



Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

October 1, 2004

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(317) 232-8603
(800) 451-6027
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TO: Interested Parties / Applicant

RE: Carb -Rite Company / 089-16701-00093

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require 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 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of 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.

Enclosures
FNPER.dot 9/16/03



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FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) RENEWAL OFFICE OF AIR QUALITY

**Carb-Rite Company
23810 Highland Street
Schneider, Indiana 46367**

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

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

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|---|--|
| Operation Permit No.: F089-16701-00093 | |
| Issued by: Original Signed by Paul Dubenetzky, Branch Chief Office of Air Quality | Issuance Date: October 1, 2004 Expiration Date: October 1, 2009 |



TABLE OF CONTENTS

| | | |
|------------------|---|----|
| SECTION A | SOURCE SUMMARY | 5 |
| A.1 | General Information [326 IAC 2-8-3(b)] | |
| A.2 | Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)] | |
| A.3 | Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)] | |
| A.4 | FESOP Applicability [326 IAC 2-8-2] | |
| A.5 | Prior Permits Superseded [326 IAC 2-1.1-9.5] | |
| SECTION B | GENERAL CONDITIONS | 11 |
| B.1 | Permit No Defense [IC 13] | |
| B.2 | Definitions [326 IAC 2-8-1] | |
| B.3 | Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5] | |
| B.4 | Enforceability [326 IAC 2-8-6] | |
| B.5 | Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)] | |
| B.6 | Severability [326 IAC 2-8-4(4)] | |
| B.7 | Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)] | |
| B.8 | Duty to Provide Information [326 IAC 2-8-4(5)(E)] | |
| B.9 | Compliance Order Issuance [326 IAC 2-8-5(b)] | |
| B.10 | Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)] | |
| B.11 | Annual Compliance Certification [326 IAC 2-8-5(a)(1)] | |
| B.12 | Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)] | |
| B.13 | Emergency Provisions [326 IAC 2-8-12] | |
| B.14 | Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)] | |
| B.15 | Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8] | |
| B.16 | Permit Renewal [326 IAC 2-8-3(h)] | |
| B.17 | Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1] | |
| B.18 | Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1] | |
| B.19 | Permit Revision Requirement [326 IAC 2-8-11.1] | |
| B.20 | Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC13-14-2-2][IC13-30-3-1] [IC13-17-3-2] | |
| B.21 | Transfer of Ownership or Operational Control [326 IAC 2-8-10] | |
| B.22 | Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7] | |
| B.23 | Advanced Source Modification Approval [326 IAC 2-8-4(11)] [326 IAC 2-1.1-9] | |
| SECTION C | SOURCE OPERATION CONDITIONS | 20 |
| | Emission Limitations and Standards [326 IAC 2-8-4(1)] | |
| C.1 | Overall Source Limit [326 IAC 2-8] | |
| C.2 | Opacity [326 IAC 5-1] | |
| C.3 | Open Burning [326 IAC 4-1][IC 13-17-9] | |
| C.4 | Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)] | |
| C.5 | Fugitive Dust Emissions [326 IAC 6-4] | |
| C.6 | Fugitive Dust Emissions [326 IAC 6-1-11.1] | |
| C.7 | Lake County Particulate Matter Contingency Measures [326 IAC 6-1-11.2] | |
| C.8 | Operation of Equipment [326 IAC 2-8-5(a)(4)] | |
| C.9 | Stack Height [326 IAC 1-7] | |
| C.10 | Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61 Subpart M] | |
| | Testing Requirements [326 IAC 2-8-4(3)] | |
| C.11 | Performance Testing [326 IAC 3-6] | |
| | Compliance Requirements [326 IAC 2-1.1-11] | |
| C.12 | Compliance Requirements [326 IAC 2-1.1-11] | |

TABLE OF CONTENTS (CONTINUED)

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

- C.13 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]
- C.14 Monitoring Methods [326 IAC 3][40 CFR 60][40 CFR 63]
- C.15 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11]
[326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]

Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5]

- C.16 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]
- C.17 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]
- C.18 Compliance Response Plan -Preparation, Implementation, Records, and Reports
[326 IAC 2-8-4][326 IAC 2-8-5]
- C.19 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4]
[326 IAC 2-8-5]

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

- C.20 General Record Keeping Requirements [326 IAC 2-8-4(3)][326 IAC 2-8-5]
- C.21 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

Stratospheric Ozone Protection

- C.22 Compliance with 40 CFR 82 and 326 IAC 22-1

SECTION D.1 FACILITY OPERATION CONDITIONS 28

Emission Limitations and Standards [326 IAC 2-8-4(1)]

