevant equipment and control systems within twenty-four (24) hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the twenty-four (24) hour average CO emission level to 0.15 lb/MMBtu or less.

(iv) The Permittee shall record the CO measurements and calculations performed and any corrective actions taken. The record of corrective action taken must include the date and time during which the twenty-four (24) hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(b) The continuous monitoring systems have been installed and operational prior to conducting the performance tests. A monitoring protocol has been performed in accordance with the applicable procedures under 40 CFR 60, Appendix B, Performance Specification 1 and 326 IAC 3-5.

(c) The Permittee shall record the output of the system and shall perform the required record keeping, pursuant to 326 IAC 3-5-6, and reporting, pursuant to 326 IAC 3-5-7.

(d) In instances of CEM downtime, compliance with the NOX emission limits established in Conditions D.1.1 and D.1.2 shall be determined by the use of the appropriate AP-42 emission factors. Compliance with the particulate emission limits contained in Condition D.1.4 shall be determined by burning clean fuels such as natural gas or landfill gas.

(e) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 3-5 and 40 CFR 60, Subpart Db.

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

D.1.8 Record Keeping Requirements

(a) To document the compliance status with Conditions D.1.1, D.1.2, D.1.3 and D.1.7, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the NOX and opacity emission limits established in Conditions D.1.1, D.1.2, and D.1.3.

(1) Calendar dates covered in the compliance determination period;
(2) Heat input for Boilers 004 and 005;
(3) Amount of natural gas usage for Boilers 004 and 005 and amount of landfill gas usage for Boiler 004;
(4) Output of the NOX continuous emissions monitoring systems on Boilers 004 and 005 and record keeping required pursuant to 326 IAC 3-5-6;

(b) To document the compliance status with Condition D.1.3, the Permittee shall maintain records of the natural gas usage to the twenty (20) natural gas fired burners (MOD 1 - MOD 10) monthly.
In the event that a breakdown of a continuous emission monitoring equipment system occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.

To document the compliance status with Condition D.1.4, the Permittee shall maintain records of the monthly natural gas usage to Boiler 1 and Boiler 2.

Section C - General Record Keeping Requirements, of this permit, contains the Permittee's obligation with regard to the records required by this condition.

D.1.9 Reporting Requirements

(a) A quarterly summary of the information to document the compliance status with Condition D.1.2 shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the semi-annual period being reported. Section C - General Reporting 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).

(b) A semi-annual summary of the information to document the compliance status with Condition D.1.3 shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the semi-annual period being reported. Section C - General Reporting 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).

(c) The Permittee shall submit NOx CEM performance audit reports pursuant to 326 IAC 3-5-5(e).

(d) A quarterly summary of the information to document the compliance status with Condition D.1.4 shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting 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  EMISSION UNIT OPERATION CONDITIONS

Emission Unit Description:

(b) One (1) ELPO Dipping System, identified as 006, constructed in August 1985, using natural gas thermal incinerators identified as #1 through #3 on the drying ovens as VOC control, and exhausting to stack 02;

(c) One (1) Underbody Robotic Sealer Operation, identified as Stone Guard Sealer, approved in 2012 for operation, using no controls, and exhausting indoors;

(f) Miscellaneous sealers/adhesives/additives/solvents, identified as 009, constructed in August 1985, using no controls, and exhausting to stacks 07 and 08;

(g) One (1) Final Repair Operation, identified as 012, constructed in August 1985, using dry filters for particulate control, and exhausting to stack 06 and spot repair stalls; and

(h) One (1) Maintenance Paint Operation, identified as 013, constructed in August 1985, using no control, and exhausting to stack 10.

(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 Prevention of Significant Deterioration (PSD) - Best Available Control Technology for Volatile Organic Compounds (VOC) [326 IAC 2-2-3]

Pursuant to PSD (02) 1575, issued on November 30, 1984 and 326 IAC 2-2-3 (Control Technology Review; Requirements), the Permittee shall comply with the following VOC BACT limits:

The total VOC usage from ELPO Dipping System (006), Underbody Robotic Sealer, identified as Stone Guard Sealer, Miscellaneous Sealers/Adhesives/Additives/Solvents (009), and Final Repair Operation (012), combined with the potential to emit VOC from all the other surface coatings operations and cleaning operations, including the Primer Surfarce System (010), Topcoat System (008), and Maintenance Paint Operation (013); shall be limited such that total source's VOC potential to emit does not exceed 3,204 tons per twelve consecutive month period, with compliance determined at the end of each month.

Compliance with condition shall satisfy the requirements of 326 IAC 2-2, PSD rules.

D.2.2 Automobile and Light Duty Truck Coating Operations [326 IAC 8-2-2][326 IAC 8-1-2]

(a) Pursuant to 326 IAC 8-2-2 (Automobile and Light Duty Truck Coating Operations), the volatile organic compound (VOC) delivered to the applicator from ELPO Dipping System (006) and Final Repair Operation (012) application, flash-off and curing of coatings applied to automobile and light duty truck bodies, hoods, doors, cargo boxes, fenders, and grill openings shall not exceed:

(1) 0.23 kilograms per liter of coating (1.9 pounds per gallon), excluding water, for the ELPO Dipping System (006).

(2) 0.58 kilograms per liter of coating (4.8 pounds per gallon), excluding water, for the Final Repair Operation (012).

(b) Pursuant to 326 IAC 8-1-2(a)(5), when using an equivalent emission limitation to comply with Condition D.2.2(a)(1), the VOC emissions from the ELPO Dipping System (006) thermal oxidizers shall be limited to no greater than 2.6 pounds per gallon solids deposited.
D.2.3 Miscellaneous Metal Coating Operations \([326 \text{ IAC 8-2-9}]\)

(a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the Permittee shall not allow the discharge into the atmosphere of VOC in excess of three and five-tenths \((3.5)\) pounds of VOC per gallon of coating, excluding water, as delivered to the applicator for the Miscellaneous Sealers and Adhesives \((009)\) and Underbody Robotic Sealer Operation (Stone Guard Sealer).

(b) Pursuant to 326 IAC 8-1-2(a)(5), when using an equivalent emission limitation to comply with Condition D.2.3(a), the VOC emissions from the Miscellaneous Sealers and Adhesives \((009)\) and the Underbody Robotic Sealer Operation (Stone Guard Sealer) shall be limited to no greater than 1.34 kilograms of VOC per liter solids deposited \((11.2 \text{ pounds per gallon solids deposited})\) based on an actual measured transfer efficiency greater than 60%.

D.2.4 Work Practices \([326 \text{ IAC 8-2-9}]\)

Pursuant to 326 IAC 8-2-9(f), the Permittee shall use the following work practices to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for coatings, thinners, clean materials, and waste materials, including, but not limited to, the following:

(a) Store all VOC containing coatings, thinners, coating related waste, and cleaning materials in closed containers.

(b) Ensure that mixing and storage containers used for VOC containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials.

(c) Minimize spills of VOC containing coatings, thinners, coating related waste, and cleaning materials.

(d) Convey VOC containing coatings, thinners, coating related waste, and cleaning materials from one \((1)\) location to another in closed containers or pipes.

(e) Minimize VOC emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

D.2.5 Particulate Emission Limitations, Work Practices, and Control Technologies \([326 \text{ IAC 6-3-2(d)}]\)

Pursuant to 326 IAC 6-3-2(d), particulate emissions from the Final Repair Operation \((012)\) shall be controlled by a dry particulate filter, waterwash, or an equivalent control device, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

D.2.6 Preventive Maintenance Plan \([326 \text{ IAC 2-7-5(12)}]\)

A Preventive Maintenance Plan is required for the ELPO Dipping System \((006)\) and its 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 \([326 \text{ IAC 2-7-5(1)}]\)

D.2.7 PSD VOC BACT Compliance Equation

Compliance with the VOC PSD BACT limit in Condition D.2.1 shall be determined within 30 days of the end of each month based on the following:

For ELPO Dipping System \((006)\), Primer Surfacer System \((010)\), Underbody Robotic Sealer, identified as Stone Guard Sealer, Topcoat System \((008)\), Miscellaneous Sealers/Adhesives/Additives/Solvents \((009)\), Final Repair Operation \((012)\), and Maintenance Paint Operation \((013)\):

\[
\text{VOC emissions (tons, 12 consecutive months)} = \text{VOC emissions in previous eleven (11) months, tons +}
\]
monthly VOC usage (uncontrolled), tons + monthly VOC emissions (after controls), tons

where:
monthly VOC emissions (after controls), tons = monthly VOC input (tons) x (1 - overall control efficiency/100);

where:
overall control efficiency (%) = capture efficiency (%) x destruction efficiency (%)

D.2.8 Volatile Organic Compounds (VOC) [326 IAC 8-1-2][326 IAC 8-1-4]

(a) Compliance with the VOC contents contained in Conditions D.2.2 and D.2.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) Pursuant to 326 IAC 8-1-2(a), the emission limitations specified in D.2.2(a), shall be achieved through one or any combination of thermal incineration, higher solids (low solvent) coatings, water borne coatings and/or daily averaging.

(c) Compliance with the equivalent emission limitation in Condition D.2.2(b), shall be determined according to the following equation:

\[ E = \frac{L}{[(1 - (L/D)) \cdot T]} \]

Where:

E = Actual emissions in pounds of VOC per gallon of coating solids deposited

L = Actual VOC content in pounds of VOC per gallon of coating, as applied, excluding water and nonphotochemically reactive hydrocarbons

D = Actual density of the VOC in the coating in pounds per gallon of VOC

(d) When a combination of compliant and non-compliant coatings are utilized and daily averaging is used to comply with the emission limitations in Condition D.2.2(a), one of the following equations shall be used to determine the volume weighted average of coatings on a daily basis:

(1) When a thermal oxidizer is used to demonstrate compliance with an emission limitation, the daily volume weighted average shall be determined as follows:

\[ A = \frac{\sum_{i=1}^{n} C_i U_i (1 - (C \cdot D \cdot R \cdot E))}{\sum_{i=1}^{n} U_i (1 - D_i)} \]

Where:

A = daily volume weighted average, lb VOC/gal, less water

C = VOC content of coating i, lb VOC/gal, less water

U = actual coating i usage, gal/day

D = coating i volume % water
n = no. of coatings used during the day

CE = capture efficiency of the emission system vented to the thermal oxidizer

DRE = destruction/removal efficiency of thermal oxidizer

(2) When a thermal oxidizer is not used to demonstrate compliance with an emission limitation, the daily volume weighted average shall be determined as follows:

\[ A = \frac{\sum_{i=1}^{n} C_i U_i}{\sum_{i=1}^{n} U_i} \]

Where:

A = daily volume weighted average, lb VOC/gal, less water

C = VOC content of coating i, lb VOC/gal, less water

U = actual coating i usage, gal/day

n = no. of coatings used during the day

(e) Pursuant to 326 IAC 8-1-2(c), when used to comply with the emission limitation in D.2.2(a)(1), the overall efficiency of the ELPO Dipping System (006) thermal oxidizers shall be no less than the equivalent overall efficiency calculated by the following equation:

\[ O = 100 \times \frac{V - E}{V} \]

Where:

V = The actual VOC content of the coating, or, if multiple coatings are used, the daily weighted-average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids, as applied;

E = Equivalent emission limit in pounds of VOC per gallon of coating solids, as applied, where \( E = \frac{L}{1 - (L / D)} \), and

L = Applicable emission limit in pounds of VOC per gallon of coating.

D = Density of VOC in coating in pounds per gallon of VOC.

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

A solvent density of seven and thirty-six hundredths (7.36) pounds of VOC per gallon of solvent shall be used to determine equivalent pounds of VOC per gallon of solids for the applicable emission limit. Actual solvent density shall be used to determine compliance; and

O = Equivalent overall efficiency of the capture system and control device as a
(e) Pursuant to 326 IAC 8-1-2(a) the emission limitations specified in D.2.3(a), shall be achieved through one or any combination of higher solids (low solvent) coatings, water borne coatings and/or an equivalent emission limitation.

(g) Compliance with the equivalent emission limitation in Condition D.2.3(a), shall be determined according to the following equation:

\[
E = \frac{L}{[(1 - (L/D)) \cdot T]}
\]

Where:

- \(E\) = Actual emissions in pounds of VOC per gallon of coating solids deposited
- \(L\) = Actual VOC content in pounds of VOC per gallon of coating, as applied, excluding water and nonphotochemically reactive hydrocarbons
- \(D\) = Actual density of the VOC in the coating in pounds per gallon of VOC
- \(T\) = Actual measured transfer efficiency

D.2.9 PM and VOC Controls

(a) In order to assure compliance with Condition D.2.5, the dry filters shall always be in place and operating at all times the Final Repair Operation (012) is in operation.

(b) Pursuant to 326 IAC 8-1-2(a) and in order to assure compliance with Conditions D.2.1 and/or D.2.2, the Permittee shall operate the thermal incinerators #1 - #3 for the ELPO Dipping System (006) at all times the processes that they are controlling are in operation, if the abatement credit is used to demonstrate compliance with Conditions D.2.1 and/or D.2.2.

D.2.10 Testing Requirements

The following facilities are required to stack test, when used to demonstrate compliance with Conditions D.2.1 and/or D.2.2, as follows:

(a) Not later than five (5) years from the date of the most recent valid compliance demonstration, the Permittee shall conduct testing for VOC capture and destruction efficiency for one (1) of the thermal incinerators, #1 - #3, controlling the ELPO Dipping System (006) emissions. This test shall be repeated every five (5) years from the date of the most recent valid compliance demonstration. Testing on an incinerator shall not be repeated until each one has been tested.

(b) The Permittee shall use the determined capture and destruction efficiencies from the most recent performance test for determining compliance when the control devices are used to demonstrate compliance with Conditions D.2.1 and/or D.2.2. 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.

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

D.2.11 Thermal Oxidizer Temperature [40 CFR 64]

The following requirements shall apply only if the VOC reduction credit for the incinerators is used to demonstrate compliance with Conditions D.2.1 and/or D.2.2:

(a) A continuous monitoring system shall be calibrated and maintained on each thermal and catalytic oxidizer for measuring operating temperature. For the purpose of this condition,
continuous means no less often than once per fifteen (15) minutes. The output of this system shall be recorded as a 3-hour average.

(b) The Permittee shall determine the 3-hour average temperature from the most recent valid stack test that demonstrates compliance with limits in Conditions D.2.1 and/or D.2.2.

(c) The Permittee shall operate the thermal oxidizer at or above the 3-hour average temperature as observed during the most recent compliant stack test. If the 3-hour average temperature falls below the level observed during the most recent valid compliant stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A 3-hour average temperature reading that is below the level observed during the most recent valid compliant stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

D.2.12 Parametric Monitoring [40 CFR 64]
The following requirements shall apply only if the VOC reduction credit for the thermal incinerators is used to demonstrate compliance with Conditions D.2.1 and/or D.2.2:

The system that continuously monitors proper operation of the thermal incinerators shall be equipped with system alarms, which shall immediately notify plant personnel that a malfunction of the emission control equipment has occurred. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]
D.2.13 Record Keeping Requirements

(a) To document the compliance status with Conditions D.2.1, D.2.2, D.2.3, D.2.7, D.2.8, D.2.11, and D.2.12, the Permittee shall maintain records in accordance with (1) through (8) below. Records maintained for (1) through (8) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Conditions D.2.1, D.2.2, and D.2.3.

(1) The VOC content of each coating material and solvent used, less water.

(2) The amount of coating material and solvent used on a monthly basis.

(A) Records shall include documents necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) A log of the dates of use of each coating.

(4) A log of when the thermal incinerators are used to demonstrate compliance with an emission limitation.

(5) The calculated daily volume weighted average in pounds of VOC per gallon, less water, if applicable.

(6) The monthly cleanup solvent usage.

(7) The total VOC usage and emissions for each month.

(8) During periods when the thermal incinerators are used to demonstrate compliance with
an emission limitation:

(A) The continuous temperature records (on a 3-hour average basis) for the thermal oxidizers and the 3-hour average temperature used to demonstrate compliance during the most recent compliant stack test.

(B) Records of the dates of any thermal incinerator system alarms and corrective actions taken.

(b) Section C - General Record Keeping Requirements, of this permit, contains the Permittee’s obligation with regard to the records required by this condition.

D.2.14 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.2.1 shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting 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.3  EMISSION UNIT OPERATION CONDITIONS

Emission Unit Description:

(d) One (1) Primer Surfacer System, identified as 010, constructed in March 1994, approved in 2010 for modification, using a natural gas fired regenerative thermal oxidizer with a maximum heat input capacity of 16 MMBtu/hr as VOC control, and water wash as PM control, and exhausting to stack 03. The Primer Surfacer System also includes applicators that purge internally through valves located inside the robot into a gun box. Additionally, the robotic bells purge into a gun box within the booth. The booth is an enclosed manufacturing unit, which is directed to the control device described above.

(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.3.1 Prevention of Significant Deterioration (PSD) - Best Available Control Technology for Volatile Organic Compounds (VOC) [326 IAC 2-2-3]

Pursuant to PSD (02) 1575, issued on November 30, 1984 and 326 IAC 2-2-3 (Control Technology Review; Requirements), the Permittee shall comply with the following VOC BACT limits:

The total VOC usage from Primer Surfacer System (010), combined with the potential to emit VOC from all the other surface coatings operations and cleaning operations, including ELPO Dipping System (006), Underbody Robotic Sealer, identified as Stone Guard Sealer, Miscellaneous Sealers/Adhesives/Additives/Solvents (009), Topcoat System (008), Final Repair Operation (012), and Maintenance Paint Operation (013); shall be limited such that total source's VOC potential to emit does not exceed 3,204 tons per twelve consecutive month period, with compliance determined at the end of each month.

Compliance with condition shall satisfy the requirements of 326 IAC 2-2, PSD rules.

D.3.2 Automobile and Light Duty Truck Coating Operations [326 IAC 8-2-2][326 IAC 8-1-2]

(a) Pursuant to 326 IAC 8-2-2(b)(2) (Automobile and Light Duty Truck Coating Operations), the volatile organic compound (VOC) delivered to the applicator from Primer Surfacer System (010) application, flash-off and curing of coatings applied to automobile and light duty truck bodies, hoods, doors, cargo boxes, fenders, and grill openings shall not exceed 0.34 kilograms per liter of coating (2.8 pounds per gallon), excluding water.

(b) Pursuant to 326 IAC 8-1-2(a)(5), VOC emissions as allowed in D.3.2(a)(2) from the Primer Surfacer System (010) shall be limited to no greater than an equivalent emission limitation based on an actual measured transfer efficiency higher than 30%. The equivalent emission limitation is 1.83 kilograms of VOC per liter solids deposited (15.1 pounds per gallon solids deposited). Compliance with the above equivalent emission limitation shall be determined by use of procedures found in "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations", EPA-450/3-88-018, December 1988, or by an alternative method approved by the Commissioner.

(c) Pursuant to 326 IAC 8-1-2(c), when used to comply with the emission limitation in D.3.2(a), the overall efficiency of the Primer Surfacer System (010) thermal oxidizer shall be no less than the equivalent overall efficiency of 21.5%.

D.3.3 Particulate Emission Limitations, Work Practices, and Control Technologies [326 IAC 6-3-2(d)]

Pursuant to 326 IAC 6-3-2(d), particulate from Primer Surfacer System (010) shall be controlled by a dry particulate filter, water wash, or an equivalent control device at all times that the process is operating. The Permittee shall operate the control device in accordance with manufacturer's specifications.
D.3.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for the Primer Surfacer System (010), and its 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.3.5 VOC PSD BACT Compliance Equation

Compliance with the VOC PSD BACT limit in Condition D.3.1 shall be determined within 30 days of the end of each month based on the following:

For ELPO Dipping System (006), Primer Surfacer System (010), Underbody Robotic Sealer, identified as Stone Guard Sealer, Topcoat System (008), Miscellaneous Sealers/Additives/Solvents (009), Final Repair Operation (012), and Maintenance Paint Operation (013):

\[
\text{VOC emissions (tons, 12 consecutive months)} = \text{VOC emissions in previous eleven (11) months, tons} + \text{monthly VOC usage (uncontrolled), tons} + \text{monthly VOC emissions (after controls), tons}
\]

where:

\[
\text{VOC emissions (after controls), tons} = \text{VOC input (tons)} \times (1 - \text{overall control efficiency/100})
\]

where:

\[
\text{overall control efficiency (\%)} = \text{capture efficiency (\%)} \times \text{destruction efficiency (\%)}
\]

D.3.6 Volatile Organic Compounds (VOC)

(a) Compliance with the VOC contents contained in Condition D.3.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) Pursuant to 326 IAC 8-1-2(a), the emission limitation specified in D.3.2(a), shall be achieved through one or any combination of thermal incineration, higher solids (low solvent) coatings, water borne coatings, and/or an equivalent emission limitation.

(d) Compliance with the equivalent overall efficiency (\(O\)) of the Primer Surfacer System (010) thermal oxidizer to demonstrate compliance with Condition D.3.2(a) shall be calculated by the following equation:

\[
O = 100 \times \frac{V - E}{V}
\]

Where:

\[V = \text{The actual VOC content of the coating, or, if multiple coatings are used, the daily weighted-average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids, as applied;}
\]

\[E = \text{Equivalent emission limit in pounds of VOC per gallon of coating solids, as applied; and}
\]

\[O = \text{Equivalent overall efficiency of the capture system and control device as a percentage.}
\]

\[O = \frac{6.50 - 5.1}{6.5} \times 100 = 21.5\%\]
D.3.7 PM and VOC Controls

(a) In order to assure compliance with Condition D.3.3, the water wash system shall operate at all times the Primer Surfacer System (010) is in operation.

(b) Pursuant to 326 IAC 8-1-2(a) and in order to assure compliance with Conditions D.3.1 and D.3.2, the Permittee shall operate the regenerative thermal oxidizer for the Primer Surfacer System (010) at all times the processes that it controls are in operation, if the abatement credit is used to demonstrate compliance with Conditions D.3.1 and/or D.3.2.

D.3.8 Testing Requirements [326 IAC 2-1.1-11]

The following facilities are required to stack test when used to demonstrate compliance with Conditions D.3.1 and/or D.3.2 as follows:

(a) Not later than five (5) years from the date of the most recent valid compliance demonstration, the Permittee shall conduct testing for VOC capture and destruction efficiency for the regenerative thermal oxidizer controlling the Primer Surfacer System (010) emissions. This test shall be repeated every five (5) years from the date of the most recent valid compliance demonstration.

(b) The Permittee shall use the determined capture and destruction efficiencies from the most recent performance test for determining compliance when the control device is used to demonstrate compliance with Conditions D.3.1 and/or D.3.2. 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.

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

D.3.9 Thermal Oxidizer Temperature [40 CFR 64]

The following requirements shall apply only if the regenerative thermal oxidizer is used to demonstrate compliance with Conditions D.3.1 and/or D.3.2:

(a) A continuous monitoring system shall be calibrated and maintained on the regenerative thermal oxidizer for measuring operating temperature. For the purpose of this condition, continuous means no less often than once per fifteen (15) minutes. The output of this system shall be recorded as a 3-hour average.

(b) The Permittee shall determine the 3-hour average temperature from the most recent valid stack test that demonstrates compliance with limits in Conditions D.3.1 and/or D.3.2.

(c) The Permittee shall operate the thermal oxidizer at or above the 3-hour average temperature as observed during the most recent compliant stack test. If the 3-hour average temperature falls below the level observed during the most recent valid compliant stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. A 3-hour average temperature reading that is below the level observed during the most recent valid compliant stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

D.3.10 Parametric Monitoring [40 CFR 64]

The following requirements shall apply only if the VOC reduction credit for the thermal oxidizer is used to demonstrate compliance with Conditions D.3.1 and/or D.3.2:

The system that continuously monitors proper operation of the thermal oxidizer shall be equipped with system alarms, which shall immediately notify plant personnel that a malfunction of the emission control equipment has occurred. Section C - Response to Excursions or Exceedances contains the Permittee’s
obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.3.11 Monitoring [40 CFR 64]

(a) The condition of the Primer Surfacer System (010) waterwash system shall be monitored through the use of alarms on the water pumps that feed the systems. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

(b) Semi-annual inspections shall be performed of the coating emissions from stack 03 and the presence of overspray on the rooftops and nearby ground. When there is a noticeable change in overspray emissions, or when evidence of overspray emission is observed, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

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

D.3.12 Record Keeping Requirements

(a) To document the compliance status with Conditions D.3.1, D.3.2, D.3.5, D.3.6, D.3.9, and D.3.10, the Permittee shall maintain records in accordance with (1) through (7) below. Records maintained for (1) through (7) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Conditions D.3.1 and D.3.2.

(1) The VOC content of each coating material and solvent used, less water.

(2) The amount of coating material and solvent used on a monthly basis.

(A) Records shall include documents necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) A log of the dates of use of each coating.

(4) A log of when the regenerative thermal oxidizer is used to demonstrate compliance with an emission limitation.

(5) The monthly cleanup solvent usage.

(6) The total VOC usage and emissions for each month.

(7) During periods when the regenerative thermal oxidizer is used to demonstrate compliance with an emission limitation:

(A) The continuous temperature records (on a 3-hour average basis) for the thermal oxidizer and the 3-hour average temperature used to demonstrate compliance during the most recent compliant stack test.

(B) Records of the dates of any thermal oxidizer system alarms and corrective actions taken.

(b) To document the compliance status with Conditions D.3.3 and D.3.11, the Permittee shall maintain records of the dates of any water wash alarms and corrective actions taken and shall
maintain a log of semi-annual inspections.

(c) Section C - General Record Keeping Requirements, of this permit, contains the Permittee's obligation with regard to the record required by this condition.

D.3.13 Reporting Requirements
A quarterly summary of the information to document the compliance status with Condition D.3.1 shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting 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.4 EMISSION UNIT OPERATION CONDITIONS

Emission Unit Description:

(e) One (1) Topcoat System, identified as 008, constructed in August 1985, approved in 2015 for modification, using ten (10) natural gas fired catalytic oxidizers identified as #1 - #10 on the drying ovens as VOC control, with the maximum heat input capacity of oxidizers #1 - #7 being 7.5 MMBtu/hr each, and the maximum heat input capacity of oxidizers #8 - #10 being 9.5 MMBtu/hr each, using waterwash as PM control, and exhausting to stack 04.

(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.4.1 Prevention of Significant Deterioration (PSD) - Best Available Control Technology for Volatile Organic Compounds (VOC) [326 IAC 2-2-3]

Pursuant to PSD (02) 1575, issued on November 30, 1984 and 326 IAC 2-2-3 (Control Technology Review; Requirements), the Permittee shall comply with the following VOC BACT limits:

The total VOC usage from Topcoat System (008), combined with the potential to emit VOC from all the other surface coatings operations and cleaning operations, including Primer Surfacer System (010), ELPO Dipping System (006), Underbody Robotic Sealer, identified as Stone Guard Sealer, Miscellaneous Sealers/Adhesives/Additives/Solvents (009), Final Repair Operation (012), and Maintenance Paint Operation (013); shall be limited such that total source's VOC potential to emit does not exceed 3,204 tons per twelve consecutive month period, with compliance determined at the end of each month.

Compliance with condition shall satisfy the requirements of 326 IAC 2-2, PSD rules.

D.4.2 Automobile and Light Duty Truck Coating Operations [326 IAC 8-2-2][326 IAC 8-1-2]

(a) Pursuant to 326 IAC 8-2-2 (Automobile and Light Duty Truck Coating Operations), the volatile organic compound (VOC) delivered to the applicator from Topcoat System (008) application, flash-off and curing of coatings applied to automobile and light duty truck bodies, hoods, doors, cargo boxes, fenders, and grill openings shall not exceed 0.34 kilograms per liter of coating (2.8 pounds per gallon), excluding water.

(b) Pursuant to 326 IAC 8-1-2(a)(5), VOC emissions as allowed in D.4.2(a) from the Topcoat System (008) shall be limited to no greater than an equivalent emission limitation based on an actual measured transfer efficiency higher than 30%. The equivalent emission limitation is 1.83 kilograms of VOC per liter solids deposited (15.1 pounds per gallon solids deposited). Compliance with the above equivalent emission limitation shall be determined by use of procedures found in "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations", EPA-450/3-88-018, December 1988, or by an alternative method approved by the Commissioner.

D.4.3 Particulate Emission Limitations, Work Practices, and Control Technologies [326 IAC 6-3-2(d)]

Pursuant to 326 IAC 6-3-2(d), particulate emissions from the Topcoat System (008) shall be controlled by a dry particulate filter, water wash, or an equivalent control device at all times that the process is operating. The Permittee shall operate the control device in accordance with manufacturer’s specifications.

D.4.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for the Topcoat System (008), and its 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.4.5 PSD VOC BACT Compliance Equation

Compliance with the VOC PSD BACT limit in Condition D.4.1 shall be determined within 30 days of the end of each month based on the following:

For ELPO Dipping System (006), Primer Surfacer System (010), Underbody Robotic Sealer, identified as Stone Guard Sealer, Topcoat System (008), Miscellaneous Sealers/Adhesives/Additives/Solvents (009), Final Repair Operation (012), and Maintenance Paint Operation (013):

VOC emissions (tons, 12 consecutive months) = VOC emissions in previous eleven (11) months, tons + monthly VOC usage (uncontrolled), tons + monthly VOC emissions (after controls), tons

where:
monthly VOC emissions (after controls), tons = monthly VOC input (tons) x (1- overall control efficiency/100);

where:
overall control efficiency (%) = capture efficiency (%) x destruction efficiency (%)

D.4.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-2][326 IAC 8-1-4]

(a) Compliance with the VOC contents contained in Condition D.4.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) Pursuant to 326 IAC 8-1-2(a), the emission limitation specified in D.4.2(a), shall be achieved through one or any combination of catalytic incineration, higher solids (low solvent) coatings, water borne coatings, and/or an equivalent emission limitation.

(c) Pursuant to 326 IAC 8-1-2(c), when used to comply with the emission limitation in D.4.2(a), the overall efficiency of the Topcoat System (008) catalytic oxidizers shall be no less than the equivalent overall efficiency calculated by the following equation:

\[ O = 100 \times \frac{(V - E)}{V} \]

Where:

\[ V = \] The actual VOC content of the coating, or, if multiple coatings are used, the daily weighted-average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids, as applied;

\[ E = \] Equivalent emission limit in pounds of VOC per gallon of coating solids, as applied; and

\[ O = \] Equivalent overall efficiency of the capture system and control device as a percentage.

D.4.7 PM and VOC Controls

(a) In order to assure compliance with Condition D.4.3, the water wash shall be operated at all times the Topcoat System (008) is in operation.
D.4.8 Testing Requirements [326 IAC 2-1.1-11]

The following facilities are required to stack test, when the oxidizer abatement credit is used to demonstrate compliance with Conditions D.4.1 and/or D.4.2, as follows:

(a) Not later than five (5) years from the date of the most recent valid compliance demonstration, the Permittee shall conduct testing for VOC destruction efficiency for two (2) of the 7.5 MMBtu/hr catalytic oxidizers and one (1) of the 9.5 MMBtu/hr catalytic oxidizers controlling the Topcoat System (008) emissions. This test shall be repeated every five (5) years from the date of the most recent valid compliance demonstration. Testing on a catalytic oxidizer shall not be repeated until each one has been tested.

(b) The Permittee shall use the determined destruction efficiencies from the most recent performance test for determining compliance when the control devices are used to demonstrate compliance with Conditions D.4.1 and/or D.4.2. 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.

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

D.4.9 Catalytic Oxidizer Temperature [40 CFR 64]

The following requirements shall apply only if the VOC reduction credit from the catalytic oxidizers is used to demonstrate compliance with Conditions D.4.1 and/or D.4.2:

(a) A temperature measurement device shall be installed in the gas stream immediately before and after the catalyst bed. A continuous monitoring system shall be calibrated and maintained on each catalytic oxidizer for measuring operating temperature. For the purpose of this condition, continuous means no less often than once per fifteen (15) minutes. The output of this system shall be recorded as a 3-hour average.

(b) The Permittee shall determine the 3-hour average temperature from the most recent valid stack test that demonstrates compliance with limits in Conditions D.4.1 and/or D.4.2.

(c) The Permittee shall operate the thermal oxidizer at or above the 3-hour average temperature as observed during the most recent compliant stack test. If the 3-hour average temperature falls below the level observed during the most recent valid compliant stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A 3-hour average temperature reading that is below the level observed during the most recent valid compliant stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

D.4.10 Parametric Monitoring [40 CFR 64]

The following requirements shall apply only if the VOC reduction credit for the catalytic oxidizers is used to demonstrate compliance with Conditions D.4.1 and/or D.4.2:

The system that continuously monitors proper operation of the catalytic oxidizers shall be equipped with system alarms, which shall immediately notify plant personnel that a malfunction of the emission control equipment has occurred. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.
D.4.11 Monitoring [40 CFR 64]

(a) The condition of the Topcoat System (008) waterwash system shall be monitored through the use of alarms on the water pumps that feed the systems. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

(b) Semi-annual inspections shall be performed of the coating emissions from stack 04 and the presence of overspray on the rooftops and nearby ground. When there is a noticeable change in overspray emissions, or when evidence of overspray emission is observed, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

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

D.4.12 Record Keeping Requirements

(a) To document the compliance status with Conditions D.4.1, D.4.2, D.4.5, D.4.6, D.4.9, and D.4.10, the Permittee shall maintain records in accordance with (1) through (7) below. Records maintained for (1) through (7) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Conditions D.4.1 and D.4.2.

1. The VOC content of each coating material and solvent used, less water.
2. The amount of coating material and solvent used on a monthly basis.
   (A) Records shall include documents necessary to verify the type and amount used.
   (B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.
3. A log of the dates of use of each coating.
4. A log of when the catalytic oxidizers are used to demonstrate compliance with an emission limitation.
5. The monthly cleanup solvent usage.
6. The total VOC usage and emissions for each month.
7. During periods when the catalytic oxidizers are used to demonstrate compliance with an emission limitation:
   (A) The continuous temperature records (on a 3-hour average basis) for the catalytic oxidizers and the 3-hour average temperature used to demonstrate compliance during the most recent compliant stack test.
   (B) Records of the dates of any catalytic oxidizer system alarms and corrective actions taken.

(b) To document the compliance status with Conditions D.4.3 and D.4.11, the Permittee shall maintain records of the dates of any water wash alarms and corrective actions taken and shall maintain a log of semi-annual inspections.

(c) The Permittee shall monitor and record the annual VOC emissions from the Topcoat that could
result in a significant VOC emissions increase as a result of the project described in SECTION D.7, permitted in SSM003-34856-00036.

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

D.4.13 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.4.1 shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting 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.5  EMISSION UNIT OPERATION CONDITIONS**

**Emission Unit Description:**

Insignificant Activities:

(a) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.

(b) One (1) Body Shop - Grinding and Machining, associated with the T1 Full Size Truck Project, approved in 2015 for construction.

(f) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.

(l) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection or trim material recovery device such as a bag filter or cyclone.

(u)(3) Grinding Operations (Light Duty Truck Body Shop).

(u)(21) Mig Welding.

(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.5.1 Particulate Matter Limitations for Process Operations [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2(e)(2) (Process Operations), the allowable PM emission rate from a manufacturing process shall not exceed 0.551 pounds per hour when operating at a process weight rate of less than 100 pounds per hour.

(b) Pursuant to 326 IAC 6-3-2(e), the allowable PM emission rate from a manufacturing process shall not exceed \( E \), the pounds per hour allowable emission rate, when processing a process weight up to sixty thousand (60,000) pounds per hour as determined by the following equation:

\[
E = 4.10 \times P^{0.67} \quad \text{where} \quad E = \text{rate of emission in pounds per hour} \quad \text{and} \quad P = \text{process weight rate in tons per hour}
\]

D.5.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and its control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.
SECTION D.6 EMISSION UNIT OPERATION CONDITIONS

Emission Unit Description:

(j) Four (4) identical landfill gas-fired generators, identified as Gen 1 through Gen 4, approved in 2013 for construction, each with a maximum output rating of 2,242 horsepower, using no controls, and each exhausting through Stack S01.

Under New Source Performance Standards for Stationary Spark Ignition Internal Combustion Engines (40 CFR 60, Subpart JJJJ), these four (4) generators are considered affected facilities.

Under National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ), these four (4) generators are considered affected facilities.

(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.6.1 Prevention of Significant Deterioration (PSD) Best Available Control Technology (BACT) [326 IAC 2-2-3][326 IAC 8-1-6]

Pursuant to PSD/Significant Permit Modification No. 003-33317-00038, issued December 6, 2013, and 326 IAC 2-2-3 (Control Technology Review; Requirements), the Permittee shall comply with the following BACT limits for the four (4) landfill gas-fired generators, identified as Gen 1 through Gen 4:

(a) The VOC emissions from each of the Caterpillar G3520C generators, identified as Gen 1 through Gen 4, shall not exceed 0.56 g/bhp-hr VOC.

(b) The NOx emissions from each of the Caterpillar G3520C generators, identified as Gen 1 through Gen 4, shall not exceed 0.6 g/bhp-hr NOx.

(c) The CO emissions from each of the Caterpillar G3520C generators, identified as Gen 1 through Gen 4, shall not exceed 4.22 g/bhp-hr CO.

(d) The PM$_{2.5}$ emissions from each of the Caterpillar G3520C generators, identified as Gen 1 through Gen 4, shall not exceed 0.13 g/bhp-hr PM$_{2.5}$ (0.044 lb/MMBtu).

(e) The landfill gas-fired generators, Gen 1 through Gen 4, shall each be equipped with lean-burn control technology with air-to-fuel ratio adjustment control and ignition timing to ensure good combustion practices, and shall be maintained in accordance with manufacturer’s recommendations.

Compliance with condition shall satisfy the requirements of 326 IAC 2-2, PSD rules and 326 IAC 8-1-6.

D.6.2 Opacity Limits [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity for generators Gen 1 through Gen 4 shall meet the following:

When operating alone, the opacity from any one generator shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period. 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) in a six (6) hour period. The opacity standards apply except during periods of startup, shutdown, or malfunction.
D.6.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for each of the four (4) generators, identified as Gen 1 through Gen 4. 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.6.4 Testing Requirements [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition D.6.1 (PSD BACT), within sixty (60) days of reaching maximum capacity but no later than one hundred eighty (180) days after initial startup, the Permittee shall conduct emissions testing utilizing methods as approved by the commissioner as follows:

(a) In order to demonstrate compliance with Condition D.6.1(a), the Permittee shall conduct emissions testing of VOC emissions from one of the Caterpillar G3520C generators, identified as Gen 1 though Gen 4. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be alternated between Gen 1, Gen 2, Gen 3, and Gen 4 on a rotating schedule such that no generator shall be tested again until each of the four (4) generators has been tested.

(b) In order to demonstrate compliance with Condition D.6.1(b), the Permittee shall conduct emissions testing of NOx emissions from one of the Caterpillar G3520C generators, identified as Gen 1 though Gen 4. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be alternated between Gen 1, Gen 2, Gen 3, and Gen 4 on a rotating schedule such that no generator shall be tested again until each of the four (4) generators has been tested.

(c) In order to demonstrate compliance with Condition D.6.1(c), the Permittee shall conduct emissions testing of CO emissions from one of the Caterpillar G3520C generators, identified as Gen 1 though Gen 4. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be alternated between Gen 1, Gen 2, Gen 3, and Gen 4 on a rotating schedule such that no generator shall be tested again until each of the four (4) generators has been tested.

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.

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

D.6.5 Record Keeping Requirements

(a) In order to document the compliance status with Condition D.6.1, the Permittee shall maintain records in accordance with (1) through (3) below. Records maintained for (1) through (3) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC BACT, NOx BACT, CO BACT, and PM2.5 BACT, established in Condition D.6.1.

(1) Records maintained shall include for each generator, Gen 1 through Gen 4, a complete list of maintenance specifications from the manufacturer, including specific parts and functions, maintenance items needed, specific intervals for maintenance of those parts, and the minimum specification required of those parts; and

(2) Records maintained shall include for each generator, Gen 1 through Gen 4, a complete list of actual maintenance performed, and shall include specific parts and functions, maintenance items performed, date and time of maintenance, and the specification achieved as the result of the maintenance activity.

