INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

To:	Interested Parties
Date:	June 26, 2024
From:	Jenny Acker, Chief Permits Branch Office of Air Quality
Source Name:	CF Industries Distribution Facilities LLC Terre Haute Terminal
Permit Level:	MSOP Administrative Amendment
Permit Number:	167-47886-00002
Source Location:	9905 US Hwy 41 N, Rosedale, IN 47874
Type of Action Taken:	Changes that are administrative in nature

Notice of Decision: Approval

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the matter referenced above. Pursuant to 326 IAC 2, this approval was effective immediately upon submittal of the application.

The final decision is available on the IDEM website at: http://www.in.gov/apps/idem/caats/
To view the document, choose Search Option **by Permit Number**, then enter permit 47886. This search will also provide the application received date and **final** permit issuance date.

The final decision is also available via IDEM's Virtual File Cabinet (VFC). Please go to: https://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.

(continues on next page)

If you would like to request a paper copy of the permit document, please contact IDEM's Office of Records Management:

IDEM - Office of Records Management
Indiana Government Center North, Room 1207
100 North Senate Avenue
Indianapolis, IN 46204
Phone: (317) 232-8667
Fax: (317) 233-6647
Email: IDEMFILEROOM@idem.in.gov

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room N103, Indianapolis, IN 46204, **within eighteen (18) calendar days from the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

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June 26, 2024

Mr. Ryan Kahn
CF Industries Distribution Facilities, LLC - Terre Haute Terminal
2375 Waterview Drive
Northbrook, IL 60062

Re: 167-47886-00002
Administrative Amendment to
MSOP Renewal No. M167-46618-00002

Dear Mr. Kahn:

CF Industries Distribution Facilities, LLC - Terre Haute Terminal was issued a Minor Source Operating Permit (MSOP) Renewal No. M167-46618-00002 on August 9, 2023, for a stationary ammonia and other nitrogen-based fertilizer storage and distribution terminal located at 9905 U.S. Highway 41 North, Rosedale, IN 47874. On May 28, 2024, the Office of Air Quality (OAQ) received an application from the source requesting to add new flare piping, header, supports, pilot ring, and flame arrestors, for an upgrade of the existing natural gas-fired flare, identified as F1. A temporary propane-fired flare will be used during the upgrade of the existing natural gas-fired flare.

Pursuant to the provisions of 326 IAC 2-6.1-6(d), the permit is hereby administratively amended as described in the attached Technical Support Document.

Please find attached the entire MSOP as amended.

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

Attachment A: Fugitive Dust Control Plan
Attachment B: 40 CFR 60, Subpart JJJJ - New Source Performance Standards for Stationary Spark Ignition Internal Combustion Engines
Attachment C: 40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

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

Previously issued approvals for this source are also available via IDEM's Virtual File Cabinet (VFC). To access VFC, please go to: https://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.

Federal rules under Title 40 of United States Code of Federal Regulations may also be found on the U.S. Government Printing Office's Electronic Code of Federal Regulations (eCFR) website, located on the Internet at: http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40tab_02.tpl.

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: https://www.in.gov/idem/ and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria. For additional information about air

permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: https://www.in.gov/idem/airpermit/public-participation/; and the Citizens' Guide to IDEM on the Internet at: https://www.in.gov/idem/resources/citizens-guide-to-idem/.

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 Donald McQuigg, 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) 234-4240 or (800) 451-6027, and ask for Donald McQuigg or (317) 234-4240.

Sincerely,

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

Attachment(s): Updated Permit and Technical Support Document

cc: File - Vigo County
Vigo County Health Department
U.S. EPA, Region 5
Compliance and Enforcement Branch
IDEM Southwest Regional Office

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Minor Source Operating Permit Renewal
OFFICE OF AIR QUALITY

CF Industries Distribution Facilities, LLC - Terre Haute Terminal

9905 U.S. Highway 41 North, Rosedale, Indiana 47874

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

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Indiana statutes from IC 13 and rules from 326 IAC, quoted 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 MSOP under 326 IAC 2-6.1.

Operation Permit No.: M 167-46618-00002 Master Agency Interest ID: 10806	
Issued by/Signed by: Josiah K. Balogun, Section Chief Permits Branch Office of Air Quality	Issuance Date: August 9, 2024 Expiration Date: August 9, 2034

Administrative Amendment No.: 167-47886-00002	
Issued by: B. Williams, for Josiah K. Balogun, Section Chief Permits Branch Office of Air Quality	Issuance Date: June 26, 2024 Expiration Date: August 9, 2034

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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 and A.2 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 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary ammonia and other nitrogen-based fertilizer storage and distribution terminal.

Source Address:	9905 U.S. Highway 41 North, Rosedale, Indiana 47874
General Source Phone Number:	(812) 466 - 7311
SIC Code:	5191 (Farm Supplies)
County Location:	Vigo
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary

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

(a) One (1) natural gas-fired process heater, identified as PH1, constructed in 1988, with a maximum heat input rate of 20.83 million British thermal units per hour (MMBtu/hr), using no control, and exhausting to stack PH1.

(b) One (1) natural gas-fired flare, identified as F1, installed in 1963, approved in 2024 for modification, with a maximum heat input rate of 0.25 million British thermal units per hour (MMBtu/hr) to the flare pilot, using no control, and exhausting to stack F1.

(c) One (1) natural gas-fired emergency generator, identified as EG2, constructed after January 1, 2009, and permitted in 2015, with a maximum capacity of 100 kW, using no control, and exhausting outdoors.

Under 40 CFR 60, Subpart JJJJ, this is considered an affected source.
Under 40 CFR 63, Subpart ZZZZ, this is considered a new affected source.

(d) Storage tanks as follows:

(1) One (1) anhydrous ammonia high pressure storage tank, constructed in 1975, with a maximum capacity of 60,000 gallons;

(2) One (1) anhydrous ammonia low pressure storage tank, identified as ST-1, constructed in 1963, with a maximum capacity of 15,000 tons;

(3) One (1) anhydrous ammonia low pressure storage tank, identified as ST-2, constructed in 1964, with a maximum capacity of 15,000 tons;

(4) One (1) urea ammonium nitrate solution (UAN) storage tank, constructed in 1963, with a maximum capacity of 11,487 tons;

(5) Four (4) liquid UAN storage tanks - out of service/unused.

(e) One (1) parts washer, with a maximum capacity of nine (9) gallons of solvent.

(f) Intermittent painting/sand blasting projects for building maintenance purposes.

(g) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]

(h) One (1) portable temporary propane-fired flare, identified as TF1, approved in 2024 for construction, with a maximum heat input rate of 4.96 MMBtu per hour, uncontrolled, and exhausting outdoors.

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-1.1-1]

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 2-1.1-1) shall prevail.

B.2 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

(a) This permit, M 167-46618-00002, is issued for a fixed term of ten (10) 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, 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

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

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

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information

(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 Annual Notification [326 IAC 2-6.1-5(a)(5)]

(a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.