- D.1.1 Particulate Emission Limitations [326 IAC 2-2] [326 IAC 2-8]
- D.1.2 Non-Attainment Particulate Emission Limitations [326 IAC 6-1-2]
- D.1.3 Lake County Fugitive Particulate Matter Control Requirements [326 IAC 6-1-11.1]
- D.1.4 Sulfur Dioxide [326 IAC 7-1.1-2] [326 IAC 7-2-1]
- D.1.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

Compliance Determination Requirements

- D.1.6 Testing Requirements [326 IAC 2-8-5(a)(1), (4)][326 IAC 2-1.1-11]
- D.1.7 Particulate Control
- D.1.8 Sulfur Dioxide Emissions and Sulfur Content

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

- D.1.9 Visible Emissions Notations
- D.1.10 Parametric Monitoring
- D.1.11 Baghouse Inspections
- D.1.12 Broken or Failed Bag Detection
- D.1.13 Cyclone Inspections
- D.1.14 Cyclone Failure Detection

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

- D.1.15 Record Keeping Requirements
- D.1.16 Reporting Requirements

SECTION D.2 FACILITY OPERATION CONDITIONS 37

Emission Limitations and Standards [326 IAC 2-8-4(1)]

- D.2.1 Non-Attainment Particulate Emission Limitations [326 IAC 6-1-2]
- D.2.2 Lake County Fugitive Particulate Matter Control Requirements [326 IAC 6-1-11.1]

TABLE OF CONTENTS (CONTINUED)

- D.2.3 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]
- D.2.4 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

Compliance Determination Requirements

- D.2.5 Fugitive Particulate Matter (PM)

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

- D.2.6 Record Keeping Requirements
- D.2.7 Reporting Requirements

| | |
|---|----|
| Certification Form | 43 |
| Emergency Occurrence Form | 44 |
| Quarterly Report Form | 46 |
| Quarterly Deviation and Compliance Monitoring Report Form | 47 |

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary metallurgical coke and petroleum coke processing plant.

| | |
|-------------------------|--|
| Authorized individual: | Chairman of the Board |
| Source Address: | 23810 Highland Street, Schneider, Indiana 46367 |
| Mailing Address: | 23810 Highland Street, Schneider, Indiana 46367 |
| General Source Phone: | (412) 344-9900 |
| SIC Code: | 2999 and 3999 |
| County Location Status: | Lake County |
| Source Location Status: | Nonattainment for ozone under the 8-hour standard Nonattainment for ozone under the 1-hour standard Attainment for all other criteria pollutants |
| Source Status: | Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD and Nonattainment NSR Rules Not 1 of 28 Source Categories |

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

(a) Emission units located outdoors:

6' x 20' Scalping Screen Line (ID# 2), constructed in 2000, with a maximum capacity of 50 tons of metallurgical coke or sand per hour, consisting of the following equipment:

- (1) Six (6) conveyors (ID# 2A, 2B, 2C, 2D, 2E, 2F).
- (2) One (1) 6' x 20' scalping screen (ID# 2G).
- (3) One (1) vibrating pan feeder (ID#2H).

(b) Emission units located at the raw material storage building:

Bulk Truck Unloading (ID# 4), constructed in 1973, with a maximum capacity of 250 tons of petroleum coke per hour.

(c) Emission units located at the dryer building:

- (1) Rotary Dryer Line (ID# 6), constructed in 1987, with a maximum capacity of 30 tons of metallurgical coke or metallurgical coke-petroleum coke blend, consisting of the following equipment:
 - (A) One (1) dryer loading bin (ID# 6A).
 - (B) One (1) feed hopper (ID# 6B).
 - (C) One (1) vibrating pan feeder (ID# 6C).
 - (D) One (1) conveyor (ID# 6D).