(3) Section C - Record Keeping Requirements contains the Permittee's obligation with regard to the record keeping requirements required by this condition.
**SECTION D.7  FACILITY OPERATION CONDITIONS**

<table>
<thead>
<tr>
<th>Emission Unit Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(k)</strong> The following equipment approved in 2015 for construction to accommodate the T1 Full Size Truck Project:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

*(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.7.1 PM2.5 PSD Credit Limitations [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the Permittee shall comply with the following:

(a) The combined natural gas usage at the one hundred fifty (150) combustion units associated with the T1 Full Size Truck Project permitted in SSM 003-34856-00036 shall be limited to 600 million cubic feet (MMCF) per twelve consecutive month period, with compliance determined at the end of each month.

(b) Boiler, identified as 003, shall be shut down permanently and removed from operation prior to the operation of any of the emission units associated with the T1 Full Size Truck Project permitted in SSM 003-34856-00036.

(c) PM2.5 emissions from overspray at the Primer Surfacer, identified as 010, shall not exceed 0.07 pound per hour.

Compliance with this condition shall render the requirements of 326 IAC 2-2, PSD, not applicable to this modification for PM2.5.

D.7.2 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the Permittee shall comply with the following:

(a) The VOC emissions from the Miscellaneous Sealers and Adhesives operation, identified as 022, controlled by the Primer Surfacer Coating System, identified as 010 RTO shall not exceed 28 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The VOC emissions from the ELPO, identified as 020, controlled by one RTO, exhausting to Stack 020, shall not exceed 10 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with the above limits, combined with the potential to emit VOC from other emission units in the 2015 modification shall limit the VOC emissions to less than the significant emission rate (SER) of 40 tons per year and renders the requirements of 326 IAC 2-2, PSD, not applicable to this 2015 modification.

D.7.3 Automobile and Light Duty Truck Coating Operations [326 IAC 8-2-2]

(a) Pursuant to 326 IAC 8-2-2 (Automobile and Light Duty Truck Coating Operations), the combined VOC delivered to the applicators from prime application, involving the Electrodeposition (ELPO Dipping) System, identified as 020, in this SECTION D.7 and the Primer Surfacer Coating System, identified as 010, in SECTION D.3, including the flash-off area, and drying oven shall not exceed 0.23 kilogram per liter of coating (1.9 pounds per gallon), excluding water.

(b) Pursuant to 326 IAC 8-1-2(b), VOC emissions from the Electrodeposition (ELPO Dipping) System, identified as 020, and the Primer Surfacer Coating System, identified as 010, shall be limited to no greater than the equivalent emissions of 2.6 pounds of VOC per gallon of coating solids, allowed in paragraph (a) of this condition.

D.7.4 Miscellaneous Metal Coating Operations [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the Permittee shall not allow the discharge into the atmosphere of VOC in excess of three and five-tenths (3.5) pounds of VOC per
D.7.5 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]
Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), particulate emissions from the three (3) Hot Water Generators, shall each not exceed 0.22 pound/MMBtu.

D.7.6 Preventive Maintenance Plan [326 IAC 2-7-5(12)]
A Preventive Maintenance Plan is required for the ELPO Dipping System, identified as 20 and its control devices and the Miscellaneous Sealers and Adhesives application, identified as 022 in this Section D.7. 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.7.7 Volatile Organic Compounds (VOC) Compliance Equation

(a) Compliance with the VOC content and usage limitations contained in Conditions D.7.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAQ reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8.

(b) Pursuant to 326 IAC 8-1-2(a), the combined VOC emission limitations under 326 IAC 8-2-2 in Condition D.7.3, for the Electrodeposition (ELPO Dipping) System, identified as 020, and the Primer Surfacer Coating System, identified as 010, shall be achieved through one (1) or any combination of the following: thermal incineration, use of higher solids (low solvent) coatings, and/or waterborne coatings.

When daily averaging is used to comply with the emission limitations in Condition D.7.3, one of the following equations shall be used to determine the volume weighted average of coatings on a daily basis:

(1) When a thermal oxidizer is used to demonstrate compliance with an emission limitation, the daily volume weighted average shall be determined as follows:

\[
A = \frac{\sum_{i=1}^{n} C_i U_i (1 - (C E \times D R E))}{\sum_{i=1}^{n} U_i (1 - D_i)}
\]

Where:

\( A \) = daily volume weighted average, lb VOC/gal, less water
\( C \) = VOC content of coating i, lb VOC/gal, less water
\( U \) = actual coating i usage, gal/day
\( D \) = coating i volume % water
\( n \) = no. of coatings used during the day
\( C E \) = capture efficiency of the emission system vented to the thermal oxidizer
\( D R E \) = destruction/removal efficiency of thermal oxidizer

\[
gallon of coating, excluding water, as delivered to the applicators for the Miscellaneous Sealers and Adhesives, identified as 022.\]
When a thermal oxidizer is not used to demonstrate compliance with the emission limitation in Condition D.7.3, the daily volume weighted average shall be determined as follows:

$$A = \frac{\sum_{i=1}^{n} C_i U_i}{\sum_{i=1}^{n} U_i}$$

Where:
- $A$ = daily volume weighted average, lb VOC/gal, less water
- $C_i$ = VOC content of coating $i$, lb VOC/gal, less water
- $U_i$ = actual coating $i$ usage, gal/day
- $n$ = no. of coatings used during the day

Using VOC Control:

The source may comply using VOC control equipment. In this case, the source must comply with the equivalent VOC emission limit expressed in terms of pound of VOC per gallon of coating solids. Equivalent emission limit is calculated using the following equation:

$$E = \frac{L}{1 - \frac{L}{D}}$$

$$= \frac{1.9}{1 - \frac{1.9}{7.36}}$$

$$= 2.6 \text{ lbs/gallon of coating solids}$$

Where
- $L$ = Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating (1.9 lb/gal);
- $D$ = Density of VOC in coating in pounds per gallon of VOC (7.36 lb/gal);
- $E$ = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

A solvent density of 7.36 pounds of VOC per gallon of coating shall be used to determine equivalent pounds of VOC per gallon of solids for the applicable emission limit contained in this article.

To meet the equivalent emission limit in pounds per gallon of applied coating solids (lb/gacs) of the pound per gallon less water VOC limit in Condition D.7.3(a), the overall control efficiency shall not be less than the equivalent overall efficiency calculated as follows:

$$O = \frac{(V - E) \times 100}{V}$$

Where:
(5) Compliance with the VOC emission limits in D.7.2 shall be determined by using the following equation, which calculates tons of VOC emissions per month, and adding the result to the calculated VOC emissions from the previous eleven months.

\[
V_b = \sum_{i=1}^{n} (U_i \times C_i) \times (1 - CE) \times 1 \text{ ton/2000 lbs}
\]

Where:
- \(V_b\) = VOC emissions from the ELPO or Miscellaneous Sealers and Adhesive booth, ton/month
- \(U_i\) = usage of coating/sealer \(i\) in gallons per month;
- \(C_i\) = VOC content of coating/sealer \(i\) in pounds of VOC/gallon;
- \(CE\) = overall VOC control efficiency for the booth as determined from most recent test, when applicable.

(c) Compliance with the equivalent emission limitation in Condition D.7.3(b) shall be determined according to the following equation:

\[
E = \frac{L}{1 - (L / D)}
\]

Where:
- \(L\) = Applicable emission limit in pounds of VOC per gallon of coating.
- \(D\) = Density of VOC in coating in pounds per gallon of VOC.
- \(E\) = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

A solvent density of seven and thirty-six hundredths (7.36) pounds of VOC per gallon of coating shall be used to determine equivalent pounds of VOC per gallon of solids for the applicable emission limit. Actual solvent density shall be used to determine compliance of surface coating operations using the compliance methods contained in 326 IAC 8-1-2(a).

D.7.8 Operation of Particulate and VOC Controls

(a) In order to ensure compliance with Condition D.7.1(c), the water wash associated with the Primer Surfacer, identified as 010, in SECTION D.3, shall be in operation at all times the Primer Surfacer, identified as 010, is in operation. The Permittee shall continue monitoring the water wash operation as required in Condition D.3.11.
(b) In order to ensure compliance with Conditions D.7.2(b) and D.7.3(a), the Permittee shall operate the one (1) RTO at all times the ELPO, identified as 020, is in operation whenever noncompliant coatings are utilized at the ELPO Dipping System, identified as 020.

(c) In order to ensure compliance with Conditions D.7.2(a), the Permittee shall operate the Primer Surfacer, 010 RTO at all times the Miscellaneous Sealers and Adhesives, is in operation if the abatement credit is used to demonstrate compliance with Condition D.7.2(a).

D.7.9 Testing Requirements [326 IAC 2-1.1-11]

(a) Within sixty (60) days after achieving maximum capacity but no later than one hundred eighty (180) days after initial startup of the ELPO, identified as 020, the Permittee shall conduct initial performance tests to determine the overall control efficiency (capture and destruction) of the one (1) RTO during operation of the ELPO and shall determine compliance with the VOC limit in Condition D.7.2(b), utilizing methods as approved by the Commissioner. This testing shall be repeated 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) for control efficiency testing. Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(b) The Permittee shall determine the capture efficiency for the Miscellaneous Sealers and Adhesives, identified as 022 within 60 days after using new sealers that will require the use of the Primer Surfacer, 010 RTO as an abatement credit to demonstrate the compliance status with VOC limit in Condition D.7.2(a), utilizing methods as approved by the Commissioner. The overall control efficiency (capture efficiency and destruction/removal (DRE)) of the Primer Surfacer, 010 RTO shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Performance testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures) for destruction efficiency testing. Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

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

D.7.10 Thermal Oxidizer Temperature [40 CFR 64]

(a) A continuous monitoring system shall be calibrated and maintained on the RTO controlling the ELPO Dipping System, identified as 20 and Primer Surfacer, 010 RTO controlling the Miscellaneous Sealers and Adhesives, identified as 022, for measuring operating temperature. For the purpose of this condition, continuous means no less often than once per fifteen (15) minutes. The output of this system shall be recorded as a 3-hour average.

(b) The Permittee shall determine the 3-hour average temperature from the most recent valid stack test that demonstrates compliance with the VOC limit in Condition D.7.2.

(c) The Permittee shall operate the thermal oxidizers at or above the 3-hour average temperature as observed during the most recent compliant stack test. If the 3-hour average temperature falls below the level observed during the most recent valid compliant stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A 3-hour average temperature reading that is below the level observed during the most recent valid compliant stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

The instruments used for determining the temperature shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months.
D.7.11 Parametric Monitoring [40 CFR 64]

(a) The Permittee shall determine the range for appropriate duct pressure or fan amperage for the RTO associated with the ELPO, identified as 020, and Primer Surferce, 010 RTO controlling the Miscellaneous Sealers and Adhesives, identified as 022 from the most recent valid stack test that demonstrates compliance with the permit limits on VOC destruction efficiency and control efficiency as approved by IDEM.

(b) The duct pressure or fan amperage, whichever is monitored by the Permittee under this condition, shall be observed at least once per day when the thermal oxidizer is in operation. On and after the date the approved stack test results are available, the duct pressure or fan amperage shall be maintained within the normal range as established in the most recent compliant stack test. If the duct pressure or fan amperage reading is outside the normal range, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A duct pressure or fan amperage reading that is outside the normal range observed during the most recent valid compliant stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

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

D.7.12 Record Keeping Requirements

(a) To document the compliance status with Condition D.7.1(a), the Permittee shall maintain records of the natural gas usage from the one hundred fifty (150) combustion units associated with the T1 Full Size Truck Project, including the RTO control in this SECTION D.7.

(b) To document the compliance status with Conditions D.7.2, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC usage limit in D.7.2:

1. The VOC content of each coating material and solvent used, less water at the ELPO System, identified as 20 and VOC content of Miscellaneous Sealers and Adhesives, identified as 022.

2. A log of when the RTOs are used to demonstrate compliance with the emission limits.

3. Monthly VOC usage for each coatings at the ELPO, ID 20

4. Monthly VOC usage for each coatings/sealers/adhesives at the Miscellaneous Sealers and Adhesives, ID 022.

5. Calculated monthly VOC emissions at the ELPO, ID 20 and Miscellaneous Sealers and Adhesives, identified as 022 in tons/month.

6. During periods when the regenerative thermal oxidizers (RTOs) are used to demonstrate compliance with the ELPO and Miscellaneous Sealers and Adhesives emission limitations in D.7.2 and Condition D.7.11:

   A. The continuous temperature records (on a 3-hour average basis) for the RTO and the 3-hour average temperature used to demonstrate compliance during the most recent compliant stack test.

   B. The Permittee shall maintain records of RTO shutdowns due to duct pressure or fan amperage deviations.

   C. Daily records of the duct pressure or fan amperage
(D) Records of the dates of the RTO system alarms and corrective actions taken.

(c) To document the compliance status with Condition D.7.3(a), the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC emission limit in Condition D.7.3(a):

(1) The VOC content of each coating material and solvent used, less water.

(2) The amount of coating material and solvent used on a monthly basis.
   
   (A) Records shall include documents necessary to verify the type and amount used.
   
   (B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) A log of the dates of use of each coating.

(4) A log of when the regenerative thermal oxidizers are used to demonstrate compliance with an emission limitation.

(5) The monthly cleanup solvent usage.

(6) The total VOC usage for each month.

(d) Section C - General Record Keeping Requirements, of this permit, contains the Permittee's obligation with regard to the record required by this condition.

D.7.13 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.7.1(a) and Condition D.7.2 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting 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).
### Emission Unit Description:

(i) **Four (4) natural gas-fired dock door heaters**, identified as DUH-56, DUH-88, DUH-40, and DUH-57, approved in 2016 for construction, each with a maximum heat input capacity of 0.40 MMBtu/hr, and exhausting indoors.

(m) **Fourteen (14) natural gas-fired space heaters**, identified as UH-1 through UH-14, approved in 2016 for construction, each with a maximum heat input capacity of 0.40 MMBtu/hr, and exhausting indoors.

(n) **One (1) natural gas-fired boiler**, identified as BU-2, approved in 2016 for construction, with a maximum heat input capacity of 0.645 MMBtu/hr, and exhausting indoors.

[Under 40 CFR 63, Subpart DDDDD, this boiler is considered an affected facility.]

(o) **Forty-two (42) natural gas-fired Paint Shop & Body Shop Building Air Handling Units**, exhausting indoors. The following units utilize steam from boilers ID 004 and 005 and are currently not listed in the permit since they do not emit any air pollutant:

1. Paint Bld ASH #3, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 6.631 MMBtu/hr.

2. Paint Bld ASH #4, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 6.631 MMBtu/hr.

3. Paint Bld ASH #5, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.266 MMBtu/hr.

4. Paint Bld ASH #6, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.266 MMBtu/hr.

5. Paint Bld ASH #16, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.989 MMBtu/hr.

6. Paint Bld ASH #17, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.989 MMBtu/hr.

7. Paint Bld ASH #18, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 6.631 MMBtu/hr.

8. Paint Bld ASH #19, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 8.0 MMBtu/hr.

9. Paint Bld ASH #20, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 8.0 MMBtu/hr.
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Paint Bld ASH #21, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 6.631 MMBtu/hr.</td>
</tr>
<tr>
<td>11</td>
<td>Paint Bld ASH #33, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 3.617 MMBtu/hr.</td>
</tr>
<tr>
<td>12</td>
<td>Paint Bld ASH #34, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 3.617 MMBtu/hr.</td>
</tr>
<tr>
<td>13</td>
<td>Paint Bld ASH #35, approved for construction in 2016, with a maximum heat input capacity of 4.219 MMBtu/hr.</td>
</tr>
<tr>
<td>14</td>
<td>Paint Bld ASH #36, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.989 MMBtu/hr.</td>
</tr>
<tr>
<td>15</td>
<td>Paint Bld ASH #37, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.447 MMBtu/hr.</td>
</tr>
<tr>
<td>16</td>
<td>Bodyshop ACU #1, approved in 2016 for construction, with a maximum heat input capacity of 0.75 MMBtu/hr.</td>
</tr>
<tr>
<td>17</td>
<td>Bodyshop ACU #2, approved in 2016 for construction, with a maximum heat input capacity of 0.35 MMBtu/hr.</td>
</tr>
<tr>
<td>18</td>
<td>Bodyshop ACU #3, approved in 2016 for construction, with a maximum heat input capacity of 0.35 MMBtu/hr.</td>
</tr>
<tr>
<td>19</td>
<td>Mod Obs ASH #1, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 4.0 MMBtu/hr.</td>
</tr>
<tr>
<td>20</td>
<td>Mod Obs ASH #2, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 4.0 MMBtu/hr.</td>
</tr>
<tr>
<td>21</td>
<td>Mod Obs ASH #3, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 4.0 MMBtu/hr.</td>
</tr>
<tr>
<td>22</td>
<td>Mod Obs ASH #4, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 4.0 MMBtu/hr.</td>
</tr>
<tr>
<td>23</td>
<td>Mod Obs ASH #5, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 4.0 MMBtu/hr.</td>
</tr>
<tr>
<td>24</td>
<td>Mod Obs ASH #6, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 4.0 MMBtu/hr.</td>
</tr>
</tbody>
</table>
(25) Mod Obs ASH #7, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 4.0 MMBtu/hr.

(26) Mod Obs ASH #8, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 4.0 MMBtu/hr.

(27) Mod Obs ASH #9, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 4.0 MMBtu/hr.

(28) Mod Obs ASH #10, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 4.0 MMBtu/hr.

(29) 206 ASH, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 7.5 MMBtu/hr.

(30) Prime Cleanroom ASH, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 3.0 MMBtu/hr.

(31) 216 ASH #1 (SE), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.5 MMBtu/hr.

(32) 216 ASH #2 (SW), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.5 MMBtu/hr.

(33) 216 ASH #3 (NE), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.5 MMBtu/hr.

(34) 216 ASH #4 (NW), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.5 MMBtu/hr.

(35) 217 ASH #1 (SE), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 2.0 MMBtu/hr.

(36) 217 ASH #2 (SW), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 2.0 MMBtu/hr.

(37) 217 ASH #3 (NW), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.5 MMBtu/hr.

(38) 217 ASH #4 (NE), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.5 MMBtu/hr.
(39) 241 ASH #1 (SE), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 3.0 MMBtu/hr.

(40) 241 ASH #2 (SW), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 8.0 MMBtu/hr.

(41) 243 ASH #1 (NE), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 3.0 MMBtu/hr.

(42) 243 ASH #2 (NW), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 8.0 MMBtu/hr.

(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.8.1 Prevention of Significant Deterioration (PSD) Minor Limit [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the Permittee shall comply with the following:

(a) The total natural gas fuel usage for the four (4) natural gas-fired dock door heaters, identified as DUH-56, DUH-88, DUH-40, and DUH-57, the fourteen (14) natural gas-fired space heaters, identified as UH-1 through UH-14, one (1) natural gas-fired boiler, identified as BU-2, and the forty-two (42) natural gas-fired Paint Shop & Body Shop Building Air Handling Units shall not exceed seven hundred ninety-five (795) million cubic feet of natural gas per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The NOx emissions shall not exceed 100 pounds per million cubic feet of natural gas.

Compliance with this limit shall limit the NOx emissions from the four (4) natural gas-fired dock door heaters, identified as DUH-56, DUH-88, DUH-40, and DUH-57, the fourteen (14) natural gas-fired space heaters, identified as UH-1 through UH-14, one (1) natural gas-fired boiler, identified as BU-2, and the forty-two (42) natural gas-fired Paint Shop & Body Shop Building Air Handling Units to less than forty (40) tons per year and render 326 IAC 2-2 (PSD) not applicable to the 2016 modification permitted under SSM No. 003-37324-00036.

D.8.2 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4(a) (Particulate Emission Limitations for Sources of Indirect Heating), the particulate emissions from the one (1) boiler, identified as BU-2, shall not exceed 0.22 pounds per MMBtu heat input.

D.8.3 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.
D.8.4 Record Keeping Requirements

(a) To document the compliance status with Condition D.8.1, the Permittee shall maintain records of the natural gas usage to the four (4) natural gas-fired dock door heaters, identified as DUH-56, DUH-88, DUH-40, and DUH-57, the fourteen (14) natural gas-fired space heaters, identified as UH-1 through UH-14, one (1) natural gas-fired boiler, identified as BU-2, and the forty-two (42) natural gas-fired Paint Shop & Body Shop Building Air Handling Units monthly.

(b) Section C - General Record Keeping Requirements, of this permit, contains the Permittee's obligations with regard to the records required by this condition.

D.8.5 Reporting Requirements

A quarterly report of the information to document the compliance status with Condition D.8.1 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. 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 C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.
SECTION D.9  EMISSION UNIT OPERATION CONDITIONS

Emission Unit Description:

(i) One (1) Gasoline Fill Operation, identified as 014, constructed in 1985, including tanks 8 and 9, each with a capacity of 20,000 gallons. The vehicles being fueled is equipped with an Onboard Refueling Vapor Recovery (ORVR) System as VOC control;

Insignificant Activity:

(f) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.

(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.9.1 Gasoline Dispensing Facilities [326 IAC 8-4-6]

Pursuant to 326 IAC 8-4-6(b), the Permittee shall not allow the transfer of gasoline between any transport and any storage tank unless such tank is equipped with the following:

(1) A submerged fill pipe that extends to not more than twelve (12) inches from the bottom of the storage tank if the fill pipe was installed on or before November 9, 2006.

(2) Either a pressure relief valve set to release at no less than seven-tenths (0.7) pounds per square inch or an orifice of five-tenths (0.5) inch in diameter.

(3) A vapor balance system connected between the tank and the transport, operating according to manufacturer's specifications.

D.9.2 Leaks from Transports and Vapor Collection Systems; Records [326 IAC 8-4-9]

Pursuant to 326 IAC 8-4-9, the owner or operator of a vapor balance system or vapor control system subject to this rule shall:

(1) design and operate the applicable system and the gasoline loading equipment in a manner that prevents:

(A) a reading equal to or greater than twenty-one thousand (21,000) parts per million as propane, from all points on the perimeter of a potential leak source when measured by the method referenced in 40 CFR 60, Appendix A, Method 21, or an equivalent procedure approved by the commissioner during loading or unloading operations at gasoline dispensing facilities, bulk plants, and bulk terminals; and

(B) avoidable visible liquid leaks during loading or unloading operations at gasoline dispensing facilities.

(2) within fifteen (15) days, repair and retest a vapor balance, collection, or control system that exceeds the limits in subdivision (1).

D.9.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.
Emission Unit Description:

(a) Facility-wide natural gas usage, including combustion units described as follows:

(1) One (1) natural gas/landfill gas fired boiler, identified as 004, constructed in 1992 and modified in 2011 to combust landfill gas, with a maximum heat input capacity of 228 MMBtu/hr for natural gas and landfill gas, using low NOx burners and flue gas recirculation as control, and exhausting to stack 01;

Under 40 CFR 60, Subpart Db, this boiler is considered an affected facility.

Under 40 CFR 63, Subpart DDDDD, this boiler is considered an affected facility.

(2) One (1) natural gas-fired boiler, identified as 005, constructed in 1993, with a maximum heat input capacity of 228 MMBtu/hr, using low NOx burners and flue gas recirculation as control, and exhausting to stack 01;

Under 40 CFR 60, Subpart Db, this boiler is considered an affected facility.

Under 40 CFR 63, Subpart DDDDD, this boiler is considered an affected facility.

(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)]


(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 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 Db.

(b) Pursuant to 40 CFR 60.4, 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.1.2 Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units NSPS [40 CFR Part 60, Subpart Db]

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

(A) 40 CFR 60.40b(a),(f),(g),(j);
(B) 40 CFR 60.41b;
(C) 40 CFR 60.42b(k)(2);
(D) 40 CFR 60.44b(a)(1),(h), (i);
(E) 40 CFR 60.46b(a),(c), (e);
(F) 40 CFR 60.48b(b)(1) or (b)(2), (c), (d), (f);
(G) 40 CFR 60.49b(a),(b), (d), (g), (o), (v), (w).
SECTION E.2
NSPS

Emission Unit Description:

(b) One (1) ELPO Dipping System, identified as 006, constructed in August 1985, using natural gas thermal incinerators identified as #1 through #3 on the drying ovens as VOC control, and exhausting to stack 02;

d) One (1) Primer Surfacer System, identified as 010, constructed in March 1994, approved in 2010 for modification, using a natural gas fired regenerative thermal oxidizer with a maximum heat input capacity of 16 MMBtu/hr as VOC control, and water wash as PM control, and exhausting to stack 03. The Primer Surfacer System also includes applicators that purge internally through valves located inside the robot into a gun box. Additionally, the robotic bells purge into a gun box within the booth. The booth is an enclosed manufacturing unit, which is directed to the control device described above; and

e) One (1) Topcoat System, identified as 008, constructed in August 1985, approved in 2015 for modification, using ten (10) natural gas fired catalytic oxidizers identified as #1 - #10 on the drying ovens as VOC control, with the maximum heat input capacity of oxidizers #1 - #7 being 7.5 MMBtu/hr each, and the maximum heat input capacity of oxidizers #8 - #10 being 9.5 MMBtu/hr each, using water wash as PM control, and exhausting to stack 04.

k) The following equipment approved in 2015 for construction to accommodate the T1 Full Size Truck Project:

(1) One (1) Electrodeposition (ELPO Dipping) System, identified as 20, constructed in 2015 and approved in 2017 for modification, using one (1) natural gas-fired regenerative thermal oxidizer (RTO), with a maximum heat input capacity of 10 million British thermal units per hour (MMBtu/hr) as VOC control for the tank and oven, and exhausting through stack 020. The ELPO oven has 14 zones with a combined maximum heat input capacity of 79.5 MMBtu/hr.

(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)]


(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 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 MM.

(b) Pursuant to 40 CFR 60.4, 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 Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations [40 CFR Part 60, Subpart MM]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart MM (included as Attachment B to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission units listed above:
(1) 40 CFR 60.390;
(2) 40 CFR 60.391;
(3) 40 CFR 60.392(a)(1), (b), (c);
(4) 40 CFR 60.393;
(5) 40 CFR 60.394;
(6) 40 CFR 60.395;
(7) 40 CFR 60.396;
(8) 40 CFR 60.397.
SECTION E.3 NSPS

Emission Unit Description:

Insignificant Activities:

General Motors LLC – Lafayette Center Road

(t) Other emergency equipment as follows: Stationary fire pumps.

(2) One (1) diesel-fired stationary fire pump engine, identified as Fire Pump 2, constructed in 2014, with a maximum output rating of 121 horsepower, using no controls, and exhausting through Stack FP2.

Under 40 CFR 60, Subpart IIII, Fire Pump 2 is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, Fire Pump 2 is considered an affected facility.

(y) One (1) diesel-fired emergency generator, identified as Emergency Generator 9, constructed in 2016, approved in 2018 for construction, with a maximum output rating of 689 horsepower, EPA Certified engine with 2.53 L/cylinder displacement, using no controls, and exhausting through Stack EG9.

Under 40 CFR 60, Subpart IIII, Emergency Generator 9 is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, Emergency Generator 9 is considered an affected facility.

General Motors LLC - Stonebridge Road

(a) Four (4) diesel-fired emergency generators, identified as LOC Emergency Generators 1-4, each with a maximum output rating of 909 HP, constructed in 2018 with no controls, exhausting outdoors.

Under 40 CFR 60, Subpart IIII, this generator is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, this generator is considered an affected facility.

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

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 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 IIII.

(b) Pursuant to 40 CFR 60.4, 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
The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart III (included as Attachment C to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission units as specified below:

**General Motors LLC – Lafayette Center Road**

(a) One (1) diesel-fired emergency generator, identified as Emergency Generator 9, constructed in 2016, approved in 2018 for construction, with a maximum output rating of 689 horsepower, EPA Certified engine with 2.53 L/cylinder displacement, using no controls, and exhausting through Stack EG9.

1. 40 CFR 60.4200(a)(2)(i)
2. 40 CFR 60.4205(b)
3. 40 CFR 60.4206
4. 40 CFR 60.4207(b)
5. 40 CFR 60.4209(a)
6. 40 CFR 60.4211(a), (c), (f)
7. 40 CFR 60.4214
8. 40 CFR 60.4219
9. Table 5 (applicable portions) to 40 CFR 60, Subpart III
deferred for 40 CFR 60, Subpart III
10. Table 8 (applicable portions) to 40 CFR 60, Subpart III
11. Table 8 (applicable portions) to 40 CFR 60, Subpart III

(b) One (1) diesel-fired stationary fire pump engine, identified as Fire Pump 2, constructed in 2014, with a maximum output rating of 121 horsepower, using no controls, and exhausting through Stack FP2.

1. 40 CFR 60.4200(a)(2), (a)(4)
2. 40 CFR 60.4205(c)
3. 40 CFR 60.4206
4. 40 CFR 60.4207(b)
5. 40 CFR 60.4209(a)
6. 40 CFR 60.4211(a), (c), (f)
7. 40 CFR 60.4214(b)
8. 40 CFR 60.4219
9. Table 4 (applicable portions) to 40 CFR 60, Subpart III
deferred for 40 CFR 60, Subpart III
deferred for 40 CFR 60, Subpart III
10. Table 5 (applicable portions) to 40 CFR 60, Subpart III
deferred for 40 CFR 60, Subpart III
11. Table 8 (applicable portions) to 40 CFR 60, Subpart III
deferred for 40 CFR 60, Subpart III

**General Motors LLC - Stonebridge Road**

(a) Four (4) diesel-fired emergency generators, identified as LOC Emergency Generators 1-4, each with a maximum output rating of 909 HP, constructed in 2018 with no controls, exhausting outdoors.

1. 40 CFR 60.4200(a)(2), (a)(4)
2. 40 CFR 60.4205(b)
3. 40 CFR 60.4206
4. 40 CFR 60.4207(b)
5. 40 CFR 60.4209(a)
6. 40 CFR 60.4211(a), (c), (f)
7. 40 CFR 60.4214(b)
8. 40 CFR 60.4218
9. 40 CFR 60.4219
10. Table 5 (applicable portions) to 40 CFR 60, Subpart III
deferred for 40 CFR 60, Subpart III
11. Table 8 (applicable portions) to 40 CFR 60, Subpart III
SECTION E.4

NSPS

Emission Unit Description:

General Motors LLC – Lafayette Center Road

(j) Four (4) identical landfill gas-fired generators, identified as Gen 1 through Gen 4, approved in 2013 for construction, each with a maximum output rating of 2,242 horsepower, using no controls, and each exhausting through Stack S01.

Under 40 CFR 60, Subpart JJJJ, Gen 1 through Gen 4 are considered affected facilities.

Under 40 CFR 63, Subpart ZZZZ, Gen 1 through Gen 4 are considered affected facilities.

Insignificant Activities:

(z) One (1) natural gas-fired emergency generator, identified as Emergency Generator 6, constructed in 2016, approved in 2018 for construction, with a maximum output rating of 194 horsepower, EPA Certified engine with 0.68 L/cylinder displacement, using no controls, and exhausting through Stack EG6.

Under 40 CFR 60, Subpart JJJJ, Emergency Generator 6 is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, Emergency Generator 6 is considered an affected facility.

(aa) One (1) natural gas-fired emergency generator, identified as Emergency Generator 7, constructed in 2017, approved in 2018 for construction, with a maximum output rating of 131.6 horsepower, EPA Certified engine with 0.68 L/cylinder displacement, using no controls, and exhausting through Stack EG7.

Under 40 CFR 60, Subpart JJJJ, Emergency Generator 7 is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, Emergency Generator 7 is considered an affected facility.

(bb) One (1) natural gas-fired emergency generator, identified as Emergency Generator 8, constructed in 2017, approved in 2018 for construction, with a maximum output rating of 131.6 horsepower, EPA Certified engine with 0.68 L/cylinder displacement, using no controls, and exhausting through Stack EG8.

Under 40 CFR 60, Subpart JJJJ, Emergency Generator 8 is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, Emergency Generator 8 is considered an affected facility.

(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 [40 CFR 60, Subpart A][326 IAC 12-1]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 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 JJJJJ.
(b) Pursuant to 40 CFR 60.4, 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.4.2 New Standards of Performance for Spark Ignition Internal Combustion Engines NSPS [40 CFR 60, Subpart JJJJ]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart JJJJ (included as Attachment D to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission units as specified below:

(a) Four (4) identical landfill gas-fired generators, identified as Gen 1 through Gen 4, approved in 2013 for construction, each with a maximum output rating of 2,242 horsepower, using no controls, and each exhausting through Stack S01.

(1) 40 CFR 60.4230(a)(4)(i), (6)
(2) 40 CFR 60.4233(e)
(3) 40 CFR 60.4234
(4) 40 CFR 60.4243(b)(2)(ii), (g),
(5) 40 CFR 60.4244
(6) 40 CFR 60.4245(a), (c), (d)
(7) 40 CFR 60.4246
(8) 40 CFR 60.4248
(9) Tables 1 - 3 (applicable portions) to 40 CFR Part 60, Subpart JJJJ

(b) One (1) natural gas-fired emergency generator, identified as Emergency Generator 6, constructed in 2016, approved in 2018 for construction, with a maximum output rating of 194 horsepower, EPA Certified engine with 0.68 L/cylinder displacement, using no controls, and exhausting through Stack EG6.

(1) 40 CFR 60.4230(a)(4)(iv)
(2) 40 CFR 60.4233(e)
(3) 40 CFR 60.4234
(4) 40 CFR 60.4237
(5) 40 CFR 60.4243(d)
(6) Tables 1 (applicable portions) to 40 CFR Part 60, Subpart JJJJ
(7) Tables 4 (applicable portions) to 40 CFR Part 60, Subpart JJJJ

(c) One (1) natural gas-fired emergency generator, identified as Emergency Generator 7, constructed in 2017, approved in 2018 for construction, with a maximum output rating of 131.6 horsepower, EPA Certified engine with 0.68 L/cylinder displacement, using no controls, and exhausting through Stack EG7.

(1) 40 CFR 60.4230(a)(4)(iv)
(2) 40 CFR 60.4233(e)
(3) 40 CFR 60.4234
(4) 40 CFR 60.4237
(5) 40 CFR 60.4243(d)
(6) Tables 1 (applicable portions) to 40 CFR Part 60, Subpart JJJJ
(7) Tables 4 (applicable portions) to 40 CFR Part 60, Subpart JJJJ

(d) One (1) natural gas-fired emergency generator, identified as Emergency Generator 8,
constructed in 2017, approved in 2018 for construction, with a maximum output rating of 131.6 horsepower, EPA Certified engine with 0.68 L/cylinder displacement, using no controls, and exhausting through Stack EG8.

(1) 40 CFR 60.4230(a)(4)(iv)
(2) 40 CFR 60.4233(e)
(3) 40 CFR 60.4234
(3) 40 CFR 60.4237
(4) 40 CFR 60.4243(d)
(5) 40 CFR 60.4248
(6) Tables 1 (applicable portions) to 40 CFR Part 60, Subpart JJJJ
(7) Tables 4 (applicable portions) to 40 CFR Part 60, Subpart JJJJ
SECTION E.5
NESHAP

**Emission Unit Description:**

(g) The following VOC and HAP storage containers:

1. Storage tanks with capacity less than or equal to 1,000 gallons and annual throughput less than 12,000 gallons.
2. Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.

(dd) Methanol windshield washer fluid storage tank, with a capacity of 10,000 gallons.

Under 40 CFR 63, Subpart EEEE, these storage tanks storing “Organic liquids” as defined in 40 CFR 63.2406 are considered an affected facility.

(The information describing the process contained in this emissions unit 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 20-1-1, for the emission units listed above, except as otherwise specified in 40 CFR 63, Subpart EEEE.

(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.5.2 National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline) [40 CFR Part 63, Subpart EEEE] [326 IAC 20-83-1]**

The Permittee shall comply with the following provisions of this 40 CFR 63, Subpart EEEE (included as Attachment E of the operating permit), which are incorporated by reference as 326 IAC 20-83, for the units listed above, upon startup:

1. 40 CFR 63.2330
2. 40 CFR 63.2334(a)
3. 40 CFR 63.2338(a)(1), (a)(3)(i), (d)
4. 40 CFR 63.2342(a)(1)(i)
5. 40 CFR 63.2343(b)(3)
6. 40 CFR 63.2402
7. 40 CFR 63.2406
8. Table 2 to Subpart EEEE of Part 63
SECTION E.6
NESHAP

Emission Unit Description:

(b) One (1) ELPO Dipping System, identified as 006, constructed in August 1985, using natural gas thermal incinerators identified as #1 through #3 on the drying ovens as VOC control, and exhausting to stack 02;

(c) One (1) Underbody Robotic Sealer Operation, identified as Stone Guard Sealer, approved in 2012 for operation, using no controls, and exhausting indoors;

(d) One (1) Primer Surfacer System, identified as 010, constructed in March 1994, approved in 2010 for modification, using a natural gas fired regenerative thermal oxidizer with a maximum heat input capacity of 16 MMBtu/hr as VOC control, and water wash as PM control, and exhausting to stack 03. The Primer Surfacer System also includes applicators that purge internally through valves located inside the robot into a gun box. Additionally, the robotic bells purge into a gun box within the booth. The booth is an enclosed manufacturing unit, which is directed to the control device described above;

(e) One (1) Topcoat System, identified as 008, constructed in August 1985, approved in 2015 for modification, using ten (10) natural gas fired catalytic oxidizers identified as #1 - #10 on the drying ovens as VOC control, with the maximum heat input capacity of oxidizers #1 - #7 being 7.5 MMBtu/hr each, and the maximum heat input capacity of oxidizers #8 - #10 being 9.5 MMBtu/hr each, using water wash as PM control, and exhausting to stack 04;

(f) Miscellaneous sealers/adhesives/additives/solvents, identified as part of 009, constructed in August 1985, using no controls, and exhausting to stacks 07 and 08;

(g) One (1) Final Repair Operation, identified as 012, constructed in August 1985, using dry filters for particulate control, and exhausting to stack 06 and spot repair stalls;

(h) One (1) Maintenance Paint Operation, identified as 013, constructed in August 1985, using no control, and exhausting to stack 10;

(k) The following equipment approved in 2015 for construction to accommodate the T1 Full Size Truck Project:

(1) One (1) Electrodeposition (ELPO Dipping) System, identified as 20, constructed in 2015 and approved in 2017 for modification, using one (1) natural gas-fired regenerative thermal oxidizer (RTO), with a maximum heat input capacity of 10 million British thermal units per hour (MMBtu/hr) as VOC control for the tank and oven, and exhausting through stack 020. The ELPO oven has 14 zones with a combined maximum heat input capacity of 79.5 MMBtu/hr.

Under 40 CFR 60, Subpart MM, this is considered an affected facility.

Insignificant Activities:

(b) Storage tanks, identified as 1 (solvent/thinner), 2 (solvent/thinner), and two (2) 18,900 gallon waste purge solvent tanks, all constructed after July 23, 1984.

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

(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 III.

(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.6.2 Surface Coating of Automobiles and Light-Duty Trucks NESHAP [40 CFR Part 63, Subpart III]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart III (included as Attachment F to the operating permit), for the emission units listed above:

1. 40 CFR 63.3080;
2. 40 CFR 63.3081;
3. 40 CFR 63.3082(a)-(d), (g);
4. 40 CFR 63.3083(b), (d);
5. 40 CFR 63.3091(a)-(f);
6. 40 CFR 63.3092;
7. 40 CFR 63.3093;
8. 40 CFR 63.3094;
9. 40 CFR 63.3100;
10. 40 CFR 63.3101;
11. 40 CFR 63.3110;
12. 40 CFR 63.3120;
13. 40 CFR 63.3130;
14. 40 CFR 63.3131;
15. 40 CFR 63.3150;
16. 40 CFR 63.3151;
17. 40 CFR 63.3152;
18. 40 CFR 63.3160(b), (c);
19. 40 CFR 63.3161;
20. 40 CFR 63.3163;
21. 40 CFR 63.3164;
22. 40 CFR 63.3165;
23. 40 CFR 63.3166;
24. 40 CFR 63.3167(a), (b), (f);
25. 40 CFR 63.3168(a), (b), (c), (g);
26. 40 CFR 63.3169;
27. 40 CFR 63.3170(b);
28. 40 CFR 63.3171;
29. 40 CFR 63.3173;
30. 40 CFR 63.3174;
31. 40 CFR 63.3175;
32. 40 CFR 63.3176;
33. Table 1 to 40 CFR 63, Subpart III;
34. Table 2 to 40 CFR 63, Subpart III;
35. Table 3 to 40 CFR 63, Subpart III;
36. Appendix A to Subpart III of Part 63.
E.6.3 Surface Coating of Miscellaneous Metal Parts and Products NESHAP [40 CFR 63, Subpart MMMM]

Pursuant to 40 CFR 63.3881(d), the Permittee which engages in the surface coating of miscellaneous metal parts and products that meets the applicability criteria in 40 CFR 63.3081(b) for the surface coating of automobiles and light-duty trucks, shall comply with the provisions of 40 CFR 63, Subpart III, in order to demonstrate compliance with 40 CFR 63, Subpart MMMM.
SECTION E.7 NESHAP

Emission Unit Description:

General Motors LLC – Lafayette Center Road

(j) Four (4) identical landfill gas-fired generators, identified as Gen 1 through Gen 4, approved in 2013 for construction, each with a maximum output rating of 2,242 horsepower, using no controls, and each exhausting through Stack S01.