(b) The annual notice shall be submitted in the format attached no later than March 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

(c) The notification 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.

B.9 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

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

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

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

The Permittee shall implement the PMPs.

(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 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.

(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.10 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to M 167-46618-00002 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

(3) deleted.

(b) All previous registrations and permits are superseded by this permit.

B.11 Termination of Right to Operate [326 IAC 2-6.1-7(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 one hundred twenty (120) days prior to the date of expiration of the source’s existing permit, consistent with 326 IAC 2-6.1-7.

B.12 Permit Renewal [326 IAC 2-6.1-7]

(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 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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 one hundred twenty (120) days 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 2-6.1 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 2-6.1-4(b), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.13 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 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

(c) The Permittee shall notify the OAQ no later than thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.14 Source Modification Requirement

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.15 Inspection and Entry
[326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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 permitted 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, at reasonable times, 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, at reasonable times, 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, at reasonable times, 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.16 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

(a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 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

The application which shall be submitted by the Permittee does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

B.17 Annual Fee Payment [326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees due no later than thirty (30) calendar days of receipt of a bill from IDEM, OAQ.

(b) 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.18 Credible Evidence [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 2-6.1-5(a)(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 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to operate may be revoked for any of the following causes:

(a) Violation of any conditions of this permit.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 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.4 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.5 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.6 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).

C.7 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.

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.

(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 2-6.1-5(a)(2)]

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.

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date.

(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 2-6.1-5(a)(2)]

C.11 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.12 Instrument Specifications [326 IAC 2-1.1-11]

(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

C.13 Response to Excursions or Exceedances

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

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

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

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

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

(1) monitoring results;

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

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

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

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

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test

(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.

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

C.15 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

(a) A record of all malfunctions, startups or shutdowns of any emission unit or emission control equipment, that results in violations of applicable air pollution control regulations or applicable emission limitations must be kept and retained for a period of three (3) years and be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.

(b) When a malfunction of any emission unit or emission control equipment occurs that lasts more than one (1) hour, the condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification must be made by telephone or other electronic means, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of the occurrence.

(c) Failure to report a malfunction of any emission unit or emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information on the scope and expected duration of the malfunction must be provided, including the items specified in 326 IAC 1-6-2(c)(3)(A) through (E).

(d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.16 General Record Keeping Requirements [326 IAC 2-6.1-5]

(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. 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.17 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) Reports required by conditions in Section D of 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

(b) 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.

(c) 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.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(e) One (1) parts washer, with a maximum capacity of nine (9) gallons of solvent.

(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 2-6.1-5(a)(1)]

D.1.1 Cold Cleaner Degreaser Control Equipment and Operating Requirements [326 IAC 8-3-2]

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

(a) Pursuant to 326 IAC 8-3-2(a), the owner or operator of a cold cleaner degreaser shall ensure the following control equipment and operating requirements are met:

(1) Equip the degreaser with a cover.

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

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

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

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

(6) Store waste solvent only in closed containers.

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

(b) The Permittee shall ensure the following additional control equipment and operating requirements are met:

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

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent used is insoluble in, and heavier than, water.

(C) A refrigerated chiller.

(D) Carbon adsorption.

(E) An alternative system of demonstrated equivalent or better control as those outlined in (b)(1)(A) through (D) of this condition that is approved by the department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.

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

(3) If used, solvent spray:

(A) must be a solid, fluid stream; and

(B) shall be applied at a pressure that does not cause excessive splashing.

D.1.2 Material Requirements for Cold Cleaner Degreasers [326 IAC 8-3-8]

Pursuant to 326 IAC 8-3-8(b)(2), the Permittee shall not operate a cold cleaner degreaser with a solvent that has a VOC composite partial vapor pressure that exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty eight (68) degrees Fahrenheit).

D.1.3 Preventive Maintenance Plan [326 IAC 1-6-3]

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

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

D.1.4 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.2, the Permittee shall maintain the following records for each purchase of solvent used in the cold cleaner degreasing operations. These records shall be retained on-site or accessible electronically for the most recent three (3) year period and shall be reasonably accessible for an additional two (2) year period.

(1) The name and address of the solvent supplier.

(2) The date of purchase (or invoice/bill dates of contract servicer indicating service date).

(3) The type of solvent purchased.

(4) The total volume of the solvent purchased.

(5) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit.

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

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(b) One (1) natural gas-fired flare, identified as F1, installed in 1963, approved in 2024 for construction, with a maximum heat input rate of 0.25 million British thermal units per hour (MMBtu/hr) to the flare pilot, using no control, and exhausting to stack F1.

(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 2-6.1-5(a)(1)]

D.2.1 Particulate Matter Limitations Except Lake County [326 IAC 6.5]

Pursuant to 326 IAC 6.5-1-2(a), particulate matter emissions from the one (1) natural gas-fired flare, identified as F1, shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

D.2.2 Preventive Maintenance Plan [326 IAC 1-6-3]

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

SECTION E.1 NSPS

Emissions Unit Description:

(c) One (1) natural gas-fired emergency generator, identified as EG2, constructed after January 1, 2009, and permitted in 2015, with a maximum capacity of 100 kW, using no control, and exhausting outdoors.

Under 40 CFR 60, Subpart JJJJ, this is considered an affected source.
Under 40 CFR 63, Subpart ZZZZ, this is considered a new affected source.

(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 2-6.1-5(a)(1)]

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

(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 unit(s) listed above, except as otherwise specified in 40 CFR Part 60, Subpart JJJJ.

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

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

and

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

E.1.2 Preventive Maintenance Plan [326 IAC 1-6-3]

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

E.1.3 New Source Performance Standard for Stationary Spark Ignition Internal Combustion Engines NSPS [326 IAC 12] [40 CFR Part 60, Subpart JJJJ]

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

(1) 40 CFR 60.4230(a)(4)(iv)
(2) 40 CFR 60.4233(e)
(3) 40 CFR 60.4234
(4) 40 CFR 60.4236(c)
(5) 40 CFR 60.4237(b)

(6) 40 CFR 60.4243(b)
(7) 40 CFR 60.4243(d)
(8) 40 CFR 60.4243(e)
(9) 40 CFR 60.4243(f)
(10) 40 CFR 60.4243(g)
(11) 40 CFR 60.4244
(12) 40 CFR 60.4245(a)
(13) 40 CFR 60.4245(b)
(14) 40 CFR 60.4245(d)
(15) 40 CFR 60.4245(e)
(16) 40 CFR 60.4248
(17) Table 1 to Subpart JJJJ (applicable portions)
(18) Table 2 to Subpart JJJJ (applicable portions)

SECTION E.2 NESHAP

Emissions Unit Description:

(c) One (1) natural gas-fired emergency generator, identified as EG2, constructed after January 1, 2009, and permitted in 2015, with a maximum capacity of 100 kW, using no control, and exhausting outdoors.