- (E) One (1) natural gas-fired rotary dryer (ID# 6E) with a maximum heat input rate of 37.4 million British Thermal Units per hour (MMBTU/hr), controlled by a cyclone-baghouse system (ID# DSS-1) exhausting through a stack (ID# DSS-1). This dryer uses no. 2 fuel oil as a back-up fuel.
 - (F) One (1) cooling screw (ID# 6F) controlled by a cyclone-baghouse system (ID# DSS-1) exhausting through a stack (ID# DSS-1),
 - (G) One (1) belt conveyor (ID# 6G) controlled by a cyclone-baghouse system (ID# DSS-1) exhausting through a stack (ID# DSS-1),
 - (H) One (1) 5' x 14' screen (ID# 6H) controlled by a cyclone-baghouse system (ID# DSS-1) exhausting through a stack (ID# DSS-1),
 - (I) One (1) dryer discharge bin (ID# 6I), and
 - (J) Various product storage bins (ID# 6J).
- (2) Crushing Line (ID# 7), constructed in 1983, with a maximum capacity of 50 tons of metallurgical coke or petroleum coke per hour, controlled by a baghouse (ID# DSS-3), exhausting through a stack (ID# DSS-3), consisting of the following equipment:
- (A) One (1) feed hopper (ID# 7A).
 - (B) One (1) vibrating pan feeder (ID# 7B).
 - (C) Two (2) belt conveyors (ID# 7C, 7D).
 - (D) One (1) enclosed crusher (ID# 7C).
 - (E) One (1) discharge storage bin (ID# 7D).
- (3) Two-Meter Screen Line (ID# 8), constructed in 1986, with a maximum capacity of 25 tons of metallurgical coke per hour, controlled by a baghouse (ID# DSS-2), exhausting through a stack (ID# DSS-2), consisting of the following equipment:
- (A) One (1) feed hopper (ID# 8A).
 - (B) One (1) vibrating pan feeder (ID# 8B).
 - (C) One (1) belt conveyor (ID# 8C).
 - (D) One (1) enclosed two meter screen (ID# 8D).
 - (E) Various storage bins (ID# 8E).
- (4) Bulk Loadout Line (ID# 18), constructed 2001, with a maximum capacity of 25 tons of metallurgical coke, controlled by a dust collector (ID# WBBSS-3) exhausting through a stack (ID# WBBSS-3), and consisting of the following equipment:
- (A) One (1) feed hopper (ID# 18A).
 - (B) One (1) vibrating pan feeder (ID# 18B).
 - (C) One (1) belt conveyor (ID# 18C).

- (D) One (1) loading hopper and spout (ID# 18D).
- (d) Emission units located at the screening building:
 - (1) Bulk Truck Unloading (ID# 9), constructed in 1971, with a maximum capacity of 250 tons of petroleum coke per hour.
 - (2) One-Meter Screen Line (ID# 10), constructed in 1990, with a maximum capacity of 10 tons of petroleum coke per hour, controlled by a baghouse (ID# DSS-4), exhausting through a stack (ID# DSS-4), consisting of the following equipment:
 - (A) One (1) feed hopper (ID# 10A).
 - (B) One (1) vibrating pan feeder (ID# 10B).
 - (C) One (1) conveyor (ID# 10D).
 - (D) One (1) enclosed one meter screen (ID# 10E).
 - (E) One (1) inside storage bin (ID# 10F).
 - (F) One (1) inside storage area (ID# 10G).
- (e) Emission units located at the mix/storage building:
 - (1) Bulk Truck Unloading (ID# 11), constructed in 1970, with a maximum capacity of 250 tons of petroleum coke per hour.
 - (2) Bulk Rail Unloading (ID# 13), constructed in 1970, with a maximum capacity of 22.5 tons of metallurgical coke or petroleum coke per hour, consisting of the following equipment:
 - (A) One (1) underground feed hopper (ID# 13A).
 - (B) One (1) fixed conveyor (ID# 13B).
 - (C) One (1) movable conveyor (ID# 13C).
 - (3) Bulk Loadout Line (ID# 16), constructed in 2000, with a maximum capacity of 25 tons of petroleum coke, consisting of the following equipment:
 - (A) One (1) feed hopper (ID# 16A).
 - (B) One (1) vibrating pan feeder (ID# 16B).
 - (C) One (1) belt conveyor (ID# 16C).
 - (D) One (1) loading hopper and spout (ID# 16D), controlled by a dust collector (ID# WBBSS-2) exhausting through a stack (ID# WBBSS-2).
- (f) Emission units located at the warehouse/bagging building:
 - (1) Bagging Line (ID# 14,) with a maximum capacity of 15 tons of metallurgical coke, petroleum coke, or metallurgical coke-petroleum coke blend, consisting of the following equipment [326 IAC 6-1-2]:
 - (A) One (1) feed hopper (ID# 14A).
 - (B) One (1) conveyor (ID# 14B).