Under 40 CFR 60, Subpart JJJJ, Gen 1 through Gen 4 are considered affected facilities.

Under 40 CFR 63, Subpart ZZZZ, Gen 1 through Gen 4 are considered affected facilities.

Insignificant Activities:

(s) Diesel generators not exceeding 1600 horsepower.

(1) One (1) diesel-fired emergency generator, identified as Emergency Generator 2, constructed in 1985, with a maximum output rating of 415 horsepower, using no controls, and exhausting through Stack EG2.

Under 40 CFR 63, Subpart ZZZZ, Emergency Generator 2 is considered an affected facility.

(2) One (1) diesel-fired emergency generator, identified as Emergency Generator 3, constructed in 1985, with a maximum output rating of 415 horsepower, using no controls, and exhausting through Stack EG3.

Under 40 CFR 63, Subpart ZZZZ, Emergency Generator 3 is considered an affected facility.

(3) One (1) diesel-fired emergency generator, identified as Emergency Generator 5, constructed in 1985, with a maximum output rating of 415 horsepower, using no controls, and exhausting through Stack EG5.

Under 40 CFR 63, Subpart ZZZZ, Emergency Generator 5 is considered an affected facility.

(4) One (1) diesel-fired emergency generator, identified as Emergency Generator PHDZL, constructed in 1985, with a maximum output rating of 1515 horsepower, using no controls, and exhausting through Stack EGPHDZL.

Under 40 CFR 63, Subpart ZZZZ, Emergency Generator PHDZL is considered an affected facility.

(t) Other emergency equipment as follows: Stationary fire pumps.

(1) One (1) diesel-fired stationary fire pump engine, identified as Fire Pump 1, constructed in 1985, with a maximum output rating of 302 horsepower, using no controls, and each exhausting through Stack FP1.

Under 40 CFR 63, Subpart ZZZZ, Fire Pump 1 is considered an affected facility.

(2) One (1) diesel-fired stationary fire pump engine, identified as Fire Pump 2, constructed in 2014, with a maximum output rating of 121 horsepower, using no controls, and each
exhausting through Stack FP2.

Under 40 CFR 60, Subpart III, Fire Pump 2 is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, Fire Pump 2 is considered an affected facility.

(y) One (1) diesel-fired emergency generator, identified as Emergency Generator 9, constructed in 2016, approved in 2018 for construction, with a maximum output rating of 689 horsepower, EPA Certified engine with 2.53 L/cylinder displacement, using no controls, and exhausting through Stack EG9.

Under 40 CFR 60, Subpart III, Emergency Generator 9 is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, Emergency Generator 9 is considered an affected facility.

(z) One (1) natural gas-fired emergency generator, identified as Emergency Generator 6, constructed in 2016, approved in 2018 for construction, with a maximum output rating of 194 horsepower, EPA Certified engine with 0.68 L/cylinder displacement, using no controls, and exhausting through Stack EG6.

Under 40 CFR 60, Subpart JJJJ, Emergency Generator 6 is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, Emergency Generator 6 is considered an affected facility.

(aa) One (1) natural gas-fired emergency generator, identified as Emergency Generator 7, constructed in 2017, approved in 2018 for construction, with a maximum output rating of 131.6 horsepower, EPA Certified engine with 0.68 L/cylinder displacement, using no controls, and exhausting through Stack EG7.

Under 40 CFR 60, Subpart JJJJ, Emergency Generator 7 is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, Emergency Generator 7 is considered an affected facility.

(bb) One (1) natural gas-fired emergency generator, identified as Emergency Generator 8, constructed in 2017, approved in 2018 for construction, with a maximum output rating of 131.6 horsepower, EPA Certified engine with 0.68 L/cylinder displacement, using no controls, and exhausting through Stack EG8.

Under 40 CFR 60, Subpart JJJJ, Emergency Generator 8 is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, Emergency Generator 8 is considered an affected facility.

General Motors LLC - Stonebridge Road

(a) Four (4) diesel-fired emergency generators, identified as LOC Emergency Generators 1-4, each with a maximum output rating of 909 HP, constructed in 2018 with no controls, exhausting outdoors.

Under 40 CFR 60, Subpart III, this generator is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, this generator is considered an affected facility.

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

(a) Pursuant to 40 CFR 63, the Permittee shall comply with the provisions of 40 CFR 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1-1, except where 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.7.2 National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR 63, Subpart ZZZZ]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment G to the operating permit), for the emission units as specified below:

General Motors LLC – Lafayette Center Road

(a) Four (4) identical landfill gas-fired generators, identified as Gen 1 through Gen 4, approved in 2013 for construction, each with a maximum output rating of 2,242 horsepower, using no controls, and each exhausting through Stack S01.

1. 40 CFR 63.6580
2. 40 CFR 63.6585 (a), (b)
3. 40 CFR 63.6590 (a)(2)(i), (b)(2)
4. 40 CFR 63.6595 (a)(3)
5. 40 CFR 63.6600 (c)
6. 40 CFR 63.6605
7. 40 CFR 63.6625 (c)
8. 40 CFR 63.6640 (e)
9. 40 CFR 63.6645 (c)
10. 40 CFR 63.6650 (g)
11. 40 CFR 63.6655 (c)
12. 40 CFR 63.6660
13. 40 CFR 63.6665
14. 40 CFR 63.6670
15. 40 CFR 63.6675
16. Table 7 (item 2) to 40 CFR 63, Subpart ZZZZ
17. Table 8 to 40 CFR 63, Subpart ZZZZ

(b) Three (3) diesel-fired emergency generators, identified as Emergency Generator 2, Emergency Generator 3, and Emergency Generator 5, each constructed in 1985, each with a maximum output rating of 415 horsepower, using no controls, and each exhausting through Stacks EG2, EG3, and EG5, respectively.

One (1) diesel-fired emergency generator, identified as Emergency Generator PHDZL, constructed in 1985, with a maximum output rating of 1515 horsepower, using no controls, and exhausting through Stack EGPHDZL.

One (1) diesel-fired stationary fire pump engine, identified as Fire Pump 1, constructed in 1985, with a maximum output rating of 302 horsepower, using no controls, and exhausting through
Stack FP1.

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585 (a), (b)
(3) 40 CFR 63.6590 (a)(1)(i), (ii)
(4) 40 CFR 63.6595 (a)(1)
(5) 40 CFR 63.6600 (c)
(6) 40 CFR 63.6602
(7) 40 CFR 63.6605
(8) 40 CFR 63.6625 (f)
(9) 40 CFR 63.6655 (e)(2), (f)(1)
(10) 40 CFR 63.6660
(11) Table 2C to 40 CFR 63, Subpart ZZZZ

(c) One (1) diesel-fired emergency generator, identified as Emergency Generator 9, constructed in 2016, approved in 2018 for construction, with a maximum output rating of 689 horsepower, EPA Certified engine with 2.53 L/cylinder displacement, using no controls, and exhausting through Stack EG9.

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585(a), (b)
(3) 40 CFR 63.6590(a)(2)(i)
(4) 40 CFR 63.6590(b)(1)(i)
(5) 40 CFR 63.6645(f)

(d) One (1) diesel-fired stationary fire pump engine, identified as Fire Pump 2, constructed in 2014, with a maximum output rating of 121 horsepower, using no controls, and exhausting through Stack FP2.

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585(a), (b)
(3) 40 CFR 63.6590(a)(2)(ii)
(4) 40 CFR 63.6590(c)(7)

(e) One (1) natural gas-fired emergency generator, identified as Emergency Generator 6, constructed in 2016, approved in 2018 for construction, with a maximum output rating of 194 horsepower, EPA Certified engine with 0.68 L/cylinder displacement, using no controls, and exhausting through Stack EG6.

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585(a), (b)
(3) 40 CFR 63.6590(c)(6)

(f) One (1) natural gas-fired emergency generator, identified as Emergency Generator 7, constructed in 2017, approved in 2018 for construction, with a maximum output rating of 131.6 horsepower, EPA Certified engine with 0.68 L/cylinder displacement, using no controls, and exhausting through Stack EG7.

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585(a), (b)
(3) 40 CFR 63.6590(c)(6)

(g) One (1) natural gas-fired emergency generator, identified as Emergency Generator 8, constructed in 2017, approved in 2018 for construction, with a maximum output rating of 131.6 horsepower, EPA Certified engine with 0.68 L/cylinder displacement, using no controls, and exhausting through Stack EG8.
General Motors LLC - Stonebridge Road

(a) Four (4) diesel-fired emergency generators, identified as LOC Emergency Generators 1-4, each with a maximum output rating of 909 HP, constructed in 2018 with no controls, exhausting outdoors.

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585(a), (b)
(3) 40 CFR 63.6590(c)(6)

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585(a), (b)
(3) 40 CFR 63.6590(a)(2)(i), (b)(1)
(4) 40 CFR 63.6645(f)
Emission Unit Description:

(a)(1) One (1) natural gas/landfill gas fired boiler, identified as 004, constructed in 1992 and modified in 2011 to combust landfill gas, with a maximum heat input capacity of 228 MMBtu/hr for natural gas and landfill gas, using low NOx burners and flue gas recirculation as control, and exhausting to stack 01;

Under 40 CFR 60, Subpart Db, this boiler is considered an affected facility.
Under 40 CFR 63, Subpart DDDDD, this boiler is considered an affected facility.

(a)(2) One (1) natural gas-fired boiler, identified as 005, constructed in 1993, with a maximum heat input capacity of 228 MMBtu/hr, using low NOx burners and flue gas recirculation as control, and exhausting to stack 01;

Under 40 CFR 60, Subpart Db, this boiler is considered an affected facility.
Under 40 CFR 63, Subpart DDDDD, this boiler is considered an affected facility.

(a)(5) Two (2) natural gas-fired Powerhouse Boilers, identified as Boiler 1 and Boiler 2, each with a maximum heat input rate of 31.51 MMBtu/hour, approved in 2020 for construction.

Under 40 CFR 60, Subpart Dc, these boilers are considered affected facilities.
Under 40 CFR 63, Subpart DDDDD, these boilers are considered affected facilities.

(k)(3)(ii)Three (3) Hot Water Generators, located at the paint area, each with a maximum heat input capacity of 8.0 MMBtu/hr.

(n) One (1) natural gas-fired boiler, identified as BU-2, approved in 2016 for construction, with a maximum heat input capacity of 0.3 MMBtu/hr, and exhausting indoors. [Under 40 CFR 63, Subpart DDDDD, this boiler is considered an affected facility.]

(The information describing the process contained in this emissions unit 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.8.2 National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers [40 CFR 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 H to the operating permit), which are incorporated by reference as 326 IAC 20-95, for the emission units listed above. Boiler 1 and Boiler 2 must comply to the following portions of 40 CFR 63, Subpart DDDDD upon startup:

(a) 40 CFR 63.7480;
(b) 40 CFR 63.7485;
(c) 40 CFR 63.7490;
(d) 40 CFR 63.7495;
(e) 40 CFR 63.7500;
(f) 40 CFR 63.7505;
(g) 40 CFR 63.7510;
(h) 40 CFR 63.7515;
(i) 40 CFR 63.7520;
(j) 40 CFR 63.7525;
(k) 40 CFR 63.7530;
(l) 40 CFR 63.7535;
(m) 40 CFR 63.7540;
(n) 40 CFR 63.7541;
(o) 40 CFR 63.7545;
(p) 40 CFR 63.7550;
(q) 40 CFR 63.7555;
(r) 40 CFR 63.7560;
(s) 40 CFR 63.7565;
(t) 40 CFR 63.7570;
(u) 40 CFR 63 Table 2 to NESHAP Subpart DDDDD;
(v) 40 CFR 63 Table 3 to NESHAP Subpart DDDDD;
(w) 40 CFR 63 Table 4 to NESHAP Subpart DDDDD;
(x) 40 CFR 63 Table 5 to NESHAP Subpart DDDDD;
(y) 40 CFR 63 Table 6 to NESHAP Subpart DDDDD;
(z) 40 CFR 63 Table 8 to NESHAP Subpart DDDDD;
(aa) 40 CFR 63 Table 9 to NESHAP Subpart DDDDD;
(bb) 40 CFR 63 Table 10 to NESHAP Subpart DDDDD; and
(cc) 40 CFR 63 Table 11 to NESHAP Subpart DDDDD.
SECTION E.9 NSPS

**Emission Unit Description:**

(a) Facility-wide natural gas usage, including combustion units described as follows:

(5) Two (2) natural gas-fired Powerhouse Boilers, identified as Boiler 1 and Boiler 2, each with a maximum heat input rate of 31.51 MMBtu/hour, approved in 2020 for construction.

Under 40 CFR 60, Subpart Dc, these boilers are considered affected facilities.

Under 40 CFR 63, Subpart DDDDD, these boilers are considered affected facilities.

(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)]**


(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 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 Dc.

(b) Pursuant to 40 CFR 60.4, 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.9.2 Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR Part 60, Subpart Dc]

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

(1) 40 CFR 60.48c(a)(1), (g), (i)
Source Name: General Motors, LLC - Fort Wayne Assembly
Source Address: 12200 Lafayette Center Road, Roanoke, Indiana 46783
Part 70 Permit No.: T003-41020-00036

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
Page 1 of 2

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

| Date/Time Emergency started: |  |
| Date/Time Emergency was corrected: |  |
| Was the facility being properly operated at the time of the emergency? | Y | N |

**Type of Pollutants Emitted:** TSP, PM-10, SO₂, VOC, NOₓ, CO, Pb, other:

**Estimated amount of pollutant(s) emitted during emergency:**

**Describe the steps taken to mitigate the problem:**

**Describe the corrective actions/response steps taken:**

**Describe the measures taken to minimize emissions:**

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:

---

Form Completed by: ____________________________

Title / Position: ____________________________

Date: ____________________________

Phone: ____________________________
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: General Motors LLC Fort Wayne Assembly
Source Address: 12200 Lafayette Center Road, Roanoke, Indiana 46783
Part 70 Permit No.: T 003-41020-00036
Facility: Boiler 005
Parameter: Natural gas usage
Limit: Shall not exceed 1,902.2 million cubic feet (MMCF) 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>Natural Gas Usage (MMCF)</td>
</tr>
<tr>
<td>This Month</td>
<td>Previous 11 Months</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: ____________________________
Source Name: General Motors LLC Fort Wayne Assembly
Source Address: 12200 Lafayette Center Road, Roanoke, Indiana 46783
Part 70 Permit No.: T 003-41020-00036
Facility: Surface Coating and Cleaning Operations, including ELPO Dipping System (006), Primer Surfacer System (010), Topcoat System (008), Miscellaneous Sealers/Adhesives/Additives/Solvents (009), Final Repair Operation (012), and Maintenance Paint Operation (013)
Parameter: VOC emissions
Limit: Shall not exceed 3,204 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></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Month</th>
<th>VOC Emissions (tons)</th>
<th>VOC Emissions (tons)</th>
<th>VOC Emissions (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This Month</td>
<td>Previous 11 Months</td>
<td>12 Month Total</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<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: ________________________________
Part 70 Quarterly Report

Source Name: General Motors LLC Fort Wayne Assembly
Source Address: 12200 Lafayette Center Road, Roanoke, Indiana 46783
Part 70 Permit No.: T 003-41020-00036
Facility: T1 Full Size Truck Project - ELPO, ID 020
Parameter: VOC emissions
Limit: Shall not exceed 10 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>
</table>

<table>
<thead>
<tr>
<th>Month</th>
<th>VOC Emissions (tons)</th>
<th>VOC Emissions (tons)</th>
<th>VOC Emissions (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Month</td>
<td></td>
<td>Previous 11 Months</td>
<td>12 Month Total</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: ______________________

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
### Part 70 Quarterly Report

Source Name: General Motors LLC Fort Wayne Assembly  
Source Address: 12200 Lafayette Center Road, Roanoke, Indiana 46783  
Part 70 Permit No.: T 003-41020-00036  
Facility: Twenty (20) natural gas-fired burners, known as MOD 1 through MOD 10 (each mod contains two burners)  
Parameter: Natural gas usage  
Limit: Shall not exceed six hundred ten (610) million cubic feet 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>
</table>

<table>
<thead>
<tr>
<th>Month</th>
<th>Natural Gas Usage (MMCF)</th>
<th>Natural Gas Usage (MMCF)</th>
<th>Natural Gas Usage (MMCF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Month</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previous 11 Months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Month Total</td>
<td></td>
<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:  

<table>
<thead>
<tr>
<th>Month</th>
<th>Natural Gas Usage (MMCF)</th>
<th>Natural Gas Usage (MMCF)</th>
<th>Natural Gas Usage (MMCF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Month</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previous 11 Months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Month Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Part 70 Quarterly Report

**Source Name:** General Motors LLC Fort Wayne Assembly  
**Source Address:** 12200 Lafayette Center Road, Roanoke, Indiana 46783  
**Part 70 Permit No.:** T 003-41020-00036  
**Facility:** T1 Full Size Truck Project - Miscellaneous Sealers and Adhesives, ID 022  
**Parameter:** VOC emissions  
**Limit:** Shall not exceed 28 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>
</table>

<table>
<thead>
<tr>
<th>Month</th>
<th>VOC Emissions (tons)</th>
<th>VOC Emissions (tons)</th>
<th>VOC Emissions (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This Month</td>
<td>Previous 11 Months</td>
<td>12 Month Total</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<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: ____________________________
### Part 70 Quarterly Report

Source Name: General Motors LLC Fort Wayne Assembly  
Source Address: 12200 Lafayette Center Road, Roanoke, Indiana 46783  
Part 70 Permit No.: T 003-41020-00036  
Facility: T1 Full Size Truck Project - One hundred fifty (150) natural gas-fired heaters, and RTOs  
Parameter: Natural gas usage  
Limit: Shall not exceed six hundred (600) million cubic feet 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></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Month</th>
<th>Natural Gas Usage (MMCF)</th>
<th>Natural Gas Usage (MMCF)</th>
<th>Natural Gas Usage (MMCF)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This Month</td>
<td>Previous 11 Months</td>
<td>12 Month Total</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<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:
Part 70 Quarterly Report

Source Name: General Motors LLC Fort Wayne Assembly
Source Address: 12200 Lafayette Center Road, Roanoke, Indiana 46783
Part 70 Permit No.: T 003-41020-00036
Facility: Four (4) natural gas-fired dock door heaters, identified as DUH-56, DUH-88, DUH-40, and DUH-57, the fourteen (14) natural gas-fired space heaters, identified as UH-1 through UH-14, one (1) natural gas-fired boiler, identified as BU-2, and the forty-two (42) natural gas-fired Paint Shop & Body Shop Building Air Handling Units
Parameter: Natural gas usage
Limit: Shall not exceed seven hundred ninety-five (795) million cubic feet 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>
</table>

<table>
<thead>
<tr>
<th>Month</th>
<th>Natural Gas Usage (MMCF)</th>
<th>Natural Gas Usage (MMCF)</th>
<th>Natural Gas Usage (MMCF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Month</td>
<td>Previous 11 Months</td>
<td>12 Month Total</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: ______________________
### Part 70 Quarterly Report

Source Name: General Motors LLC Fort Wayne Assembly  
Source Address: 12200 Lafayette Center Road, Roanoke, Indiana 46783  
Part 70 Permit No.: T 003-41020-00036  
Facility: Powerhouse Boiler 1 and Boiler 2  
Parameter: Natural gas usage  
Limit: Shall not exceed 309.744 MMCF (309,744,000 cubic feet) 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>
</table>

<table>
<thead>
<tr>
<th>Month</th>
<th>Natural Gas Usage (MMCF)</th>
<th>Natural Gas Usage (MMCF)</th>
<th>Natural Gas Usage (MMCF)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This Month</td>
<td>Previous 11 Months</td>
<td>12 Month Total</td>
</tr>
<tr>
<td></td>
<td></td>
<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: ________________
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: General Motors, LLC - Fort Wayne Assembly  
Source Address: 12200 Lafayette Center Road, Roanoke, Indiana 46783  
Part 70 Permit No.: T003-41020-00036

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>
<thead>
<tr>
<th>Permit Requirement (specify permit condition #)</th>
<th>Date of Deviation:</th>
<th>Duration of Deviation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Deviations:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Probable Cause of Deviation:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response Steps Taken:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Permit Requirement (specify permit condition #)</th>
<th>Date of Deviation:</th>
<th>Duration of Deviation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Deviations:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Probable Cause of Deviation:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response Steps Taken:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permit Requirement (specify permit condition #)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Date of Deviation:</strong></td>
<td><strong>Duration of Deviation:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Number of Deviations:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Probable Cause of Deviation:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Response Steps Taken:</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Permit Requirement (specify permit condition #)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Date of Deviation:</strong></td>
</tr>
<tr>
<td><strong>Number of Deviations:</strong></td>
</tr>
<tr>
<td><strong>Probable Cause of Deviation:</strong></td>
</tr>
<tr>
<td><strong>Response Steps Taken:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Permit Requirement (specify permit condition #)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Date of Deviation:</strong></td>
</tr>
<tr>
<td><strong>Number of Deviations:</strong></td>
</tr>
<tr>
<td><strong>Probable Cause of Deviation:</strong></td>
</tr>
<tr>
<td><strong>Response Steps Taken:</strong></td>
</tr>
</tbody>
</table>

Form Completed by: ________________________________
Title / Position: ________________________________
Date: ________________________________
Phone: ________________________________
PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

§ 60.40c  Applicability and delegation of authority.

(a) Except as provided in paragraphs (d), (e), (f), and (g) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, § 60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units that meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO₂) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§ 60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in § 60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under § 60.14.

(e) Affected facilities (i.e. heat recovery steam generators and fuel heaters) that are associated with stationary combustion turbines and meet the applicability requirements of subpart KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators, fuel heaters, and other affected facilities that are capable of combusting more than or equal to 2.9 MW (10 MMBtu/h) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/h) heat input of fossil fuel. If the heat recovery steam generator, fuel heater, or other affected facility is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The stationary combustion turbine emissions are subject to subpart GG or KKKK, as applicable, of this part.)

(f) Any affected facility that meets the applicability requirements of and is subject to subpart AAAA or subpart CCCC of this part is not subject to this subpart.

(g) Any facility that meets the applicability requirements and is subject to an EPA approved State or Federal section 111(d)/129 plan implementing subpart BBBBB of this part is not subject to this subpart.

(h) Affected facilities that also meet the applicability requirements under subpart J or subpart Ja of this part are subject to the PM and NOₓ standards under this subpart and the SO₂ standards under subpart J or subpart Ja of this part, as applicable.

(i) Temporary boilers are not subject to this subpart.
§ 60.41c Definitions.

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

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see § 60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels derived from coal for the purposes of creating useful heat, including but not limited to solvent refined coal, gasified coal not meeting the definition of natural gas, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

Coal refuse means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb)) on a dry basis.

Combined cycle system means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

Combustion research means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit (i.e., the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

Conventional technology means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see § 60.17), diesel fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see § 60.17), kerosine, as defined by the American Society of Testing and Materials in ASTM D3699 (incorporated by reference, see § 60.17), biodiesel as defined by the American Society of Testing and Materials in ASTM D6751 (incorporated by reference, see § 60.17), or biodiesel blends as defined by the American Society of Testing and Materials in ASTM D7467 (incorporated by reference, see § 60.17).

Dry flue gas desulfurization technology means a SO2 control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline reagent and water, whether introduced separately or as a premixed slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.
**Emerging technology** means any SO₂ control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under § 60.48c(a)(4).

**Federally enforceable** means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 51.24.

**Fluidized bed combustion technology** means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

**Fuel pretreatment** means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

**Heat input** means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

**Heat transfer medium** means any material that is used to transfer heat from one point to another point.

**Maximum design heat input capacity** means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

**Natural gas** means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth’s surface, of which the principal constituent is methane; or

(2) Liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see § 60.17); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 34 and 43 megajoules (MJ) per dry standard cubic meter (910 and 1,150 Btu per dry standard cubic foot).

**Noncontinental area** means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Marianas Islands.

**Oil** means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

**Potential sulfur dioxide emission rate** means the theoretical SO₂ emissions (nanograms per joule (ng/J) or lb/MMBtu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

**Process heater** means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

**Residual oil** means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see § 60.17).
Steam generating unit means a device that combusts any fuel and produces steam or heats water or heats any heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Temporary boiler means a steam generating unit that combusts natural gas or distillate oil with a potential SO\textsubscript{2} emissions rate no greater than 26 ng/J (0.060 lb/MMBtu), and the unit is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A steam generating unit is not a temporary boiler if any one of the following conditions exists:

1. The equipment is attached to a foundation.
2. The steam generating unit or a replacement remains at a location for more than 180 consecutive days. Any temporary boiler that replaces a temporary boiler at a location and performs the same or similar function will be included in calculating the consecutive time period.
3. The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.
4. The equipment is moved from one location to another in an attempt to circumvent the residence time requirements of this definition.

Wet flue gas desulfurization technology means an SO\textsubscript{2} control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of PM or SO\textsubscript{2}.

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.


§ 60.42c Standard for sulfur dioxide (SO\textsubscript{2}).

(a) Except as provided in paragraphs (b), (c), and (e) of this section, on and after the date on which the performance test is completed or required to be completed under § 60.8, whichever date comes first, the owner or operator of an affected facility that combusts only coal shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO\textsubscript{2} in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO\textsubscript{2} emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO\textsubscript{2} in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO\textsubscript{2} in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO\textsubscript{2} emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO\textsubscript{2} in excess of the emission limit is determined pursuant to paragraph (e)(2) of this section.

(b) Except as provided in paragraphs (c) and (e) of this section, on and after the date on which the performance test is completed or required to be completed under § 60.8, whichever date comes first, the owner or operator of an affected facility that:
(1) Combusts only coal refuse alone in a fluidized bed combustion steam generating unit shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO$_2$ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 20 percent (0.20) of the potential SO$_2$ emission rate (80 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO$_2$ in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is fired with coal refuse, the affected facility subject to paragraph (a) of this section. If oil or any other fuel (except coal) is fired with coal refuse, the affected facility is subject to the 87 ng/J (0.20 lb/MMBtu) heat input SO$_2$ emissions limit or the 90 percent SO$_2$ reduction requirement specified in paragraph (a) of this section and the emission limit is determined pursuant to paragraph (e)(2) of this section.

(2) Combusts only coal and that uses an emerging technology for the control of SO$_2$ emissions shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO$_2$ in excess of 50 percent (0.50) of the potential SO$_2$ emission rate (50 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO$_2$ in excess of 260 ng/J (0.60 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 50 percent SO$_2$ reduction requirement specified in this paragraph and the emission limit determined pursuant to paragraph (e)(2) of this section.

(c) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, alone or in combination with any other fuel, and is listed in paragraphs (c)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO$_2$ in excess of the emission limit determined pursuant to paragraph (e)(2) of this section. Percent reduction requirements are not applicable to affected facilities under paragraphs (c)(1), (2), (3), or (4).

(1) Affected facilities that have a heat input capacity of 22 MW (75 MMBtu/h) or less;

(2) Affected facilities that have an annual capacity for coal of 55 percent (0.55) or less and are subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for coal of 55 percent (0.55) or less.

(3) Affected facilities located in a noncontinental area; or

(4) Affected facilities that combust coal in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from exhaust gases entering the duct burner.

(d) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, alone or in combination with any other fuel shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO$_2$ in excess of 215 ng/J (0.50 lb/MMBtu) heat input from oil; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

(e) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, or coal and oil with any other fuel shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO$_2$ in excess of the following:

(1) The percent of potential SO$_2$ emission rate or numerical SO$_2$ emission rate required under paragraph (a) or (b)(2) of this section, as applicable, for any affected facility that

(i) Combusts coal in combination with any other fuel;
(ii) Has a heat input capacity greater than 22 MW (75 MMBtu/h); and

(iii) Has an annual capacity factor for coal greater than 55 percent (0.55); and

(2) The emission limit determined according to the following formula for any affected facility that combusts coal, oil, or coal and oil with any other fuel:

\[
E_s = \left( \frac{K_a H_a + K_b H_b + K_c H_c}{H_a + H_b + H_c} \right)
\]

Where:

- \( E_s \) = SO₂ emission limit, expressed in ng/J or lb/MMBtu heat input;
- \( K_a = 520 \text{ ng/J (1.2 lb/MMBtu)} \);
- \( K_b = 260 \text{ ng/J (0.60 lb/MMBtu)} \);
- \( K_c = 215 \text{ ng/J (0.50 lb/MMBtu)} \);
- \( H_a \) = Heat input from the combustion of coal, except coal combusted in an affected facility subject to paragraph (b)(2) of this section, in Joules (J) [MMBtu];
- \( H_b \) = Heat input from the combustion of coal in an affected facility subject to paragraph (b)(2) of this section, in J (MMBtu); and
- \( H_c \) = Heat input from the combustion of oil, in J (MMBtu).

(f) Reduction in the potential SO₂ emission rate through fuel pretreatment is not credited toward the percent reduction requirement under paragraph (b)(2) of this section unless:

(1) Fuel pretreatment results in a 50 percent (0.50) or greater reduction in the potential SO₂ emission rate; and

(2) Emissions from the pretreated fuel (without either combustion or post-combustion SO₂ control) are equal to or less than the emission limits specified under paragraph (b)(2) of this section.

(g) Except as provided in paragraph (h) of this section, compliance with the percent reduction requirements, fuel oil sulfur limits, and emission limits of this section shall be determined on a 30-day rolling average basis.

(h) For affected facilities listed under paragraphs (h)(1), (2), (3), or (4) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under § 60.48c(f), as applicable.

(1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 MMBtu/hr).

(2) Residual oil-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).

(3) Coal-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/h).

(4) Other fuels-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/h).

(i) The SO₂ emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.
(j) For affected facilities located in noncontinental areas and affected facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.


§ 60.43c Standard for particulate matter (PM).

(a) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or combusts mixtures of coal with other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 22 ng/J (0.051 lb/MMBtu) heat input if the affected facility combusts only coal, or combusts coal with other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility combusts coal with other fuels, has an annual capacity factor for the other fuels greater than 10 percent (0.10), and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(b) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts wood or combusts mixtures of wood with other fuels (except coal) and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emissions limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood greater than 30 percent (0.30); or

(2) 130 ng/J (0.30 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood of 30 percent (0.30) or less and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for wood of 30 percent (0.30) or less.

(c) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. Owners and operators of an affected facility that elect to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart and are subject to a federally enforceable PM limit of 0.030 lb/MMBtu or less are exempt from the opacity standard specified in this paragraph (c).

(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.

(e)(1) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, or a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input, except as provided in paragraphs (e)(2), (e)(3), and (e)(4) of this section.

(2) As an alternative to meeting the requirements of paragraph (e)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commences modification

after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

(i) 22 ng/J (0.051 lb/MMBtu) heat input derived from the combustion of coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels; and

(ii) 0.2 percent of the combustion concentration (99.8 percent reduction) when combusting coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels.

(3) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(4) An owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.50 weight percent sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a PM standard under § 60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or SO2 emissions is not subject to the PM limit in this section.


§ 60.44c Compliance and performance test methods and procedures for sulfur dioxide.

(a) Except as provided in paragraphs (g) and (h) of this section and § 60.8(b), performance tests required under § 60.8 shall be conducted following the procedures specified in paragraphs (b), (c), (d), (e), and (f) of this section, as applicable. Section 60.8(f) does not apply to this section. The 30-day notice required in § 60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(b) The initial performance test required under § 60.8 shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the percent reduction requirements and SO2 emission limits under § 60.42c shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affect facility will be operated, but not later than 180 days after the initial startup of the facility. The steam generating unit load during the 30-day period does not have to be the maximum design heat input capacity, but must be representative of future operating conditions.

(c) After the initial performance test required under paragraph (b) of this section and § 60.8, compliance with the percent reduction requirements and SO2 emission limits under § 60.42c is based on the average percent reduction and the average SO2 emission rates for 30 consecutive steam generating unit operating days. A separate performance test is completed at the end of each steam generating unit operating day, and a new 30-day average percent reduction and SO2 emission rate are calculated to show compliance with the standard.

(d) If only coal, only oil, or a mixture of coal and oil is combusted in an affected facility, the procedures in Method 19 of appendix A of this part are used to determine the hourly SO2 emission rate (Eho) and the 30-day average SO2 emission rate (Eao). The hourly averages used to compute the 30-day averages are obtained from the CEMS. Method 19 of appendix A of this part shall be used to calculate Eao when using daily fuel sampling or Method 6B of appendix A of this part.

(e) If coal, oil, or coal and oil are combusted with other fuels:

(1) An adjusted Eao (Eao o) is used in Equation 19-19 of Method 19 of appendix A of this part to compute the adjusted Eao (Eao o). The Eao o is computed using the following formula:

\[ E_{ao}^{o} = \frac{E_{ao} - E_{w}(1-X_{s})}{X_{s}} \]
Where:

\[ E_{ho} = \text{Adjusted E}_{ho}, \text{ ng/J (lb/MMBtu)}; \]

\[ E_{ho} = \text{Hourly SO}_2 \text{ emission rate, ng/J (lb/MMBtu)}; \]

\[ E_w = \text{SO}_2 \text{ concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9 of appendix A of this part, ng/J (lb/MMBtu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E_w if the owner or operator elects to assume E_w = 0.} \]

\[ X_k = \text{Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.} \]

(2) The owner or operator of an affected facility that qualifies under the provisions of § 60.42c(c) or (d) (where percent reduction is not required) does not have to measure the parameters E_w or X_k if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19 of appendix A of this part.

(f) Affected facilities subject to the percent reduction requirements under § 60.42c(a) or (b) shall determine compliance with the SO_2 emission limits under § 60.42c pursuant to paragraphs (d) or (e) of this section, and shall determine compliance with the percent reduction requirements using the following procedures:

(1) If only coal is combusted, the percent of potential SO_2 emission rate is computed using the following formula:

\[
\% P_s = 100 \left(1 - \frac{\% R_{g}}{100}\right) \left(1 - \frac{\% R_{f}}{100}\right)
\]

Where:

\[ \% P_s = \text{Potential SO}_2 \text{ emission rate, in percent}; \]

\[ \% R_{g} = \text{SO}_2 \text{ removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent}; \]

\[ \% R_{f} = \text{SO}_2 \text{ removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.} \]

(2) If coal, oil, or coal and oil are combusted with other fuels, the same procedures required in paragraph (f)(1) of this section are used, except as provided for in the following:

(i) To compute the \( \% P_s \), an adjusted \( \% R_{g} \) \( (\% R_{g}^{o}) \) is computed from \( E_{ao}^{o} \) from paragraph (e)(1) of this section and an adjusted average \( SO_2 \) inlet rate \( (E_{ai}^{o}) \) using the following formula:

\[
\% R_{g}^{o} = 100 \left(1 - \frac{E_{ai}^{o}}{E_{ai}}\right)
\]

Where:

\[ \% R_{g}^{o} = \text{Adjusted } \% R_g, \text{ in percent}; \]

\[ E_{ao}^{o} = \text{Adjusted } E_{ao}, \text{ ng/J (lb/MMBtu)}; \]

\[ E_{ai}^{o} = \text{Adjusted average } SO_2 \text{ inlet rate, ng/J (lb/MMBtu)}. \]
(ii) To compute $E_{\text{hi}} \circ$, an adjusted hourly SO$_2$ inlet rate ($E_{\text{hi}} \circ$) is used. The $E_{\text{hi}} \circ$ is computed using the following formula:

$$E_{\text{hi}} \circ = \frac{E_{\text{hi}} - E_w (1 - X_k)}{X_k}$$

Where:

$E_{\text{hi}} \circ$ = Adjusted $E_{\text{hi}}$, ng/J (lb/MMBtu);

$E_{\text{hi}}$ = Hourly SO$_2$ inlet rate, ng/J (lb/MMBtu);

$E_w$ = SO$_2$ concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value $E_w$ for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure $E_w$ if the owner or operator elects to assume $E_w = 0$; and

$X_k$ = Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under § 60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under § 60.46c(d)(2).

(h) For affected facilities subject to § 60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO$_2$ standards based on fuel supplier certification, the performance test shall consist of the certification from the fuel supplier, as described in § 60.48c(f), as applicable.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the SO$_2$ standards under § 60.42c(h)(1) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(j) The owner or operator of an affected facility shall use all valid SO$_2$ emissions data in calculating $\%P_s$ and $E_{\text{ho}}$ under paragraphs (d), (e), or (f) of this section, as applicable, whether or not the minimum emissions data requirements under § 60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating $\%P_s$ or $E_{\text{ho}}$ pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]
(2) Method 3A or 3B of appendix A-2 of this part shall be used for gas analysis when applying Method 5 or 5B of appendix A-3 of this part or 17 of appendix A-6 of this part.

(3) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows:

(i) Method 5 of appendix A of this part may be used only at affected facilities without wet scrubber systems.

(ii) Method 17 of appendix A of this part may be used at affected facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of Sections 8.1 and 11.1 of Method 5B of appendix A of this part may be used in Method 17 of appendix A of this part only if Method 17 of appendix A of this part is used in conjunction with a wet scrubber system. Method 17 of appendix A of this part shall not be used in conjunction with a wet scrubber system if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part may be used in conjunction with a wet scrubber system.

(4) The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry standard cubic meters (dscm) [60 dry standard cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(5) For Method 5 or 5B of appendix A of this part, the temperature of the sample gas in the probe and filter holder shall be monitored and maintained at 160 ±14 °C (320±25 °F).

(6) For determination of PM emissions, an oxygen (O₂) or carbon dioxide (CO₂) measurement shall be obtained simultaneously with each run of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location.

(7) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rates expressed in ng/J (lb/MMBtu) heat input shall be determined using:

(i) The O₂ or CO₂ measurements and PM measurements obtained under this section, (ii) The dry basis F factor, and (iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part.

(8) Method 9 of appendix A-4 of this part shall be used for determining the opacity of stack emissions.

(b) The owner or operator of an affected facility seeking to demonstrate compliance with the PM standards under § 60.43c(b)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(c) In place of PM testing with Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring PM emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor PM emissions instead of conducting performance testing using Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall install, calibrate, maintain, and operate a CEMS and shall comply with the requirements specified in paragraphs (c)(1) through (c)(14) of this section.

(1) Notify the Administrator 1 month before starting use of the system.

(2) Notify the Administrator 1 month before stopping use of the system.
(3) The monitor shall be installed, evaluated, and operated in accordance with § 60.13 of subpart A of this part.

(4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under § 60.8 of subpart A of this part or within 180 days of notification to the Administrator of use of CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.

(5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under § 60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (d) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.

(6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.

(7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraph (c)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.

(i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

(ii) [Reserved]

(8) The 1-hour arithmetic averages required under paragraph (c)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under § 60.13(e)(2) of subpart A of this part.

(9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (c)(7) of this section are not met.

(10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.

(11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O2 (or CO2 ) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and performance tests conducted using the following test methods.

(i) For PM, Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall be used; and

(ii) For O2 (or CO2 ), Method 3A or 3B of appendix A-2 of this part, as applicable shall be used.

(12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.

(13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours on a 30-day rolling average.

(14) As of January 1, 2012, and within 90 days after the date of completing each performance test, as defined in § 60.8, conducted to demonstrate compliance with this subpart, you must submit relative accuracy test audit (i.e., reference method) data and performance test (i.e., compliance test) data, except opacity data, electronically to EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see http://www.epa.gov/ttn/chief/ert/ert_tool.html/) or other compatible electronic spreadsheet. Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFIRE database.
(d) The owner or operator of an affected facility seeking to demonstrate compliance under § 60.43c(e)(4) shall follow the applicable procedures under § 60.48c(f). For residual oil-fired affected facilities, fuel supplier certifications are only allowed for facilities with heat input capacities between 2.9 and 8.7 MW (10 to 30 MMBtu/h).