Under 40 CFR 60, Subpart JJJJ, this is considered an affected source.
Under 40 CFR 63, Subpart ZZZZ, this is considered a new affected source.

(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 2-6.1-5(a)(1)]

E.2.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]

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

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

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

and

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

E.2.2 National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines NESHAP [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment C to the operating permit), which are incorporated by reference as 326 IAC 20-82, for the emission unit(s) listed above:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)
(4) 40 CFR 63.6590(a)(2)(iii)
(5) 40 CFR 63.6590(c)(1)
(6) 40 CFR 63.6670
(7) 40 CFR 63.6675

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5). The initial notification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent notifications shall cover the time period from January 1 to December 31 of the previous year.

Company Name:	CF Industries Distribution Facilities, LLC - Terre Haute Terminal
Source Address:	9905 U.S. Highway 41 North,
City:	Rosedale, Indiana 47874
Phone #:	(812) 466 - 7311
MSOP #:	M167-46618-00002

I hereby certify that CF Industries Distribution Facilities, LLC - Terre Haute Terminal is:
□ still in operation.
□ no longer in operation.

I hereby certify that CF Industries Distribution Facilities, LLC - Terre Haute Terminal is:
□ in compliance with the requirements of MSOP M 167-46618-00002.
□ not in compliance with the requirements of MSOP M 167-46618-00002.

Authorized Individual (typed):	
Title:	
Signature:	Date:
Email Address:	Phone:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FAX NUMBER: (317) 233-6865

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100 TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF "MALFUNCTION" AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY:_____PHONE NO. ( )_____
LOCATION: (CITY AND COUNTY)_____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP:_____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON:_____
_____

DATE/TIME MALFUNCTION STARTED: _____/_____/ 20____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ 20____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER:_____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____
_____

MEASURES TAKEN TO MINIMIZE EMISSIONS:_____
_____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES:_____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS:_____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT:_____
INTERIM CONTROL MEASURES: (IF APPLICABLE)_____
_____
_____

MALFUNCTION REPORTED BY:_____TITLE:_____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY:_____DATE:_____TIME:_____
*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

_____
_____

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for an Administrative Amendment to a Minor Source Operating Permit (MSOP) Renewal

Source Description and Location

Source Name:	**CF Industries Distribution Facilities, LLC - Terre Haute Terminal**
Source Location:	**9905 U.S. Highway 41 North, Rosedale, IN 47874**
County:	**Vigo**
SIC Code:	**5191 (Farm Supplies)**
Operation Permit No.:	**M167-46618-00002**
Operation Permit Issuance Date:	**August 9, 2023**
Administrative Amendment No.:	**167-47886-00002**
Permit Reviewer:	**Donald McQuigg**

Existing Approvals

The source was issued MSOP Renewal No. M167-46618-00002 on August 9, 2023. There have been no subsequent approvals issued.

County Attainment Status

The source is located in Vigo County.

Pursuant to amendments to Indiana Code IC 13-17-3-14, effective July 1, 2023, a federal regulation that classifies or amends a designation of attainment, nonattainment, or unclassifiable for any area in Indiana under the federal Clean Air Act is effective and enforceable in Indiana on the effective date of the federal regulation.

Pollutant	Designation
SO_2	Attainment effective July 8, 2019, for the 2010 SO2 primary 1-hour standard for Fayette and Harrison townships. Unclassifiable or attainment effective April 9, 2018, for the remainder of the county. Better than national secondary standards effective March 3, 1978.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective January 16, 2018, for the 2015 8-hour ozone standard.
$PM_{2.5}$	Unclassifiable or attainment effective April 15, 2015, for the 2012 annual $PM_{2.5}$ standard.
$PM_{2.5}$	Unclassifiable or attainment effective December 13, 2009, for the 2006 24-hour $PM_{2.5}$ standard.
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Unclassifiable or attainment effective January 29, 2012, for the 2010 NO_2 standard.
Pb	Unclassifiable or attainment effective December 31, 2011, for the 2008 lead standard.

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) 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 NO_x emissions are considered when evaluating the rule applicability relating to ozone. Vigo County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements of Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
Vigo County has been classified as attainment for $PM_{2.5}$. Therefore, direct $PM_{2.5}$, SO_2, and NOx emissions were reviewed pursuant to the requirements of Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(d) Other Criteria Pollutants
Vigo County has been classified as attainment or unclassifiable in Indiana for all the other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

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

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

The fugitive emissions of regulated air pollutants and hazardous air pollutants (HAP) are counted toward the determination of MSOP (326 IAC 2-6.1) 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

This table reflects the unrestricted potential emissions of the source prior to the administrative amendment. 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.

	Source-Wide Emissions Prior to Administrative Amendment (tons/year)								
	PM[1]	**PM_{10}[1]**	**$PM_{2.5}$[1, 2]**	**SO_2**	**NO_X**	**VOC**	**CO**	**Single HAP[3]**	**Total HAPs**
NG Heater	0.17	0.68	0.68	0.05	8.93	0.49	7.503	0.16	0.17
NG Flare (F1)	0.001	0.005	0.005	Negl.	0.064	0.004	0.054	0.001	0.001
Process Flare Fuel-Bound and Thermal NOx	-	-	-	-	0.33	-	-	-	-
UAN Storage Tank	-	-	-	-	-	0.05	-	-	-
Degreaser	-	-	-	-	-	0.12	-	-	-
Emergency Generator, EG2	Negl.	0.003	0.003	Negl.	1.026	0.030	0.080	0.013	0.02
Total PTE of Entire Source Excluding Fugitive Emissions*	**0.17**	**0.69**	**0.69**	**0.05**	**10.35**	**0.69**	**7.64**	**0.16**	**0.19**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	10	25
Unpaved Roads	34.14	10.016	1.002	-	-	-	-	-	-
Paved Roads	59.94	11.987	2.94	-	-	-	-	-	-
Total PTE of Entire Source Including Source-Wide Fugitives*	**94.25**	**22.69**	**4.63**	**0.05**	**10.35**	**0.69**	**7.64**	**0.16**	**0.19**
MSOP Thresholds	25	25	25	25	25	25	< 100	< 10	< 25

[1]Under the Part 70 Permit program (40 CFR 70), PM_{10} and $PM_{2.5}$, not particulate matter (PM), are each considered as a "regulated air pollutant."

[2]$PM_{2.5}$ listed is direct $PM_{2.5}$.

[3]Single highest source-wide HAP is Hexane.

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

(a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no PSD regulated pollutant is emitted at a rate of two hundred fifty (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 not a major source of HAP, as defined in 40 CFR 63.2, because HAP emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.

(c) These emissions are based on the TSD of MSOP Renewal No. M167-46618-00002 issued on August 9, 2024.

Description of Amendment

The Office of Air Quality (OAQ) has reviewed an application, submitted by CF Industries Distribution Facilities, LLC - Terre Haute Terminal on May 28, 2024, requesting to add new flare piping, header, supports, pilot ring, and flame arrestors, for an upgrade of the existing natural gas-fired flare, identified as F1.