- (C) One (1) discharge tank (ID# 14C).
- (D) One (1) bagging machine (ID# 14D), controlled by a dust collector (ID# WBBSS-1), exhausting through a stack (ID# WBBSS-1).
- (2) Supersacker Line (ID# 15), with a maximum capacity of 13 tons of metallurgical coke, petroleum coke, or metallurgical coke-petroleum coke blend, consisting of the following equipment [326 IAC 6-1-2]:
 - (A) One (1) feed hopper (ID# 15A).
 - (B) One (1) vibrating pan feeder (ID# 15B).
 - (C) One (1) bucket elevator (ID# 15C).
 - (D) One (1) discharge tank (ID# 15D).
 - (E) One (1) supersacker machine (ID# 15E), controlled by a dust collector (ID# WBBSS-1) exhausting through a stack (ID# WBBSS-1).

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

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

- (a) Emission units located outdoors:
 - (1) Outside storage piles (ID# 1) [326 IAC 6-1-11.1][326 IAC 6-1-11.2].
 - (2) Crushing Line (ID# 3), with a maximum capacity of 36 tons of metallurgical coke per hour, consisting of the following equipment [326 IAC 6-1-11.1][326 IAC 6-1-11.2]:
 - (A) One (1) vibrating pan feeder (ID# 3A).
 - (B) Two (2) conveyors (ID#s 3B and 3C).
 - (C) One (1) enclosed crusher (ID# 3D).
 - (D) One (1) holding bin (ID# 3E).
- (b) Emission unit located at the dryer building:

Bulk Truck Unloading (ID# 5), with a maximum capacity of 250 tons of metallurgical coke per hour [326 IAC 6-1-11.1][326 IAC 6-1-11.2].
- (c) Emission unit located at the mix/storage building:

Blending Line (ID# 12), with a maximum capacity of 17 tons of metallurgical coke-petroleum coke blend per hour, consisting of the following equipment [326 IAC 6-1-11.1][326 IAC 6-1-11.2]:

 - (1) Various metallurgical coke inside storage bins (ID# 12A).
 - (2) One (1) petroleum coke inside storage pile (ID# 12B).
 - (3) One (1) blending area (ID# 12C).
- (d) Emission units located at the sand mix building:

Sand Mix Line (ID# 17), with a maximum capacity of 20 tons of sand per hour, consisting of the following equipment [326 IAC 6-1-11.1][326 IAC 6-1-11.2]:

- (1) One (1) intermediate outside storage area (ID# 17A).
- (2) One (1) wet yellow sand inside storage bin (ID# 17B).
- (3) One (1) wet torpedo sand inside storage bin (ID# 17C).
- (4) One (1) bond clay inside storage bin (ID# 17D).
- (5) One (1) pitch inside storage bin (ID# 17E).
- (6) One (1) feed hopper (ID# 17F).
- (7) One (1) conveyor (ID# 17G).
- (8) One (1) self-contained muller (ID# 17H).
- (9) One (1) belt conveyor with pulley mixer (ID# 17I).
- (10) One (1) inside runner-sand mix storage bin (ID# 17J).

There are no additional air pollution control devices attached to any of this equipment.

- (e) The following equipment related to manufacturing activities not resulting in the emissions of HAPs: brazing equipment, cutting torches, soldering equipment, and welding equipment. [326 IAC 6-1-2]
- (f) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. [326 IAC 8-3-2][326 IAC 8-3-5]
- (g) Paved and unpaved roadways. [326 IAC 6-4]
- (h) Cleaners and solvents characterized as follows:
 - (1) Having vapor pressure equal to or less than 2 kilopascals (kPa); 15 millimeters of mercury (mmHg); or 0.3 pounds per square inch (psi) measured at 38 degrees centigrade ($^{\circ}\text{C}$) (100°F) or
 - (2) Having a vapor pressure equal to or less than 0.7 kPa; 5 mm Hg; or 0.1 psi measured at 20°C (68°F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
- (i) Six (6) natural gas-fired space heaters each with heat input less than ten (10) million British Thermal Units per hour (MMBTU/hr).
- (j) Combustion source flame safety purging on startup.
- (k) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.
- (l) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
- (m) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.

- (n) Replacement or repair of electrostatic precipitators, bags in baghouses, and filters in other air filtration equipment.
- (o) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).

A.5 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deletedby this permit.
- (b) All previous registrations and permits are superseded by this permit.

SECTION B GENERAL CONDITIONS

B.1 Permit No Defense [IC 13]

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 FESOP under 326 IAC 2-8.