§ 60.46c Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (d) and (e) of this section, the owner or operator of an affected facility subject to the SO2 emission limits under § 60.42c shall install, calibrate, maintain, and operate a CEMS for measuring SO2 concentrations and either O2 or CO2 concentrations at the outlet of the SO2 control device (or the outlet of the steam generating unit if no SO2 control device is used), and shall record the output of the system. The owner or operator of an affected facility subject to the percent reduction requirements under § 60.42c shall measure SO2 concentrations and either O2 or CO2 concentrations at both the inlet and outlet of the SO2 control device.

(b) The 1-hour average SO2 emission rates measured by a CEMS shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under § 60.42c. Each 1-hour average SO2 emission rate must be based on at least 30 minutes of operation, and shall be calculated using the data points required under § 60.13(h)(2). Hourly SO2 emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

(c) The procedures under § 60.13 shall be followed for installation, evaluation, and operation of the CEMS.

1. All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of appendix B of this part.

2. Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of appendix F of this part.

3. For affected facilities subject to the percent reduction requirements under § 60.42c, the span value of the SO2 CEMS at the inlet to the SO2 control device shall be 125 percent of the maximum estimated hourly potential SO2 emission rate of the fuel combusted, and the span value of the SO2 CEMS at the outlet from the SO2 control device shall be 50 percent of the maximum estimated hourly potential SO2 emission rate of the fuel combusted.

4. For affected facilities that are not subject to the percent reduction requirements of § 60.42c, the span value of the SO2 CEMS at the outlet from the SO2 control device (or outlet of the steam generating unit if no SO2 control device is used) shall be 125 percent of the maximum estimated hourly potential SO2 emission rate of the fuel combusted.

(d) As an alternative to operating a CEMS at the inlet to the SO2 control device (or outlet of the steam generating unit if no SO2 control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO2 emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the SO2 control device (or outlet of the steam generating unit if no SO2 control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO2 emission rate by using Method 6B of appendix A of this part. Fuel sampling shall be conducted pursuant to either paragraph (d)(1) or (d)(2) of this section. Method 6B of appendix A of this part shall be conducted pursuant to paragraph (d)(3) of this section.

1. For affected facilities combusting coal or oil, coal or oil samples shall be collected daily in an as-fired condition at the inlet to the steam generating unit and analyzed for sulfur content and heat content according the Method 19 of appendix A of this part. Method 19 of appendix A of this part provides procedures for converting these measurements into the format to be used in calculating the average SO2 input rate.

2. As an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fuel tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur content of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when
calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.

(3) Method 6B of appendix A of this part may be used in lieu of CEMS to measure SO₂ at the inlet or outlet of the SO₂ control system. An initial stratification test is required to verify the adequacy of the Method 6B of appendix A of this part sampling location. The stratification test shall consist of three paired runs of a suitable SO₂ and CO₂ measurement train operated at the candidate location and a second similar train operated according to the procedures in §3.2 and the applicable procedures in section 7 of Performance Specification 2 of appendix B of this part. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 of appendix A of this part or Methods 6C and 3A of appendix A of this part are suitable measurement techniques. If Method 6B of appendix A of this part is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B of appendix A of this part 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent (0.10).

(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to §60.42c(h)(1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO₂ standards based on fuel supplier certification, as described under §60.48c(f), as applicable.

(f) The owner or operator of an affected facility operating a CEMS pursuant to paragraph (a) of this section, or conducting as-fired fuel sampling pursuant to paragraph (d)(1) of this section, shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive steam generating unit operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator.

§60.47c Emission monitoring for particulate matter.

(a) Except as provided in paragraphs (c), (d), (e), and (f) of this section, the owner or operator of an affected facility combusting coal, oil, or wood that is subject to the opacity standards under §60.43c shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility subject to an opacity standard in §60.43c(c) that is not required to use a COMS due to paragraphs (c), (d), (e), or (f) of this section that elects not to use a COMS shall conduct a performance test using Method 9 of appendix A-4 of this part and the procedures in §60.11 to demonstrate compliance with the applicable limit in §60.43c by April 29, 2011, within 45 days of stopping use of an existing COMS, or within 180 days after initial startup of the facility, whichever is later, and shall comply with either paragraphs (a)(1), (a)(2), or (a)(3) of this section. The observation period for Method 9 of appendix A-4 of this part performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation.

(1) Except as provided in paragraph (a)(2) and (a)(3) of this section, the owner or operator shall conduct subsequent Method 9 of appendix A-4 of this part performance tests using the procedures in paragraph (a) of this section according to the applicable schedule in paragraphs (a)(1)(i) through (a)(1)(iv) of this section, as determined by the most recent Method 9 of appendix A-4 of this part performance test results.

(i) If no visible emissions are observed, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(ii) If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(iii) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 3 calendar months from
the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; or

(iv) If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 45 calendar days from the date that the most recent performance test was conducted.

(2) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 of this part performance tests, elect to perform subsequent monitoring using Method 22 of appendix A-7 of this part according to the procedures specified in paragraphs (a)(2)(i) and (ii) of this section.

(i) The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of appendix A-7 of this part and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (i.e., 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (i.e., 90 seconds per 30 minute period), the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observation (i.e., 90 seconds) or conduct a new Method 9 of appendix A-4 of this part performance test using the procedures in paragraph (a) of this section within 45 calendar days according to the requirements in § 60.45c(a)(8).

(ii) If no visible emissions are observed for 10 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed.

(3) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in paragraph (a)(2) of this section. For reference purposes in preparing the monitoring plan, see OAQPS “Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems.” This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.

(b) All COMS shall be operated in accordance with the applicable procedures under Performance Specification 1 of appendix B of this part. The span value of the opacity COMS shall be between 60 and 80 percent.

(c) Owners and operators of an affected facilities that burn only distillate oil that contains no more than 0.5 weight percent sulfur and/or liquid or gaseous fuels with potential sulfur dioxide emission rates of 26 ng/J (0.060 lb/MMBtu) heat input or less and that do not use a post-combustion technology to reduce SO2 or PM emissions and that are subject to an opacity standard in § 60.43c(c) are not required to operate a COMS if they follow the applicable procedures in § 60.48c(f).

(d) Owners or operators complying with the PM emission limit by using a PM CEMS must calibrate, maintain, operate, and record the output of the system for PM emissions discharged to the atmosphere as specified in § 60.45c(c). The CEMS specified in paragraph § 60.45c(c) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(e) Owners and operators of an affected facility that is subject to an opacity standard in § 60.43c(c) and that does not use post-combustion technology (except a wet scrubber) for reducing PM, SO2, or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur, and is operated such that emissions of CO discharged to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a boiler operating day average basis is not required to operate a COMS. Owners and
operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (e)(1) through (4) of this section; or

(1) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (e)(1)(i) through (iv) of this section.

(i) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in § 60.58b(i)(3) of subpart Eb of this part.

(ii) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(iii) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. The 1-hour averages are calculated using the data points required in § 60.13(h)(2).

(iv) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(2) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(3) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(4) You must record the CO measurements and calculations performed according to paragraph (e) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(f) An owner or operator of an affected facility that is subject to an opacity standard in § 60.43c(c) is not required to operate a COMS provided that the affected facility meets the conditions in either paragraphs (f)(1), (2), or (3) of this section.

(1) The affected facility uses a fabric filter (baghouse) as the primary PM control device and, the owner or operator operates a bag leak detection system to monitor the performance of the fabric filter according to the requirements in section § 60.48Da of this part.

(2) The affected facility uses an ESP as the primary PM control device, and the owner or operator uses an ESP predictive model to monitor the performance of the ESP developed in accordance and operated according to the requirements in section § 60.48Da of this part.

(3) The affected facility burns only gaseous fuels and/or fuel oils that contain no greater than 0.5 weight percent sulfur, and the owner or operator operates the unit according to a written site-specific monitoring plan approved by the permitting authority. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard. For testing performed as part of this site-specific monitoring plan, the permitting authority may require as an alternative to the notification and reporting requirements specified in §§ 60.8 and 60.11 that the owner or operator submit any deviations with the excess emissions report required under § 60.48c(c).
§ 60.48c Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by § 60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under § 60.42c, or § 60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(4) Notification if an emerging technology will be used for controlling SO2 emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of § 60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO2 emission limits of § 60.42c, or the PM or opacity limits of § 60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of this part.

(c) In addition to the applicable requirements in § 60.7, the owner or operator of an affected facility subject to the opacity limits in § 60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period and maintain records according to the requirements specified in paragraphs (c)(1) through (3) of this section, as applicable to the visible emissions monitoring method used.

(1) For each performance test conducted using Method 9 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(1)(i) through (iii) of this section.

(i) Dates and time intervals of all opacity observation periods;

(ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and

(iii) Copies of all visible emission observer opacity field data sheets;

(2) For each performance test conducted using Method 22 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(2)(i) through (iv) of this section.

(i) Dates and time intervals of all visible emissions observation periods;

(ii) Name and affiliation for each visible emission observer participating in the performance test;

(iii) Copies of all visible emission observer opacity field data sheets; and

(iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.
(3) For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator.

(d) The owner or operator of each affected facility subject to the SO₂ emission limits, fuel oil sulfur limits, or percent reduction requirements under § 60.42c shall submit reports to the Administrator.

(e) The owner or operator of each affected facility subject to the SO₂ emission limits, fuel oil sulfur limits, or percent reduction requirements under § 60.42c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable.

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average SO₂ emission rate (ng/J or lb/MMBtu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent of potential SO₂ emission rate calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of the corrective actions taken.

(4) Identification of any steam generating unit operating days for which SO₂ or diluent (O₂ or CO₂) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.

(5) Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of the F factor used in calculations, method of determination, and type of fuel combusted.

(7) Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.

(8) If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.

(9) If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 of appendix B of this part.

(10) If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier;

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in § 60.41c; and

(iii) The sulfur content or maximum sulfur content of the oil.
(2) For residual oil:

(i) The name of the oil supplier;

(ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;

(iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and

(iv) The method used to determine the sulfur content of the oil.

(3) For coal:

(i) The name of the coal supplier;

(ii) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected);

(iii) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and

(iv) The methods used to determine the properties of the coal.

(4) For other fuels:

(i) The name of the supplier of the fuel;

(ii) The potential sulfur emissions rate or maximum potential sulfur emissions rate of the fuel in ng/J heat input; and

(iii) The method used to determine the potential sulfur emissions rate of the fuel.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combests only natural gas, wood, fuels using fuel certification in § 60.48c(f) to demonstrate compliance with the SO₂ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in § 60.42c to use fuel certification to demonstrate compliance with the SO₂ standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

(h) The owner or operator of each affected facility subject to a federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under § 60.42c or § 60.43c shall calculate the annual capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.
(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]
Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Significant Source Modification and a Significant Permit Modification to a Part 70

Source Description and Location

<table>
<thead>
<tr>
<th>Source Name:</th>
<th>General Motors LLC Fort Wayne Assembly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Location:</td>
<td>12200 Lafayette Center Road, Roanoke, IN 46783</td>
</tr>
<tr>
<td>County:</td>
<td>Allen</td>
</tr>
<tr>
<td>SIC Code:</td>
<td>3711 (Motor Vehicles and Passenger Car Bodies)</td>
</tr>
<tr>
<td>Operation Permit No.:</td>
<td>T003-41020-00036</td>
</tr>
<tr>
<td>Operation Permit Issuance Date:</td>
<td>December 2, 2019</td>
</tr>
<tr>
<td>Significant Source Modification No.:</td>
<td>003-43453-00036</td>
</tr>
<tr>
<td>Significant Permit Modification No.:</td>
<td>003-43572-00036</td>
</tr>
<tr>
<td>Permit Reviewer:</td>
<td>Aida DeGuzman</td>
</tr>
</tbody>
</table>

Existing Approvals

The source was issued Part 70 Operating Permit Renewal No. T003-41020-00036 on December 2, 2019. There have been no subsequent approvals issued.

County Attainment Status

The source is located in Allen 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. Allen 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

Allen 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

Allen 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**

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). However, there is an applicable New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants that was in effect on August 7, 1980 (40 CFR 60, Subpart MM -Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations); therefore, fugitive emissions are 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.

<p>| Source-Wide Emissions Prior to Modification (ton/year) |
|-----------------|----------------|-----------------|----------------|-----------------|----------------|-----------------|-----------------|</p>
<table>
<thead>
<tr>
<th>PM¹</th>
<th>PM₁₀¹</th>
<th>PM₁₂⁻²</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 Including Fugitive Emissions*</td>
<td>117.1</td>
<td>141.8</td>
<td>140.5</td>
<td>27.3</td>
<td>482.6</td>
<td>3,337.3</td>
<td>760.04</td>
<td>36.97 (H₂CO)</td>
</tr>
<tr>
<td>Title V Major Source Thresholds</td>
<td>NA</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>50</td>
<td>50</td>
<td>100</td>
<td>10</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>250</td>
<td>--</td>
</tr>
</tbody>
</table>
(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a PSD regulated pollutant, NOx, VOC, and CO, is emitted at a rate 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 Permit Renewal No.: T 003-41020-00036, issued on December 2, 2019.

<table>
<thead>
<tr>
<th>Emission Unit/ID</th>
<th>Heat Input Capacity</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Space Heater</td>
<td>ACU 101</td>
<td>0.810</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>ACU 102</td>
<td>0.540</td>
</tr>
<tr>
<td></td>
<td>HV-1</td>
<td>1.200</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-1</td>
<td>0.950</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-2</td>
<td>0.950</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-3</td>
<td>0.800</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-4</td>
<td>0.950</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-5</td>
<td>0.800</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-6</td>
<td>0.950</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-7</td>
<td>0.800</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-8</td>
<td>0.800</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-9</td>
<td>0.800</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-10</td>
<td>0.950</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-11</td>
<td>0.800</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-12</td>
<td>0.800</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-13</td>
<td>0.800</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-14</td>
<td>0.800</td>
</tr>
<tr>
<td>Space Heater</td>
<td>ASH-135</td>
<td>4.754</td>
</tr>
<tr>
<td>Space Heater</td>
<td>ASH-138</td>
<td>6.867</td>
</tr>
<tr>
<td>Space Heater</td>
<td>ASH-3</td>
<td>5.811</td>
</tr>
<tr>
<td>Space Heater</td>
<td>ASH-4</td>
<td>5.811</td>
</tr>
<tr>
<td>Space Heater</td>
<td>ASH-5</td>
<td>0.740</td>
</tr>
</tbody>
</table>

The Office of Air Quality (OAQ) has reviewed an application, submitted by General Motors LLC Fort Wayne Assembly on November 5, 2020, relating to the proposed construction of two (2) new replacement natural-gas-fired boilers and forty-two (42) natural gas heating.

The following is a list of the new emission units:

(a) Two (2) natural gas-fired Powerhouse Boilers, identified as Boiler 1 and Boiler 2, each with a maximum heat input rate of 31.51 MMBtu/hour, approved in 2020 for construction.

(b) Forty-two (42) natural gas-fired heating units, with a total heat input capacity of 56.39 MMBtu/hour, approved in 2020 for construction:
<table>
<thead>
<tr>
<th>Emission Unit/ID</th>
<th>Heat Input Capacity</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Space Heater ASH-6</td>
<td>0.740 MMBtu/hour</td>
<td>Paint Shop Roof Near Column S7</td>
</tr>
<tr>
<td>Space Heater ASH-33</td>
<td>3.170 MMBtu/hour</td>
<td>Paint Shop Roof Near Column U1</td>
</tr>
<tr>
<td>Space Heater ASH-34</td>
<td>3.170 MMBtu/hour</td>
<td>Paint Shop Roof Near Column U3</td>
</tr>
<tr>
<td>Space Heater ASH-35</td>
<td>6.075 MMBtu/hour</td>
<td>Paint Shop Roof Near Column U7 Powerhouse Generator Rm</td>
</tr>
<tr>
<td>Space Heater UH-15</td>
<td>0.250 MMBtu/hour</td>
<td>Powerhouse Generator Rm</td>
</tr>
<tr>
<td>Space Heater UH-16</td>
<td>0.250 MMBtu/hour</td>
<td>Powerhouse Generator Rm</td>
</tr>
<tr>
<td>Space Heater UH-17</td>
<td>0.250 MMBtu/hour</td>
<td>Powerhouse Generator Rm</td>
</tr>
<tr>
<td>Space Heater UH-18</td>
<td>0.250 MMBtu/hour</td>
<td>Cooling Tower Pump Rm</td>
</tr>
<tr>
<td>Space Heater UH-19</td>
<td>0.250 MMBtu/hour</td>
<td>Cooling Tower Pump Rm</td>
</tr>
<tr>
<td>Space Heater UH-20</td>
<td>0.250 MMBtu/hour</td>
<td>Cooling Tower Pump Rm</td>
</tr>
<tr>
<td>Space Heater UH-21</td>
<td>0.250 MMBtu/hour</td>
<td>Cooling Tower Pump Rm</td>
</tr>
<tr>
<td>Space Heater UH-22</td>
<td>0.250 MMBtu/hour</td>
<td>WWT Filter Press Rm</td>
</tr>
<tr>
<td>Space Heater UH-23</td>
<td>0.250 MMBtu/hour</td>
<td>Waste Treatment Area</td>
</tr>
<tr>
<td>Space Heater UH-24</td>
<td>0.250 MMBtu/hour</td>
<td>Waste Treatment Area</td>
</tr>
<tr>
<td>Space Heater UH-25</td>
<td>0.250 MMBtu/hour</td>
<td>Waste Treatment Area</td>
</tr>
<tr>
<td>Space Heater UH-26</td>
<td>0.400 MMBtu/hour</td>
<td>Filter Press Dumpster Room</td>
</tr>
<tr>
<td>Space Heater UH-27</td>
<td>0.400 MMBtu/hour</td>
<td>Filter Press Dumpster Room</td>
</tr>
<tr>
<td>Space Heater UH-28</td>
<td>0.400 MMBtu/hour</td>
<td>NW Storage Overhead Door</td>
</tr>
<tr>
<td>Space Heater UH-29</td>
<td>0.400 MMBtu/hour</td>
<td>Oil/Grease Room next to N. Overhead Door</td>
</tr>
<tr>
<td>Space Heater UH-30</td>
<td>0.400 MMBtu/hour</td>
<td>West Overhead Door</td>
</tr>
</tbody>
</table>

(c) Request to change the frequency of stack testing from every 2.5 years to every 5 years.

### Emission Units and Pollution Control Equipment Removed From the Source

As part of this permitting action, the source requested the removal of following emission units (Boilers 004 and 005) from the permit. However, since these boilers will not be removed until the proposed Powerhouse Boilers, identified as Boiler 1 and Boiler 2 are operating normally, Boilers 004 and 005 will remain in the permit:

(a) One (1) natural gas/landfill gas fired boiler, identified as 004, constructed in 1992 and modified in 2011 to combust landfill gas, with a maximum heat input capacity of 228 MMBtu/hr for natural gas and landfill gas, using low NOx burners and flue gas recirculation as control, and exhausting to stack 01.

(b) One (1) natural gas-fired boiler, identified as 005, constructed in 1993, with a maximum heat input capacity of 228 MMBtu/hr, using low NOx burners and flue gas recirculation as control, and exhausting to stack 01.
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>PM&lt;sub&gt;10&lt;/sub&gt;</th>
<th>PM&lt;sub&gt;2.5&lt;/sub&gt;&lt;sup&gt;1&lt;/sup&gt;</th>
<th>SO&lt;sub&gt;2&lt;/sub&gt;</th>
<th>NO&lt;sub&gt;x&lt;/sub&gt;</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boilers, 1 and 2</td>
<td>0.51</td>
<td>2.06</td>
<td>2.06</td>
<td>0.16</td>
<td>27.06</td>
<td>1.48</td>
<td>22.74</td>
<td>0.47 Hexane</td>
<td>0.50</td>
</tr>
<tr>
<td>42 Heating Units</td>
<td>0.46</td>
<td>1.84</td>
<td>1.84</td>
<td>0.15</td>
<td>24.21</td>
<td>1.33</td>
<td>20.34</td>
<td>0.44 Hexane</td>
<td>0.46</td>
</tr>
<tr>
<td><strong>Total PTE Before Controls of the New Emission Units:</strong></td>
<td><strong>0.97</strong></td>
<td><strong>3.90</strong></td>
<td><strong>3.90</strong></td>
<td><strong>0.31</strong></td>
<td><strong>51.27</strong></td>
<td><strong>2.81</strong></td>
<td><strong>43.08</strong></td>
<td>0.91 Hexane</td>
<td><strong>0.96</strong></td>
</tr>
</tbody>
</table>

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

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

(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 administrative amendment and it involves significant change to Part 70 permit terms or conditions.

Permit Level Determination – PSD Emissions Increase

The table below summarizes the potential to emit of the modification, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of the Part 70 source and permit modifications, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.
(a) This modification to an existing major stationary source is minor under PSD (326 IAC 2-2) because the potential to emit of NOx is limited to less than 40 tons per year and all the other PSD regulated pollutants from the modification are each less than the PSD significant emission rates (SER). Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply to the 2020 modification.

### Project Emissions (ton/year)

<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>Single HAP</th>
<th>Combined HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler 1</td>
<td>0.29</td>
<td>1.18</td>
<td>1.18</td>
<td>0.16</td>
<td>15.49</td>
<td>0.85</td>
<td>13.01</td>
<td>0.00</td>
<td>0.28</td>
</tr>
<tr>
<td>Boiler 2</td>
<td>0.46</td>
<td>1.84</td>
<td>1.84</td>
<td>0.09</td>
<td>24.21</td>
<td>1.33</td>
<td>20.34</td>
<td>0.44</td>
<td>0.46</td>
</tr>
<tr>
<td>42 Heating Units</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total PTE of Modification</td>
<td>0.75</td>
<td>3.02</td>
<td>3.02</td>
<td>0.31</td>
<td>39.7</td>
<td>2.18</td>
<td>33.35</td>
<td>0.44 (Hexane)</td>
<td>0.74</td>
</tr>
<tr>
<td>PSD Significant Emission Rates (SER)</td>
<td>25</td>
<td>15</td>
<td>10</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>100</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

**PTE of the Entire Source After Issuance of the Part 70 Modification**

The table below summarizes the after issuance source-wide potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of the Part 70 source 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. Deletions are struck through and additions are **bolded**:

<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>Combined HAPs</th>
<th>Worst HAP*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler 004 - Worst Case</td>
<td>3.79</td>
<td>15.18</td>
<td>15.18</td>
<td>1.20</td>
<td>95.11</td>
<td>4.99</td>
<td>79.89</td>
<td>60.90</td>
<td>0.25</td>
</tr>
<tr>
<td>Boiler 005 - Worst Case</td>
<td>1.81</td>
<td>7.23</td>
<td>7.23</td>
<td>0.57</td>
<td>30.11</td>
<td>5.23</td>
<td>79.89</td>
<td>1.79</td>
<td>0.07</td>
</tr>
</tbody>
</table>

**SSM No. 003-43453-00036**

<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>Combined HAPs</th>
<th>Worst HAP*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler 1, Boiler 2</td>
<td>0.29</td>
<td>1.18</td>
<td>1.18</td>
<td>0.16</td>
<td>15.49</td>
<td>0.85</td>
<td>13.01</td>
<td>0.28</td>
<td>0.02</td>
</tr>
<tr>
<td>42 Heating Units</td>
<td>0.46</td>
<td>1.84</td>
<td>1.84</td>
<td>0.09</td>
<td>24.21</td>
<td>1.33</td>
<td>20.34</td>
<td>0.46</td>
<td>0.02</td>
</tr>
<tr>
<td>Generators Gen1-Gen4</td>
<td>11.25</td>
<td>11.25</td>
<td>11.25</td>
<td>21.56</td>
<td>51.96</td>
<td>48.49</td>
<td>365.44</td>
<td>36.74</td>
<td>36.34</td>
</tr>
<tr>
<td>007 - Heaters</td>
<td>0.40</td>
<td>1.60</td>
<td>1.60</td>
<td>0.13</td>
<td>21.11</td>
<td>1.16</td>
<td>17.73</td>
<td>0.40</td>
<td>0.02</td>
</tr>
<tr>
<td>MOD 1-10 (air supply house burners)</td>
<td>2.00</td>
<td>7.99</td>
<td>7.99</td>
<td>0.63</td>
<td>105.12</td>
<td>5.78</td>
<td>88.30</td>
<td>1.98</td>
<td>0.08</td>
</tr>
<tr>
<td>006 - Thermal Incineration Natural Gas</td>
<td>0.40</td>
<td>1.59</td>
<td>1.59</td>
<td>0.13</td>
<td>20.86</td>
<td>1.15</td>
<td>17.52</td>
<td>3.94E-01</td>
<td>0.02</td>
</tr>
<tr>
<td>010 - RTO Natural Gas Combustion</td>
<td>0.13</td>
<td>0.51</td>
<td>0.51</td>
<td>0.04</td>
<td>6.67</td>
<td>0.37</td>
<td>5.61</td>
<td>1.26E-01</td>
<td>0.01</td>
</tr>
<tr>
<td>008 - Catalytic Oxidizer Natural Gas Combustion</td>
<td>0.64</td>
<td>2.57</td>
<td>2.57</td>
<td>0.20</td>
<td>33.79</td>
<td>1.86</td>
<td>28.38</td>
<td>6.38E-01</td>
<td>0.03</td>
</tr>
<tr>
<td>006 - ELPO Dipping System</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>010-Primer Surface System</td>
<td>11.21</td>
<td>11.21</td>
<td>11.21</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>008 - Topcoat System</td>
<td>59.01</td>
<td>59.01</td>
<td>59.01</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Underbody Robotic Sealer Operation</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>009- Misc. Sealers/ Adhesives/Additives</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>007 - Catalysts/ Additives</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**SSM No. 003-43572-00036**
### Potential To Emit of the Entire Source After Issuance of Modification (tons/year)

<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>Combined HAPs</th>
<th>Worst HAP*</th>
</tr>
</thead>
<tbody>
<tr>
<td>009- Misc. Solvents</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>012 - Final Repair Operation</td>
<td>0.37</td>
<td>0.37</td>
<td>0.37</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>013 - Maintenance Paint Operation</td>
<td>2.82</td>
<td>2.82</td>
<td>2.82</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>014 - Gasoline Fill Operation</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>9.65</td>
<td>-</td>
<td>7.87E-02</td>
<td>0.003</td>
<td></td>
</tr>
<tr>
<td>ELPO Dipping System - T1 Full-Size Truck Project</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>10</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Miscellaneous Sealers and Adhesives - T1 Full-Size Truck Project</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>28</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>ELPO oven, RTO, and heater: nat gas comb -- T1 Full-Size Truck Project</td>
<td>0.57</td>
<td>2.28</td>
<td>2.28</td>
<td>0.18</td>
<td>30.00</td>
<td>1.65</td>
<td>25.20</td>
<td>0.57</td>
<td>0.08</td>
</tr>
<tr>
<td>2016 Steam Elimination Natural Gas Combustion</td>
<td>0.76</td>
<td>3.02</td>
<td>3.02</td>
<td>0.24</td>
<td>39.75</td>
<td>2.19</td>
<td>33.39</td>
<td>0.75</td>
<td>0.03</td>
</tr>
</tbody>
</table>

#### Insignificant Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>Combined HAPs</th>
<th>Worst HAP*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Shop - Grinding &amp; Machining Operations -- T1 Full-Size Truck Project</td>
<td>4.51</td>
<td>4.51</td>
<td>4.51</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Machining and Grinding</td>
<td>4.51</td>
<td>4.51</td>
<td>4.51</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Storage Tanks (1, 2, 7, 8, 12, 13, 14, 15, &amp; two waste purge solvent tanks)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2.11</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Space Heaters, Process Heaters, Boilers less than 10 MMBtu/hr.</td>
<td>0.08</td>
<td>0.32</td>
<td>0.32</td>
<td>0.03</td>
<td>4.17</td>
<td>0.23</td>
<td>3.50</td>
<td>0.08</td>
<td>0.003</td>
</tr>
<tr>
<td>Gasoline Fuel Transfer &amp; Dispensing Operation</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4.51</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Emergency Diesel Generators (2, 3, 5, &amp; PHDZL)</td>
<td>0.88</td>
<td>0.88</td>
<td>0.88</td>
<td>0.82</td>
<td>12.40</td>
<td>1.01</td>
<td>2.67</td>
<td>3.85E-03</td>
<td>0.001</td>
</tr>
<tr>
<td>Emergency Diesel Fire Pumps (1 and 2)</td>
<td>0.44</td>
<td>0.44</td>
<td>0.44</td>
<td>0.41</td>
<td>6.20</td>
<td>0.50</td>
<td>1.34</td>
<td>1.93E-03</td>
<td>0.001</td>
</tr>
<tr>
<td>Vehicle Fluid Fill Operations</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.12</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other Miscellaneous Insignificant Activities</td>
<td>1.90</td>
<td>1.90</td>
<td>1.90</td>
<td>0.10</td>
<td>-</td>
<td>3.10</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Emergency Generators EG6 - EG9</td>
<td>0.12</td>
<td>0.08</td>
<td>0.08</td>
<td>0.70</td>
<td>7.63</td>
<td>0.22</td>
<td>1.22</td>
<td>0.06</td>
<td>0.045</td>
</tr>
<tr>
<td>Stonebridge Facility-Heaters, AMU 1-5</td>
<td>0.11</td>
<td>0.45</td>
<td>0.45</td>
<td>0.04</td>
<td>5.90</td>
<td>0.32</td>
<td>4.96</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stonebridge Facility- Tanks</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.001</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Stonebridge-Fugitive (Paved Rds)</td>
<td>8.73</td>
<td>1.75</td>
<td>0.43</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Total PTE for Entire Source**: 117.82 144.83 143.51 27.56 522.3 3,339.46 793.39 105.38 37.02 (H2CO)<sup>3</sup>

### Notes

- The source has requested Boilers 004 and 005 be removed from the permit. However, since they will not be removed until Boiler 1 and Boiler 2 starts normally operating, they will remain listed until they are removed.

- **(a)** This existing major PSD stationary source will continue to be major under 326 IAC 2-2 because at least one pollutant, NOx, VOC, and CO is emitted equal to or greater than the PSD major source threshold.

- **Note:** PSD Major Source Thresholds: 250 250 250 250 250 250 NA NA
- **Title V Major Source Thresholds:** NA 100 100 100 100 100 100 25 10
- **PSD Major Source Thresholds:** 250 250 250 250 250 250 250 -- --
(b) This existing major source of HAP will continue to be a major source of HAP, as defined in 40 CFR 63.2, because HAP emissions will continue to be equal to or greater than ten (10) tons per year for any single HAP and/or equal to or greater than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is a major 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 Powerhouse Boilers, identified as Boiler 1 and Boiler 2, are not subject to the New Source Performance Standards for Fossil-Fuel-Fired Steam Generators, 40 CFR 60, Subpart D and 326 IAC 12, because they do not have heat input rate of 250 million British thermal units per hour (MMBtu/hour). Each boiler has a heat input of 31.51 MMBtu/hour.

(b) The Powerhouse Boilers, identified as Boiler 1 and Boiler 2, are not subject to the New Source Performance Standards for Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Db and 326 IAC 12, because they do not have heat input rate of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)). Each boiler has a heat input of 31.51 MMBtu/hour.

(c) The Powerhouse Boilers, identified as Boiler 1 and Boiler 2, are subject to the New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 63, Subpart Dc, and 326 IAC 12, since these boilers for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h). Each boiler has a heat input of 31.51 MMBtu/hour. The facilities subject to this rule include the following:

(1) Two (2) natural gas-fired Powerhouse Boilers, identified as Boiler 1 and Boiler 2, each with a maximum heat input rate of 31.51 MMBtu/hour, approved in 2020 for construction.

These natural gas-fired boilers are subject to the following portions of 40 CFR 60, Subpart Dc:

(1) 40 CFR 60.48c(a)(1), (g), (i)

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to these boilers except as otherwise specified in 40 CFR 60, Subpart Dc.

(d) 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 proposed forty-two (42) natural gas-fired heating units are not subject to the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers, 40 CFR 63, Subpart DDDDD, which is incorporated by reference as 326 IAC 20-95, because process heaters as defined in 40 CFR 63.7575 do not include units used for comfort heat or space heat.

(b) The boilers are subject to the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers, 40 CFR 63, Subpart DDDDD, which is incorporated by reference as 326 IAC 20-95, because these boilers meet the definition of
industrial boilers in 40 CFR 63.7575 and they are located at, or are part of, a major source of HAP. The boilers subject to this rule include the following:

(1) Two (2) natural gas-fired Powerhouse Boilers, identified as Boiler 1 and Boiler 2, each with a maximum heat input rate of 31.51 MMBtu/hour, approved in 2020 for construction.

These natural gas-fired boilers are subject and must comply to the following portions of 40 CFR 63, Subpart DDDDD upon startup of these boilers:

(1) 40 CFR 63.7480;
(2) 40 CFR 63.7485;
(3) 40 CFR 63.7490;
(4) 40 CFR 63.7495;
(5) 40 CFR 63.7500;
(6) 40 CFR 63.7505;
(7) 40 CFR 63.7510;
(8) 40 CFR 63.7515;
(9) 40 CFR 63.7520;
(10) 40 CFR 63.7525;
(11) 40 CFR 63.7530;
(12) 40 CFR 63.7535;
(13) 40 CFR 63.7540;
(14) 40 CFR 63.7541;
(15) 40 CFR 63.7545;
(16) 40 CFR 63.7550;
(17) 40 CFR 63.7555;
(18) 40 CFR 63.7560;
(19) 40 CFR 63.7565;
(20) 40 CFR 63.7570;
(21) 40 CFR 63 Table 2 to NESHAP Subpart DDDDD;
(22) 40 CFR 63 Table 3 to NESHAP Subpart DDDDD;
(23) 40 CFR 63 Table 4 to NESHAP Subpart DDDDD;
(24) 40 CFR 63 Table 5 to NESHAP Subpart DDDDD;
(25) 40 CFR 63 Table 6 to NESHAP Subpart DDDDD;
(26) 40 CFR 63 Table 8 to NESHAP Subpart DDDDD;
(27) 40 CFR 63 Table 9 to NESHAP Subpart DDDDD;
(28) 40 CFR 63 Table 10 to NESHAP Subpart DDDDD; and
(29) 40 CFR 63 Table 11 to NESHAP Subpart DDDDD.

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to the boilers except as otherwise specified in 40 CFR 63, Subpart DDDDD.

(c) 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.

In addition, Boilers 1 and 2 do not utilize a control device to meet a standard or a limitation, and do not emit any regulated pollutant at major levels. Therefore, they are not subject to the requirements of 40 CFR Part 64, CAM.

State Rule Applicability

Due to this modification, state rule applicability has been reviewed as follows:

326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset)
The proposed source modification emits NOx equal to or greater than the PSD significant emission rate (SER) of 40 tons per year. However, the source opted to take NOx limit in order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to this 2020 source modification.

2020 Modification
In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the Permittee shall comply with the following:

(1) The natural gas usage to boilers, identified as Boiler 1 and Boiler 2, shall not exceed 309.744 MMCF (309,744,000 cubic feet) per twelve (12) consecutive month period with compliance determined at the end of each month.

(2) The nitrogen oxides (NOx) emissions from the boilers, identified as Boiler 1 and Boiler 2 shall not exceed 100 pounds per million cubic feet (lb/MMCF) of natural gas.

Compliance with these limits, shall limit emissions from Boiler 1 and Boiler 2, combined with the potential to emit NOx from the other forty (42) natural gas-fired heating units (ACU-101, ACU-102, HV-1 through HV-14, ASH-3 through ASH-6, ASH 33 though ASH-35, ASH-135, ASH-138 and UH-15 though UH-30) shall limit NOx emissions to less than 40 tons per year and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2020 modification.

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).

The operation of Boiler 1, Boiler 2 and the forty-two (42) heating units 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 5-1 (Opacity Limitations)
This source is subject to the opacity limitations specified in 326 IAC 5-1-2(1)
326 IAC 6.5 (Particulate Matter Limitations Except Lake County)
Pursuant to 326 IAC 6.5-1-1(a), this source (located in Allen County) is not subject to the requirements of 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

326 IAC 6-2-1 (Particulate Emission Limitations for Sources of Indirect Heating)

Boiler 1 and Boiler 2
Pursuant to 326 IAC 6-2-1(d), indirect heating from all facilities receiving permits to construct on or after September 21, 1983, shall be limited by 326 IAC 6-2-4. Boiler 1 and Boiler 2 are subject to the particulate emissions limitation under 326 IAC 6-2-4 since both boilers will be constructed after September 21, 1983. Pursuant to 326 IAC 6-2-4 these boilers are limited as follows:

<table>
<thead>
<tr>
<th>Unit</th>
<th>Year Permitted</th>
<th>Heat Input Capacity (MMBtu/hr)</th>
<th>Q: Source Maximum Operating Capacity Rating at the Time of Each Boiler Construction (MMBtu/hr)</th>
<th>Pt: Particulate Emission Limitation (lb/MMBtu)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Q prior to SSM No. 003-43453-00036</td>
<td>480.645</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiler 1</td>
<td>Proposed 2021</td>
<td>31.51</td>
<td>480.645+31.51+31.51 = 543.665</td>
<td>0.21</td>
</tr>
<tr>
<td>Boiler 2</td>
<td>Proposed 2021</td>
<td>31.51</td>
<td>480.645+31.51+31.51 = 543.665</td>
<td>0.21</td>
</tr>
</tbody>
</table>

These limitations were based on the following equation:

\[
Pt = \frac{1.09}{Q^{0.26}}
\]

Where: \(Pt\) = Pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input. 
\(Q\) = Total source maximum operating capacity rating in million Btu per hour (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 permit shall be used.

Forty-two (42) natural gas-fired heating units
These heating units are not subject to 326 IAC 6-2, because they are not sources of indirect heating.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The natural gas-fired boilers, identified as Boiler 1 and Boiler 2 and the forty-two (42) heating units are not subject to the requirements of 326 IAC 6-3, because as defined in 326 IAC 1-2-59, process weight does not include liquid and gaseous fuel.

326 IAC 7-1.1 Sulfur Dioxide Emission Limitations
The natural gas-fired boilers, identified as Boiler 1 and Boiler 2 and the forty-two (42) heating units are not subject to 326 IAC 326 IAC 7-1.1 because each 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)
The natural gas-fired Powerhouse Boilers, identified as Boiler 1 and Boiler 2 and the forty-two (42) heating units are not subject to the requirements of 326 IAC 8-1-6 because no unit has potential VOC emissions of 25 tons per year.
326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Categories)
The requirements of 326 IAC 10-3 do not apply to the Powerhouse Boilers, identified as Boiler 1 and Boiler 2 since these units are not blast furnace gas-fired boilers, a Portland cement kiln, or a facility specifically listed under 326 IAC 10-3-1(a)(2).

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.

There are no new or modified compliance requirements included with 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.

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) Section A.3, has been modified to include the new Powerhouse Boilers and heating units permitted in SSM No. 003-43453-00036.

(b) Section D.1 and Section E.8 have been modified to incorporate the new boilers permitted in SSM No. 003-43453-00036 applicable requirements.

The emission units numbering in Section E.8 has been changed to reflect the number as they appear in Section A.3.

(c) Section E.9 has been added for the natural gas-fired Powerhouse Boilers, identified as Boiler 1 and Boiler 2.

(d) Compliance Data Section has granted the request of GM to change the frequency of stack testing currently required every 2.5 years to every 5 years. Therefore, Conditions D.2.10, D.3.8, D.4.8, and D.7.9 have been modified to reflect every 5 years stack testing.
Section A.3 Changes:

A.3 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:

General Motors LLC – Lafayette Center Road

(a) Facility-wide natural gas usage, including combustion units described as follows:

(1) One (1) natural gas/landfill gas fired boiler, identified as 004, constructed in 1992 and modified in 2011 to combust landfill gas, with a maximum heat input capacity of 228 MMBtu/hr for natural gas and landfill gas, using low NOX burners and flue gas recirculation as control, and exhausting to stack 01;

Under 40 CFR 60, Subpart Db, this boiler is considered an affected facility.

Under 40 CFR 63, Subpart DDDDD, this boiler is considered an affected facility.

*************************

(5) Two (2) natural gas-fired Powerhouse Boilers, identified as Boiler 1 and Boiler 2, each with a maximum heat input rate of 31.51 MMBtu/hour, approved in 2020 for construction.