The following is a list of the new and modified emission units:

(a) One (1) natural gas-fired flare, identified as F1, installed in 1963, approved in 2024 for modification, with a maximum heat input rate of 0.25 million British thermal units per hour (MMBtu/hr) to the flare pilot, using no control, and exhausting to stack F1.

(b) One (1) portable temporary propane-fired flare, identified as TF1, approved in 2024 for construction, with a maximum heat input rate of 4.96 MMBtu per hour, uncontrolled, and exhausting outdoors.

Enforcement Issues

There are no pending enforcement actions related to this administrative amendment.

Emission Calculations

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

Permit Level Determination – MSOP Administrative Amendment

The following table is used to determine the appropriate permit level under 326 IAC 2-6.1-6. This table reflects the PTE before controls of the administrative amendment. 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.

	PTE Before Controls of the New Emission Unit (ton/year)								
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$[1]**	**SO_2**	**NO_X**	**VOC**	**CO**	**Single HAP[2]**	**Total HAPs**
Temporary Propane Flare (TF1)	0.05	0.17	0.17	0.01	3.08	0.24	1.78	-	-
Total PTE Before Controls of the New Emission Units:	**0.05**	**0.17**	**0.17**	**0.01**	**3.08**	**0.24**	**1.78**	**-**	**-**

[1]$PM_{2.5}$ listed is direct $PM_{2.5}$.
[2]Single highest HAP.

	PTE Increase of the Modified Emission Unit/Process (ton/year)								
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$[1]**	**SO_2**	**NO_X**	**VOC**	**CO**	**Single HAP[2]**	**Total HAPs**
PTE Before Modification (F1)	0.0012	0.0049	0.0049	0.0004	0.0644	0.0035	0.0541	0.0012	0.0012
PTE After Modification (F1)	0.0021	0.0082	0.0082	0.0006	0.1082	0.0060	0.0909	0.0019	0.0019
PTE Increase (F1)	*0.0008*	*0.0033*	*0.0033*	*0.0003*	*0.0438*	*0.0024*	*0.0368*	*0.0008*	*0.0008*
Total PTE Increase of the Modified Emission Unit /Process	**0.0008**	**0.0033**	**0.0033**	**0.0003**	**0.0438**	**0.0024**	**0.0368**	**0.0008**	**0.0008**

[1]$PM_{2.5}$ listed is direct $PM_{2.5}$.
[2]Single highest HAP = hexane

	PTE Increases Due to the Revision (ton/year)								
	PM	**PM_{10}**	**$PM_{2.5}$[1]**	**SO_2**	**NO_X**	**VOC**	**CO**	**Single HAP[2]**	**Total HAPs**
Total PTE Before Controls of the New Emission Units	0.05	0.17	0.17	0.01	3.08	0.24	1.78	-	-
Total PTE Increase of the Modified Emission Unit/Process	8.32E0-4	3.33E-03	3.33E-03	2.63E-04	4.38E-02	2.41E-03	3.68E-02	7.88E-04	8.27E-04
Total PTE of the Administrative Amendment	**0.05**	**0.17**	**0.17**	**0.01**	**3.13**	**0.24**	**1.82**	**7.88E-04**	**8.27E-04**

[1]$PM_{2.5}$ listed is direct $PM_{2.5}$.
[2]Single highest HAP.

Appendix A of this TSD reflects the detailed potential emissions of the administrative amendment.

Pursuant to 326 IAC 2-6.1-6(d)(11), this change to the permit is considered an administrative amendment because the permit is amended to add an emissions unit, subject to 326 IAC 2-1.1-3 (Exemptions), at the request of the applicant.

PTE of the Entire Source After Issuance of the MSOP Administrative Amendment

The table below summarizes the uncontrolled/unlimited potential to emit of the entire source. 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.

	Source-Wide Emissions After Issuance (tons/year) (uncontrolled/unlimited)								
	PM[1]	**PM_{10}[1]**	**$PM_{2.5}$[1, 2]**	**SO_2**	**NO_X**	**VOC**	**CO**	**Single HAP[3]**	**Total HAPs**
Natural Gas Heater	0.17	0.68	0.68	0.05	8.93	0.49	7.503	0.16	0.17
Natural Gas Flare (F1)	0.002	0.008	0.008	0.0006	0.108	0.006	0.091	0.002	0.002
Temporary Propane Flare (TF1)	0.05	0.17	0.17	0.01	3.08	0.24	1.78	-	-
Process Flare Fuel-Bound and Thermal NOx	-	-	-	-	0.33	-	-	-	-
UAN Storage Tank	-	-	-	-	-	0.05	-	-	-
Degreaser	-	-	-	-	-	0.12	-	-	-
Emergency Generator, EG2	Negl.	0.003	0.003	Negl.	1.026	0.030	0.080	0.013	0.02
Total PTE of Entire Source Excluding Fugitive Emissions*	**0.22**	**0.86**	**0.86**	**0.067**	**13.48**	**0.93**	**9.45**	**0.16**	**0.19**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	10	25
Unpaved Roads	34.14	10.016	1.002	-	-	-	-	-	-
Paved Roads	59.94	11.987	2.94	-	-	-	-	-	-
Total PTE of Entire Source Including Source-Wide Fugitives*	**94.30**	**22.86**	**4.80**	**0.067**	**13.48**	**0.93**	**9.45**	**0.16**	**0.19**
MSOP Thresholds	25	25	25	25	25	25	< 100	< 10	< 25

[1]Under the Part 70 Permit program (40 CFR 70), PM_{10} and $PM_{2.5}$, not particulate matter (PM), are each considered as a "regulated air pollutant."

[2]$PM_{2.5}$ listed is direct $PM_{2.5}$.

[3]Single highest source-wide HAP is Hexane.

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

Appendix A of this TSD reflects the detailed unlimited/uncontrolled emissions of the source.

Federal Rule Applicability Determination

Due to the administrative amendment, federal rule applicability has been reviewed as follows:

New Source Performance Standards (NSPS):

(a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this administrative amendment.

National Emission Standards for Hazardous Air Pollutants (NESHAP):

(a) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (40 CFR Part 63, 326 IAC 14, and 326 IAC 20) included in the permit for this administrative amendment.

Compliance Assurance Monitoring (CAM):

Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability - Entire Source

Due to this administrative amendment, state rule applicability has been reviewed as follows:

326 IAC 2-6.1 (MSOP)
MSOP applicability is discussed under the PTE of the Entire Source After Issuance of the MSOP Administrative Amendment section of this document.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The modified emission unit(s) 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 6.5 (Particulate Matter Limitations Except Lake County)
This source (located in Vigo County) is located in one of the counties listed in 326 IAC 6.5, but is not one of the sources specifically listed in 326 IAC 6.5-2 through 326 IAC 6.5-10. The source-wide PTE of PM is ten (10) tons per year or more. Therefore, this source is subject to the requirements of 326 IAC 6.5-1-2 because the source-wide actual emissions of PM can be ten (10) tons per year or more.