B.2 Definitions [326 IAC 2-8-1]

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

B.3 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5]

This permit is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

B.4 Enforceability [326 IAC 2-8-6]

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 Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3(h)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

B.6 Severability [326 IAC 2-8-4(4)]

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.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

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

B.8 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1). 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.9 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.10 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an authorized individual of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable

inquiry, the statements and information in the document are true, accurate, and complete.

- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An authorized individual is defined at 326 IAC 2-1.1-1(1).

B.11 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than April 15 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
 - (5) Such other facts as specified in Sections D of this permit, IDEM, OAQ, may require to determine the compliance status of the source.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.12 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs), 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.

- (b) The Permittee shall implement the PMPs, including any required record keeping, as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.
- (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 or potential to emit. The PMP does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (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.13 Emergency Provisions [326 IAC 2-8-12]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes the following:
 - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
 - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, and the Northwest Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

IDEM, OAQ:

Telephone No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section) or,

Telephone No.: 317-233-5674 (ask for Compliance Section)

Facsimile No.: 317-233-5967

and

Northwest Regional Office:

Telephone No.: 1-888-209- 8892 or 219-881-6712

Facsimile No.: 219-881-6745

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

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015

Indianapolis, Indiana 46206-6015

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

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

B.14 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provision), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a FESOP modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
- (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.16 Permit Renewal [326 IAC 2-8-3(h)]

- (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 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

(b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]

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

- (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
- (B) 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.

(2) If IDEM, OAQ upon receiving a timely and complete 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.

(c) Right to Operate After Application for Renewal [326 IAC 2-8-9]

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 2-8 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 in writing by IDEM, OAQ, any additional information identified as needed to process the application.

B.17 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 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
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application shall be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement the administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

(d) No permit amendment or modification is required for the addition, operation or removal of a nonroad engine, as defined in 40 CFR 89.2.

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
- (3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

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

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

- (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-8-15(b) through (d) and makes such records available, upon reasonable request, to public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-8-15(b)(2), (c)(1), and (d).

- (b) **Emission Trades [326 IAC 2-8-15(c)]**
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (c) **Alternative Operating Scenarios [326 IAC 2-8-15(d)]**
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.
- (d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.19 Permit Revision Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2][IC13-30-3-1] [IC13-17-3-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a FESOP 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.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 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
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.22 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action, or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4320 (ask for OAQ, Billing, Licensing and Training Section (BLT)), to determine the appropriate permit fee.

B.23 Advanced Source Modification Approval [326 IAC 2-8-4(11)] [326 IAC 2-1.1-9]

- (a) The requirements to obtain a permit revision under 326 IAC 2-8-11.1 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections A.2 and A.3.

(b) Pursuant to 326 IAC 2-1.1-9 any permit authorizing construction may be revoked if

Construction of the emission unit has not commenced within eighteen (18) months from the date of issuance of the permit, or if during the construction work is suspended for a continuous period of one (1) year or more.

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

Notwithstanding the conditions of this permit that state specific methods that may be used to demonstrate compliance with, or a violation of, applicable requirements, any person (including the Permittee) may also use other credible evidence to demonstrate compliance with, or a violation of, any term or condition of this permit.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

C.1 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

- (a) Pursuant to 326 IAC 2-8:
- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period. This limitation shall also satisfy the requirements of 326 IAC 2-3 (Emission Offset);
 - (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
 - (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
- (b) Pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.
- (c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided the source's potential to emit does not exceed the above specified limits.
- (d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.2 Opacity [326 IAC 5-1]

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

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

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

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

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and in 326 IAC 9-1-2.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

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

C.6 Fugitive Dust Emissions [326 IAC 6-1-11.1]

Pursuant to 326 IAC 6-1-11.1 (Lake County Fugitive Particulate Matter Control Requirements), the particulate matter emissions from source wide activities shall meet the following requirements:

- (a) The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%).
- (b) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).
- (c) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).
- (d) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.
- (e) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.
- (f) There shall be a zero (0) percent frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time.
- (g) The opacity of fugitive particulate emissions from the inplant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).
- (h) There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.
- (i) The PM₁₀ emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.
- (j) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).
- (k) Any facility or operation not specified in 326 IAC 6-1-11.1(d) shall meet a twenty percent (20%), three (3) minute average opacity standard.

The Permittee shall achieve these limits by controlling fugitive particulate matter emissions according to the Fugitive Dust Control Plan, submitted in November, 1999. This plan is included as Appendix B.

C.7 Lake County Particulate Matter Contingency Measures [326 IAC 6-1-11.2]

The Permittee shall comply with the applicable provisions of 326 IAC 6-1-11.2 (Lake County Particulate Matter Contingency Measures).