(6) Forty-two (42) natural gas-fired heating units, with a total heat input capacity of 56.39 MMBtu/hour, approved in 2020 for construction:

<table>
<thead>
<tr>
<th>Emission Unit/ID</th>
<th>Heat Input Capacity MMBtu/hour</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Space Heater</td>
<td>ACU 101 0.810</td>
<td>Administration Roof</td>
</tr>
<tr>
<td>Space Heater</td>
<td>ACU 102 0.540 1.200</td>
<td>Administration Roof Pad Mounted on Ground</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-1 0.950</td>
<td>J Dock Column 34-37</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-2 0.950</td>
<td>J Dock Column 34-37</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-3 0.800</td>
<td>F Dock Column L47</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-4 0.950</td>
<td>E Dock Column L39-L40</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-5 0.800</td>
<td>D Dock Column L34-L35</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-6 0.950</td>
<td>C Dock Column L23-L25</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-7 0.800</td>
<td>104 Dock A-33</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-8 0.800</td>
<td>DOR325 Column K7</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-9 0.800 0.950</td>
<td>DOR326 Column K7</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-10 0.950</td>
<td>N. of Test Door Col. G2</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-11 0.800</td>
<td>S. of Test Door Col. E1</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-12 0.800</td>
<td>N Dock Column U15</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-13 0.800</td>
<td>M Dock Column X7</td>
</tr>
<tr>
<td>Dock Door Heater</td>
<td>HV-14 0.800</td>
<td>Old Tin Shop Dock Col. C1</td>
</tr>
<tr>
<td>Space Heater</td>
<td>ASH-135 4.754</td>
<td>Roof Near Column F-8</td>
</tr>
<tr>
<td>Space Heater</td>
<td>ASH-138 6.867</td>
<td>Roof Near Column G-6</td>
</tr>
<tr>
<td>Emission Unit/ID</td>
<td>Heat Input/ Capacity</td>
<td>Location</td>
</tr>
<tr>
<td>------------------</td>
<td>----------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>Space Heater ASH-3</td>
<td>5.811 MMBtu/hour</td>
<td>Paint Shop Roof Near Column S2</td>
</tr>
<tr>
<td>Space Heater ASH-4</td>
<td>5.811 MMBtu/hour</td>
<td>Paint Shop Roof Near Column S8</td>
</tr>
<tr>
<td>Space Heater ASH-5</td>
<td>0.740 MMBtu/hour</td>
<td>Paint Shop Roof Near Column S3</td>
</tr>
<tr>
<td>Space Heater ASH-6</td>
<td>0.740 MMBtu/hour</td>
<td>Paint Shop Roof Near Column S7</td>
</tr>
<tr>
<td>Space Heater ASH-33</td>
<td>3.170 MMBtu/hour</td>
<td>Paint Shop Roof Near Column U1</td>
</tr>
<tr>
<td>Space Heater ASH-34</td>
<td>3.170 MMBtu/hour</td>
<td>Paint Shop Roof Near Column U3</td>
</tr>
<tr>
<td>Space Heater ASH-35</td>
<td>6.075 MMBtu/hour</td>
<td>Paint Shop Roof Near Column U7</td>
</tr>
<tr>
<td>Space Heater UH-15</td>
<td>0.250 MMBtu/hour</td>
<td>Powerhouse Generator Rm</td>
</tr>
<tr>
<td>Space Heater UH-16</td>
<td>0.250 MMBtu/hour</td>
<td>Powerhouse Generator Rm</td>
</tr>
<tr>
<td>Space Heater UH-17</td>
<td>0.250 MMBtu/hour</td>
<td>Powerhouse Generator Rm</td>
</tr>
<tr>
<td>Space Heater UH-18</td>
<td>0.250 MMBtu/hour</td>
<td>Cooling Tower Pump Rm</td>
</tr>
<tr>
<td>Space Heater UH-19</td>
<td>0.250 MMBtu/hour</td>
<td>Cooling Tower Pump Rm</td>
</tr>
<tr>
<td>Space Heater UH-20</td>
<td>0.250 MMBtu/hour</td>
<td>Cooling Tower Pump Rm</td>
</tr>
<tr>
<td>Space Heater UH-21</td>
<td>0.250 MMBtu/hour</td>
<td>Cooling Tower Pump Rm</td>
</tr>
<tr>
<td>Space Heater UH-22</td>
<td>0.250 MMBtu/hour</td>
<td>WWT Filter Press Rm</td>
</tr>
<tr>
<td>Space Heater UH-23</td>
<td>0.250 MMBtu/hour</td>
<td>Waste Treatment Area</td>
</tr>
<tr>
<td>Space Heater UH-24</td>
<td>0.250 MMBtu/hour</td>
<td>Waste Treatment Area</td>
</tr>
<tr>
<td>Space Heater UH-25</td>
<td>0.250 MMBtu/hour</td>
<td>Waste Treatment Area</td>
</tr>
<tr>
<td>Space Heater UH-26</td>
<td>0.400 MMBtu/hour</td>
<td>Filter Press Dumpster Room</td>
</tr>
<tr>
<td>Space Heater UH-27</td>
<td>0.400 MMBtu/hour</td>
<td>Filter Press Dumpster Room</td>
</tr>
<tr>
<td>Space Heater UH-28</td>
<td>0.400 MMBtu/hour</td>
<td>NW Storage Overhead Door</td>
</tr>
<tr>
<td>Space Heater UH-29</td>
<td>0.400 MMBtu/hour</td>
<td>Oil/Grease Room next to N. Overhead Door</td>
</tr>
<tr>
<td>Space Heater UH-30</td>
<td>0.400 MMBtu/hour</td>
<td>West Overhead Door</td>
</tr>
</tbody>
</table>

Section D.1 Changes:

SECTION D.1 EMISSION UNIT OPERATION CONDITIONS

Emission Unit Description:

(a) Facility-wide natural gas usage, including combustion units described as follows:

***************************
Two (2) natural gas-fired Powerhouse Boilers, identified as Boiler 1 and Boiler 2, each with a maximum heat input rate of 31.51 MMBtu/hour, approved in 2020 for construction.

Under 40 CFR 60, Subpart Dc, these boilers are considered affected facilities.

Under 40 CFR 63, Subpart DDDDD, these boilers are considered affected facilities.

(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.1.4 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the Permittee shall comply with the following:

1. The natural gas usage to Powerhouse Boilers, identified as Boiler 1 and Boiler 2, shall not exceed 309.744 MMCF (309,744,000 cubic feet) per twelve (12) consecutive month period with compliance determined at the end of each month.

2. The nitrogen oxides (NOx) emissions from the Powerhouse Boilers, identified as Boiler 1 and Boiler 2 shall not exceed 100 pounds per million cubic feet (lb/MMCF) of natural gas.

Compliance with these limits, shall limit emissions from Boiler 1 and Boiler 2, combined with the potential to emit NOx from the other forty (42) natural gas-fired heating units (ACU-101, ACU-102, HV-1 through HV-14, ASH-3 through ASH-6, ASH 33 though ASH-35, ASH-135, ASH-138 and UH-15 though UH-30) shall limit NOx emissions to less than 40 tons per year and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2020 modification.

D.1.5 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), particulate emissions from each of the two 228 MMBtu/hour boilers, identified as Boilers 004 and 005, shall be limited as follows:

(a) Boiler 004 shall be limited to 0.22 pound per million BTU heat input.

(b) Boiler 005 shall be limited to 0.20 pound per million BTU heat input.

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), particulate matter (PM) emissions from the boilers shall not exceed the limits in pound per million Btu (lb/MMBtu) heat input listed in the following table:

<table>
<thead>
<tr>
<th>Emission Unit/ID</th>
<th>Heat Input Rate (MMBtu/hour)</th>
<th>PM Emission Limits (lb/MMBtu)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler 004</td>
<td>228</td>
<td>0.22</td>
</tr>
<tr>
<td>Boiler 005</td>
<td>228</td>
<td>0.20</td>
</tr>
<tr>
<td>Powerhouse Boiler 1</td>
<td>31.51</td>
<td>0.21</td>
</tr>
<tr>
<td>Powerhouse Boiler 2</td>
<td>31.51</td>
<td>0.21</td>
</tr>
</tbody>
</table>
D.1.56 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for Boilers 004 and 005. Boiler 004, Boiler 005, Boiler 1 and Boiler 2. Section B - Preventive Maintenance Plan contains the Permittee’s obligation with regard to the preventive maintenance plan required by this condition.

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

D.1.67 Continuous Emission Monitoring [326 IAC 2-2] [326 IAC 3-5] [40 CFR 60, Subpart Db]

(a) Pursuant to 326 IAC 2-2, 326 IAC 3-5, and 326 IAC 12, the Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment and shall continuously monitor and record the following parameters to demonstrate compliance with Condition D.1.1 and D.1.4:

D.1.5 for Boilers 004 and 005:

***************************************************************

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

D.1.78 Record Keeping Requirements

(a) To document the compliance status with Conditions D.1.1, D.1.2, D.1.3 and D.1.6, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the NOx and opacity emission limits established in Conditions D.1.1, D.1.2, and D.1.3.

***************************************************************

(d) To document the compliance status with Condition D.1.4, the Permittee shall maintain records of the monthly natural gas usage to Boiler 1 and Boiler 2.

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

D.1.8 Reporting Requirements

***************************************************************

(d) A quarterly summary of the information to document the compliance status with Condition D.1.4 shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting 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).

Stack Testing Frequency Changes:

D.2.10 Testing Requirements

The following facilities are required to stack test, when used to demonstrate compliance with Conditions D.2.1 and/or D.2.2, as follows:

(a) Not later than two and one-half (2.5) five (5) years from the date of the most recent valid compliance demonstration, the Permittee shall conduct testing for VOC capture and destruction efficiency for one (1) of the thermal incinerators, #1 - #3, controlling the ELPO Dipping System (006) emissions. This test shall be repeated every two and one-half (2.5) five (5) years from the date of the most recent valid compliance demonstration. Testing on an incinerator shall not be repeated until each one has been tested.

***************************************************************
D.3.8 Testing Requirements [326 IAC 2-1.1-11]

The following facilities are required to stack test when used to demonstrate compliance with Conditions D.3.1 and/or D.3.2 as follows:

(a) Not later than two and one-half (2.5) five (5) years from the date of the most recent valid compliance demonstration, the Permittee shall conduct testing for VOC capture and destruction efficiency for the regenerative thermal oxidizer controlling the Primer Surfacer System (010) emissions. This test shall be repeated every two and one-half (2.5) five (5) years from the date of the most recent valid compliance demonstration.

*************************

D.4.8 Testing Requirements [326 IAC 2-1.1-11]

The following facilities are required to stack test, when the oxidizer abatement credit is used to demonstrate compliance with Conditions D.4.1 and/or D.4.2, as follows:

(a) Not later than two and one-half (2.5) five (5) years from the date of the most recent valid compliance demonstration, the Permittee shall conduct testing for VOC destruction efficiency for two (2) of the 7.5 MMBtu/hr catalytic oxidizers and one (1) of the 9.5 MMBtu/hr catalytic oxidizers controlling the Topcoat System (008) emissions. This test shall be repeated every two and one-half (2.5) five (5) years from the date of the most recent valid compliance demonstration. Testing on a catalytic oxidizer shall not be repeated until each one has been tested.

*************************

D.7.9 Testing Requirements [326 IAC 2-1.1-11]

(a) Within sixty (60) days after achieving maximum capacity but no later than one hundred eighty (180) days after initial startup of the ELPO, identified as 020, the Permittee shall conduct initial performance tests to determine the overall control efficiency (capture and destruction) of the one (1) RTO during operation of the ELPO and shall determine compliance with the VOC limit in Condition D.7.2(b), utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every two and one-half (2.5) 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) for control efficiency testing. Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(b) The Permittee shall determine the capture efficiency for the Miscellaneous Sealers and Adhesives, identified as 022 within 60 days after using new sealers that will require the use of the Primer Surfacer, 010 RTO as an abatement credit to demonstrate the compliance status with VOC limit in Condition D.7.2(a), utilizing methods as approved by the Commissioner. The overall control efficiency (capture efficiency and destruction/removal (DRE)) of the Primer Surfacer, 010 RTO shall be repeated at least once every two and one-half (2.5) five (5) years from the date of the most recent valid compliance demonstration. Performance testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures) for destruction efficiency testing. Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.
Section E.8 Changes:

SECTION E.8 NESHAP

Emission Unit Description:

(a)(1) One (1) natural gas/landfill gas fired boiler, identified as 004, constructed in 1992 and modified in 2011 to combust landfill gas, with a maximum heat input capacity of 228 MMBtu/hr for natural gas and landfill gas, using low NOx burners and flue gas recirculation as control, and exhausting to stack 01;

[Under 40 CFR 60, Subpart Db, this boiler is considered an affected facility.]

[Under 40 CFR 63, Subpart DDDDD, this boiler is considered an affected facility.]

(a)(b2) One (1) natural gas-fired boiler, identified as 005, constructed in 1993, with a maximum heat input capacity of 228 MMBtu/hr, using low NOx burners and flue gas recirculation as control, and exhausting to stack 01;

[Under 40 CFR 60, Subpart Db, this boiler is considered an affected facility.]

[Under 40 CFR 63, Subpart DDDDD, this boiler is considered an affected facility.]

(a)(5) Two (2) natural gas-fired Powerhouse Boilers, identified as Boiler 1 and Boiler 2, each with a maximum heat input rate of 31.51 MMBtu/hour, approved in 2020 for construction.

Under 40 CFR 60, Subpart Dc, these boilers are considered affected facilities.

Under 40 CFR 63, Subpart DDDDD, these boilers are considered affected facilities.

(k)(4)(iii) Three (3) Hot Water Generators, located at the paint area, each with a maximum heat input capacity of 8.0 MMBtu/hr.

(n) One (1) natural gas-fired boiler, identified as BU-2, approved in 2016 for construction, with a maximum heat input capacity of 0.3 MMBtu/hr, and exhausting indoors.

[Under 40 CFR 63, Subpart DDDDD, this boiler is considered an affected facility.]

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

**************************

E.8.2 National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers [40 CFR 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 H to the operating permit), which are incorporated by reference as 326 IAC 20-95, for the emission units listed above. **Boiler 1 and Boiler 2 must comply to the following portions of 40 CFR 63, Subpart DDDDD upon startup:**

**************************
Addition of E.9:

SECTION E.9 NSPS

<table>
<thead>
<tr>
<th>Emission Unit Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Facility-wide natural gas usage, including combustion units described as follows:</td>
</tr>
<tr>
<td>(5) Two (2) natural gas-fired Powerhouse Boilers, identified as Boiler 1 and Boiler 2, each with a maximum heat input rate of 31.51 MMBtu/hour, approved in 2020 for construction.</td>
</tr>
</tbody>
</table>

Under 40 CFR 60, Subpart Dc, these boilers are considered affected facilities.

Under 40 CFR 63, Subpart DDDDD, these boilers are considered affected facilities.

(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)]


| (a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 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 Dc. |
| (b) Pursuant to 40 CFR 60.4, 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.9.2 Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR Part 60, Subpart Dc]

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

| (1) 40 CFR 60.48c(a)(1), (g), (i) |
## Part 70 Quarterly Report

**Source Name:** General Motors LLC Fort Wayne Assembly  
**Source Address:** 12200 Lafayette Center Road, Roanoke, Indiana 46783  
**Part 70 Permit No.:** T 003-41020-00036  
**Facility:** Powerhouse Boiler 1 and Boiler 2  
**Parameter:** Natural gas usage  
**Limit:** Shall not exceed 309.744 MMCF (309,744,000 cubic feet) 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>
</table>

<table>
<thead>
<tr>
<th>Month</th>
<th>Natural Gas Usage (MMCF)</th>
<th>Natural Gas Usage (MMCF)</th>
<th>Natural Gas Usage (MMCF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Month</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previous 11 Months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Month Total</td>
<td></td>
<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:** ________________________________
**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.

*The phone number for the OAQ, Billing, Licensing, and Training Section has updated to 317-233-8590.*

**Condition B.24 - Annual Fee Payment of the permit has been revised as follows to include an updated phone number for the OAQ, Billing, Licensing, and Training Section:**

B.24 Annual Fee Payment [326 IAC 2-1.1-7]

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section) to determine the appropriate permit fee.

**Condition C.7 has been revised to reflect the change in the rule cite.**

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

.....

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2c).

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

.....

**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 November 5, 2020.

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 003-43453-00036. The operation of this proposed modification shall be subject to the conditions of the attached proposed Significant Permit Modification No. 003-43572-00036.

The staff recommends to the Commissioner that the Part 70 Significant Source Modification Significant Permit Modification be approved.
(a) If you have any questions regarding this permit, please contact Aida DeGuzman, 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) 233-4972 or (800) 451-6027, and ask for Aida DeGuzman or (317) 233-4972.

(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.
**Emission Calculations**

**Potential Future PTE Decrease**

**Company Name:** General Motors LLC Fort Wayne Assembly  
**Address City IN Zip:** 12200 LaFayette Center Road, Roanoke, IN 46783  
**SSM No.:** 003-43453-00036  
**SPM No.:** 003-43572-00036  
**Reviewer:** Aida DeGuzman

### Uncontrolled/Unlimited PTE of New Emission Units (ton/yr)

<table>
<thead>
<tr>
<th>Emission Units to be Installed</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO₂</th>
<th>NOₓ</th>
<th>VOC</th>
<th>CO</th>
<th>Total HAPs</th>
<th>Single HAP (Hexane)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler 1</td>
<td>0.26</td>
<td>1.03</td>
<td>1.03</td>
<td>0.08</td>
<td>13.53</td>
<td>0.74</td>
<td>11.37</td>
<td>0.25</td>
<td>0.47</td>
</tr>
<tr>
<td>Boiler 2</td>
<td>0.26</td>
<td>1.03</td>
<td>1.03</td>
<td>0.08</td>
<td>13.53</td>
<td>0.74</td>
<td>11.37</td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>Heating Units</td>
<td>0.46</td>
<td>1.84</td>
<td>1.84</td>
<td>0.15</td>
<td>24.21</td>
<td>1.33</td>
<td>20.34</td>
<td>0.46</td>
<td>0.44</td>
</tr>
<tr>
<td><strong>Total Uncontrolled/Unlimited PTE of Source Modification</strong></td>
<td><strong>0.97</strong></td>
<td><strong>3.90</strong></td>
<td><strong>3.90</strong></td>
<td><strong>0.31</strong></td>
<td><strong>51.27</strong></td>
<td><strong>2.82</strong></td>
<td><strong>43.07</strong></td>
<td><strong>0.95</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Limited PTE of New Emission Units (ton/yr)

<table>
<thead>
<tr>
<th>Emission Units to be Installed</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO₂</th>
<th>NOₓ</th>
<th>VOC</th>
<th>CO</th>
<th>Total HAPs</th>
<th>Single HAP (Hexane)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler 1</td>
<td>0.29</td>
<td>1.18</td>
<td>1.18</td>
<td>0.09</td>
<td>15.49</td>
<td>0.85</td>
<td>13.01</td>
<td>0.28</td>
<td>0.00</td>
</tr>
<tr>
<td>Boiler 2</td>
<td>0.46</td>
<td>1.84</td>
<td>1.84</td>
<td>0.15</td>
<td>24.21</td>
<td>1.33</td>
<td>20.34</td>
<td>0.46</td>
<td>0.44</td>
</tr>
<tr>
<td><strong>Total Limited PTE of Source Modification</strong></td>
<td><strong>0.75</strong></td>
<td><strong>3.02</strong></td>
<td><strong>3.02</strong></td>
<td><strong>0.24</strong></td>
<td><strong>39.70</strong></td>
<td><strong>2.18</strong></td>
<td><strong>33.35</strong></td>
<td><strong>0.74</strong></td>
<td><strong>0.44</strong></td>
</tr>
</tbody>
</table>

**PSD Significant Emission Rate (SERs)**  
- 25  
- 15  
- 10  
- 40  
- 40  
- 40  
- 100  
- NA  
- NA
# Emission Calculations

## 42 Natural Gas Heating Units

### MM BTU/HR

<table>
<thead>
<tr>
<th>Company Name:</th>
<th>General Motors LLC Fort Wayne Assembly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address City &amp; State:</td>
<td>12200 Lafayette Center Road, Roanoke, IN 46783</td>
</tr>
<tr>
<td>Part 74 Renewal No.:</td>
<td>003-41020-00036</td>
</tr>
<tr>
<td>SSM No.:</td>
<td>003-43453-00036</td>
</tr>
<tr>
<td>SPM No.:</td>
<td>003-43572-00036</td>
</tr>
<tr>
<td>Reviewer:</td>
<td>Aida DeGuzman</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Heat Input Capacity</th>
<th>Potential Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMBtu/hr</td>
<td>MMCF/yr</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------</td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td></td>
</tr>
<tr>
<td>ACU 101</td>
<td>0.810</td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td></td>
</tr>
<tr>
<td>ACU 102</td>
<td>0.540</td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td></td>
</tr>
<tr>
<td>HV-1</td>
<td>1.200</td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td></td>
</tr>
<tr>
<td>HV-1</td>
<td>0.950</td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td></td>
</tr>
<tr>
<td>HV-2</td>
<td>0.950</td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td></td>
</tr>
<tr>
<td>HV-3</td>
<td>0.800</td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td></td>
</tr>
<tr>
<td>HV-4</td>
<td>0.950</td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td></td>
</tr>
<tr>
<td>HV-5</td>
<td>0.800</td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td></td>
</tr>
<tr>
<td>HV-6</td>
<td>0.950</td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td></td>
</tr>
<tr>
<td>HV-7</td>
<td>0.800</td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td></td>
</tr>
<tr>
<td>HV-8</td>
<td>0.800</td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td></td>
</tr>
<tr>
<td>HV-9</td>
<td>0.800</td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td></td>
</tr>
<tr>
<td>HV-10</td>
<td>0.950</td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td></td>
</tr>
<tr>
<td>HV-11</td>
<td>0.800</td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td></td>
</tr>
<tr>
<td>HV-12</td>
<td>0.800</td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td></td>
</tr>
<tr>
<td>HV-13</td>
<td>0.800</td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td></td>
</tr>
<tr>
<td>HV-14</td>
<td>0.800</td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td></td>
</tr>
<tr>
<td>ASH-135</td>
<td>4.754</td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td></td>
</tr>
<tr>
<td>ASH-138</td>
<td>6.867</td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td></td>
</tr>
<tr>
<td>ASH-3</td>
<td>5.811</td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td></td>
</tr>
<tr>
<td>ASH-4</td>
<td>5.811</td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td></td>
</tr>
<tr>
<td>ASH-5</td>
<td>0.740</td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td></td>
</tr>
<tr>
<td>ASH-6</td>
<td>0.740</td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td></td>
</tr>
<tr>
<td>ASH-33</td>
<td>3.170</td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td></td>
</tr>
<tr>
<td>ASH-34</td>
<td>3.170</td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td></td>
</tr>
<tr>
<td>UH-15</td>
<td>0.250</td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td></td>
</tr>
<tr>
<td>UH-16</td>
<td>0.250</td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td></td>
</tr>
<tr>
<td>UH-17</td>
<td>0.250</td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td></td>
</tr>
<tr>
<td>UH-18</td>
<td>0.250</td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td></td>
</tr>
<tr>
<td>UH-19</td>
<td>0.250</td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td></td>
</tr>
<tr>
<td>UH-20</td>
<td>0.250</td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td></td>
</tr>
<tr>
<td>UH-21</td>
<td>0.250</td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td></td>
</tr>
<tr>
<td>UH-22</td>
<td>0.400</td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td></td>
</tr>
<tr>
<td>UH-23</td>
<td>0.250</td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td></td>
</tr>
<tr>
<td>UH-24</td>
<td>0.250</td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td></td>
</tr>
<tr>
<td>UH-25</td>
<td>0.250</td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td></td>
</tr>
<tr>
<td>UH-26</td>
<td>0.250</td>
</tr>
</tbody>
</table>

### PM* PM10* direct PM2.5* SO2 NOx VOC CO

| Emission Factor in lb/MMCF | 1.9 | 7.600 | 7.6 | 0.6 | 100 | 5.5 | 84 |

### PM2.5 emission factor is filterable and condensable PM2.5 combined.

**Emission Factors for NOx from AP-42, Table 1.4-1 for Small Boilers <100 MMBtu/hr Heat Input: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32**

### Methodology

1. **Heating Value of Natural Gas = 1020 MMBtu/MMcf**
2. MMBtu = 1,000,000 Btu
3. MMCF = 1,000,000 Cubic Feet of Gas
4. **Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu**
5. **Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton**

### TOTAL

<table>
<thead>
<tr>
<th>Emission</th>
<th>0.46</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single HAP</td>
<td>4.40</td>
</tr>
</tbody>
</table>

### Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**The five highest organic and metal HAPs emission factors are provided above.**
Appendix A: Emission Calculations
Natural Gas Combustion Only
MMBTU/HR <100
New Boilers

Company Name: General Motors LLC Fort Wayne Assembly
Address City IN Zip: 12200 Lafayette Center Road, Roanoke, IN 46783
Part 70 Renewal No.: 003-41020-00036
SSM No.: 003-43453-00036
SPM No.: 003-43572-00036
Reviewer: Aida DeGuzman

---

### Emission Calculations: Natural Gas Combustion Only

**MMBTU/HR <100**

#### New Boilers

**PM**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/MMCF</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM*</td>
<td>1.9</td>
</tr>
<tr>
<td>PM10*</td>
<td>7.5</td>
</tr>
<tr>
<td>PM2.5*</td>
<td>7.6</td>
</tr>
<tr>
<td>SO2</td>
<td>0.6</td>
</tr>
<tr>
<td>NOx</td>
<td>100.0</td>
</tr>
<tr>
<td>VOC</td>
<td>8.5</td>
</tr>
<tr>
<td>CO</td>
<td>84.9</td>
</tr>
</tbody>
</table>

**Emissions Unit**

**Heat Input Capacity (MMBtu/hr)**

**Potential Unlimited Throughput (MMCF/yr)**

**Unlimited Potential to Emit (tons/yr)**

| Boiler 1 | 31.51 | 270.8 | 0.3 | 0.9 | 13.5 | 0.7 | 11.4 |
| Boiler 2 | 31.51 | 270.8 | 0.3 | 0.9 | 13.5 | 0.7 | 11.4 |
| **TOTAL**| 63.02 | 541.6 | 0.6 | 1.8 | 27.0 | 1.4 | 22.7 |

**Throughput (MMCF/yr)**

**Limited Potential to Emit (tons/yr)**

<table>
<thead>
<tr>
<th>Emissions Unit</th>
<th>Heat Input Capacity (MMBtu/hr)</th>
<th>Total Limited Throughput (MMCF/yr)</th>
<th>Limited Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Boiler 1</strong></td>
<td>31.51</td>
<td>309.74</td>
<td>0.29</td>
</tr>
<tr>
<td><strong>Boiler 2</strong></td>
<td>31.51</td>
<td>309.74</td>
<td>0.29</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>63.02</td>
<td>619.48</td>
<td>0.58</td>
</tr>
</tbody>
</table>

**Emission Factors for NOx: Provided by manufacturer Cleaver Brooks**

**PM emission factor is filterable PM only. PM10 and PM2.5 emission factors are condensable and filterable PM10 and PM2.5 combined.**

**Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.**

**Subtotal CO2e**

**Emission (tons/yr) = Throughput (MMCF/yr) * Emission Factor (lb/MMCF) *(1 ton/2,000 lb)**

**Emission Factor in lb/MMCF**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>Subtotal</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</td>
<td>12000.0</td>
<td>2.30</td>
<td>2.20</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Greenhouse Gas Emissions**

**Emission Factor in lb/MMCF**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/MMCF</th>
<th>Potential Throughput (MMCF/yr)</th>
<th>Potential to Emit (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Boiler 1</strong></td>
<td>31.51</td>
<td>270.65</td>
<td>0.3</td>
</tr>
<tr>
<td><strong>Boiler 2</strong></td>
<td>31.51</td>
<td>270.65</td>
<td>0.3</td>
</tr>
</tbody>
</table>

**Methodology**

**Potential Throughput (MMCF/yr)**

Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) * (8,760 hrs/yr) * (1 MMBtu/1,050 MMCF)

**Potential Emissions (tons/yr)**

Potential Emissions (tons/yr) = Throughput (MMCF/yr) * Emission Factor (lb/MMCF) *(1 ton/2,000 lb)

**The five highest organic and metal HAPs emission factors are provided above.**

**Additional HAPs emission factors are available in AP-42, Chapter 1.4.**

**Methodology**

All emission factors are based on normal firing.

**MMBtu = 1,000,000 Btu**

**MMCF = 1,000,000 Cubic Feet of Gas**

**Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) * (8,760 hrs/yr) * (1 MMBtu/1,050 MMCF)**

**Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-01-006-01, 1-01-006-04 (AP-42 Supplement D 3/98)**

**Emission (tons/yr) = Throughput (MMCF/yr) * Emission Factor (lb/MMCF) *(1 ton/2,000 lb)**

**Emission Factor in lb/MMCF**

**Potential Emissions (tons/yr)**

**Coefficient of Variation (COV) = Standard Deviation (SD) / Mean (X) * 100**

**Coefficient of Variation (COV)**

**Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.**

**Emission (tons/yr) = Throughput (MMCF/yr) * Emission Factor (lb/MMCF) *(1 ton/2,000 lb)**

**Potential to Emit (ton/yr)**

**Potential to Emit (ton/yr) = Throughput (MMCF/yr) * Emission Factor (lb/MMCF) *(1 ton/2,000 lb)**
### Appendix B: Updated Source-Wide Emission Calculations

#### Summary Uncontrolled Potential to Emit of Criteria Pollutants

- **Company Name:** General Motors LLC Fort Wayne Assembly
- **Address City IN Zip:** 12200 LaFayette Center Road, Roanoke, IN 46783
- **Part 70 Renewal No.:** 003-41020-00036
- **SSM No.:** 003-43453-00036
- **SPM No.:** 003-43572-00036
- **Reviewer:** Aida DeGuzman

#### Emission Units

<table>
<thead>
<tr>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>Total HAPs</th>
<th>Worst HAP (Formaldehyde)</th>
</tr>
</thead>
</table>

#### GM LLC Lafayette Center Road Facility

| Boiler 1 | 0.51 | 2.06 | 2.06 | 0.16 | 27.06 | 1.49 | 22.73 | 0.50 | 0.02 |
| Boiler 2 | 0.46 | 1.84 | 1.84 | 0.15 | 24.21 | 1.33 | 20.34 | 0.95 | 0.02 |
| 42 NG Heating Units | 3.79 | 15.18 | 15.18 | 1.20 | 95.11 | 4.99 | 79.89 | 60.90 | 0.25 |
| Boiler 004 - Natural Gas | 1.81 | 7.23 | 7.23 | 0.57 | 51.96 | 4.84 | 35.44 | 36.72 | 36.44 |
| Generators Gen1 - Gen4 | 11.25 | 11.25 | 11.25 | 21.56 | 151.6 | 15.16 | 17.52 | 17.52 | 0.39 |
| 007 - Space heaters and process heaters | 0.04 | 1.60 | 1.60 | 0.13 | 21.11 | 1.16 | 17.73 | 17.73 | 0.40 |
| MOD 1-10 - 20 air supply house burners | 2.00 | 7.99 | 7.99 | 0.63 | 105.12 | 5.78 | 79.89 | 79.89 | 0.98 |
| 006 - Thermal Incineration Natural Gas Combustion | 0.40 | 1.59 | 1.59 | 0.13 | 20.86 | 1.15 | 17.52 | 17.52 | 0.39 |
| 003 - Catalytic Oxidizer Natural Gas Combustion | 0.64 | 2.57 | 2.57 | 0.20 | 33.79 | 1.86 | 28.38 | 28.38 | 0.64 |
| 006 - ELPO Dipping System - T1 Full Size Truck Project | -- | -- | -- | -- | -- | -- | 356.4 | -- | -- |
| 008 - RTO Natural Gas Combustion | 0.53 | 2.10 | 2.10 | 0.13 | 15.18 | 0.89 | 13.69 | 13.69 | 0.25 |
| 008 - ELPO Oven, RTOs, and other Heaters - T1 Full Size Truck Project | 1.99 | 7.96 | 7.96 | 0.63 | 104.70 | 5.76 | 87.95 | 87.95 | 1.98 |
| 2016 Steam Elimination Natural Gas Combustion | 0.98 | 3.91 | 3.91 | 0.31 | 51.47 | 2.83 | 43.23 | 43.23 | 0.97 |

#### Insignificant Activities

- **Body Shop - Grinding and Machining Operations - T1 Full Size Truck Project:** 4.51
- **Machining and Grinding:** 4.51
- **Storage Tanks (1, 2, 7, 8, 12, 13, 14, and 15, and two waste purge solvent tanks):** --
- **Space Heaters, Process Heaters, Boilers with Natural Gas less than 10 MMMBtu/hr:** 0.08
- **Gasoline Fuel Transfer and Dispensing Operation:** --
- **ELPO Dipping System - T1 Full Size Truck Project:** --
- **Miscellaneous Heaters and Adhesives - T1 Full Size Truck Project:** --
- **ELPO Oven, RTOs, and other Heaters - T1 Full Size Truck Project:** 1.99
- **2016 Steam Elimination Natural Gas Combustion:** 0.98

#### Source Total Uncontrolled PTE (ton/yr):

- **1,460.91**
- **1,493.50**
- **1,492.18**
- **28.15**
- **685.29**
- **6,800.75**
- **875.71**
- **107.70**
- **37.02**
### Limited PTE (ton/yr)

<table>
<thead>
<tr>
<th>Emission Units</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>Total HAPs</th>
<th>Worst HAP (Formaldehyde)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Boiler 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42 NG Heating Units</td>
<td>0.29</td>
<td>1.18</td>
<td>1.18</td>
<td>0.09</td>
<td>15.49</td>
<td>0.85</td>
<td>13.01</td>
<td>0.28</td>
<td>0.02</td>
</tr>
<tr>
<td><strong>Boiler 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>007 - Space heaters and process heaters</td>
<td>0.40</td>
<td>1.60</td>
<td>1.60</td>
<td>0.13</td>
<td>21.11</td>
<td>1.16</td>
<td>17.73</td>
<td>0.40</td>
<td>0.02</td>
</tr>
<tr>
<td><strong>MOD 1-10</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>006 - Thermal Incineration Natural Gas Combustion</td>
<td>0.40</td>
<td>1.59</td>
<td>1.59</td>
<td>0.13</td>
<td>20.86</td>
<td>1.15</td>
<td>17.52</td>
<td>0.39</td>
<td>0.02</td>
</tr>
<tr>
<td><strong>010 - RTO Natural Gas Combustion</strong></td>
<td>0.13</td>
<td>0.51</td>
<td>0.51</td>
<td>0.04</td>
<td>6.67</td>
<td>0.37</td>
<td>5.61</td>
<td>0.13</td>
<td>0.01</td>
</tr>
<tr>
<td><strong>008 - Catalytic Oxidizer Natural Gas Combustion</strong></td>
<td>0.64</td>
<td>2.57</td>
<td>2.57</td>
<td>0.20</td>
<td>33.79</td>
<td>1.86</td>
<td>28.38</td>
<td>0.64</td>
<td>0.03</td>
</tr>
<tr>
<td><strong>006 - ELPO Dipping System</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>010 - Primer Surfacer System</strong></td>
<td>11.21</td>
<td>11.21</td>
<td>11.21</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>3204</td>
<td></td>
</tr>
<tr>
<td><strong>008 - Topcoat System</strong></td>
<td>59.01</td>
<td>59.01</td>
<td>59.01</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Underbody Robotic Sealer Operation</strong></td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>009 - Misc. Sealers/Adhesives/Additives</strong></td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>009 - Misc. Solvents</strong></td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>012 - Final Repair Operation</strong></td>
<td>0.37</td>
<td>0.37</td>
<td>0.37</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>013 - Maintenance Paint Operation</strong></td>
<td>2.82</td>
<td>2.82</td>
<td>2.82</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>014 - Gasoline Fill Operation</strong></td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>9.65</td>
<td>0.08</td>
</tr>
<tr>
<td><strong>ELPO Dipping System - T1 Full Size Truck Project</strong></td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>10.00</td>
<td>--</td>
</tr>
<tr>
<td><strong>MISCELLANEOUS SEALERS AND ADHESIVES - T1 Full Size Truck Project</strong></td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>28.00</td>
<td>--</td>
</tr>
<tr>
<td><strong>ELPO Oven, RTOs, and other Heaters - T1 Full Size Truck Project</strong></td>
<td>0.57</td>
<td>2.28</td>
<td>2.28</td>
<td>0.18</td>
<td>30.00</td>
<td>1.65</td>
<td>25.20</td>
<td>0.57</td>
<td>0.08</td>
</tr>
<tr>
<td><strong>2016 Steam Elimination Natural Gas Combustion</strong></td>
<td>0.76</td>
<td>3.02</td>
<td>3.02</td>
<td>0.24</td>
<td>39.75</td>
<td>2.19</td>
<td>33.39</td>
<td>0.75</td>
<td>0.03</td>
</tr>
</tbody>
</table>

### Insignificant Activities

<table>
<thead>
<tr>
<th>Activity Description</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>Total HAPs</th>
<th>Worst HAP (Formaldehyde)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Body Shop - Grinding and Machining Operations - T1 Full Size Truck Project</strong></td>
<td>4.51</td>
<td>4.51</td>
<td>4.51</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Machining and Grinding</strong></td>
<td>4.51</td>
<td>4.51</td>
<td>4.51</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Storage Tanks (1, 2, 7, 8, 12, 13, 14, 15, and two waste purge solvent tanks)</strong></td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>2.11</td>
<td>--</td>
</tr>
<tr>
<td><strong>Space Heaters, Process Heaters, Boilers with Natural Gas less than 10 MMbtu/hr</strong></td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>28.00</td>
<td>--</td>
</tr>
<tr>
<td><strong>Emergency Diesel Generators (2, 3, 5, &amp; PHDZL)</strong></td>
<td>0.88</td>
<td>0.88</td>
<td>0.88</td>
<td>0.82</td>
<td>12.40</td>
<td>1.01</td>
<td>2.67</td>
<td>0.00</td>
<td>0.001</td>
</tr>
<tr>
<td><strong>Emergency Diesel Fire Pumps (1 and 2)</strong></td>
<td>0.44</td>
<td>0.44</td>
<td>0.44</td>
<td>0.41</td>
<td>6.20</td>
<td>0.50</td>
<td>1.34</td>
<td>0.00</td>
<td>0.001</td>
</tr>
<tr>
<td><strong>Emergency Generators (EGS - EG9)</strong></td>
<td>0.12</td>
<td>0.08</td>
<td>0.08</td>
<td>0.70</td>
<td>7.83</td>
<td>0.22</td>
<td>1.22</td>
<td>0.06</td>
<td>0.045</td>
</tr>
</tbody>
</table>

**Note:** The source has requested Boilers 004 and 005 be removed from the permit. However, since they will not be removed until Boiler 1 and Boiler 2 start normally operating, they will remain listed until they are removed.
### Appendix A: Emission Calculations

**Potential to Emit Increase Due to the Modification**

**Company Name:** General Motors LLC Fort Wayne Assembly  
**Address City IN Zip:** 12200 LaFayette Center Road, Roanoke, IN 46783  
**Part 70 Renewal No.:** 003-41020-00036  
**SSM No.:** 003-43453-00036  
**SPM No.:** 003-43572-00036  
**Reviewer:** Aida DeGuzman