State Rule Applicability – Individual Facilities

Due to the administrative amendment, state rule applicability has been reviewed as follows:

<u>One (1) natural gas-fired flare, identified as F1</u>

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)
Pursuant to 326 IAC 6.5-1-2(a), particulate matter emissions from the **o**ne (1) natural gas-fired flare, identified as F1, shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

326 IAC 7-1.1 Sulfur Dioxide Emission Limitations
The one (1) natural gas-fired flare, identified as F1, is not subject to 326 IAC 326 IAC 7-1.1 because it has a potential to emit (or limited potential to emit) sulfur dioxide (SO_2) of less than twenty-five (25) tons per year or ten (10) pounds per hour.

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The one (1) natural gas-fired flare, identified as F1, is not subject to the requirements of 326 IAC 8-1-6 because its unlimited VOC potential emissions are less than twenty-five (25) tons per year.

326 IAC 9-1 (Carbon Monoxide Emission Limits)
The requirements of 326 IAC 9-1 do not apply to the one (1) natural gas-fired flare, identified as F1, because this source does not operate a catalyst regeneration petroleum cracking system or a petroleum fluid coker, grey iron cupola, blast furnace, basic oxygen steel furnace, or other ferrous metal smelting equipment.

Compliance Determination and Monitoring Requirements

There are no new or modified compliance requirements included with this administrative amendment.

Proposed Changes

The following changes listed below are due to the administrative amendment. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:

(1) One (1) natural gas-fired flare, identified as F1, ~~constructed~~ **installed** in 1963, **approved in 2024 for modification**, with a maximum heat input rate of ~~0.15~~ **0.25** million British thermal units per hour (MMBtu/hr) to the flare pilot, using no control, and exhausting to stack F1.

.

(b) One (1) portable temporary propane-fired flare, identified as TF1, approved in 2024 for construction, with a maximum heat input rate of 4.96 MMBtu per hour, uncontrolled, and exhausting outdoors.

Additional Changes

IDEM, OAQ made additional revisions 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.

(1) The MSOP Annual Notification Form has been revised to include space for an email address and phone number.

Authorized Individual (typed):	
Title:	
Signature:	**Date:**
~~Date:~~**Email Address:**	**Phone:**

(2) A new Section D.2 is added due to an incorrect applicability determination in the previous permit.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(b) One (1) natural gas-fired flare, identified as F1, installed in 1963, permitted in 2024, with a maximum heat input rate of 0.25 million British thermal units per hour (MMBtu/hr) to the flare pilot, using no control, and exhausting to stack F1.

(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 2-6.1-5(a)(1)]

D.2.1 Particulate Matter Limitations Except Lake County [326 IAC 6.5]

Pursuant to 326 IAC 6.5-1-2(a), particulate matter emissions from the one (1) natural gas-fired flare, identified as F1, shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

D.2.2 Preventive Maintenance Plan [326 IAC 1-6-3]

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

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 May 28, 2024. Additional information was received on 6/23/2024 during applicant review.

IDEM Contact

(a) If you have any questions regarding this permit, please contact Donald McQuigg, 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) 234-4240 or (800) 451-6027, and ask for Donald McQuigg or (317) 234-4240.

(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: https://www.in.gov/idem/airpermit/public-participation/; and the Citizens' Guide to IDEM on the Internet at: https://www.in.gov/idem/resources/citizens-guide-to-idem/.

Appendix A: Emissions Calculations
Source Emissions Summary

Company Name: CF Industries Distribution Facilities, LLC - Terre Haute Terminal
Source Address: 9905 US Highway 41 North, Rosedale, Indiana 47874
MSOP AA No.: M167-47886-00002
Permit Reviewer: Donald McQuigg

	Unlimited/Uncontrolled Potential to Emit after Amendment (tons/year)*									
Process description	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	VOC	CO	Total HAPs	Worst Single HAP	
Non-Fugitive Emissions										
Natural Gas heater	0.17	0.68	0.68	0.05	8.93	0.49	7.503	0.17	0.161	(hexane)
Natural Gas flare (F1)	0.002	0.008	0.008	0.0006	0.108	0.006	0.091	0.002	0.002	(hexane)
Temporary Propane Flare (TF1)	0.047	0.166	0.166	0.013	3.084	0.237	1.779	-	-	-
Pffbt	-	-	-	-	0.33	-	-	-	-	-
UAN storage tank	-	-	-	-	-	0.05	-	-	-	-
Degreaser	-	-	-	-	-	0.12	-	-	-	-
EG2	0.0000	0.003	0.003	0.0001	1.026	0.030	0.080	0.02	0.013	(formaldehyde)
Total Non-Fugitive Emissions	**0.22**	**0.86**	**0.86**	**0.067**	**13.48**	**0.93**	**9.45**	**0.19**	**0.16**	**hexane**
Fugitive Emissions										
Unpaved Roads	34.140	10.016	1.002	-	-	-	-	-	-	-
Paved Roads	59.936	11.987	2.942	-	-	-	-	-	-	-
Total Fugitive Emissions	**94.08**	**22.00**	**3.94**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**-**
Total Non-Fugitive and Fugitive Emissions	**94.30**	**22.86**	**4.80**	**0.067**	**13.48**	**0.93**	**9.45**	**0.19**	**0.16**	**hexane**

Appendix A: Emissions Calculations
Administrative Amendment
PTE for Permit Level
Flare F1 Upgrade

Company Name: CF Industries Distribution Facilities, LLC - Terre Haute Terminal
Source Address: 9905 US Highway 41 North, Rosedale, Indiana 47874
MSOP AA No.: M167-47886-00002
Permit Reviewer: Donald McQuigg

		Uncontrolled Potential to Emit of New and Modified Units (tons/year)								
Emission Unit		**PM**	**PM_{10}**	**$PM_{2.5}$***	**SO_2**	**NO_x**	**VOC**	**CO**	**Combined HAPs**	**Single HAP (Hexane)**
New Units										
Temporary Propane Flare (TF1)		0.05	0.17	0.17	0.01	3.08	0.24	1.78	-	-
PTE of New Units		*0.05*	*0.17*	*0.17*	*0.01*	*3.08*	*0.24*	*1.78*	*0.00*	*0.00*
Modified Units										
Flare F1 NG Combustion	Before	1.22E-03	4.90E-03	4.90E-03	3.86E-04	6.44E-02	3.54E-03	5.41E-02	1.22E-03	1.16E-03
Flare F1 NG Combustion	After	2.06E-03	8.22E-03	8.22E-03	6.49E-04	1.08E-01	5.95E-03	9.09E-02	2.04E-03	1.95E-03
PTE Increase		*8.32E-04*	*3.33E-03*	*3.33E-03*	*2.63E-04*	*4.38E-02*	*2.41E-03*	*3.68E-02*	*8.27E-04*	*7.88E-04*
Total PTE Increase (tons/year):		**0.05**	**0.17**	**0.17**	**0.01**	**3.13**	**0.24**	**1.82**	**8.27E-04**	**7.88E-04**