C.8 Operation of Equipment [326 IAC 2-8-5(a)(4)]

Except as otherwise provided by statute, rule or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.9 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

C.10 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(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (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 Accredited 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 Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-8-4(3)]

C.11 Performance Testing [326 IAC 3-6]

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (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.12 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 2-8-4] [326 IAC 2-8-5(a)(1)]

C.13 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented upon issuance of this permit. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

Unless otherwise specified in the approval for the new emissions unit, compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

C.14 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63 or other approved methods as specified in this permit.

C.15 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)]
[326 IAC 2-8-5(1)]

- (a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.
- (b) Whenever a condition in this permit requires the measurement of a flow rate, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.
- (c) The Permittee may request that IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.16 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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

- (a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on January 12, 1999.
- (b) Upon direct notification by IDEM, OAQ, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.17 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

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

C.18 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-8-4] [326 IAC 2-8-5]

- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and is comprised of:
 - (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected time frame for taking reasonable response steps.
 - (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
 - (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or

- (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.

- (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, and it will be ten (10) days or more until the unit or device will be shut down, then the permittee shall promptly notify the IDEM, OAQ of the expected date of the shut down. The notification shall also include the status of the applicable compliance monitoring parameter with respect to normal, and the results of the response actions taken up to the time of notification.
 - (4) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
- (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied.
 - (3) An automatic measurement was taken when the process was not operating.
 - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-8-12 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.
- C.19 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4]
[326 IAC 2-8-5]
-
- (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 take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
 - (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
 - (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to

noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.20 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (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, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.21 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) 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.

Stratospheric Ozone Protection

C.22 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

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

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Individual Facilities

(a) Emission units located outdoors:

6' x 20' Scalping Screen Line (ID# 2), constructed in 2000, with a maximum capacity of 50 tons of metallurgical coke or sand per hour, consisting of the following equipment:

- (1) Six (6) conveyors (ID# 2A, 2B, 2C, 2D, 2E, 2F).
- (2) One (1) 6' x 20' scalping screen (ID# 2G).
- (3) One (1) vibrating pan feeder (ID#2H).

(b) Emission units located at the raw material storage building:

Bulk Truck Unloading (ID# 4), constructed in 1973, with a maximum capacity of 250 tons of petroleum coke per hour.

(c) Emission units located at the Dryer Building:

(1) Rotary Dryer Line (ID# 6), constructed in 1987, with a maximum capacity of 30 tons of metallurgical coke or metallurgical coke-petroleum coke blend, consisting of the following equipment:

- (A) One (1) dryer loading bin (ID# 6A).
- (B) One (1) feed hopper (ID# 6B).
- (C) One (1) vibrating pan feeder (ID# 6C).
- (D) One (1) conveyor (ID# 6D).
- (E) One (1) natural gas-fired rotary dryer (ID# 6E), with a maximum heat input rate of 37.4 million British Thermal Units per hour (MMBTU/hr), controlled by a cyclone-baghouse system (ID# DSS-1) exhausting through a stack (ID# DSS-1). This dryer uses no. 2 fuel oil as a back-up fuel.
- (F) One (1) cooling screw (ID# 6F), controlled by a cyclone-baghouse system (ID# DSS-1) exhausting through a stack (ID# DSS-1).
- (G) One (1) belt conveyor (ID# 6G), controlled by a cyclone-baghouse system (ID# DSS-1) exhausting through a stack (ID# DSS-1).
- (H) One (1) 5' x 14' screen (ID# 6H), controlled by a cyclone-baghouse system (ID# DSS-1) exhausting through a stack (ID# DSS-1).
- (I) One (1) dryer discharge bin (ID# 6I).
- (J) Various product storage bins (ID# 6J).

(2) Crushing Line (ID# 7), constructed in 1983, with a maximum capacity of 50 tons of metallurgical coke or petroleum coke per hour, controlled by a baghouse (ID# DSS-3), exhausting through a stack (ID# DSS-3), consisting of the following equipment:

- (A) One (1) feed hopper (ID# 7A).