<table>
<thead>
<tr>
<th>Emission Units</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO$_2$</th>
<th>NO$_x$</th>
<th>VOC</th>
<th>CO</th>
<th>Total HAPs</th>
<th>Worst Single HAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>EG6</td>
<td>2.80E-05</td>
<td>3.63E-03</td>
<td>3.63E-03</td>
<td>2.14E-04</td>
<td>1.48</td>
<td>0.04</td>
<td>0.12</td>
<td>0.026</td>
<td>formaldehyde</td>
</tr>
<tr>
<td>EG7</td>
<td>1.90E-05</td>
<td>2.46E-03</td>
<td>2.46E-03</td>
<td>1.45E-04</td>
<td>1.01</td>
<td>0.03</td>
<td>0.08</td>
<td>0.018</td>
<td>formaldehyde</td>
</tr>
<tr>
<td>EG8</td>
<td>1.90E-05</td>
<td>2.46E-03</td>
<td>2.46E-03</td>
<td>1.45E-04</td>
<td>1.01</td>
<td>0.03</td>
<td>0.08</td>
<td>0.018</td>
<td>formaldehyde</td>
</tr>
<tr>
<td>EG9</td>
<td>1.21E-01</td>
<td>6.91E-02</td>
<td>6.91E-02</td>
<td>6.97E-01</td>
<td>4.13</td>
<td>0.12</td>
<td>0.95</td>
<td>0.002</td>
<td>9.36E-04 benzene</td>
</tr>
<tr>
<td>Totals</td>
<td>0.12</td>
<td>0.08</td>
<td>0.08</td>
<td>0.70</td>
<td>7.63</td>
<td>0.22</td>
<td>1.22</td>
<td>0.063</td>
<td>formaldehyde</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emission Units</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO$_2$</th>
<th>NO$_x$</th>
<th>VOC</th>
<th>CO</th>
<th>Total HAPs</th>
<th>Worst Single HAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTE of New Emission Units</td>
<td>0.12</td>
<td>0.08</td>
<td>0.08</td>
<td>0.70</td>
<td>7.63</td>
<td>0.22</td>
<td>1.22</td>
<td>0.06</td>
<td>formaldehyde</td>
</tr>
<tr>
<td>PTE Increase of Modified Emission Units</td>
<td>0.40</td>
<td>1.61</td>
<td>1.61</td>
<td>0.13</td>
<td>21.24</td>
<td>1.17</td>
<td>17.84</td>
<td>0.40</td>
<td>0.38 hexane</td>
</tr>
<tr>
<td>Totals</td>
<td>0.52</td>
<td>1.69</td>
<td>1.69</td>
<td>0.82</td>
<td>28.87</td>
<td>1.39</td>
<td>19.06</td>
<td>0.46</td>
<td>0.38 hexane</td>
</tr>
</tbody>
</table>
### Appendix A Emissions Calculations

#### Natural Gas Combustion Only

**PTE Increase of Modified Natural Gas-Fired Units**

**Company Name:** General Motors LLC Fort Wayne Assembly  
**Address City IN ZIP:** 12200 LaFayette Center Road, Roanoke, IN 46783  
**Part 70 Renewal No.:** 003-41020-00036  
**SSM No.:** 003-43453-00036  
**SPM No.:** 003-43572-00036  
**Reviewer:** Aida DeGuzman

<table>
<thead>
<tr>
<th>After Mod</th>
<th>Before Mod</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>157.795</td>
<td>108.327</td>
<td>49.468</td>
</tr>
</tbody>
</table>

#### Heat Input Capacity

<table>
<thead>
<tr>
<th>MMBtu/hr</th>
<th>mmBtu</th>
<th>Potential Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td>49.47</td>
<td>1020</td>
<td>424.8</td>
</tr>
</tbody>
</table>

**Pollutant**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM*</th>
<th>PM10*</th>
<th>direct PM2.5*</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
</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  

#### Hazardous Air Pollutants (HAPs)

**HAPs - Organics**

<table>
<thead>
<tr>
<th>HAPs - Organics</th>
<th>Benzene</th>
<th>Dichloro - benzene</th>
<th>Formaldehyde</th>
<th>Hexane</th>
<th>Toluene</th>
<th>Total - Organics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</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>4.0E-04</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>4.5E-04</td>
<td>2.5E-04</td>
<td>1.6E-02</td>
<td>0.38</td>
<td>7.2E-04</td>
<td>0.40</td>
</tr>
</tbody>
</table>

**HAPs - Metals**

<table>
<thead>
<tr>
<th>HAPs - Metals</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>Emission Factor in lb/MMCF</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>1.2E-03</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>1.1E-04</td>
<td>2.3E-04</td>
<td>3.0E-04</td>
<td>8.1E-05</td>
<td>4.5E-04</td>
<td>0.40</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.
<table>
<thead>
<tr>
<th>Current Permit Description*</th>
<th>Permitted Total MMBtu/hr</th>
<th>Installed Total MMBtu/hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1 Truck Project [A.2(k)]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thirty-nine (39) ASH Heaters, located at the Body Shop and Material Room, each with a maximum heat input capacity of 0.972 MMBtu/hr; all venting inside the building.</td>
<td>37.908</td>
<td>47.700</td>
</tr>
<tr>
<td><strong>Steam Elimination Project</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Four (4) natural gas-fired dock door heaters, identified as DHU-56, DHU-68, DHU-42, and DHU-57, exhaust in each, with a maximum heat input capacity of 0.35 MMBtu/hr, and exhausting indoors.</td>
<td>1.400</td>
<td>1.600</td>
</tr>
<tr>
<td>Fourteen (14) natural gas-fired space heaters, identified as UH-1 through UH-14, approved in 2016 for construction, each with a maximum heat input capacity of 0.125 MMBtu/hr, and exhausting indoors.</td>
<td>1.750</td>
<td>5.600</td>
</tr>
<tr>
<td>One (1) natural gas-fired boiler, identified as BU-2, approved in 2016 for construction, with a maximum heat input capacity of 0.3 MMBtu/hr, and exhausting indoors.</td>
<td>0.300</td>
<td>0.645</td>
</tr>
<tr>
<td>Paint Bld ASH #20, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 6.631 MMBtu/hr.</td>
<td>6.631</td>
<td>8.000</td>
</tr>
<tr>
<td>Paint Bld ASH #20, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 6.631 MMBtu/hr.</td>
<td>6.631</td>
<td>8.000</td>
</tr>
<tr>
<td>Bodyshop ACU #1, approved in 2016 for construction, with a maximum heat input capacity of 0.700 MMBtu/hr.</td>
<td>0.700</td>
<td>0.750</td>
</tr>
<tr>
<td>Mod Obs ASH #1, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 2.652 MMBtu/hr.</td>
<td>2.652</td>
<td>4.000</td>
</tr>
<tr>
<td>Mod Obs ASH #2, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 2.652 MMBtu/hr.</td>
<td>2.652</td>
<td>4.000</td>
</tr>
<tr>
<td>Mod Obs ASH #3, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 2.652 MMBtu/hr.</td>
<td>2.652</td>
<td>4.000</td>
</tr>
<tr>
<td>Mod Obs ASH #4, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 2.652 MMBtu/hr.</td>
<td>2.652</td>
<td>4.000</td>
</tr>
<tr>
<td>Mod Obs ASH #5, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 2.652 MMBtu/hr.</td>
<td>2.652</td>
<td>4.000</td>
</tr>
<tr>
<td>Mod Obs ASH #6, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 2.652 MMBtu/hr.</td>
<td>2.652</td>
<td>4.000</td>
</tr>
<tr>
<td>Mod Obs ASH #7, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 2.652 MMBtu/hr.</td>
<td>2.652</td>
<td>4.000</td>
</tr>
<tr>
<td>Mod Obs ASH #8, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 2.652 MMBtu/hr.</td>
<td>2.652</td>
<td>4.000</td>
</tr>
<tr>
<td>Mod Obs ASH #9, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 2.652 MMBtu/hr.</td>
<td>2.652</td>
<td>4.000</td>
</tr>
<tr>
<td>Mod Obs ASH #10, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 2.652 MMBtu/hr.</td>
<td>2.652</td>
<td>4.000</td>
</tr>
<tr>
<td>206 ASH, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 4.394 MMBtu/hr.</td>
<td>4.394</td>
<td>7.500</td>
</tr>
<tr>
<td>Prime Cleanroom ASH, constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.628 MMBtu/hr.</td>
<td>1.628</td>
<td>3.000</td>
</tr>
<tr>
<td>216 ASH #1 (SE), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 0.939 MMBtu/hr.</td>
<td>0.939</td>
<td>1.500</td>
</tr>
<tr>
<td>216 ASH #2 (SW), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 0.939 MMBtu/hr.</td>
<td>0.939</td>
<td>1.500</td>
</tr>
<tr>
<td>216 ASH #3 (SW), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 0.939 MMBtu/hr.</td>
<td>0.939</td>
<td>1.500</td>
</tr>
<tr>
<td>216 ASH #4 (NW), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 0.939 MMBtu/hr.</td>
<td>0.939</td>
<td>1.500</td>
</tr>
<tr>
<td>217 ASH #1 (SE), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.215 MMBtu/hr.</td>
<td>1.215</td>
<td>2.000</td>
</tr>
<tr>
<td>217 ASH #2 (SW), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.215 MMBtu/hr.</td>
<td>1.215</td>
<td>2.000</td>
</tr>
<tr>
<td>217 ASH #3 (NW), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 0.723 MMBtu/hr.</td>
<td>0.723</td>
<td>1.500</td>
</tr>
<tr>
<td>217 ASH #4 (NE), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 0.723 MMBtu/hr.</td>
<td>0.723</td>
<td>1.500</td>
</tr>
<tr>
<td>241 ASH #1 (SW), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 2.071 MMBtu/hr.</td>
<td>2.071</td>
<td>3.000</td>
</tr>
<tr>
<td>241 ASH #2 (SW), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 4.653 MMBtu/hr.</td>
<td>4.653</td>
<td>8.000</td>
</tr>
<tr>
<td>243 ASH #1 (NE), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 1.456 MMBtu/hr.</td>
<td>1.456</td>
<td>3.000</td>
</tr>
<tr>
<td>243 ASH #2 (NW), constructed in 1985 as steam units and approved for modification in 2016 to be retrofitted with the ability to use natural gas, with a maximum heat input capacity of 4.653 MMBtu/hr.</td>
<td>4.653</td>
<td>8.000</td>
</tr>
</tbody>
</table>

Total |

<table>
<thead>
<tr>
<th>Current Permit Description*</th>
<th>Permitted Total MMBtu/hr</th>
<th>Installed Total MMBtu/hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1 Truck Project [A.2(k)]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fifty-nine (59) Dock Door Heaters, located at the Body Shop and Material Room, each with a maximum heat input capacity of 0.40 MMBtu/hr; all venting inside the building.</td>
<td>23.6</td>
<td>18.4</td>
</tr>
</tbody>
</table>

* These modified units resulted in a decrease in emissions and are not reflected in the PTE increase calculation.
Appendix A: Emission Calculations

Reciprocating Internal Combustion Engines - Natural Gas

4-Stroke Lean-Burn (4SLB) Engine - EG6

Maximum Output Horsepower Rating (hp): 194
Brake Specific Fuel Consumption (BSFC) (Btu/hp-hr): 7500
Maximum Hours Operated per Year (hr/yr): 500
Potential Fuel Usage (MMBtu/yr): 728
High Heat Value (MMBtu/MMscf): 1020
Potential Fuel Usage (MMcf/yr): 0.71

Criteria Pollutants

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM0.5*</th>
<th>PM2.5*</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor (lb/MMBtu)</td>
<td>7.16E-05</td>
<td>9.99E-03</td>
<td>9.99E-03</td>
<td>9.99E-04</td>
<td>4.08E+00</td>
<td>1.18E-01</td>
</tr>
<tr>
<td>Potential Emissions (tons/yr)</td>
<td>2.80E-05</td>
<td>3.63E-03</td>
<td>3.63E-03</td>
<td>2.14E-04</td>
<td>1.48</td>
<td>0.04</td>
</tr>
</tbody>
</table>

*PM emission factor is for filterable PM-10.  PM10 emission factor is filterable PM + 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>8.96E-03</td>
<td>0.003</td>
</tr>
<tr>
<td>Acrylonitrile</td>
<td>5.14E-03</td>
<td>0.002</td>
</tr>
<tr>
<td>Benzene</td>
<td>4.55E-05</td>
<td>0.000</td>
</tr>
<tr>
<td>Benzenes</td>
<td>2.18E-03</td>
<td>0.000</td>
</tr>
<tr>
<td>1,3-Butadiene</td>
<td>2.07E-04</td>
<td>0.000</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>5.2E-02</td>
<td>0.019</td>
</tr>
<tr>
<td>Methanol</td>
<td>2.5E-03</td>
<td>0.001</td>
</tr>
<tr>
<td>Hexane</td>
<td>1.10E-03</td>
<td>0.000</td>
</tr>
<tr>
<td>Toluene</td>
<td>4.10E-05</td>
<td>0.000</td>
</tr>
<tr>
<td>2,2,4-Triethylpentane</td>
<td>2.90E-04</td>
<td>0.000</td>
</tr>
<tr>
<td>Xylenes</td>
<td>1.88E-04</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Total: 0.93

HAP pollutants consist of the eleven highest HAPs included in AP-42 Table 3.2-2.

Greenhouse Gases (GHGs)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor (lb/MMBtu)</th>
<th>Potential Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO2</td>
<td>1.10</td>
<td>1.25</td>
</tr>
<tr>
<td>CH4</td>
<td>2.7</td>
<td>40.01</td>
</tr>
<tr>
<td>N2O</td>
<td>0.85</td>
<td>0.45</td>
</tr>
</tbody>
</table>

Total CO2e in tons/yr: 40.47

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

CO2e Total in tons/yr: 51.61

Methodology

*The CO2 and CH4 emission factors are from Emission Factors are from AP-42 (Supplement F, July, 2000), Table 3.2-2
**The N2O emission factor is from AP-42, Table 1.2-2. The N2O Emission Factor for low Nox burner is 0.64.
For CO2 and CH4 Emission (tons/yr) = Potential Fuel Usage (MMBtu/yr) * Emission Factor (lb/MMBtu) / (2,000 lb/ton)
For N2O: Emission (tons/yr) = Potential Fuel Usage (MMBtu/yr) * Emission Factor (lb/MMBtu) / (2,000 lb/ton)
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (296).

Abbreviations

PM = Particulate Matter  CO2 = Carbon Dioxide
PM10 = Particulate Matter (<10 um)  NOx = Nitrous Oxide
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

4-Stroke Lean-Burn (4SLB) Engine - EG7

Company Name: General Motors LLC Fort Wayne Assembly
Address City In Zip: 12200 Lafayette Center Road, Roanoke, IN 46783
Part 70 Renewal No.: 003-41020-00036
SSM No.: 003-43453-00036
SPM No.: 003-43572-00036
Reviewer: Aida DeGuzman

Maximum Output Horsepower Rating (hp)  131.6
Brake Specific Fuel Consumption (BSFC) (Btu/hp-hr)  7500
Maximum Hours Operated per Year (hr/yr)  500
Potential Fuel Usage (MMBtu/yr)  494
High Heat Value (MMBtu/MMscf)  1020
Potential Fuel Usage (MMcf/yr)  0.48

<table>
<thead>
<tr>
<th>Pollutant</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>Emission Factor (lb/MMBtu)</td>
<td>7.71E-05</td>
<td>9.99E-03</td>
<td>9.99E-03</td>
<td>5.88E-04</td>
<td>4.08E+00</td>
<td>1.18E-01</td>
</tr>
<tr>
<td>Potential Emissions (tons/yr)</td>
<td>1.90E-05</td>
<td>2.46E-03</td>
<td>2.46E-03</td>
<td>1.45E-04</td>
<td>1.18E-01</td>
<td>3.17E-01</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>8.38E-03</td>
<td>0.002</td>
</tr>
<tr>
<td>Acrylon</td>
<td>6.14E-03</td>
<td>0.001</td>
</tr>
<tr>
<td>Benzene</td>
<td>4.45E-04</td>
<td>0.000</td>
</tr>
<tr>
<td>Ethylene</td>
<td>2.12E-04</td>
<td>0.000</td>
</tr>
<tr>
<td>1,3-Butadiene</td>
<td>2.31E-04</td>
<td>0.000</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>5.28E-02</td>
<td>0.003</td>
</tr>
<tr>
<td>Methylhydrazine</td>
<td>2.20E-04</td>
<td>0.000</td>
</tr>
<tr>
<td>Methane</td>
<td>1.18E-05</td>
<td>0.000</td>
</tr>
<tr>
<td>Methanol</td>
<td>4.86E-04</td>
<td>0.000</td>
</tr>
<tr>
<td>2,2,4-Trimethylpentane</td>
<td>2.50E-04</td>
<td>0.000</td>
</tr>
<tr>
<td>TOXIC</td>
<td>1.87E-04</td>
<td>0.000</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>0.02</td>
</tr>
</tbody>
</table>

HAP pollutants consist of the eleven highest HAPs included in AP-42 Table 3.2-2.

Methodology

Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-2
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]
Appendix A: Emission Calculations

Reciprocating Internal Combustion Engines - Natural Gas

4-Stroke Lean-Burn (4SLB) Engine - EGB

Company Name: General Motors LLC Fort Wayne Assembly

Address City: Roanoke, IN Zip: 46783

Part 70 Renewal No.: 003-41020-00036

SSM No.: 003-43455-00036

SPM No.: 003-43072-00036

Reviewer: Aida DeGuzman

Maximum Output Horsepower Rating (hp) 131.6
Brake Specific Fuel Consumption (Btu/hp-hr) 7500
Maximum Hours Operated per Year (hr/yr) 500
Potential Fuel Usage (MMBtu) 2466.03
High Heat Value (MMBtu/MMscf) 1020.0
Potential Fuel Usage (MMcf/yr) 0.48

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>7.71E-05</td>
<td>1.90E-05</td>
</tr>
<tr>
<td>PM10</td>
<td>9.99E-03</td>
<td>2.46E-03</td>
</tr>
<tr>
<td>PM2.5</td>
<td>9.99E-03</td>
<td>2.46E-03</td>
</tr>
<tr>
<td>SO2</td>
<td>5.88E-04</td>
<td>1.45E-04</td>
</tr>
<tr>
<td>NOx</td>
<td>4.08E+00</td>
<td>1.01</td>
</tr>
<tr>
<td>VOC</td>
<td>1.18E-01</td>
<td>0.03</td>
</tr>
<tr>
<td>CO</td>
<td>3.17E-01</td>
<td>0.08</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>8.36E-03</td>
<td>0.002</td>
</tr>
<tr>
<td>Acrolein</td>
<td>6.43E-03</td>
<td>0.001</td>
</tr>
<tr>
<td>Benzene</td>
<td>4.02E-04</td>
<td>0.000</td>
</tr>
<tr>
<td>Butadiene</td>
<td>2.32E-04</td>
<td>0.000</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>2.36E-04</td>
<td>0.002</td>
</tr>
<tr>
<td>Methylene</td>
<td>2.92E-05</td>
<td>0.000</td>
</tr>
<tr>
<td>N-hexane</td>
<td>1.02E-05</td>
<td>0.000</td>
</tr>
<tr>
<td>Toluene</td>
<td>4.36E-04</td>
<td>0.000</td>
</tr>
<tr>
<td>2,2,4-Trimethylpentane</td>
<td>2.31E-04</td>
<td>0.000</td>
</tr>
<tr>
<td>Xylene</td>
<td>1.84E-04</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Total 0.02

HAP pollutants consist of the eleven highest HAPs included in AP-42 Table 3.2-2.

Methodology

Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-2

Potential Fuel Usage (MMBtu/yr) = [Maximum Output Horsepower Rating (hp)] * [Brake Specific Fuel Consumption (Btu/hp-hr)] * [Maximum Hours Operated per Year (hr/yr)] / [1,000,000 Btu/MMBtu]

Potential Emissions (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]

Greenhouse Gases (GHGs)

<table>
<thead>
<tr>
<th>Gas</th>
<th>Emission Factor in lb/MMBtu*</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO2</td>
<td>110</td>
<td>27.14</td>
</tr>
<tr>
<td>CH4</td>
<td>1.00</td>
<td>0.31</td>
</tr>
<tr>
<td>N2O</td>
<td>2.2</td>
<td>0.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Greenhouse Gas (GHG)</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMBtu*</td>
<td>110</td>
<td>1.00</td>
<td>2.2</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>27.14</td>
<td>0.31</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Summed Potential Emissions in tons/yr 27.45

CO2e Total in tons/yr 35.01

Methodology

* The CO2 and CH4 emission factors are from Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-2
** The N2O emission factor is from AP-42, Table 4.2. The N2O Emission Factor for low NOx burner is 0.64. The N2O Emission Factor for high NOx burner is 0.4. The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low NOx burner is 0.64. The N2O Emission Factor for high NOx burner is 0.4.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

For CO2 and CH4: Emission (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]

For N2O: Emission (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]

CO2e (tons/yr) = CO2 Potential Emission tons/yr x CO2 GWP (1) + CH4 Potential Emission tons/yr x CH4 GWP (25) + N2O Potential Emission tons/yr x N2O GWP (298).

Abbreviations

PM = Particulate Matter 
NOx = Nitrous Oxides 
CO2 = Carbon 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

Page 8 of 36 TSD Appendix A
A. Emissions calculated based on output rating (hp)

<table>
<thead>
<tr>
<th>Output Horsepower Rating (hp)</th>
<th>Maximum Hours Operated per Year</th>
<th>Potential Throughput (hp-hr/yr)</th>
<th>Sulfur Content (S) of Fuel (% by weight)</th>
</tr>
</thead>
<tbody>
<tr>
<td>689.0</td>
<td>500</td>
<td>344,500</td>
<td>0.500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/hp-hr</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM*</td>
<td>7.00E-04</td>
<td>0.12</td>
</tr>
<tr>
<td>PM10*</td>
<td>4.01E-04</td>
<td>0.07</td>
</tr>
<tr>
<td>direct PM2.5*</td>
<td>4.01E-04</td>
<td>0.07</td>
</tr>
<tr>
<td>SO2</td>
<td>4.05E-03</td>
<td>0.70</td>
</tr>
<tr>
<td>NOx</td>
<td>2.40E-02</td>
<td>4.13</td>
</tr>
<tr>
<td>VOC</td>
<td>7.05E-04</td>
<td>0.12</td>
</tr>
<tr>
<td>CO</td>
<td>5.50E-03</td>
<td>0.95</td>
</tr>
</tbody>
</table>

**PM10 emission factor in lb/hp-hr was calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

**NOx emission factor: uncontrolled = 0.024 lb/hp-hr, controlled by ignition timing retard = 0.013 lb/hp-hr

Hazardous Air Pollutants (HAPs)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/hp-hr</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>5.43E-06</td>
<td>9.36E-04</td>
</tr>
<tr>
<td>Toluene</td>
<td>1.97E-06</td>
<td>3.39E-04</td>
</tr>
<tr>
<td>Xylene</td>
<td>1.35E-06</td>
<td>2.33E-04</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>5.52E-07</td>
<td>9.51E-05</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>1.76E-07</td>
<td>3.04E-05</td>
</tr>
<tr>
<td>Acrolein</td>
<td>5.52E-08</td>
<td>9.50E-06</td>
</tr>
<tr>
<td>Total PAH HAPs***</td>
<td>1.48E-06</td>
<td>2.56E-04</td>
</tr>
<tr>
<td>Total HAPs</td>
<td>1.90E-03</td>
<td>1.90E-03</td>
</tr>
</tbody>
</table>

***PAH = Polynuclear Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1, 3.4-2, 3.4-3, and 3.4-4.

Option B Methodology

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]

Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]
### Appendix A: Summary of Modification

**Company Name:** General Motors LLC Fort Wayne Assembly  
**Address City IN Zip:** 12200 LaFayette Center Road, Roanoke, IN 46783  
**Part 70 Renewal No.:** 003-41020-00036  
**SSM No.:** 003-43453-00036  
**SPM No.:** 003-43572-00036  
**Reviewer:** Aida DeGuzman

#### Permitted in 2015

<table>
<thead>
<tr>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO₂</th>
<th>NOₓ</th>
<th>VOC</th>
<th>CO</th>
<th>Total HAPs</th>
<th>Worst HAP (Hexane)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1 Full Size Truck Project</td>
<td>1.77</td>
<td>7.07</td>
<td>7.07</td>
<td>0.56</td>
<td>93.08</td>
<td>5.12</td>
<td>78.19</td>
<td>1.76</td>
</tr>
</tbody>
</table>

#### Approved in 2017 as Modified

<table>
<thead>
<tr>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO₂</th>
<th>NOₓ</th>
<th>VOC</th>
<th>CO</th>
<th>Total HAPs</th>
<th>Worst HAP (Hexane)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1 Full Size Truck Project</td>
<td>1.99</td>
<td>7.96</td>
<td>7.96</td>
<td>0.63</td>
<td>104.70</td>
<td>5.76</td>
<td>87.95</td>
<td>1.98</td>
</tr>
</tbody>
</table>

#### Increase in PTE from 2017 Modification

<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>Total HAPs</th>
<th>Worst HAP (Hexane)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.22</td>
<td>0.88</td>
<td>0.88</td>
<td>0.07</td>
<td>11.62</td>
<td>0.64</td>
<td>9.76</td>
<td>0.22</td>
<td>0.21</td>
</tr>
</tbody>
</table>
### Unlimited NG Combustion

**Company Name:** General Motors LLC Fort Wayne Assembly  
**Address City IN Zip:** 12200 LaFayette Center Road, Roanoke, IN 46783

<table>
<thead>
<tr>
<th>Part 70 Renewal No.</th>
<th>003-43453-00036</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPM No.</td>
<td>003-43572-00036</td>
</tr>
<tr>
<td>Reviewer</td>
<td>Aida DeGuzman</td>
</tr>
</tbody>
</table>

#### Duck Door Heaters

<table>
<thead>
<tr>
<th>Unit</th>
<th>MM Btu/hr</th>
<th>Unit</th>
<th>MM Btu/hr</th>
<th>Unit</th>
<th>MM Btu/hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>DUH-56</td>
<td>0.35</td>
<td>UH-1</td>
<td>0.125</td>
<td>Paint Bid ASH #3</td>
<td>6.631</td>
</tr>
<tr>
<td>DUH-88</td>
<td>0.35</td>
<td>UH-2</td>
<td>0.125</td>
<td>Paint Bid ASH #4</td>
<td>6.631</td>
</tr>
<tr>
<td>DUH-40</td>
<td>0.35</td>
<td>UH-3</td>
<td>0.125</td>
<td>Paint Bid ASH #5</td>
<td>1.266</td>
</tr>
<tr>
<td>Total</td>
<td>1.4</td>
<td>UH-4</td>
<td>0.125</td>
<td>Paint Bid ASH #6</td>
<td>1.266</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UH-5</td>
<td>0.125</td>
<td>Paint Bid ASH #16</td>
<td>1.989</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UH-6</td>
<td>0.125</td>
<td>Paint Bid ASH #17</td>
<td>1.989</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UH-7</td>
<td>0.125</td>
<td>Paint Bid ASH #18</td>
<td>6.631</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UH-8</td>
<td>0.125</td>
<td>Paint Bid ASH #19</td>
<td>6.631</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UH-9</td>
<td>0.125</td>
<td>Paint Bid ASH #20</td>
<td>6.631</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UH-10</td>
<td>0.125</td>
<td>Paint Bid ASH #21</td>
<td>6.631</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UH-11</td>
<td>0.125</td>
<td>Paint Bid ASH #33</td>
<td>3.617</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UH-12</td>
<td>0.125</td>
<td>Paint Bid ASH #34</td>
<td>3.617</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UH-13</td>
<td>0.125</td>
<td>Paint Bid ASH #35</td>
<td>4.219</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UH-14</td>
<td>0.125</td>
<td>Paint Bid ASH #36</td>
<td>1.989</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Paint Bid ASH #37</td>
<td>1.447</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>216 ASH #3 (NE)</td>
<td>0.939</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bodyshop ACU #1</td>
<td>0.700</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>216 ASH #4 (NW)</td>
<td>0.939</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bodyshop ACU #2</td>
<td>0.464</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>217 ASH #1 (SE)</td>
<td>1.215</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bodyshop ACU #3</td>
<td>0.464</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>217 ASH #2 (SW)</td>
<td>1.215</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bodyshop ACU #5</td>
<td>0.228</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>217 ASH #3 (NW)</td>
<td>0.723</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bodyshop ACU #6</td>
<td>0.285</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>217 ASH #4 (NE)</td>
<td>0.723</td>
</tr>
<tr>
<td>Total</td>
<td>1.78</td>
<td></td>
<td></td>
<td>217 ASH #1 (SE)</td>
<td>2.071</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>241 ASH #1 (SE)</td>
<td>2.071</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>241 ASH #2 (SW)</td>
<td>4.653</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>243 ASH #1 (NE)</td>
<td>1.456</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>243 ASH #2 (NW)</td>
<td>4.653</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total</td>
<td>53.007</td>
</tr>
</tbody>
</table>

#### Gas Fired Space Heaters

#### Paint Shop & Process Air Handling

#### Grand Total 119.859 MM Btu/hr
# Appendix A: Emission Calculations
## Natural Gas Combustion Only
### MMBtu/hr > 100
### Steam Elimination Project - Unlimited PTE

**Company Name:** General Motors LLC Fort Wayne Assembly  
**Address City IN Zip:** 12200 LaFayette Center Road, Roanoke, IN 46733  
**Part 70 Renewal No.:** 003-41020-00036  
**SSM No.:** 003-43453-00036  
**SPM No.:** 003-43572-00036  
**Reviewer:** Aida DeGuzman

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM*</th>
<th>PM10*</th>
<th>direct PM2.5*</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</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>0.8</td>
<td>100.0</td>
<td>8.5</td>
<td>84.0</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>0.98</td>
<td>3.91</td>
<td>3.91</td>
<td>0.31</td>
<td>51.47</td>
<td>2.83</td>
<td>43.23</td>
</tr>
</tbody>
</table>

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.  
PM2.5 emission factor is condensable and filterable PM2.5 combined.  
**Emission Factors for NOx: Uncontrolled = 280 (pre-NSPS) or 190 (post-NSPS), Low NOx Burner = 140, Flue gas recirculation = 100 (See Table 1.4-1)

### Methodology

All emission factors are based on normal firing.  
**MMBtu = 1,000,000 Btu**  
**MMCF = 1,000,000 Cubic Feet of Gas**  
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu  
Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-01-006-01, 1-01-006-04 (AP-42 Supplement D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

### Hazardous Air Pollutants (HAPs)

#### HAPs - Organics

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Benzene</th>
<th>Dichlorobenzene</th>
<th>Formaldehyde</th>
<th>Hexane</th>
<th>Toluene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</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>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>1.08E-03</td>
<td>6.18E-04</td>
<td>3.66E-02</td>
<td>9.26E-01</td>
<td>1.78E-03</td>
</tr>
</tbody>
</table>

#### HAPs - Metals

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Lead</th>
<th>Cadmium</th>
<th>Chromium</th>
<th>Manganese</th>
<th>Nickel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</td>
<td>5.3E-04</td>
<td>1.1E-03</td>
<td>1.4E-03</td>
<td>3.8E-04</td>
<td>2.1E-03</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>2.37E-04</td>
<td>5.68E-04</td>
<td>7.21E-04</td>
<td>1.98E-04</td>
<td>1.08E-03</td>
</tr>
</tbody>
</table>

Methodology is the same 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**

**Natural Gas Combustion Only**

**MMBTU/hr >100**

**Steam Elimination Project - Limited PTE**

**Company Name:** General Motors LLC Fort Wayne Assembly  
**Address City IN Zip:** 12200 Lafayette Center Road, Roanoke, IN 46783  
**Part 70 Renewal No.:** 003-41020-00036  
**SSM No.:** 003-43453-00036  
**SPM No.:** 003-43572-00036  
**Reviewer:** Aida DeGuzman

Limited Throughput

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM*</th>
<th>PM10*</th>
<th>direct PM2.5*</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</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><strong>see below</strong></td>
<td>5.5</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>0.76</td>
<td>3.02</td>
<td>3.02</td>
<td>0.24</td>
<td>39.75</td>
<td>2.19</td>
</tr>
</tbody>
</table>

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined. PM2.5 emission factor is condensable and filterable PM2.5 combined.

**Emission Factors for NOx:** Uncontrolled = 280 (pre-NSPS) or 190 (post-NSPS), Low NOx Burner = 140, Flue gas recirculation = 100 (See Table 1.4-1)

**Methodology**

All emission factors are based on normal firing.  

\[ \text{MMBtu} = 1,000,000 \text{ Btu} \]

\[ \text{MMCF} = 1,000,000 \text{ Cubic Feet of Gas} \]

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-01-006-01, 1-01-006-04 (AP-42 Supplement D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Hazardous Air Pollutants (HAPs)**

**- Organics**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Benzene</th>
<th>Dichlorobenzene</th>
<th>Formaldehyde</th>
<th>Hexane</th>
<th>Toluene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</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>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>8.35E-04</td>
<td>4.7E-04</td>
<td>2.98E-02</td>
<td>7.16E-01</td>
<td>1.35E-03</td>
</tr>
</tbody>
</table>

**- Metals**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Lead</th>
<th>Cadmium</th>
<th>Chromium</th>
<th>Manganese</th>
<th>Nickel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</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>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>1.99E-04</td>
<td>4.37E-04</td>
<td>5.57E-04</td>
<td>1.51E-04</td>
<td>8.35E-04</td>
</tr>
</tbody>
</table>

Methodology is the same 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**  
**VOC and Particulate**  
**From Surface Coating Operations**

**NEW EMISSION UNIT**

<table>
<thead>
<tr>
<th>Process/Material</th>
<th>( V_C ) (lb VOC/gal coating, less water)</th>
<th>( S_C ) (gal solids/gal coating)</th>
<th>( A_V ) (ft²/vehicle)</th>
<th>( T_f ) (mil)</th>
<th>( T_e ) (fraction of total coating solids used that remains on coated parts)</th>
<th>Maximum Production Rate (vehicles/hr)</th>
<th>PTE VOC (lb/hr)</th>
<th>PTE VOC (ton/yr)</th>
<th>Thermal Incinerator Overall Control Efficiency</th>
<th>Controlled PTE VOC (ton/yr)</th>
<th>Limited PTE VOC (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELPO Dipping System, ID 020</td>
<td>0.741</td>
<td>0.9068</td>
<td>1270</td>
<td>1.70</td>
<td>1.0</td>
<td>1.10</td>
<td>74</td>
<td>81.38</td>
<td>356.4</td>
<td>95.00%</td>
<td>17.82</td>
</tr>
</tbody>
</table>

**NEW EMISSION UNIT**

**NEW EMISSION UNIT**

**Material usage per job** 1.20 gal  
**Material VOC content** 0.4 lb VOC/gal  
**Maximum Production Rate** 74 Jobs per hour  
**Tons VOC/yr**  

\[
\text{Emissions/year} = \frac{(\text{Avg. Usage} \times \text{Avg. VOC content} \times \text{Annual Volume})}{2000 \text{ lbs/ton}}
\]

**METHODOLOGY**

\[
\text{E}_{VOC} = A_V \times T_f \times \left(\frac{1 ft}{12,000 \text{ mil}}\right) \times \left(\frac{7.48 \text{ gal}}{ft^2}\right) \times V_C
\]

**NEW EMISSION UNIT**

**Material usage per job** 1.20 gal  
**Material VOC content** 0.4 lb VOC/gal  
**Maximum Production Rate** 74 Jobs per hour  
**Tons VOC/yr**

\[
\text{E}_{VOC} = (\text{Material usage per job} \times \text{Material VOC content} \times \text{Maximum Production Rate})
\]

\[
\text{E}_{VOC} = (1.20 \text{ gal} \times 0.4 \text{ lb VOC/gal} \times 74 \text{ Jobs per hour}) = 28 \text{ tons/yr limit}
\]

**MODIFIED EMISSION UNIT**

<table>
<thead>
<tr>
<th>Density (lb/gal)</th>
<th>Weight % Volatile (H₂O &amp; Organics)</th>
<th>Gal of Mat. (gal/unit)</th>
<th>Maximum Production Rate (unit/hour)</th>
<th>Pounds VOC per gallon of coating</th>
<th>PTE VOC (lb/hr)</th>
<th>PTE VOC (ton/yr)</th>
<th>Transfer Efficiency</th>
<th>VOC/PM Control</th>
<th>Overall VOC Control Efficiency</th>
<th>Controlled PTE VOC (ton/yr)</th>
<th>PM Control Efficiency</th>
<th>Controlled PTE PM (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Coat 7.68</td>
<td>61.20%</td>
<td>1.1180</td>
<td>74.000</td>
<td>4.70</td>
<td>388.84</td>
<td>1703.12</td>
<td>61%</td>
<td>Catalytic Oxidizer/Waterwash</td>
<td>14%</td>
<td>1471.50</td>
<td>95%</td>
<td>21.06</td>
</tr>
<tr>
<td>Clear Coat 7.7</td>
<td>56.20%</td>
<td>1.7900</td>
<td>74.000</td>
<td>4.30</td>
<td>569.58</td>
<td>2494.75</td>
<td>61%</td>
<td>Catalytic Oxidizer/Waterwash</td>
<td>14%</td>
<td>2155.47</td>
<td>85%</td>
<td>37.96</td>
</tr>
</tbody>
</table>

**METHODOLOGY**

VOC PTE, tons/yr = Material usage per job, gallons x Maximum production rate, jobs/hour x VOC content, lbs VOC/gal x 8760 hrs/yr x ton/2000 lbs
# Appendix A: Emissions Calculations

**ELPO Natural Gas Combustion**

**Company Name:** General Motors LLC Fort Wayne Assembly  
**Address City IN Zip:** 12200 LaFayette Center Road, Roanoke, IN 46783  
**Part 70 Renewal No.:** 003-41020-00036  
**SSM No.:** 003-43453-00036  
**SPM No.:** 003-43572-00036  
**Reviewer:** Aida DeGuzman

<table>
<thead>
<tr>
<th>Emission Factor</th>
<th>Heat Input Capacity (MMBtu/hr)</th>
<th>Amended in 2017</th>
<th>Heat Input Capacity (MMBtu/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 RTO</td>
<td>9 RTO</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>5 ASH Paint Heaters</td>
<td>30 ASH Paint Heaters</td>
<td>62.5</td>
<td></td>
</tr>
<tr>
<td>ASH Paint Heaters</td>
<td>8 Not installed</td>
<td>0.875</td>
<td>0.48</td>
</tr>
<tr>
<td>3 Hot Water Generators</td>
<td>24 3 Hot Water Generators</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Locker Room Heater</td>
<td>0.875 Locker Room Heater</td>
<td>0.875</td>
<td></td>
</tr>
<tr>
<td>4 Door Heaters</td>
<td>1.92 Door Heaters</td>
<td>0.48</td>
<td></td>
</tr>
<tr>
<td>8 Unit Heaters</td>
<td>0.464 8 Unit Heaters</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>14 ELPO Oven Convection</td>
<td>42 14 ELPO Oven Convection</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>12 ELPO Oven Radiant</td>
<td>36.0 ELPO Oven Radiant</td>
<td>42.0</td>
<td></td>
</tr>
<tr>
<td>ELPO Oven Radiant</td>
<td>3 Not installed</td>
<td>23.6</td>
<td>23.8</td>
</tr>
<tr>
<td>39 ASH Heaters</td>
<td>37.908 39 ASH Heaters</td>
<td>23.8</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>216.8</td>
<td>243.8</td>
<td></td>
</tr>
<tr>
<td>Potential Throughput (MMCF/yr)</td>
<td>1861.6</td>
<td>Potential Throughput (MMCF/yr)</td>
<td>2094.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMCF</th>
<th>PM*</th>
<th>PM10*</th>
<th>direct PM2.5*</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<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></td>
</tr>
</tbody>
</table>

| Potential Emission in tons/yr | 1.77 | 7.07 | 7.07 | 0.56 | 93.08 | 5.12 | 78.2 |
| Amended Potential Emission in tons/yr | 1.99 | 7.96 | 7.96 | 0.63 | 104.70 | 5.76 | 87.9 |
| Limited PTE                | 0.57 | 2.28 | 2.28 | 0.18 | 30.00 | 1.65 | 25.2 |

**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 - 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></td>
</tr>
</tbody>
</table>

| Potential Emission in tons/yr | 0.002 | 0.0011 | 0.07 | 1.68 | 0.003 | 1.75 |
| Amended Potential Emission in tons/yr | 0.002 | 0.0013 | 0.08 | 1.88 | 0.004 | 1.97 |
| Limited PTE                  | 0.001 | 0.0004 | 0.02 | 0.54 | 0.001 | 0.56 |

## 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></td>
</tr>
</tbody>
</table>

| Potential Emission in tons/yr | 0.0005 | 0.0010 | 0.0013 | 0.0004 | 0.002 | 0.005 |
| Amended Potential Emission in tons/yr | 0.0005 | 0.0012 | 0.0015 | 0.0004 | 0.02 | 0.006 |
| Limited PTE                  | 0.0002 | 0.0003 | 0.0004 | 0.0001 | 0.001 | 0.002 |

### Methodology

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
Grinding/Machining Particulate Emissions

Company Name: General Motors LLC Fort Wayne Assembly
Address City IN Zip: 12200 LaFayette Center Road, Roanoke, IN 46783
Part 70 Renewal No.: 003-41020-00036
SSM No.: 003-43453-00036
SPM No.: 003-43572-00036
Reviewer: Aida DeGuzman

NEW EMISSION UNITS

<table>
<thead>
<tr>
<th>BODY SHOP</th>
<th>Outlet Grain Loading (gr/dscf)</th>
<th>Flow Rate (acfm)</th>
<th>PM/PM10/PM 2.5 (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grinding and Machining Operations</td>
<td>0.03</td>
<td>4000</td>
<td>4.51</td>
</tr>
</tbody>
</table>

Meet the insignificant activity under 326 IAC 2-7-1(21)(J)(xxiii)

Methodology

PTE PM/PM10 (ton/yr) =
Grain Loading (gr/dsf) * Airflow (acfm) * (60 min/hr) * (8760 hr/yr) * (1 lb/7000 gr) * (1 ton/2000 lb)
## Emission Calculations

### Natural Gas Combustion Only

<table>
<thead>
<tr>
<th>MMBTU/hr</th>
<th>100</th>
</tr>
</thead>
</table>

### Thermal Incinerators for ELPO Dipping System (006)

<table>
<thead>
<tr>
<th>Emissions Unit</th>
<th>Heat Input Capacity (MMBtu/hr)</th>
<th>Potential Throughput (MMCF/yr)</th>
<th>Potential Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>007: Various Space Heaters and Process Heaters (56 in total) with combined heat input capacity:</td>
<td>50.6</td>
<td>422.149</td>
<td>0.401</td>
</tr>
<tr>
<td>MOD 1 - MOD10: Natural gas fired air supply houses each contain two 12.6 MMBtu/hr burners</td>
<td>252</td>
<td>2102.400</td>
<td>1.997</td>
</tr>
<tr>
<td>Catalytic oxidizers for Topcoat system (008) - 10 oxidizers with combined heat input capacity:</td>
<td>81</td>
<td>675.771</td>
<td>0.642</td>
</tr>
</tbody>
</table>

#### Insignificant Activities: Space heaters, process heaters, or boilers with heat input capacities ≤ 10 MMBtu/hr

<table>
<thead>
<tr>
<th>Emissions Unit</th>
<th>Heat Input Capacity (MMBtu/hr)</th>
<th>Potential Throughput (MMCF/yr)</th>
<th>Potential Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>83.429</td>
<td>0.079</td>
<td>0.317</td>
</tr>
</tbody>
</table>

#### PM Emissions

**PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.**

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32**

### Emissions Factor in lb/MMCF

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Benzene</th>
<th>Dichlorobenzene</th>
<th>Formaldehyde</th>
<th>Hexane</th>
<th>Toluene</th>
<th>PM</th>
<th>PM10</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor</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>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Emissions Factor in lb/MMCF

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Lead</th>
<th>Cadmium</th>
<th>Chromium</th>
<th>Manganese</th>
<th>Nickel</th>
<th>Total HAPs (Organics + Metals)</th>
<th>HAPs - Organics</th>
<th>HAPs - Metals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor</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>4.0E-01</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Methodology

All emission factors are based on normal firing.