**$PM_{2.5}$ listed is direct $PM_{2.5}$*

Appendix A: Emissions Calculations
Potential to Emit for Flare Upgrade
Calculation of Increased Heat Input Capacity for Upgrade

Company Name: CF Industries Distribution Facilities, LLC - Terre Haute Terminal
Source Address: 9905 US Highway 41 North, Rosedale, Indiana 47874
MSOP AA No.: M167-47886-00002
Permit Reviewer: Donald McQuigg

1. Flare upgrade project to an existing process flare operation.

		Heat Input Capacity	HHV	Potential Throughput
# Pilots (new)	2			
Natural Gas Design Flow, SCFH	50	MMBtu/hr	MMBtu	MMCF/yr
Total Natural Gas Usage, SCFH	100		mmscf	
Total Natural Gas Usage, SCF/year	876000	0.102	1020	0.88

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	9.69E-05	3.88E-04	3.88E-04	3.06E-05	5.10E-03	2.81E-04	4.28E-03

*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

Appendix A: Emissions Calculations
Natural Gas Combustion Only
Upgraded Process Flare

Company Name: CF Industries Distribution Facilities, LLC - Terre Haute Terminal
Source Address: 9905 US Highway 41 North, Rosedale, Indiana 47874
MSOP AA No.: M167-47886-00002
Permit Reviewer: Donald McQuigg

Heat Input Capacity MMBtu/hr	HHV MMBtu/mmscf	Potential Throughput MMCF/yr
0.252	1020	2.2

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.002	0.008	0.008	0.0006	0.108	0.006	0.091

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	2.272E-06	1.299E-06	8.116E-05	1.948E-03	3.679E-06	**2.036E-03**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	5.411E-07	1.190E-06	1.515E-06	4.112E-07	2.272E-06	**5.930E-06**
					Total HAPs	**2.042E-03**
					Worst HAP	**1.948E-03**

Methodology is the same as above.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
LPG-Propane - Temporary Flare
(Heat input capacity: > 10 MMBtu/hr and < 100 MMBtu/hr)

Company Name: CF Industries Distribution Facilities, LLC - Terre Haute Terminal
Source Address: 9905 US Highway 41 North, Rosedale, Indiana 47874
MSOP AA No.: M167-47886-00002
Permit Reviewer: Donald McQuigg

Heat Input Capacity MMBtu/hr****	Potential Throughput kgals/year
4.96	474.5

SO2 Emission factor = 0.10 x S
S = Sulfur Content = 0.54 grains/100ft^3

	Pollutant						
	PM*	PM10*	direct PM2.5**	SO2	NOx	VOC	CO
Emission Factor in lb/kgal***	0.2	0.7	0.7	0.054 *(0.10S)*	13.0	1.0 **TOC value	7.5
Potential Emission in tons/yr	0.05	0.17	0.17	0.0128	3.08	0.24	1.78

*PM emission factor is filterable PM only. PM emissions are stated to be all less than 10 microns in aerodynamic equivalent diameter, footnote in Table 1.5-1, therefore PM10 is based on the filterable and condensable PM emission factors.
** No direct PM2.5 emission factor was given. Direct PM2.5 is a subset of PM10. If one assumes all PM10 to be all direct PM2.5, then a worst case assumption of direct PM2.5 can be made.
**The VOC value given is TOC. The methane emission factor is 0.2 lb/kgal.
***Emissions factors for direct fired propane combustion heating units were not found. Emissions factors for propane fired boilers were used
MMBtu is a conservative estimate of the temp flare and temp assist ring****

Appendix A: Emissions Calculations
Source Emissions Summary before AA

Company Name: CF Industries Distribution Facilities, LLC - Terre Haute Terminal
Source Address: 9905 US Highway 41 North, Rosedale, Indiana 47874
MSOP AA No.: M167-47886-00002
Permit Reviewer: Donald McQuigg

	Unlimited/Uncontrolled Potential to Emit after Amendment (tons/year)*									
Process description	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	VOC	CO	Total HAPs	Worst Single HAP	
Non-Fugitive Emissions										
NG heater	0.17	0.68	0.68	0.05	8.93	0.49	7.503	0.17	0.161	(hexane)
NG flare	0.001	0.005	0.005	0.000	0.064	0.004	0.054	0.001	0.001	-
Pffbt	-	-	-	-	0.33	-	-	-	-	-
UAN storage tank	-	-	-	-	-	0.05	-	-	-	-
Degreaser	-	-	-	-	-	0.12	-	-	-	-
EG2	0.000	0.003	0.003	0.000	1.026	0.030	0.080	0.02	0.013	(formaldehyde)
Total Non-Fugitive Emissions	**0.17**	**0.69**	**0.69**	**0.05**	**10.35**	**0.69**	**7.64**	**0.19**	**0.16**	**(hexane)**
Fugitive Emissions										
Unpaved Roads	34.140	10.016	1.002	-	-	-	-	-	-	-
Paved Roads	59.936	11.987	2.942	-	-	-	-	-	-	-
Total Fugitive Emissions	**94.08**	**22.00**	**3.94**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**-**
Total Non-Fugitive and Fugitive Emissions	**94.25**	**22.69**	**4.63**	**0.05**	**10.35**	**0.69**	**7.64**	**0.19**	**0.16**	**(hexane)**

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Natural Gas
4-Stroke Lean-Burn (4SLB) Engines
One (1) 100kW (134.1 hp) Natural gas-fired Emergency Generator

Company Name: CF Industries Distribution Facilities, LLC - Terre Haute Terminal
Source Address: 9905 US Highway 41 North, Rosedale, Indiana 47874
MSOP AA No.: M167-47886-00002
Permit Reviewer: Donald McQuigg

Maximum Output Horsepower Rating (hp)	134.1
Brake Specific Fuel Consumption (BSFC) (Btu/hp-hr)	7500
Maximum Hours Operated per Year (hr/yr)	500
Potential Fuel Usage (MMBtu/yr)	503
High Heat Value (MMBtu/MMscf)	1020
Potential Fuel Usage (MMcf/yr)	0.49

	Pollutant						
Criteria Pollutants	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor (lb/MMBtu)	7.71E-05	9.99E-03	9.99E-03	5.88E-04	4.08E+00	1.18E-01	3.17E-01
Potential Emissions (tons/yr)	1.94E-05	2.51E-03	2.51E-03	1.48E-04	1.03E+00	2.97E-02	7.97E-02

*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)