SECTION D.1

FACILITY OPERATION CONDITIONS (Continued)

Facility Description [326 IAC 2-8-4(10)]: Individual Facilities (Continued)

- (B) One (1) vibrating pan feeder (ID# 7B).
- (C) Two (2) belt conveyors (ID#7C, 7D).
- (D) One (1) enclosed crusher (ID# 7C).
- (E) One (1) discharge storage bin (ID# 7D).
- (3) Two-Meter Screen Line (ID# 8), constructed in 1986, with a maximum capacity of 25 tons of metallurgical coke per hour, controlled by a baghouse (ID# DSS-2), exhausting through a stack (ID# DSS-2), consisting of the following equipment:
 - (A) One (1) feed hopper (ID# 8A).
 - (B) One (1) bucket elevator (ID# 8B).
 - (C) One (1) vibrating pan feeder (ID# 8C).
 - (D) One (1) enclosed two meter screen (ID# 8D).
 - (E) Various storage bins (ID# 8E).
- (4) Bulk Loadout Line (ID# 18), constructed 2001, with a maximum capacity of 25 tons of metallurgical coke, controlled by a dust collector (ID# WBBSS-3), exhausting through a stack (ID# WBBSS-3), consisting of the following equipment:
 - (A) One (1) feed hopper (ID# 18A).
 - (B) One (1) vibrating pan feeder (ID# 18B).
 - (C) One (1) belt conveyor (ID# 18C).
 - (D) One (1) loading hopper and spout (ID# 18D).
- (d) Emission units located at the screening building:
 - (1) Bulk Truck Unloading (ID# 9), constructed in 1971, with a maximum capacity of 250 tons of petroleum coke per hour.
 - (2) One-Meter Screen Line (ID# 10), constructed in 1990, with a maximum capacity of 10 tons of petroleum coke per hour, controlled by a baghouse (ID# DSS-4), exhausting through a stack (ID# DSS-4), consisting of the following equipment:
 - (A) One (1) feed hopper (ID# 10A).
 - (B) One (1) vibrating pan feeder (ID# 10B).
 - (C) One (1) conveyor (ID# 10D).
 - (D) One (1) enclosed one meter screen (ID# 10E).
 - (E) One (1) inside storage bin (ID# 10F).

SECTION D.1

FACILITY OPERATION CONDITIONS (Continued)

Facility Description [326 IAC 2-8-4(10)]: Individual Facilities (Continued)

- (F) One (1) inside storage area (ID# 10G).
- (e) Emission units located at the mix/storage building:
 - (1) Bulk Truck Unloading (ID# 11), constructed in 1970, with a maximum capacity of 250 tons of petroleum coke per hour.
 - (2) Bulk Rail Unloading (ID# 13), constructed in 1970, with a maximum capacity of 22.5 tons of metallurgical coke or petroleum coke per hour, consisting of the following equipment:
 - (A) One (1) underground feed hopper (ID# 13A).
 - (B) One (1) fixed conveyor (ID# 13B).
 - (C) One (1) movable conveyor (ID# 13C).
 - (3) Bulk Loadout Line (ID# 16), constructed in 2000, with a maximum capacity of 25 tons of petroleum coke, consisting of the following equipment:
 - (A) One (1) feed hopper (ID# 16A).
 - (B) One (1) vibrating pan feeder (ID# 16B).
 - (C) One (1) belt conveyor (ID# 16C).
 - (D) One (1) loading hopper and spout (ID# 16D), controlled by a dust collector (ID# WBBSS-2) exhausting through a stack (ID# WBBSS-2).
- (f) Emission units located at the warehouse/bagging building:
 - (1) Bagging Line (ID# 14,) with a maximum capacity of 15 tons of metallurgical coke, petroleum coke, or metallurgical coke-petroleum coke blend, consisting of the following equipment [326 IAC 6-1-2]:
 - (A) one (1) feed hopper (ID# 14A).
 - (B) one (1) conveyor (ID# 14B).
 - (C) one (1) discharge tank (ID# 14C).
 - (D) one (1) bagging machine (ID# 14D), controlled by a dust collector (ID# WBBSS-1), exhausting through a stack (ID# WBBSS-1).
 - (2) Supersacker Line (ID# 15), with a maximum capacity of 13 tons of metallurgical coke, petroleum coke, or metallurgical coke-petroleum coke blend, consisting of the following equipment [326 IAC 6-1-2]:
 - (A) one (1) feed hopper (ID# 15A).
 - (B) one (1) vibrating pan feeder (ID# 15B).
 - (C) one (1) bucket elevator (ID# 15C).

SECTION D.1 FACILITY OPERATION CONDITIONS (Continued)

Facility Description [326 IAC 2-8-4(10)]: Individual Facilities (Continued)

- (D) one (1) discharge tank (ID# 15D).
- (E) one (1) supersacker machine (ID# 15E), controlled by a dust collector (ID# WBBSS-1) exhausting through a stack (ID# WBBSS-1).