**MMBtu = 1,000,000 Btu**

**MMCF = 1,000,000 Cubic Feet of Gas**

**Heating Value of Natural Gas = 1050 MMBtu/MMCF**

**Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) * (8,760 hrs/yr) * (1 MMCF/1,050 MMBtu)**

**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 (Supplement D 3/98)**

**Emission Potential (tons/yr) = Throughput (MMCF/yr) * Emission Factor (lb/MMCF) * (1 ton/2,000 lb)**

<table>
<thead>
<tr>
<th>Greenhouse Gas Emissions (tons/year)</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>Subtotal</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emissions Unit</td>
<td>Heat Input</td>
<td>Potential</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>007: Various Space Heaters and Process Heaters (56 in total) with combined heat input capacity:</td>
<td>50.6</td>
<td>422.149</td>
<td>25282.9</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>MOD 1 - MOD10: Natural gas fired air supply houses each contain two 12.6 MMBtu/hr burners</td>
<td>252</td>
<td>2102.400</td>
<td>126144.0</td>
<td>2.4</td>
<td>2.3</td>
</tr>
<tr>
<td>Catalytic oxidizers for Topcoat system (008) - 10 oxidizers with combined heat input capacity:</td>
<td>81</td>
<td>675.771</td>
<td>40546.3</td>
<td>0.8</td>
<td>0.7</td>
</tr>
</tbody>
</table>

**Insignificant Activities: Space heaters, process heaters, or boilers with heat input capacities ≤ 10 MMBtu/hr**

<table>
<thead>
<tr>
<th>Emissions Unit</th>
<th>Heat Input</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>83.429</td>
<td>5005.7</td>
</tr>
</tbody>
</table>
### Boiler 004 & 005 Alternative Operating Scenario

**Company Name:** General Motors LLC Fort Wayne Assembly  
**Address City IN Zip:** 12200 LaFayette Center Road, Roanoke, IN 46783  
**Part 70 Renewal No.:** 003-41020-00036  
**Reviewer:** Aida DeGuzman

#### PM* PM10* SO2 NOx VOC CO

<table>
<thead>
<tr>
<th>Emissions Unit</th>
<th>Heat Input Capacity (MMBtu/hr)</th>
<th>Potential Throughput (MMCF/yr)</th>
<th>Potential Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler 004 - Alternative Operating Scenario</td>
<td>228</td>
<td>1902.171</td>
<td>1.8</td>
</tr>
<tr>
<td>Boiler 005 - Alternative Operating Scenario</td>
<td>228</td>
<td>1902.171</td>
<td>1.8</td>
</tr>
</tbody>
</table>

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.

**Emission Factors for NOx:**  Uncontrolled = 280 (pre-NSPS) or 190 (post-NSPS), Low NOx Burner = 140, Flue gas recirculation = 100 (See Table 1.4-1)

### HAPs - Organics

<table>
<thead>
<tr>
<th>Emissions Unit</th>
<th>Heat Input Capacity (MMBtu/hr)</th>
<th>Potential Throughput (MMCF/yr)</th>
<th>Potential Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler 004 - Alternative Operating Scenario</td>
<td>228</td>
<td>1902.171</td>
<td>2.0E-03</td>
</tr>
<tr>
<td>Boiler 005 - Alternative Operating Scenario</td>
<td>228</td>
<td>1902.171</td>
<td>2.0E-03</td>
</tr>
</tbody>
</table>

### HAPs - Metals

<table>
<thead>
<tr>
<th>Emissions Unit</th>
<th>Heat Input Capacity (MMBtu/hr)</th>
<th>Potential Throughput (MMCF/yr)</th>
<th>Potential Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler 004 - Alternative Operating Scenario</td>
<td>228</td>
<td>1902.171</td>
<td>4.8E-04</td>
</tr>
<tr>
<td>Boiler 005 - Alternative Operating Scenario</td>
<td>228</td>
<td>1902.171</td>
<td>4.8E-04</td>
</tr>
</tbody>
</table>

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

### Methodology

**Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) * (8,760 hrs/yr) * (1 MMCF/1,050 MMBtu)**

**Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-01-006-01, SCC #1-01-006-04 (AP-42 Supplement D 3/98)**

Emission (tons/yr) = Throughput (MMCF/yr) * Emission Factor (lb/MMCF) * (1 ton/2,000 lb)

Emission (tons/yr) = Throughput (MMCF/yr) * Emission Factor (lb/MMCF) * (1 ton/2,000 lb)

**Greenhouse Gas Emissions**

<table>
<thead>
<tr>
<th>Emissions Unit</th>
<th>Heat Input Capacity (MMBtu/hr)</th>
<th>Potential Throughput (MMCF/yr)</th>
<th>Potential to Emit (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler 004 - Alternative Operating Scenario</td>
<td>228</td>
<td>1968.118</td>
<td>117487.1</td>
</tr>
<tr>
<td>Boiler 005 - Alternative Operating Scenario</td>
<td>228</td>
<td>1968.118</td>
<td>117487.1</td>
</tr>
</tbody>
</table>

**Methodology**

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

**Emission Factors are from AP-42, Table 1.4-2, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.**

**Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.**

GHG Mass-Based (ton/yr) = CO2 (ton/yr) + N2O (ton/yr) + CH4 (ton/yr)

CO2, N2O, CH4 (ton/yr) = Heat Input Capacity (MMBtu/hr) x Emission Factor (kg/MMBtu) x (10000 g/kg) x (1 g/453.6 lb) x (1 ton/2000 lb) x (8760 hr/yr)

GHGs:
Controlled Emissions (tons/yr) = Pollutant Emissions Exiting the Boiler = Uncontrolled Emissions (tons/yr) * (1 - Destruction Efficiency)%
Uncontrolled Emissions (tons/yr) = Pollutant Entering the Boiler = Landfill Gas Throughput (MMCF/yr) x Uncontrolled Emission Rate (lb/MMCF)

Potential Throughput (MMCF/yr) is based on the maximum capacity of the burner (228 MMBtu/hr) and a LFG heating value of 500 MMBtu/MMCF as provided by the Permittee.

GHGs:
CO2, N2O, CH4 (ton/yr) = Heat Input Capacity (MMBtu/hr) x Emission Factor (kg/MMBtu) x (10000 g/kg) x (1 g/453.6 lb) x (1 ton/2000 lb) x (8760 hr/yr)

GWP = global warming potential for each greenhouse gas
n = number of greenhouse gases emitted

GWP from 40 CFR 98, Subpart C, Table A-1: 1 for CO2, 21 for CH4, 310 for N2O

HAPs and TRS Emissions from Landfill Gas Combustion in a Boiler

Emission Factors for PM, PM10, and PM2.5 are from AP-42, Table 1.4-2 for natural gas. PM is filterable only. PM10 and PM2.5 are filterable and condensable PM combined. Based upon testing of a boiler firing emission Factors for GHGs are from 40 CFR 98, Subpart C, Table A-1 and C-2 for biogas.

GWP = global warming potential for each greenhouse gas
n = number of greenhouse gases emitted

*Emission Factors for PM, PM10, and PM2.5 are from AP-42, Table 1.4-2 for natural gas. PM is filterable only. PM10 and PM2.5 are filterable and condensable PM combined. Based upon testing of a boiler firing emission Factors for GHGs are from 40 CFR 98, Subpart C, Table A-1 and C-2 for biogas.

HAPs and TRS Emissions from Landfill Gas Combustion in a Boiler

Emission Factors for SO2, NOx, VOC, and CO are as provided by the Permittee (estimates from vendor analysis (Peabody and Coen)). NOx will be verified through CEMS and CO will be verified through testing.

*Emission Factors for PM10, PM2.5, and SO2 are from AP-42, Table 1.4-2 for natural gas. PM is filterable only. PM10 and PM2.5 are filterable and condensable PM combined. Based upon testing of a boiler firing

Appendix A: Emission Calculations
Boiler 004 - Landfill Gas Combustion

Company Name: General Motors LLC Fort Wayne Assembly
Address: 12200 Lafayette Center Road, Roanoke, IN 46783
Part 70 Renewal No.: 003-41020-00036
Reviewer: Aida DeGuzman

Table of Pollutants

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>CAS</th>
<th>Molecular Weight (lb/mol)</th>
<th>Default Concentration (ppmv)</th>
<th>Uncontrolled Emission Rate (lb/MMCF)</th>
<th>Controlled Emissions (tons/yr)</th>
<th>Destruction Efficiency (%)</th>
<th>Controlled Emissions (Calling the Boiler) (PTE) (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAPs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Methodology

HAPs and TRS Compounds
Uncontrolled Emission Rate (lb/MMCF) = [Default Concentration (cf/MMCF)] x [Molecular Weight (lb/mol)] x [1/Gas Constant (0.7302 cf-atm/lb-mole-R)] x [Pressure (1 atm)] x [1/Temperature (528 R)]

Normal Temperature and Pressure are assumed

Uncontrolled Emission Rate = Pollutant Entering the Boiler = Potential Emission Rate x Uncontrolled Emission Factor

Controlled Emissions (tons/yr) = Pollutant Emissions Entering the Boiler - Uncontrolled Emissions (tons/yr) * (1 - Destruction Efficiency)

TRS: Total Emissions (tons/yr) = Potential Emissions (tons/yr) + Controlled Emissions (tons/yr)

Landfill Gas HAPs and TRS Components (default concentrations from AP-42 Tables 2-4-1 and 2-2-1 15/6/04 Table 1.4-2 over 15/6/04 Table 2-4-1)

Destruction Efficiencies are from Table 2-4-3 in AP-42 for boilers/steam turbines. The lower end of the control efficiency range was used (67%) for non-
Appendix A: Emissions Calculations

LFG Combustion - Criteria Pollutant Emissions

Company Name: General Motors LLC Fort Wayne Assembly
Address City IN Zip: 12200 LaFayette Center Road, Roanoke, IN 46783
Part 70 Renewal No.: 003-41020-00036
SSM No.: 003-43453-00036
SPM No.: 003-43572-00036
Reviewer: Aida DeGuzman

GM Fort Wayne Assembly - LFG Generator Project

<table>
<thead>
<tr>
<th>Engine Information</th>
<th>Each Unit</th>
<th>Total (all 4 Units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genset Power, BHP</td>
<td>2242</td>
<td>8968</td>
</tr>
<tr>
<td>Number of Engines</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Operating time (hours/yr)</td>
<td>8760</td>
<td></td>
</tr>
<tr>
<td>Fuel Consumption (Btu/hp-hr)</td>
<td>651.1</td>
<td></td>
</tr>
<tr>
<td>LFG Heat Value (Btu/ft³)</td>
<td>453.8</td>
<td></td>
</tr>
<tr>
<td>LFG flow rate (MMBtu/yr)</td>
<td>255.8</td>
<td>1023.2</td>
</tr>
<tr>
<td>LFG flow rate (ft³/hour)</td>
<td>29201</td>
<td>116803.65</td>
</tr>
<tr>
<td>LFG flow rate (ft³/min)</td>
<td>486.68</td>
<td>1946.73</td>
</tr>
</tbody>
</table>

**Emission Factors**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor</th>
<th>Units</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>0.6 g/bhp-hr</td>
<td></td>
<td>Manufacturer Data</td>
</tr>
<tr>
<td>CO</td>
<td>4.22 g/bhp-hr</td>
<td></td>
<td>Manufacturer Data</td>
</tr>
<tr>
<td>VOC</td>
<td>0.06 lb/MMBtu</td>
<td></td>
<td>Stack test data - source supplied</td>
</tr>
<tr>
<td>*PM (condensable)</td>
<td>0.044 lb/MMBtu</td>
<td></td>
<td>Stack test data - source supplied</td>
</tr>
<tr>
<td>*PM10 (filterable)</td>
<td>0.044 lb/MMBtu</td>
<td></td>
<td>Stack test data - source supplied</td>
</tr>
<tr>
<td>*PM2.5 (filterable)</td>
<td>0.044 lb/MMBtu</td>
<td></td>
<td>Stack test data - source supplied</td>
</tr>
<tr>
<td>SO2</td>
<td>250.00 ppm</td>
<td></td>
<td>Stack test data - source supplied</td>
</tr>
</tbody>
</table>

**Methodology**

PTE PM, PM10, PM2.5 (lb/hr) = EF (lb/MMBtu) x Total Genset Power (Bhp) x Total Fuel Consumption (Btu/Bhp-hr) / 1,000,000

PTE PM, PM10, PM2.5 (tons/yr) x 8760 (hrs/yr) x 1/2000 (tons/lbs)

SO2 (tons/year) = Flow Rate (ft³/min) x Emission Factor (ppmv) /1,000,000 x 1 atm / Gas Constant (0.7302 atm-cf/lb mole-R) / Temp (60°F+ 460) x Mole weight (lbs/lbs mole) x 60 min/hour x 8760 hours/year x 1 ton/2000 lbs

PTE SO2 (lbs/yr) = PTE SO2 (tons/yr) x 2000 (lbs/yr) / 8760 (hrs/yr)

PTE NOx, VOC, CO (lb/hr) = EF (g/Bhp-hr) x Total Genset Power (Bhp) x conversion factor (pounds/grams)
### Appendix A: Emissions Calculations

**LFG Combustion - Hazardous Air Pollutant Emissions**

**Company Name:** General Motors LLC Fort Wayne Assembly  
**Address City IN Zip:** 12200 LaFayette Center Road, Roanoke, IN 46783  
**Part 70 Renewal No.:** 003-41020-00036  
**Reviewer:** Aida DeGuzman

#### LFG Combustion - Hazardous Air Pollutant Emissions

**Company Name:** General Motors LLC Fort Wayne Assembly  
**Address:** 12200 LaFayette Center Road, Roanoke, IN 46783  
**Part 70 Renewal No.:** 003-41020-00036  
**Reviewer:** Aida DeGuzman

<table>
<thead>
<tr>
<th>CAS#</th>
<th>HAP</th>
<th>MW</th>
<th>ppmv</th>
<th>Emission Factor* (lb/MMscf)</th>
<th>Emissions (tons/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>71556</td>
<td>1,1,1-Trichloroethylene (methyl chloroform)</td>
<td>133.41</td>
<td>0.48</td>
<td>0.005</td>
<td>0.002</td>
</tr>
<tr>
<td>76345</td>
<td>1,1,2,2-Tetrachloroethane</td>
<td>167.85</td>
<td>1.11</td>
<td>0.014</td>
<td>0.007</td>
</tr>
<tr>
<td>75343</td>
<td>1,1-Dichloroethane (ethylene chloride)</td>
<td>98.97</td>
<td>2.35</td>
<td>0.017</td>
<td>0.009</td>
</tr>
<tr>
<td>75354</td>
<td>1,1-Dichloroethene (vinylidene chloride)</td>
<td>96.94</td>
<td>0.2</td>
<td>0.001</td>
<td>0.001</td>
</tr>
<tr>
<td>107062</td>
<td>1,2-Dichloroethylene (ethylene chloride)</td>
<td>98.96</td>
<td>0.41</td>
<td>0.003</td>
<td>0.002</td>
</tr>
<tr>
<td>78875</td>
<td>propylene dichloride</td>
<td>112.99</td>
<td>0.18</td>
<td>0.002</td>
<td>0.001</td>
</tr>
<tr>
<td>107131</td>
<td>Acrylonitrile</td>
<td>53.06</td>
<td>6.33</td>
<td>0.025</td>
<td>0.013</td>
</tr>
<tr>
<td>71432</td>
<td>benzene</td>
<td>78.11</td>
<td>1.91</td>
<td>0.011</td>
<td>0.006</td>
</tr>
<tr>
<td>75150</td>
<td>Carbon disulfide</td>
<td>76.13</td>
<td>0.58</td>
<td>0.003</td>
<td>0.002</td>
</tr>
<tr>
<td>56235</td>
<td>Carbon tetrachloride</td>
<td>153.84</td>
<td>0.004</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>463581</td>
<td>Carbonyl sulfide</td>
<td>60.87</td>
<td>0.49</td>
<td>0.002</td>
<td>0.001</td>
</tr>
<tr>
<td>108907</td>
<td>Chlorobenzene</td>
<td>112.56</td>
<td>0.25</td>
<td>0.001</td>
<td>0.001</td>
</tr>
<tr>
<td>75003</td>
<td>Chloroform</td>
<td>64.52</td>
<td>1.25</td>
<td>0.006</td>
<td>0.003</td>
</tr>
<tr>
<td>7663</td>
<td>Chloroform</td>
<td>119.39</td>
<td>0.03</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>10647</td>
<td>Dichlorobenzene</td>
<td>78.11</td>
<td>0.86</td>
<td>0.002</td>
<td>0.001</td>
</tr>
<tr>
<td>79016</td>
<td>(trichloroethene)</td>
<td>84.94</td>
<td>14.3</td>
<td>0.090</td>
<td>0.046</td>
</tr>
<tr>
<td>75092</td>
<td>Dichloromethane (methylene)</td>
<td>133.41</td>
<td>0.48</td>
<td>0.005</td>
<td>0.002</td>
</tr>
<tr>
<td>100414</td>
<td>Ethylbenzene</td>
<td>106.16</td>
<td>4.61</td>
<td>0.036</td>
<td>0.018</td>
</tr>
<tr>
<td>106934</td>
<td>Ethylene dibromide</td>
<td>187.88</td>
<td>0.001</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>110543</td>
<td>Hexane</td>
<td>86.18</td>
<td>6.57</td>
<td>0.042</td>
<td>0.021</td>
</tr>
<tr>
<td>0</td>
<td>Mercury (total)</td>
<td>200.61</td>
<td>0.00292</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>108101</td>
<td>Methyl isobutyl ketone</td>
<td>100.16</td>
<td>1.87</td>
<td>0.014</td>
<td>0.007</td>
</tr>
<tr>
<td>127184</td>
<td>Perchloroethylene</td>
<td>165.83</td>
<td>3.73</td>
<td>0.046</td>
<td>0.023</td>
</tr>
<tr>
<td>108883</td>
<td>Toluene</td>
<td>92.13</td>
<td>39.3</td>
<td>0.267</td>
<td>0.137</td>
</tr>
<tr>
<td>79016</td>
<td>Trichloroethylene</td>
<td>133.41</td>
<td>2.82</td>
<td>0.027</td>
<td>0.014</td>
</tr>
<tr>
<td>75014</td>
<td>Vinyl chloride</td>
<td>62.5</td>
<td>7.34</td>
<td>0.034</td>
<td>0.017</td>
</tr>
<tr>
<td>1330207</td>
<td>Xylenes</td>
<td>106.16</td>
<td>12.1</td>
<td>0.095</td>
<td>0.048</td>
</tr>
</tbody>
</table>

**Emission Factor** (g/BHP)  
**Emissions** (tons/year)

<table>
<thead>
<tr>
<th>CAS#</th>
<th>HAP</th>
<th>MW</th>
<th>ppmv</th>
<th>Emission Factor* (g/BHP)</th>
<th>Emissions (tons/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50000</td>
<td>Formaldehyde</td>
<td>0.42</td>
<td></td>
<td></td>
<td>36.34</td>
</tr>
</tbody>
</table>

Note:  
379.5 scf/lb-mol  
97.2% IC Engine Destruction Efficiency AP-42 Table 2.4-2 except for Mercury  
*Emission Factors for HAPs are from AP-42 2.4 Municipal Solid Waste Landfills Table 2.4-1  
**Vendor Emission Factor

**Landfill Gas Greenhouse Gas Emissions**

- Maximum Output Horsepower Rating (hp): 8968  
- Brake Specific Fuel Consumption (BSFC) (Btu/hp-hr): 6511  
- Maximum Hours Operated per Year (hr/yr): 8760  
- Potential Fuel Usage (MMBtu/yr): 511502  
- Landfill Gas (50%CH4 / 50% CO2) (MMBtu/scf): 0.0005025

**CO2**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor (Kg/MMBtu)</th>
<th>PTE (TPY)</th>
<th>GWP</th>
<th>Emissions (TPY CO2e)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO2</td>
<td>52.07</td>
<td>29.449</td>
<td>1</td>
<td>29.449</td>
</tr>
</tbody>
</table>

**Total** 29,449

**GHG as CO2e**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor (Kg/MMBtu)</th>
<th>PTE (TPY)</th>
<th>GWP</th>
<th>Emissions (TPY CO2e)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH4</td>
<td>3.20E-03</td>
<td>1.8</td>
<td>25</td>
<td>38</td>
</tr>
<tr>
<td>N2O</td>
<td>6.30E-04</td>
<td>0.4</td>
<td>2.98</td>
<td>110</td>
</tr>
</tbody>
</table>

**Total** 148

**Total** 29,998

**Methodology:**

- CO2 Emission Factor from 40 CFR 98 Subpart C Table C-1.
- CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2.
- Gas Flow Rate (scfm) = Potential Fuel Usage (MMBtu/yr) / Landfill Gas EF (MMBtu/scf) * 8760 (hrs/yr) * 60 (min/hr)
- PTE (ton/yr) = max flow rate capacity (scfm) * EF (kg/MMBtu) * LFG Heat Value (MMBtu/scf) *2.2 lb/kg * 8760 hr/yr * 1 ton/2000lbs * 60 min/hr
- Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.  
- CO2e (tons/yr) = Potential Emission (ton/yr) x GWP
### ELPO Dipping System

<table>
<thead>
<tr>
<th>Process/Material</th>
<th>( V_C ) (lb VOC/gal coating, less water)</th>
<th>( S_C ) (gal solids/gal coating)</th>
<th>( A_V ) (ft(^2)/vehicle)</th>
<th>( T_f ) (mil)</th>
<th>( e_T )</th>
<th>Max Production Rate (vehicles/hr)</th>
<th>PTE VOC Rate (lb/hr)</th>
<th>PTE VOC (ton/yr)</th>
<th>Thermal Incinerator Overall Control Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELPO</td>
<td>0.741</td>
<td>0.906</td>
<td>1276</td>
<td>1.70</td>
<td>1.0</td>
<td>11.0</td>
<td>74</td>
<td>81.38</td>
<td>356.4</td>
</tr>
</tbody>
</table>

#### Methodology

- **\( V_C \)** = VOC content of coating as applied, less water (lb VOC/gal coating, less water) - value provided by Permittee
- **\( S_C \)** = Solids in coating as applied (gal solids/gal coating) - value provided by Permittee
- **\( A_V \)** = Area coated per vehicle (ft\(^2\)/vehicle) - value provided by Permittee
- **\( T_f \)** = Thickness of the dry coating film (mil) - value provided by Permittee
- **\( e_T \)** = Transfer efficiency fraction (fraction of total coating solids used that remains on coated parts) - value provided by Permittee
- **\( E_V \)** = Emission Factor for VOC (lb VOC/vehicle)

**Per AP-42, Chapter 4, Section 4.2.2.8, Automobile and Light Duty Truck Surface Coating Operations (8/82), the VOC emission factor may be determined by the equation below:**

\[
E_V = \frac{V_C \cdot S_C \cdot A_V \cdot T_f \cdot e_T}{S_C}
\]

**Potential VOC (lb/hr) =** \( E_V \) (lb VOC/vehicle) * Production Rate (vehicles/hr)

**Potential VOC (ton/yr) =** Potential VOC (lb/hr) * (8760 hr/yr) * (1 ton/2000 lb)

**Thermal Incinerator Overall Control Efficiency =** Capture Efficiency (60%) * Destruction Efficiency (95%) - values submitted by Permittee

**Controlled PTE VOC (ton/yr) =** PTE VOC (ton/yr) * (1 - Capture and Destruction Efficiency)

### Primer and Top Coat Systems

#### Primer Surfacer System (010)

<table>
<thead>
<tr>
<th>Process/Material</th>
<th>Density (bgl/gal)</th>
<th>Weight % Volatile (H(_2)O &amp; Organics)</th>
<th>Gal of Mat. (gal/unit)</th>
<th>Maximum Production Rate (unit/hour)</th>
<th>Pounds VOC per gallon of coating</th>
<th>PTE VOC Rate (lb/hr)</th>
<th>PTE VOC (ton/yr)</th>
<th>Controlled PTE VOC (ton/yr)</th>
<th>PM Control Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primer</td>
<td>9.70</td>
<td>28.00%</td>
<td>0.55000</td>
<td>74.000</td>
<td>4.00</td>
<td>162.80</td>
<td>713.06</td>
<td>224.10</td>
<td>90.50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>67.74</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>95%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11.21</td>
</tr>
</tbody>
</table>

#### Top Coat System (008)

<table>
<thead>
<tr>
<th>Process/Material</th>
<th>Gal of Mat. (gal/unit)</th>
<th>Maximum Production Rate (unit/hour)</th>
<th>Pounds VOC per gallon of coating</th>
<th>PTE VOC Rate (lb/hr)</th>
<th>PTE VOC (ton/yr)</th>
<th>PTE PM/PM10 (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Coat</td>
<td>7.68</td>
<td>61.20%</td>
<td>1.11800</td>
<td>74.000</td>
<td>4.70</td>
<td>388.84</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1702.12</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>421.12</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>61%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Catalytic Oxidizer/Water wash</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1471.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>95%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>21.06</td>
</tr>
<tr>
<td>Clear Coat</td>
<td>7.7</td>
<td>56.20%</td>
<td>1.79000</td>
<td>74.000</td>
<td>4.30</td>
<td>569.58</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2494.75</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>759.15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>61%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Catalytic Oxidizer/Water wash</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2155.47</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>95%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>37.96</td>
</tr>
</tbody>
</table>

Note: Primer line (010) was reconfigured under permit action no. 003-29630-00036, issued October 7, 2010, using Actual-to-Projected-Actual (ATPA) analysis.

**METHODOLOGY**

The following values were provided by the Permittee: density, weight% volatile, gal of mat., maximum production rate, pounds of VOC per gallon of coating, and transfer efficiency.

**PTE VOC (lb/hr) =** Maximum Production Rate (unit/hour) * Gal of Mat. (gal/unit) * (lb VOC/gal coating)

**PTE VOC (ton/yr) =** PTE VOC (lb/hr) * (8760 hr/yr) * (1 ton/2000 lb)

**Overall VOC Control Efficiency -** value provided by Permittee

### Underbody Robotic Sealer Operation

#### Scenario 1: Regular Cab

<table>
<thead>
<tr>
<th>Process/Material</th>
<th>Gal of Mat. (gal/unit)</th>
<th>Maximum Production Rate (unit/hour)</th>
<th>Pounds VOC per gallon of coating</th>
<th>PTE VOC Rate (lb/hr)</th>
<th>PTE VOC (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.04000</td>
<td>78.000</td>
<td>0.30</td>
<td>0.94</td>
<td>4.10</td>
<td></td>
</tr>
</tbody>
</table>

#### Scenario 2: Extended Cab

<table>
<thead>
<tr>
<th>Process/Material</th>
<th>Gal of Mat. (gal/unit)</th>
<th>Maximum Production Rate (unit/hour)</th>
<th>Pounds VOC per gallon of coating</th>
<th>PTE VOC Rate (lb/hr)</th>
<th>PTE VOC (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.06000</td>
<td>78.000</td>
<td>0.30</td>
<td>1.40</td>
<td>6.15</td>
<td></td>
</tr>
</tbody>
</table>

**Worst Case:**

**METHODOLOGY**

The following values were provided by the Permittee: Gal of Mat. and Maximum Production Rate

The Pounds of VOC per gallon of coating was determined based off of EPA Method 24 testing by the coating manufacturer

**PTE VOC (lb/hr) =** Maximum Production Rate (unit/hour) * Gal of Mat. (gal/unit) * (lb VOC/gal coating)

**PTE VOC (ton/yr) =** PTE VOC (lb/hr) * (8760 hr/yr) * (1 ton/2000 lb)

Note: This is a sealer with a high viscosity. The material does not atomize and there is no overspray/particulate generated.
Appendix A: Emission Calculations
Emergency Diesel-Fired Engines

Company Name: General Motors LLC Fort Wayne Assembly
Address City IN Zip: 12200 LaFayette Center Road, Roanoke, IN 46783
Part 70 Renewal No.: 003-41020-00036
SSM No.: 003-43453-00036
SPM No.: 003-43572-00036
Reviewer: Aida DeGuzman

Emergency Diesel Generators (2, 3, 5, and PHDZL)

<table>
<thead>
<tr>
<th>Power Output (hp)</th>
<th>PM</th>
<th>PM10</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1600</td>
<td>0.9</td>
<td>0.9</td>
<td>0.8</td>
<td>12.4</td>
<td>1.0</td>
<td>2.7</td>
</tr>
</tbody>
</table>

Emergency Diesel Fire Pumps (1 and 2)

<table>
<thead>
<tr>
<th>Power Output (hp)</th>
<th>PM</th>
<th>PM10</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>800</td>
<td>0.4</td>
<td>0.4</td>
<td>0.4</td>
<td>6.2</td>
<td>0.5</td>
<td>1.3</td>
</tr>
</tbody>
</table>

Emission Factors are from AP 42, Table 3.3-1 for Uncontrolled Diesel Industrial Engines (SCC #2-02-001-02, 2-03-001-01)

PM emissions are assumed to equal PM10 emissions.

Emergency Equipment have an assumed usage of 500 hours per year

\[ \text{PTE (ton/yr)} = \text{Power Output (hp)} \times \text{Emission Factor (lb/hp-hr)} \times (500 \text{ hr/yr}) \times (1 \text{ ton/2000 lb}) \]

Benzene Toluene Xylenes 1,3-Butadiene Formaldehyde Acetaldehyde Acrolein Naphthalene

<table>
<thead>
<tr>
<th>Emissions Unit</th>
<th>Benzene</th>
<th>Toluene</th>
<th>Xylenes</th>
<th>1,3-Butadiene</th>
<th>Formaldehyde</th>
<th>Acetaldehyde</th>
<th>Acrolein</th>
<th>Naphthalene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Output (hp)</td>
<td>9.3E-04</td>
<td>4.1E-04</td>
<td>2.9E-04</td>
<td>3.9E-05</td>
<td>1.2E-03</td>
<td>7.7E-04</td>
<td>9.3E-05</td>
<td>8.5E-05</td>
</tr>
</tbody>
</table>

Methodology

Emission Factors are from AP 42, Table 3.3-2 for Uncontrolled Diesel Engines (SCC #2-02-001-02, 2-03-001-01)

Emergency Equipment have an assumed usage of 500 hours per year

\[ \text{PTE (ton/yr)} = \text{Power Output (hp)} \times \text{Emission Factor (lb/MMBtu)} \times (2.5425 \times 10^{3} \text{ Btu/hp-hr}) \times (1 \text{ MMBtu/10}^{6} \text{ Btu}) \times (500 \text{ hr/yr}) \times (1 \text{ ton/2000 lb}) \]

Greenhouse Gas Emissions

<table>
<thead>
<tr>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>Subtotal</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/hp-hr</td>
<td>1.1600</td>
<td>6.35E-05</td>
<td>9.36E-06</td>
<td>-</td>
</tr>
</tbody>
</table>

\[ \text{Potential Throughput (hp-hr/yr)} = \text{Output Horsepower Rating (hp)} \times \text{Maximum Hours Operated per Year} \]

\[ \text{Potential Emission (tons/yr)} = \left( \text{Potential Throughput (hp-hr/yr)} \times \text{Emission Factor (lb/hp-hr)} \right) / (2,000 \text{ lb/ton}) \]

\[ \text{CO2e (tons/yr)} = \text{CO2 Potential Emission} \times \text{CO2 GWP} (1) + \text{CH4 Potential Emission} \times \text{CH4 GWP} (25) + \text{N2O Potential Emission} \times \text{N2O GWP} (298) \]
### Appendix A: Emission Calculations

#### Other Coating and Cleaning Operations

**Company Name:** General Motors LLC Fort Wayne Assembly  
**Address City IN Zip:** 12200 LaFayette Center Road, Roanoke, IN 46783  
**Part 70 Renewal No.:** 003-41020-00036  
**SSM No.:** 003-43453-00036  
**SPM No.:** 003-43572-00036  
**Reviewer:** Aida DeGuzman

<table>
<thead>
<tr>
<th>VOC Content (lb/gal)</th>
<th>Maximum Use</th>
<th>Units of Maximum Use</th>
<th>PTE VOC (ton/yr)</th>
<th>Transfer Efficiency</th>
<th>PM/PM10 Emission Factor (lb solids/gallon)</th>
<th>Uncontrolled PTE PM/PM10 (ton/yr)</th>
<th>Controlled PTE PM/PM10 (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Misc sealers / adhesives / additives / solvents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Misc. Sealers/Adhesives/Additives (009)</td>
<td>1</td>
<td>1.4 gal/vehicle</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>454</td>
</tr>
<tr>
<td>Miscellaneous Solvents (009)</td>
<td>6.5</td>
<td>11046 gal/month</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>431</td>
</tr>
<tr>
<td>Final Repair Operations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Repair Operation (012)</td>
<td>3.8</td>
<td>740 gal/month</td>
<td></td>
<td>17</td>
<td>50%</td>
<td>3.36</td>
<td>7.45</td>
</tr>
<tr>
<td>Maintenance Paint</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance Paint Operation (013)</td>
<td>6.5</td>
<td>280 gal/month</td>
<td></td>
<td>11</td>
<td>50%</td>
<td>3.36</td>
<td>2.82</td>
</tr>
</tbody>
</table>

#### Methodology

VOC Content and Maximum Use for Misc. Sealers/Adhesives/Additives, Misc. Solvents, Final Repair Operation, and Maintenance Paint Operation provided by the Permittee.  
PM/PM10 Emission Factor for Final Repair Operations and Maintenance Paint Operation is based on Topcoat density and % Solids.  

PTE VOC (ton/yr) = VOC Content (lb/gal) * Maximum Use (gal/vehicle) * Maximum Vehicle Capacity (vehicles/hr) * (8760 hr/yr) * (1 ton/2000 lb)  
or PTE VOC (ton/yr) = VOC Content (lb/gal) * Maximum Use (gal/month) * (12 month/yr) * (1 ton/2000 lb)
Appendix A: Emission Calculations
Gasoline Operations

Company Name: General Motors LLC Fort Wayne Assembly
Address City IN Zip: 12200 LaFayette Center Road, Roanoke, IN 46783
Part 70 Renewal No.: 003-41020-00036
SSM No.: 003-43453-00036
SPM No.: 003-43572-00036
Reviewer: Aida DeGuzman

### Gasoline Fill operation (014)

<table>
<thead>
<tr>
<th>Tank Capacity (gal)</th>
<th>Maximum True Vapor Pressure (psia)</th>
<th>Maximum Use (gal/hr)</th>
<th>PTE VOC (ton/yr)</th>
<th>Max Wt% Benzene</th>
<th>Max Wt% Ethylbenzene</th>
<th>Max Wt% Xylene</th>
<th>Max Wt% Toluene</th>
<th>PTE Benzene (ton/yr)</th>
<th>PTE Ethylbenzene (ton/yr)</th>
<th>PTE Xylene (ton/yr)</th>
<th>PTE Toluene (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage Tank 9</td>
<td>20000</td>
<td>6.34</td>
<td>370</td>
<td>4.26</td>
<td>2.0%</td>
<td>2.0%</td>
<td>10.0%</td>
<td>5.0%</td>
<td>0.085</td>
<td>0.085</td>
<td>0.426</td>
</tr>
<tr>
<td>Storage Tank 10</td>
<td>20000</td>
<td>6.34</td>
<td>370</td>
<td>4.26</td>
<td>2.0%</td>
<td>2.0%</td>
<td>10.0%</td>
<td>5.0%</td>
<td>0.085</td>
<td>0.085</td>
<td>0.426</td>
</tr>
<tr>
<td>Vehicle Refueling Spillage Losses</td>
<td>N/A</td>
<td>N/A</td>
<td>0.7</td>
<td>370</td>
<td>1.13</td>
<td>2.0%</td>
<td>2.0%</td>
<td>10.0%</td>
<td>5.0%</td>
<td>0.023</td>
<td>0.023</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>9.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.193</td>
<td>0.193</td>
</tr>
</tbody>
</table>

**Methodology**

PTE VOC (ton/yr) for Storage Tanks is based on EPA TANKS calculations provided by the Permittee for working and standing losses.

VOC Emission Factors for Vehicle Refueling Spillage Losses is from AP-42, Table 5.2-7.

Wt% HAPs provided by the Permittee

PTE VOC (ton/yr) = \( \frac{\text{VOC Emission Factor (lb/1000 gal)} \times \text{Maximum Use (gal/hr)} \times (8760 \text{ hr/yr}) \times (1 \text{ ton /2000 lb})}{1000 \text{ gal}} \)

PTE HAP (ton/yr) = PTE VOC (ton/yr) * Wt% HAP

### A.3(d) Gasoline Fuel Transfer and Dispensing Operation

<table>
<thead>
<tr>
<th>Tank Capacity (gal)</th>
<th>Maximum True Vapor Pressure (psia)</th>
<th>Throughput (gallon/day)</th>
<th>VOC Emission Factor (lb/1000 gal)</th>
<th>Total Uncontrolled VOC Loss (ton/yr)</th>
<th>Max Wt% Benzene</th>
<th>Max Wt% Ethylbenzene</th>
<th>Max Wt% Xylene</th>
<th>Max Wt% Toluene</th>
<th>PTE Benzene (ton/yr)</th>
<th>PTE Ethylbenzene (ton/yr)</th>
<th>PTE Xylene (ton/yr)</th>
<th>PTE Toluene (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submerged Filling</td>
<td>10500</td>
<td>6.34</td>
<td>1300</td>
<td>7.3</td>
<td>1.73</td>
<td>2.0%</td>
<td>2.0%</td>
<td>10.0%</td>
<td>5.0%</td>
<td>0.035</td>
<td>0.035</td>
<td>0.173</td>
</tr>
<tr>
<td>Vehicle Refueling Displacement Loss</td>
<td>10500</td>
<td>6.34</td>
<td>1300</td>
<td>11</td>
<td>2.61</td>
<td>2.0%</td>
<td>2.0%</td>
<td>10.0%</td>
<td>5.0%</td>
<td>0.052</td>
<td>0.052</td>
<td>0.261</td>
</tr>
<tr>
<td>Vehicle Refueling Spillage Loss</td>
<td>10500</td>
<td>6.34</td>
<td>1300</td>
<td>0.7</td>
<td>0.17</td>
<td>2.0%</td>
<td>2.0%</td>
<td>10.0%</td>
<td>5.0%</td>
<td>0.003</td>
<td>0.003</td>
<td>0.017</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>4.51</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.09</td>
<td>0.09</td>
<td>0.45</td>
</tr>
</tbody>
</table>

**Methodology**

VOC Emission Factors for Submerged Filling, Vehicle Refueling Displacement Loss, and Vehicle Refueling Spillage Loss are from AP-42, Table 5.2-7.