Pollutant	Emission Factor (lb/MMBtu)	Potential Emissions (tons/yr)
Acetaldehyde	8.36E-03	0.002
Acrolein	5.14E-03	0.001
Benzene	4.40E-04	0.000
Biphenyl	2.12E-04	0.000
1,3-Butadiene	2.67E-04	0.000
Formaldehyde	5.28E-02	0.013
Methanol	2.50E-03	0.001
Hexane	1.10E-03	0.000
Toluene	4.08E-04	0.000
2,2,4-Trimethylpentane	2.50E-04	0.000
Xylene	1.84E-04	0.000
	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)] / [1000000
Potential Emissions (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2000 lb/ton]

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
SO2 = Sulfur Dioxide
NOx = Nitrous Oxides
VOC - Volatile Organic Compounds
CO = Carbon Monoxide
CO2 = Carbon Dioxide
CH4 = Methane
N2O = Nitrous Oxide

Appendix A: Emissions Calculations
Natural Gas Combustion Only
Process Heater

Company Name: CF Industries Distribution Facilities, LLC - Terre Haute Terminal
Source Address: 9905 US Highway 41 North, Rosedale, Indiana 47874
MSOP AA No.: M167-47886-00002
Permit Reviewer: Donald McQuigg

Heat Input Capacity MMBtu/hr	HHV MMBtu / mmscf	Potential Throughput MMCF/yr
20.8	1020	178.6

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.170	0.679	0.679	0.054	8.932	0.491	7.503

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzen	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	1.876E-04	1.072E-04	6.699E-03	1.608E-01	3.037E-04	**1.681E-01**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	4.466E-05	9.825E-05	1.250E-04	3.394E-05	1.876E-04	**4.895E-04**

Total HAPs	**1.686E-01**
Worst HAP	**1.608E-01**

Methodology is the same as above.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
Process Flare

Company Name: CF Industries Distribution Facilities, LLC - Terre Haute Terminal
Source Address: 9905 US Highway 41 North, Rosedale, Indiana 47874
MSOP AA No.: M167-47886-00002
Permit Reviewer: Donald McQuigg

Heat Input Capacity MMBtu/hr	HHV MMBtu / mmscf	Potential Throughput MMCF/yr
0.15	1020	1.3

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.001	0.005	0.005	0.0004	0.064	0.004	0.054

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	1.353E-06	7.729E-07	4.831E-05	1.159E-03	2.190E-06	**1.212E-03**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	3.221E-07	7.085E-07	9.018E-07	2.448E-07	1.353E-06	**3.530E-06**
					Total HAPs	**1.216E-03**
					Worst HAP	**1.159E-03**

Methodology is the same as above.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emission Calculations
Process Flare Fuel-Bound and Thermal NOx

Company Name: CF Industries Distribution Facilities, LLC - Terre Haute Terminal
Source Address: 9905 US Highway 41 North, Rosedale, Indiana 47874
MSOP AA No.: M167-47886-00002
Permit Reviewer: Donald McQuigg

Ammonia Vapor Flaring Rate:	40,000	lbs/day
*Fuel-bound NOx Rate:	0.50	% ammonia vapor
*Thermal NOx Rate:	0.06	lbs NOx/MMBtu
Ammonia Heating Value	8037	Btu/lb ammonia vapor

Fuel-bound NOx Emissions:
48,000 lbs/day x 0.5 % ammonia vapor x 3 days/yr** x 1 ton/2000lbs = 0.3 tons/yr

Thermal NOx Emissions:
48,000 lbs/day x 8037 Btu/lb x 1MMBtu/10^6 Btu x 0.06 lbs NOx/MMBtu
x 3 days/yr** x 1ton/2000 lbs = 0.03 tons/yr

Fuel-bound NOx Emissions + Thermal NOx Emissions: 0.33 tons/yr

*Values were provided by the flare vendor and are consistent with values found in "Air Permit Technical Guidance for Chemical Sources: Flares and Oxidizers" from the Texas Natural Resources Conservation Commission (October 2000, RG-109 draft).
**Historical data indicates the flare would only combust 3 days out of the year.

Appendix A: Emission Calculations
Degreaser VOC Emissions

Company Name: CF Industries Distribution Facilities, LLC - Terre Haute Terminal
Source Address: 9905 US Highway 41 North, Rosedale, Indiana 47874
MSOP AA No.: M167-47886-00002
Permit Reviewer: Donald McQuigg

Solvent	Density (lb/gal)	Unit Capacity (gal)	Service Cycle (fills/yr)	VOC PTE (ton/yr)
Stoddard 105	6.7	9	4	0.12

Appendix A: Emission Calculations
UAN Storage Tank* VOC Emissions

Company Name: CF Industries Distribution Facilities, LLC - Terre Haute Terminal
Source Address: 9905 US Highway 41 North, Rosedale, Indiana 47874
MSOP AA No.: M167-47886-00002
Permit Reviewer: Donald McQuigg

Material**	VOC Content (%)	Breathing Loss (ton/yr)	Working Loss (ton/yr)	VOC PTE (ton/yr)
Urea ammonium nitrate solution	32%	0.009	0.036	0.045

* One (1) 7923 m^3 vertical tank, fixed dome type. Four (4) additional UAN storage tanks are out of service and not used.

** A surrogate with similar vapor pressure (alpha methyl styrene) was used in U.S. EPA Tanks calculation.

Methodology

The VOC potential passive emissions for the tanks were calculated using the U.S. EPA TANKS 4.0.9d program.

Appendix A: Emission Calculations
Fugitive Dust Emissions - Paved Roads

Company Name: CF Industries Distribution Facilities, LLC - Terre Haute Terminal
Source Address: 9905 US Highway 41 North, Rosedale, Indiana 47874
MSOP AA No.: M167-47886-00002
Permit Reviewer: Donald McQuigg

Paved Roads at Industrial Site
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 (1/2011).

Vehicle Information (provided by source)

Type	Maximum number of vehicles per day	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight of Loaded Vehicle (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Ammonia truck (unloaded, entering plant) (one-way trip)			120.0	19.5	2340.0	1584	0.300	36.0	13140.0
Ammonia truck (loaded, leaving plant) (one-way trip)			120.0	40.0	4800.0	2112	0.400	48.0	17520.0
UAN truck (unloaded, entering plant) (one-way trip)			60.0	15.0	900.0	2112	0.400	24.0	8760.0
UAN truck (loaded, leaving plant) (one-way trip)			60.0	40.0	2400.0	2640	0.500	30.0	10950.0
Employee Vehicles (one-way trip) - in			10.0	2.0	20.0	2112	0.400	4.0	1460.0
Employee Vehicles (one-way trip) - out			10.0	2.0	20.0	2112	0.400	4.0	1460.0
Contractor/Visitor Vehicles (one-way trip) - in			20.0	2.0	40.0	2112	0.400	8.0	2920.0
Contractor/Visitor Vehicles (one-way trip) - out			20.0	2.0	40.0	2112	0.400	8.0	2920.0
		Totals	**420.0**		**10560.0**			**162.0**	**59130.0**