PTE VOC (ton/yr) = \( \frac{\text{VOC Emission Factor (lb/1000 gal)} \times \text{Maximum Use (gal/hr)} \times (8760 \text{ hr/yr}) \times (1 \text{ ton /2000 lb})}{1000 \text{ gal}} \)

Wt% HAPs provided by the Permittee

PTE HAP (ton/yr) = PTE VOC (ton/yr) * Wt% HAP
A.3(b) & A.3(u)(10) Storage Tanks

<table>
<thead>
<tr>
<th>Tank Capacity (gal)</th>
<th>Maximum True Vapor Pressure (psia)</th>
<th>PTE VOC (ton/yr)</th>
<th>Max Wt% Ethylbenzene</th>
<th>Max Wt% Xylene</th>
<th>Max Wt% MIBK</th>
<th>PTE Ethylbenzene (ton/yr)</th>
<th>PTE Xylene (ton/yr)</th>
<th>PTE MIBK (ton/yr)</th>
<th>PTE Methanol (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - Solvent/Thinner</td>
<td>20000</td>
<td>1.58</td>
<td>0.421</td>
<td>10.0%</td>
<td>40.0%</td>
<td>0.04</td>
<td>0.17</td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>2 - Solvent/Thinner</td>
<td>20000</td>
<td>1.58</td>
<td>0.421</td>
<td>10.0%</td>
<td>40.0%</td>
<td>0.04</td>
<td>0.17</td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>3 - Windshield Wiper Fluid</td>
<td>10000</td>
<td>1.27</td>
<td>0.109</td>
<td>10.0%</td>
<td>40.0%</td>
<td>0.04</td>
<td>0.17</td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>6 - Power Steering Fluid</td>
<td>16000</td>
<td>0.004</td>
<td>0.001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 - Automatic Transmission Fluid</td>
<td>16000</td>
<td>0.000186</td>
<td>0.0001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 - Reclaimed Solvent</td>
<td>20000</td>
<td>1.58</td>
<td>0.421</td>
<td>10.0%</td>
<td>40.0%</td>
<td>0.04</td>
<td>0.17</td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>16 - Antifreeze Coolant</td>
<td>16000</td>
<td>0.00199</td>
<td>0.0011</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 - Axle Lube</td>
<td>16000</td>
<td>0.0073</td>
<td>0.004</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste Purge Solvent Tank</td>
<td>18900</td>
<td>1.58</td>
<td>0.421</td>
<td>10.0%</td>
<td>40.0%</td>
<td>0.04</td>
<td>0.17</td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>Waste Purge Solvent Tank</td>
<td>18900</td>
<td>1.58</td>
<td>0.421</td>
<td>10.0%</td>
<td>40.0%</td>
<td>0.04</td>
<td>0.17</td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2.22</td>
<td>0.2</td>
<td>0.8</td>
<td>1.2</td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Methodology
PTE VOC (ton/yr) is based on EPA TANKS calculations provided by the Permittee.
### Natural Gas Combustion

<table>
<thead>
<tr>
<th>Emissions Unit</th>
<th>Heat Input Capacity (MMBtu/hr)</th>
<th>Potential Throughput (MMCF/yr)</th>
<th>Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler 004 - Only Natural Gas Combustion</td>
<td>228</td>
<td>1902.171</td>
<td>95.1</td>
</tr>
</tbody>
</table>

Heat Input Capacity (MMBtu/hr) for Natural Gas Combustion Potential = Total Boiler Heat Input Capacity

The worst case scenario of emissions from Boiler 004 would either be from combusting natural gas alone.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM</th>
<th>PM10</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</td>
<td>1.9</td>
<td>7.6</td>
<td>0.6</td>
<td>100.0</td>
<td>5.5</td>
<td>84.0</td>
</tr>
</tbody>
</table>

### Greenhouse Gas Emissions

<table>
<thead>
<tr>
<th>Emission Factor in lb/kgal</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>Subtotal</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler 004 - Alternative Operating Scenario</td>
<td>22300.0</td>
<td>0.22</td>
<td>0.26</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emissions Unit</th>
<th>Heat Input Capacity (MMBtu/hr)</th>
<th>Potential Throughput (kgal/yr)</th>
<th>Potential to Emit (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler 004 - Alternative Operating Scenario</td>
<td>220</td>
<td>3200.000</td>
<td>35680.8</td>
</tr>
</tbody>
</table>
## Natural Gas Combustion

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM</th>
<th>PM10</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>NOx Netting credit at the time CP003-2524 was issued</th>
<th>NOx Emissions (tons/year)</th>
<th>Natural Gas Usage Limit (MMCF/yr)</th>
<th>NOx Emissions Limit (lb/MMCF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</td>
<td>1.9</td>
<td>7.6</td>
<td>0.8</td>
<td>100.0</td>
<td>5.5</td>
<td>84.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Methodology

All emission factors are based on normal firing.

- MMBtu = 1,000,000 Btu
- MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-01-006-01, 1-01-006-04 (AP-42 Supplement D 3/98)

### Greenhouse Gas Emissions

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>Subtotal</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/kgal</td>
<td>22300.0</td>
<td>0.22</td>
<td>0.26</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### Emissions Unit

<table>
<thead>
<tr>
<th>Emissions Unit</th>
<th>Heat Input Capacity (MMBtu/hr)</th>
<th>Potential Throughput (MMCF/yr)</th>
<th>Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler 004 - Alternative Operating Scenario</td>
<td>220</td>
<td>1100.000</td>
<td>12265.0</td>
</tr>
</tbody>
</table>
**A.3(a) Grinding and Machining Operations**

<table>
<thead>
<tr>
<th></th>
<th>Grind Loading (gr/dscf)</th>
<th>Flow Rate (acfm)</th>
<th>PM/PM10 (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grinding and Machining</td>
<td>0.03</td>
<td>4000</td>
<td>4.51</td>
</tr>
<tr>
<td>(small maintenance operations throughout the plant)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Methodology**

\[
PTE \text{ PM/PM10 (ton/yr)} = \text{Grain Loading (gr/dsf)} \times \text{Airflow (acfm)} \times (60 \text{ min/hr}) \times (8760 \text{ hr/yr}) \times (1 \text{ lb/7000 gr}) \times (1 \text{ ton/2000 lb})
\]

**Other Insignificant Activities - Estimated PTE**

<table>
<thead>
<tr>
<th>Activity Description</th>
<th>PM</th>
<th>PM10</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>HAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>(e) VOC and HAP Storage Containers</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(f) Brazing equipment, cutting torches, soldering equipment, welding equipment</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(h) Treatment of wastewater</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.5</td>
</tr>
<tr>
<td>(i) Operations using aqueous solutions containing less than 1% VOC by weight, excluding HAPs</td>
<td></td>
<td></td>
<td>0.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(j) Non-contact Cooling Tower Systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.5</td>
</tr>
<tr>
<td>(k) Replacement or repair of ESPs, baghouse bags, and air filters</td>
<td>0.1</td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(l) Trimmers</td>
<td>0.5</td>
<td>0.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n) Equipment used to collect released material during malfunction, spills, etc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.5</td>
<td></td>
<td>0.5</td>
</tr>
<tr>
<td>(u)(2) Sulfuric Acid Tank</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.1</td>
</tr>
<tr>
<td>(u)(3) Grinding Operations</td>
<td>0.1</td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(u)(8) Spot sanding and painting</td>
<td>0.1</td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.1</td>
</tr>
<tr>
<td>(u)(21) MIG Welding</td>
<td>0.1</td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1.9</td>
<td>1.9</td>
<td>0.1</td>
<td>0</td>
<td>3.1</td>
<td>0</td>
<td>1.5</td>
</tr>
</tbody>
</table>
### Emission Calculations

**Natural Gas Combustion Only - Water and Space heaters (Excl Boilers)**

**MM BTU/HR <100**

**Company Name:** General Motors LLC Fort Wayne Assembly  
**Address City IN Zip:** 12200 Lafayette Center Road, Roanoke, IN 46783  
**Part 70 Renewal No.:** 003-41020-00036  
**SSM No.:** 003-43453-00036  
**SPM No.:** 003-43572-00036  
**Reviewer:** Aida DeGuzman

#### Natural Gas Combustion Only - Water and Space heaters (Excl Boilers)

<table>
<thead>
<tr>
<th>Heat Input Capacity (MMBtu/hr)</th>
<th>Potential Throughput (MMCF/yr)</th>
<th>Model</th>
<th>Emission Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.87</td>
<td>25.1</td>
<td>MAU-1</td>
<td>NG Fired Heated Air Make-up Unit</td>
</tr>
<tr>
<td>2.87</td>
<td>25.1</td>
<td>MAU-2</td>
<td></td>
</tr>
<tr>
<td>2.87</td>
<td>25.1</td>
<td>MAU-3</td>
<td></td>
</tr>
<tr>
<td>2.87</td>
<td>25.1</td>
<td>MAU-4</td>
<td></td>
</tr>
<tr>
<td>2.00</td>
<td>17.5</td>
<td>MAU-5</td>
<td></td>
</tr>
</tbody>
</table>

**Heat Input Capacity:** 13.48 MMBtu/hr  
**Potential Throughput:** 118.1 MMCF/yr

#### Emission Factors

<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>0.11</td>
</tr>
<tr>
<td>PM10*</td>
<td>7.6</td>
<td>0.45</td>
</tr>
<tr>
<td>directPM2.5*</td>
<td>7.6</td>
<td>0.45</td>
</tr>
<tr>
<td>SO2</td>
<td>0.6</td>
<td>5.90</td>
</tr>
<tr>
<td>NOx</td>
<td>100</td>
<td>0.32</td>
</tr>
<tr>
<td>VOC</td>
<td>5.5</td>
<td>4.96</td>
</tr>
<tr>
<td>CO</td>
<td>84</td>
<td>4.96</td>
</tr>
</tbody>
</table>

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Methodology**

All emission factors are based on normal firing.

**MMBtu = 1,000,000 Btu**  
**MMC = 1,000,000 Cubic Feet of Gas**  
**Potential Throughput (MMC) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMC/1,000 MMBtu**

**Emission (tons/yr) = Throughput (MMC/yr) x Emission Factor (lb/MMCF) x 2,000 lb/ton**

#### HAPs - Organics

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMCF</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>2.1E-03</td>
</tr>
<tr>
<td>Dichlorobenzene</td>
<td>1.2E-03</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>0.7E-02</td>
</tr>
<tr>
<td>Hexane</td>
<td>1.8E+00</td>
</tr>
<tr>
<td>Toluene</td>
<td>3.4E-03</td>
</tr>
<tr>
<td><em>Benzene</em></td>
<td>1.2E-04</td>
</tr>
<tr>
<td><em>Dichlorobenzene</em></td>
<td>7.1E-05</td>
</tr>
<tr>
<td><em>Formaldehyde</em></td>
<td>4.4E-03</td>
</tr>
<tr>
<td><em>Hexane</em></td>
<td>0.11</td>
</tr>
<tr>
<td><em>Toluene</em></td>
<td>2.0E-04</td>
</tr>
</tbody>
</table>

#### HAPs - Metals

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMcf</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>5.0E-04</td>
</tr>
<tr>
<td>Cadmium</td>
<td>1.1E-03</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.4E-03</td>
</tr>
<tr>
<td>Manganese</td>
<td>3.8E-04</td>
</tr>
<tr>
<td>Nickel</td>
<td>2.1E-03</td>
</tr>
<tr>
<td><em>Lead</em></td>
<td>3.0E-05</td>
</tr>
<tr>
<td><em>Cadmium</em></td>
<td>6.5E-05</td>
</tr>
<tr>
<td><em>Chromium</em></td>
<td>8.3E-05</td>
</tr>
<tr>
<td><em>Manganese</em></td>
<td>2.2E-05</td>
</tr>
<tr>
<td><em>Nickel</em></td>
<td>1.2E-04</td>
</tr>
</tbody>
</table>

**TOTAL** 0.11

**Methodology**

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
Large Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (>600 HP)
Maximum Input Rate (>4.2 MMBtu/hr)

Company Name: General Motors LLC Fort Wayne Assembly
Address City IN Zip: 12200 LaFayette Center Road, Roanoke, IN 46783
Part 70 Renewal No.: 003-41020-00036
SSM No. 003-43453-00036
SPM No. 003-43572-00036
Reviewer: Aida DeGuzman

<table>
<thead>
<tr>
<th>HP Rating</th>
<th>Make</th>
<th>Model</th>
<th>Constr Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>909</td>
<td>Generac</td>
<td>MD600</td>
<td>2018</td>
</tr>
<tr>
<td>909</td>
<td>Generac</td>
<td>MD600</td>
<td>2018</td>
</tr>
<tr>
<td>909</td>
<td>Generac</td>
<td>MD600</td>
<td>2018</td>
</tr>
<tr>
<td>909</td>
<td>Generac</td>
<td>MD600</td>
<td>2018</td>
</tr>
</tbody>
</table>

Output Horsepower Rating (hp) 3636.0
Maximum Hours Operated per Year 500
Potential Throughput (hp-hr/yr) 1,818,000
Sulfur Content (S) of Fuel (% by weight) 0.05

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/hp-hr</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM*</td>
<td>7.00E-04</td>
<td>0.64</td>
</tr>
<tr>
<td>PM10*</td>
<td>4.01E-04</td>
<td>0.36</td>
</tr>
<tr>
<td>direct PM2.5*</td>
<td>4.01E-04</td>
<td>0.36</td>
</tr>
<tr>
<td>SO2</td>
<td>4.05E-04 (.00809S)</td>
<td>0.37</td>
</tr>
<tr>
<td>NOx</td>
<td>1.30E-02</td>
<td>11.82</td>
</tr>
<tr>
<td>VOC</td>
<td>7.05E-04</td>
<td>0.64</td>
</tr>
<tr>
<td>CO</td>
<td>5.50E-03</td>
<td>5.00</td>
</tr>
</tbody>
</table>

*PM10 emission factor in lb/hp-hr was calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

**NOx emission factor: uncontrolled = 0.024 lb/hp-hr, controlled by ignition timing retard = 0.013 lb/hp-hr

Hazardous Air Pollutants (HAPs)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/hp-hr****</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>5.43E-06</td>
</tr>
<tr>
<td>Toluene</td>
<td>1.97E-06</td>
</tr>
<tr>
<td>Xylene</td>
<td>1.35E-06</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>5.52E-07</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>1.76E-07</td>
</tr>
<tr>
<td>Acrolein</td>
<td>5.52E-08</td>
</tr>
<tr>
<td>Total PAH HAPs***</td>
<td>1.48E-06</td>
</tr>
</tbody>
</table>

***PAH = Polycyclic Organic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Methodology
Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4.
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]
Appendix A: Emission Calculations
Fugitive Dust Emissions - Paved Roads

Company Name: General Motors LLC Fort Wayne Assembly
Address City IN Zip: 12200 LaFayette Center Road, Roanoke, IN 46783
Part 70 Renewal No.: 003-41020-00036
SSM No.: 003-43453-00036
SPM No.: 003-43572-00036

Paved Roads at Industrial Site
Reviewer: Aida DeGuzman

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (12/2011).

Vehicle Information (provided by source)

<table>
<thead>
<tr>
<th>Type</th>
<th>Dock Location</th>
<th>Maximum number of vehicles per day</th>
<th>Number of one-way trips per day per vehicle</th>
<th>Maximum trips per day (trip/day)</th>
<th>Maximum Weight Loaded (tons/trip)</th>
<th>Total Weight driven per day (ton/day)</th>
<th>Maximum one-way distance (feet/trip)</th>
<th>Maximum one-way distance (mi/trip)</th>
<th>Maximum one-way miles (miles/day)</th>
<th>Maximum one-way miles (miles/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Van Trailers (Leaving plant full) (one-way trip)</td>
<td>North Dock (N)</td>
<td>250.00</td>
<td>1.00</td>
<td>250.00</td>
<td>40.00</td>
<td>10,000.00</td>
<td>1,500.00</td>
<td>0.28</td>
<td>71.02</td>
<td>25,923.30</td>
</tr>
<tr>
<td>Van Trailers (entering plant empty) (one-way trip)</td>
<td>North Dock (N)</td>
<td>250.00</td>
<td>1.00</td>
<td>250.00</td>
<td>10.00</td>
<td>2,500.00</td>
<td>1,500.00</td>
<td>0.28</td>
<td>71.02</td>
<td>25,923.30</td>
</tr>
<tr>
<td>Van Trailers (Leaving plant full) (one-way trip)</td>
<td>South Dock (S)</td>
<td>250.00</td>
<td>1.00</td>
<td>250.00</td>
<td>40.00</td>
<td>10,000.00</td>
<td>1,500.00</td>
<td>0.28</td>
<td>71.02</td>
<td>25,923.30</td>
</tr>
<tr>
<td>Van Trailers (entering plant empty) (one-way trip)</td>
<td>South Dock (S)</td>
<td>250.00</td>
<td>1.00</td>
<td>250.00</td>
<td>10.00</td>
<td>2,500.00</td>
<td>1,500.00</td>
<td>0.28</td>
<td>71.02</td>
<td>25,923.30</td>
</tr>
</tbody>
</table>

Totals | 1,000.00 | 25,000.00 | 284.09 | 103,693.18 |

Average Vehicle Weight Per Trip = 25.00 tons/trip
Average Miles Per Trip = 0.28 miles/trip

Unmitigated Emission Factor, \( E_f \) = \( k \cdot (sL)^{0.91} \cdot (W)^{1.02} \) (Equation 1 from AP-42 13.2.1)

where \( k = 0.011 \) PM, \( 0.00220 \) PM10, \( 0.00054 \) PM2.5
\( W = 25.00 \) tons = average vehicle weight (provided by source)
\( sL = 0.6 \) feet/trip = particle size multiplier (AP-42 Table 13.2.1-1)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, \( E_{ext} \) = \( E_f \cdot \left[1 - \frac{p}{4N}\right] \) (Equation 2 from AP-42 13.2.1)

where \( p = 125.00 \) days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
\( N = 365.00 \) days per year

Mitigated Emission Factor, \( E_{ext} \) = \( E_f \cdot \left[1 - \frac{p}{4N}\right] \) (lb/mile)

Abbreviations
PM = Particulate Matter
PM10 = Particle Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)

Methodology
Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] \* [Maximum trips per day (trip/day)]
Maximum one-way miles (miles/day) = [Maximum one-way distance (feet/trip)] \* [5280 ft/mile]
Average Vehicle Weight Per Trip (ton/trip) = SUM [Maximum Weight Loaded (tons/trip)] / SUM [Maximum trips per day (trip/day)]
Average Miles Per Trip (miles/trip) = SUM [Maximum one-way miles (miles/day)] / SUM [Maximum trips per year (trip/day)]

Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] \* [Unmitigated Emission Factor (lb/mile)] \* (ton/2000 lbs)
Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] \* [Mitigated Emission Factor (lb/mile)] \* (ton/2000 lbs)

Loaded Semi tractor weight maximums were assumed at the legal limit of gross vehicle weight per truck of 80,000 pounds or 40 tons per vehicle.

"Loaded Semi tractor weight maximums were assumed at the legal limit of gross vehicle weight per truck of 80,000 pounds or 40 tons per vehicle.

Unmitigated PTE of PM = 2.18 tons/yr
Mitigated PTE of PM10 = 0.44 tons/yr
Mitigated PTE of PM2.5 = 0.107 tons/yr

Process | Mitigated PTE of PM (tons/yr) | Mitigated PTE of PM10 (tons/yr) | Mitigated PTE of PM2.5 (tons/yr) |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Van Trailers (Leaving plant full) (one-way trip)</td>
<td>2.18</td>
<td>0.44</td>
<td>0.107</td>
</tr>
<tr>
<td>Van Trailers (entering plant empty) (one-way trip)</td>
<td>2.18</td>
<td>0.44</td>
<td>0.107</td>
</tr>
<tr>
<td>Van Trailers (Leaving plant full) (one-way trip)</td>
<td>2.18</td>
<td>0.44</td>
<td>0.107</td>
</tr>
<tr>
<td>Van Trailers (entering plant empty) (one-way trip)</td>
<td>2.18</td>
<td>0.44</td>
<td>0.107</td>
</tr>
</tbody>
</table>

Totals | 8.73 | 1.75 | 0.429 |
### Diesel Storage Tanks

#### Company Name:
General Motors LLC Fort Wayne Assembly

#### Address City IN Zip:
12200 LaFayette Center Road, Roanoke, IN 46783

#### Part 70 Renewal No.:
003-41020-00036

#### SSM No.:
003-43453-00036

#### SPM No.:
003-43572-00036

#### Reviewer:
Aida DeGuzman

---

#### Identification

<table>
<thead>
<tr>
<th>Tank Identifier</th>
<th>City</th>
<th>State</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1, T2, T3, T-4</td>
<td>Roanoke</td>
<td>Indiana</td>
<td>NorthPoint</td>
</tr>
</tbody>
</table>

#### Tank Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equivalent Diameter (ft)</td>
<td>4</td>
</tr>
<tr>
<td>Volume (gallons)</td>
<td>550</td>
</tr>
<tr>
<td>Turnovers</td>
<td>12</td>
</tr>
<tr>
<td>Net Throughput (gall/yr)</td>
<td>6,600.00</td>
</tr>
<tr>
<td>Is Tank Heated (y/n)</td>
<td>N</td>
</tr>
<tr>
<td>Is Tank Underground (y/n)</td>
<td>N</td>
</tr>
</tbody>
</table>

#### Paint Characteristics

<table>
<thead>
<tr>
<th>Color/Shade</th>
<th>Gray/Medium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition</td>
<td>Good</td>
</tr>
</tbody>
</table>

#### Breather Vent Settings

<table>
<thead>
<tr>
<th>Vacuum Settings (psig)</th>
<th>-0.03</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Settings (psig)</td>
<td>0.03</td>
</tr>
</tbody>
</table>

---

#### TANKS 4.0 Speciation Profile

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Liquid(%)*</th>
<th>PTE Single HAP (tons/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillate Fuel Oil #2 (Diesel)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Total HAPs

| Total HAPs | 0.0000 |

---

*Liquid percentage of HAP does not necessarily equate the percentage of HAP emissions; however, IDEM OAQ used the “Liquid Percentage” values to conservatively estimate HAP emissions until better information becomes available.

---

#### VOC Losses

<table>
<thead>
<tr>
<th>Component</th>
<th>Working Loss</th>
<th>Breathing Loss</th>
<th>Total Emissions</th>
<th>Working Loss</th>
<th>Breathing Loss</th>
<th>Total Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillate Fuel Oil #2 (Diesel)</td>
<td>0.13</td>
<td>0.19</td>
<td>0.33</td>
<td>0.000065</td>
<td>0.000095</td>
<td>0.000165</td>
</tr>
<tr>
<td>Distillate Fuel Oil #2 (Diesel)</td>
<td>0.13</td>
<td>0.19</td>
<td>0.33</td>
<td>0.000065</td>
<td>0.000095</td>
<td>0.000165</td>
</tr>
<tr>
<td>Distillate Fuel Oil #2 (Diesel)</td>
<td>0.13</td>
<td>0.19</td>
<td>0.33</td>
<td>0.000065</td>
<td>0.000095</td>
<td>0.000165</td>
</tr>
<tr>
<td>Distillate Fuel Oil #2 (Diesel)</td>
<td>0.13</td>
<td>0.19</td>
<td>0.33</td>
<td>0.000065</td>
<td>0.000095</td>
<td>0.000165</td>
</tr>
</tbody>
</table>

**Totals**

<table>
<thead>
<tr>
<th></th>
<th>Working Loss</th>
<th>Breathing Loss</th>
<th>Total Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.52</td>
<td>0.76</td>
<td>1.32</td>
</tr>
</tbody>
</table>

---

Meteorological Data used in Emissions Calculations:

- Fort Wayne, Indiana (Avg Atmospheric Pressure = 14.31 psia)

Methodology:

Total Emissions = Working Loss + Breathing Loss

Total Emissions (tons/year) = Total Emissions (lbs/year) / 2000 lbs per ton
### Emission Calculations
#### Potential Future PTE Decrease

**Company Name:** General Motors LLC Fort Wayne Assembly  
**Address City IN Zip:** 12200 LaFayette Center Road, Roanoke, IN 46783  
**Part 70 Renewal No.:** 003-41020-00036  
**SSM No.:** 003-43453-00036  
**SPM No.:** 003-43572-00036  
**Reviewer:** Aida DeGuzman

<table>
<thead>
<tr>
<th>Emission Units to be Installed</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO2</th>
<th>NO\textsubscript{x}</th>
<th>VOC</th>
<th>CO</th>
<th>Total HAPs</th>
<th>Single HAP (Hexane)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler 1</td>
<td>0.26</td>
<td>1.03</td>
<td>1.03</td>
<td>0.08</td>
<td>13.53</td>
<td>0.74</td>
<td>11.37</td>
<td>0.25</td>
<td>0.47</td>
</tr>
<tr>
<td>Boiler 2</td>
<td>0.26</td>
<td>1.03</td>
<td>1.03</td>
<td>0.08</td>
<td>13.53</td>
<td>0.74</td>
<td>11.37</td>
<td>0.25</td>
<td>0.47</td>
</tr>
<tr>
<td>Heating Units</td>
<td>0.46</td>
<td>1.84</td>
<td>1.84</td>
<td>0.15</td>
<td>24.21</td>
<td>1.33</td>
<td>20.34</td>
<td>0.46</td>
<td>0.44</td>
</tr>
<tr>
<td><strong>Total Uncontrolled/Unlimited PTE of Source Modification</strong></td>
<td>0.97</td>
<td>3.90</td>
<td>3.90</td>
<td>0.31</td>
<td>51.27</td>
<td>2.82</td>
<td>43.07</td>
<td>0.95</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emission Units to be Installed</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO2</th>
<th>NO\textsubscript{x}</th>
<th>VOC</th>
<th>CO</th>
<th>Total HAPs</th>
<th>Single HAP (Hexane)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler 1</td>
<td>0.29</td>
<td>1.18</td>
<td>1.18</td>
<td>0.09</td>
<td>15.49</td>
<td>0.85</td>
<td>13.01</td>
<td>0.28</td>
<td>0.00</td>
</tr>
<tr>
<td>Boiler 2</td>
<td>0.46</td>
<td>1.84</td>
<td>1.84</td>
<td>0.15</td>
<td>24.21</td>
<td>1.33</td>
<td>20.34</td>
<td>0.46</td>
<td>0.44</td>
</tr>
<tr>
<td><strong>Total Limited PTE of Source Modification</strong></td>
<td>0.75</td>
<td>3.02</td>
<td>3.02</td>
<td>0.24</td>
<td>39.70</td>
<td>2.18</td>
<td>33.35</td>
<td>0.74</td>
<td>0.44</td>
</tr>
<tr>
<td>PSD Significant Emission Rate (SERs)</td>
<td>25</td>
<td>15</td>
<td>10</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>100</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

Uncontrolled/Unlimited PTE of New Emission Units (ton/yr)

Limited PTE of New Emission Units (ton/yr)
## Emission Calculations

### 42 Natural Gas Heating Units

**Company Name:** General Motors LLC, Fort Wayne Assembly  
**Address City-Ship:** 12300 Lafayette Center Road, Roanoke, IN 46783  
**Port # Renewal No.:** 05-01-2013-003  
**SSW No.:** 05-0403-00036  
**SSM No.:** 05-0403-00036  
**Reviewer:** Aida DeGuzman

### Part 70 Renewal No.

- **Part 70 Renewal No.:** 003-41020-00036  
- **SSM No.:** 003-43453-00036  
- **SPM No.:** 003-43572-00036

### Heat Input Capacity & Potential Throughput

<table>
<thead>
<tr>
<th>Space Heater</th>
<th>Heat Input Capacity</th>
<th>Potential Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>ACU 101</strong></td>
<td><strong>0.810</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>ACU 102</strong></td>
<td><strong>0.540</strong></td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td><strong>HV-1</strong></td>
<td><strong>1.200</strong></td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td><strong>HV-1</strong></td>
<td><strong>0.950</strong></td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td><strong>HV-2</strong></td>
<td><strong>0.950</strong></td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td><strong>HV-3</strong></td>
<td><strong>0.800</strong></td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td><strong>HV-4</strong></td>
<td><strong>0.950</strong></td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td><strong>HV-5</strong></td>
<td><strong>0.800</strong></td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td><strong>HV-6</strong></td>
<td><strong>0.950</strong></td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td><strong>HV-7</strong></td>
<td><strong>0.800</strong></td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td><strong>HV-8</strong></td>
<td><strong>0.800</strong></td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td><strong>HV-9</strong></td>
<td><strong>0.800</strong></td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td><strong>HV-10</strong></td>
<td><strong>0.950</strong></td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td><strong>HV-11</strong></td>
<td><strong>0.800</strong></td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td><strong>HV-12</strong></td>
<td><strong>0.800</strong></td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td><strong>HV-13</strong></td>
<td><strong>0.800</strong></td>
</tr>
<tr>
<td><strong>Dock Door Heater</strong></td>
<td><strong>HV-14</strong></td>
<td><strong>0.800</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>ASH-135</strong></td>
<td><strong>4.754</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>ASH-138</strong></td>
<td><strong>6.867</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>ASH-3</strong></td>
<td><strong>5.811</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>ASH-4</strong></td>
<td><strong>5.811</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>ASH-5</strong></td>
<td><strong>0.740</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>ASH-6</strong></td>
<td><strong>0.740</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>ASH-33</strong></td>
<td><strong>3.170</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>ASH-34</strong></td>
<td><strong>3.170</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>ASH-35</strong></td>
<td><strong>6.075</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>UH-15</strong></td>
<td><strong>0.250</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>UH-16</strong></td>
<td><strong>0.250</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>UH-17</strong></td>
<td><strong>0.250</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>UH-18</strong></td>
<td><strong>0.250</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>UH-19</strong></td>
<td><strong>0.250</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>UH-20</strong></td>
<td><strong>0.250</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>UH-21</strong></td>
<td><strong>0.250</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>UH-22</strong></td>
<td><strong>0.400</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>UH-23</strong></td>
<td><strong>0.400</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>UH-24</strong></td>
<td><strong>0.400</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>UH-25</strong></td>
<td><strong>0.400</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>UH-26</strong></td>
<td><strong>0.400</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>UH-27</strong></td>
<td><strong>0.400</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>UH-28</strong></td>
<td><strong>0.400</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>UH-29</strong></td>
<td><strong>0.400</strong></td>
</tr>
<tr>
<td><strong>Space Heater</strong></td>
<td><strong>UH-30</strong></td>
<td><strong>0.400</strong></td>
</tr>
</tbody>
</table>

### Emission Factors

#### PM* PM10* direct PM2.5* SO2 NOx VOC CO

<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>0.46</td>
</tr>
<tr>
<td>PM10</td>
<td>7.600</td>
<td>1.84</td>
</tr>
<tr>
<td>PM2.5</td>
<td>7.6</td>
<td>1.84</td>
</tr>
<tr>
<td>SO2</td>
<td>0.6</td>
<td>0.15</td>
</tr>
<tr>
<td>NOx</td>
<td>100</td>
<td>24.21</td>
</tr>
<tr>
<td>VOC</td>
<td>5.5</td>
<td>1.33</td>
</tr>
<tr>
<td>CO</td>
<td>84</td>
<td>20.34</td>
</tr>
</tbody>
</table>

**Methodology:**

- Potential Emission in tons/yr = Throughput (MMCF/yr) x Emission Factor (lb/MMCF) / 2,000 lb/ton

#### Benzene Dichlorobenzene Formaldehyde Hexane Toluene

<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>Benzene</td>
<td>2.1E-03</td>
<td>5.1E-04</td>
</tr>
<tr>
<td>Dichlorobenzene</td>
<td>0.001</td>
<td>2.9E-04</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>7.5E-02</td>
<td>0.02</td>
</tr>
<tr>
<td>Hexane</td>
<td>1.8E+00</td>
<td>4.4E-01</td>
</tr>
<tr>
<td>Toluene</td>
<td>3.4E-03</td>
<td>8.2E-04</td>
</tr>
</tbody>
</table>

#### Lead Cadmium Chromium Manganese Nickel

<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>Lead</td>
<td>5.0E-04</td>
<td>1.2E-04</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.001</td>
<td>2.7E-04</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.4E-03</td>
<td>3.4E-04</td>
</tr>
<tr>
<td>Manganese</td>
<td>3.8E-04</td>
<td>9.2E-05</td>
</tr>
<tr>
<td>Nickel</td>
<td>2.1E-03</td>
<td>5.1E-04</td>
</tr>
</tbody>
</table>

**Methodology:**

- Total Potential Emission = 0.46

---

**Additional Information:**

- 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

#### Natural Gas Combustion Only

**MMBTU/hr <100**

**New Boilers**

<table>
<thead>
<tr>
<th>Company Name:</th>
<th>General Motors LLC Fort Wayne Assembly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address City IN Zip:</td>
<td>12200 LaFayette Center Road, Roanoke, IN 46783</td>
</tr>
<tr>
<td>Part 70 Renewal No.:</td>
<td>003-41020-00036</td>
</tr>
<tr>
<td>SSN No.:</td>
<td>003-43453-00036</td>
</tr>
<tr>
<td>SPM No.:</td>
<td>003-43572-00036</td>
</tr>
<tr>
<td>Reviewer:</td>
<td>Aida DeGuzman</td>
</tr>
</tbody>
</table>

#### PM* PM10* PM2.5* SO2 NOx VOC CO

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/MMCF</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM*</td>
<td>1.9</td>
</tr>
<tr>
<td>PM10*</td>
<td>7.6</td>
</tr>
<tr>
<td>PM2.5*</td>
<td>7.6</td>
</tr>
<tr>
<td>SO2</td>
<td>0.6</td>
</tr>
<tr>
<td>NOx</td>
<td>100.0</td>
</tr>
<tr>
<td>VOC</td>
<td>5.5</td>
</tr>
<tr>
<td>CO</td>
<td>84.9</td>
</tr>
</tbody>
</table>

#### Emission Calculations

**Natural Gas Combustion Only**

**MMBTU/hr <100**

**New Boilers**

<table>
<thead>
<tr>
<th>Emissions Unit</th>
<th>Heat Input Capacity (MMBTU/hr)</th>
<th>Potential Unlimited Throughput (MMCF/yr)</th>
<th>Unlimited Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler 1</td>
<td>31.51</td>
<td>270.8</td>
<td>0.3</td>
</tr>
<tr>
<td>Boiler 2</td>
<td>31.51</td>
<td>270.8</td>
<td>0.3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>541.231</strong></td>
<td><strong>6.51</strong></td>
<td><strong>2.16</strong></td>
</tr>
</tbody>
</table>

**Emission Calculations**

Heating Value of Natural Gas = 1020 MMBtu/MMCF

**PM emission factor is filterable PM only. PM10 and PM2.5 emission factors are condensable and filterable PM10 and PM2.5 combined.**

**Emission Factors for NOx: Provided by manufacturer Cleaver Brooks**

**Methodology**

All emission factors are based on normal firing.

### Greenhouse Gas Emissions

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMCF</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>Subtotal</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emissions Unit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiler 1</td>
<td>120000.0</td>
<td>2.30</td>
<td>2.20</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Boiler 2</td>
<td>31.61</td>
<td>270.61</td>
<td>16236.9</td>
<td>0.3</td>
<td>0.3</td>
</tr>
</tbody>
</table>

**Greenhouse Gas Emissions**

**Methodology**

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF) *(1 ton/2,000 lb)

Emission ( tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)* (1 ton/2,000 lb)

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas


Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBTU/hr) * (8,760 hrs/yr) * (1 MMCF/1,050 MMBtu)

Potential Emissions (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF) x (1 ton/2,000 lb)

**Methodology**

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas


Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBTU/hr) * (8,760 hrs/yr) * (1 MMCF/1,050 MMBtu)

Potential Emissions (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF) x (1 ton/2,000 lb)

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF) x 1 ton/2,000 lb

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)  (1 ton/2,000 lb)
January 8, 2021

Larry Wade  
General Motors, LLC - Fort Wayne Assembly  
12200 Lafayette Center Road  
Roanoke, IN 46783  

Re: Public Notice  
General Motors, LLC - Fort Wayne Assembly  
Permit Level: Title V-Significant Permit Modification & Title V-Significant Source Modification (Minor PSD/EO)  
Permit Number: 003-43572-00036 & 003-43453-00036

Dear Mr. Larry Wade:

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/. Choose Search Option by Permit Number, then enter permit 43572 & 43453

and

IDEM's Virtual File Cabinet (VFC): 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

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 Allen County Public Library, 900 Library Plaza in Fort Wayne, IN 46082. 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 Aida DeGuzman, 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 3-4972 or dial (317) 233-4972.

Sincerely,

Kathy Bourquein
Kathy Bourquein
Permits Branch
Office of Air Quality

Enclosures
PN Applicant Cover Letter access via website 8/10/2020
January 8, 2021

To: Allen County 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: General Motors, LLC – Fort Wayne Assembly
Permit Number: 003-43572-00036 & 003-43453-00036

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.

Enclosures
PN Library updated 4/2019
Notice of Public Comment

January 8, 2021
General Motors, LLC – Fort Wayne Assembly
003-43572-00036 & 003-43453-00036

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 8, 2021

A 30-day public comment period has been initiated for:

Permit Number: 003-43572-00036 & 003-43453-00036
Applicant Name: General Motors, LLC – Fort Wayne Assembly
Location: Roanoke, Allen 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

<table>
<thead>
<tr>
<th>IDEM Staff</th>
<th>KBOURQUE</th>
<th>General Motors LLC Fort Wayne Assembly 003-43572-00036 &amp; 003-43453-00036 (draft)</th>
<th>January 8, 2021</th>
<th>AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING ONLY</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Name and address of Sender</th>
<th>Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204</th>
<th>Type of Mail:</th>
<th>CERTIFICATE OF MAILING ONLY</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Line</th>
<th>Article Number</th>
<th>Name, Address, Street and Post Office Address</th>
<th>Postage</th>
<th>Handing Charges</th>
<th>Act. Value (If Registered)</th>
<th>Insured Value</th>
<th>Due Send if COD</th>
<th>R.R. Fee</th>
<th>S.D. Fee</th>
<th>S.H. Fee</th>
<th>Rest. Del. Fee</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Larry Wade General Motors LLC Fort Wayne Assembly 12200 Lafayette Center Rd Roanoke IN 46783 (Source CAATS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>Gary Duff Executive Director General Motors LLC Fort Wayne Assembly 12200 Lafayette Center Rd Roanoke IN 46783 (RO CAATS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>Daniel &amp; Sandy Trimmer 15021 Yellow River Road Columbia City IN 46725 (Affected Party)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Duane &amp; Deborah Clark Clark Farms 6973 E. 500 S. Columbia City IN 46725 (Affected Party)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>Allen County Public Library - Main Branch 900 Library Plaza, PO Box 2270 Fort Wayne IN 46802 (Library)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Mr. Jeff Coburn Plumbers &amp; Steamfitters, Local 166 2930 W Ludwig Rd Fort Wayne IN 46818-1328 (Affected Party)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>Roanoke Town Council P.O. Box 328 Roanoke IN 46783 (Local Official)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>Allen Co. Board of Commissioners 200 E Berry Street Ste 410 Fort Wayne IN 46802 (Local Official)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>Fort Wayne-Allen County Health Department 200 E Berry St Suite 360 Fort Wayne IN 46802 (Health Department)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>Lisa Green The Journal Gazette 600 W Main St Fort Wayne IN 46802 (Affected Party)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 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 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. |