Average Vehicle Weight Per Trip =	25.1	tons/trip
Average Miles Per Trip =	0.39	miles/trip

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	25.1	25.1	25.1	tons = average vehicle weight
sL =	9.7	9.7	9.7	g/m^2 = silt loading value for paved roads at iron and steel production facilities - Table 13.2.1-3)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)] (Equation 2 from AP-42 13.2.1)

Mitigated Emission Factor, Eext =	Ef * [1 - (p/4N)]	
where p =	125	days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N =	365	days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	2.332	0.466	0.1145	lb/mile
Mitigated Emission Factor, Eext =	2.133	0.427	0.1047	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Mitigated PTE of PM (Before Control) (tons/yr)	Mitigated PTE of PM10 (Before Control) (tons/yr)	Mitigated PTE of PM2.5 (Before Control) (tons/yr)	Mitigated PTE of PM (After Control) (tons/yr)	Mitigated PTE of PM10 (After Control) (tons/yr)	Mitigated PTE of PM2.5 (After Control) (tons/yr)
Semi (entering plant) (Shipping)	14.01	2.80	0.69	7.01	1.40	0.34
Semi (leaving plant)	18.68	3.74	0.92	9.34	1.87	0.46
Semi (entering plant) (Receiving)	9.34	1.87	0.46	4.67	0.93	0.23
Semi (leaving plant)	11.68	2.34	0.57	5.84	1.17	0.29
Generic (Mail Delivery)	3.11	0.62	0.15	1.56	0.31	0.08
Employee Vehicle	3.11	0.62	0.15	1.56	0.31	0.08
Totals	**59.94**	**11.99**	**2.94**	**29.97**	**5.99**	**1.47**

Methodology

Total Weight driven per day (ton/day)	= [Maximum Weight of Loaded Vehicle (tons/trip)] * [Maximum trips per day (trip/day)]
Maximum one-way distance (mi/trip)	= [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/day)	= [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip)	= SUM[Total Weight driven per day (ton/day)] / 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)]
Mitigated PTE (Before Control) (tons/yr)	= [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Mitigated PTE (After Control) (tons/yr)	= [Mitigated PTE (Before Control) (tons/yr)] * [1 - Dust Control Efficiency]

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particle Matter (<2.5 um)
PTE = Potential to Emit

Appendix A: Emission Calculations
Fugitive Dust Emissions - Unpaved Roads

Company Name: CF Industries Distribution Facilities, LLC - Terre Haute Terminal
Source Address: 9905 US Highway 41 North, Rosedale, Indiana 47874
MSOP AA No.: M167-47886-00002
Permit Reviewer: Donald McQuigg

Unpaved Roads at Industrial Site
The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (11/2006).

Vehicle Information (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight of Loaded Vehicle (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Ammonia truck (unloaded, entering plant) (one-way trip)			120.0	19.5	2340.0	528	0.100	12.0	4380.0
Ammonia truck (loaded, leaving plant) (one-way trip)			120.0	40.0	4800.0	528	0.100	12.0	4380.0
		Totals	**240.0**		**7140.0**			**24.0**	**8760.0**

Average Vehicle Weight Per Trip = 29.8 tons/trip
Average Miles Per Trip = 0.10 miles/trip

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	9.7	9.7	9.7	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-1 Iron and Steel Production)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)
W =	29.8	29.8	29.8	tons = average vehicle weight
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [(365 - P)/365] (Equation 2 from AP-42 13.2.2)
Mitigated Emission Factor, Eext = E * [(365 - P)/365]
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	11.85	3.48	0.35	lb/mile
Mitigated Emission Factor, Eext =	7.79	2.29	0.23	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Mitigated PTE of PM (Before Control) (tons/yr)	Mitigated PTE of PM10 (Before Control) (tons/yr)	Mitigated PTE of PM2.5 (Before Control) (tons/yr)	Mitigated PTE of PM (After Control) (tons/yr)	Mitigated PTE of PM10 (After Control) (tons/yr)	Mitigated PTE of PM2.5 (After Control) (tons/yr)
Ammonia truck (unloaded, entering plant) (one-way trip)	17.07	5.01	0.50	8.54	2.50	0.25
Ammonia truck (loaded, leaving plant) (one-way trip)	17.07	5.01	0.50	8.54	2.50	0.25
Totals	**34.14**	**10.02**	**1.00**	**17.07**	**5.01**	**0.50**

Methodology

Total Weight driven per day (ton/day)	= [Maximum Weight of Loaded Vehicle (tons/trip)] * [Maximum trips per day (trip/day)]
Maximum one-way distance (mi/trip)	= [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/day)	= [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip)	= SUM[Total Weight driven per day (ton/day)] / 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)]
Mitigated PTE (Before Control) (tons/yr)	= (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Mitigated PTE (After Control) (tons/yr)	= (Mitigated PTE (Before Control) (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
PTE = Potential to Emit

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Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Ryan Kahn
CF Industries Distribution Facilities LLC Terre Haute Terminal
2375 Waterview Dr
Northbrook, IL 60062

DATE: June 26, 2024

FROM: Jenny Acker, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
MSOP Administrative Amendment
167-47886-00002

This notice is to inform you that a final decision has been issued for the air permit application referenced above.

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. In addition, the Notice of Decision has been sent to the OAQ Permits Branch Interested Parties List and, if applicable, the Consultant/Agent and/or Responsible Official/Authorized Individual.

The final decision and supporting materials are available electronically; the original signature page is enclosed for your convenience. The final decision and supporting materials available electronically at:

IDEM's online searchable database: http://www.in.gov/apps/idem/caats/ . Choose Search Option **by Permit Number**, then enter permit 47886

and

IDEM's Virtual File Cabinet (VFC): https://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.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, or have difficulty accessing the documents online, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

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Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

June 26, 2024
CF Industries Distribution Facilities LLC Terre Haute Terminal
167-47886-00002

To: Interested Parties

This notice is to inform you that a final decision has been issued for the air permit application referenced above. This notice is for informational purposes only. You are not required to take any action.

You are receiving this notice because you asked to be on IDEM's notification list for this company and/or county; or because your property is nearby the company being permitted; or because you represent a local/regional government entity.

The enclosed Notice of Decision Letter provides additional information about the final permit decision.

The final decision and supporting materials 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 47886

and

IDEM's Virtual File Cabinet (VFC): https://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.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit.

Please Note: *If you 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
Final Interested Parties Cover Letter 10/13/2023

Mail Code 61-53

IDEM Staff	JLSCOTT 6/26/2024 CF Industries Distribution Facilities LLC Terre Haute Terminal 167-47886-00002 Final		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**

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4		Vigo County Health Department 147 Oak St Terre Haute IN 47807 *(Health Department)*									
5		J.P. Roehm PO Box 303 Clinton IN 47842 *(Affected Party)*									
6		Mr. Mark Fitton Tribune-Star 2800 Poplar St, Ste 37A Terre Haute IN 47807 *(Affected Party)*									
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