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 Particulate Emission Limitations [326 IAC 2-2] [326 IAC 2-8]

The Permittee shall comply with the following requirements:

- (a) The Dryer Building Rotary Dryer Line (ID# 6) PM emissions shall not exceed 1.04 pounds per hour and the PM-10 emissions shall not exceed 0.5 pounds per hour.
- (b) The Dryer Building Crushing Line (ID# 7) PM emissions shall not exceed 4.9 pounds per hour and the PM-10 emissions shall not exceed 2.3 pounds per hour.
- (c) The Dryer Building Two-Meter Screen (ID# 8) PM emissions shall not exceed 0.09 pounds per hour and the PM-10 emissions shall not exceed 0.04 pounds per hour.
- (d) The Screening Building One-Meter Screen Line (ID# 10) PM emissions shall not exceed 1.6 pounds per hour and the PM-10 emissions shall not exceed 0.7 pounds per hour.
- (e) The Mix/Storage Building Bulk Loadout Line (ID# 16) PM emissions shall not exceed 4.9 pounds per hour and the PM-10 emissions shall not exceed 2.3 pounds per hour.
- (f) The Dryer Building Bulk Loadout Line (ID# 18) PM emissions shall not exceed 2.4 pounds per hour and the PM-10 emissions shall not exceed 1.2 pounds per hour.
- (g) The Warehouse/Bagging Building Bagging Line (ID# 14) PM emissions shall not exceed 1.2 pounds per hour and the PM-10 emissions shall not exceed 0.6 pounds per hour.
- (h) The Warehouse/Bagging Building Supersacker Line (ID# 15) PM emissions shall not exceed 1.6 pounds per hour and the PM-10 emissions shall not exceed 0.8 pounds per hour.

Compliance with these limits is equivalent to source-wide, non-fugitive PM emissions of less than 250 tons per year and source-wide, non-fugitive PM-10 emissions of less than 100 tons per year. Compliance with these limits will render the requirements of 326 IAC 2-7 (Part 70 Permit Program) and 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

D.1.2 Non-attainment Particulate Emission Limitations [326 IAC 6-1-2]

Pursuant to 326 IAC 6-1-2(a) (Non-attainment Particulate Emission Limitations), particulate emissions from the Rotary Dryer Line (ID# 6), natural gas-fired combustion source on the Rotary Dryer Line (ID# 6E), Crushing Line (ID# 7), Two-Meter Screen Line (ID# 8), One-Meter Screen Line (ID# 10), Bagging Line (ID# 14), Supersacker Line (ID# 15), Bulk Loadout Line (ID# 16) and Bulk Loadout Line (ID# 18) shall not exceed 0.03 grains per dry standard cubic foot.

D.1.3 Lake County Fugitive Particulate Matter Control Requirements [326 IAC 6-1-11.1]

Pursuant to 326 IAC 6-1-11.1 (Lake County Fugitive Particulate Matter Control Requirements), compliance with the opacity limits specified in Condition C.6 (Fugitive Dust Emissions - 326 IAC 6-1-11.1) shall be achieved by controlling fugitive particulate matter emissions from 6' x 20'

Scalping Screen (ID# 2), Bulk Truck Unloading (ID# 4), Bulk Truck Unloading (ID# 9), Bulk Truck Unloading (ID# 11), Bulk Truck Unloading (ID# 13), and paved and unpaved roadways according to the Fugitive Dust Control Plan (FDCP). If it is determined that the control procedures specified in the FDCP do not demonstrate compliance with the fugitive emission limitations, IDEM, OAQ may request that the FDCP be revised and submitted for approval.

D.1.4 Sulfur Dioxide [326 IAC 7-1.1-2] [326 IAC 7-2-1]

Pursuant to 326 IAC 1-7 (Stack Height Provisions) and F089-8579-00093, issued on October 13, 1998, the fuel oil combusted by the natural gas-fired Rotary Dryer (ID#6E) shall not exceed 676 kilogallons per 12 consecutive month period with compliance determined at the end of each month and the sulfur content shall not exceed 0.5 percent (0.5%) by weight, with compliance determined at the end of each month. Compliance with this limit is equivalent to sulfur dioxide emissions of less than 25 tons per year, and will ensure compliance with the requirements of 326 IAC 7-1.1.

D.1.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.

Compliance Determination Requirements

D.1.6 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM and PM-10 testing of the Rotary Dryer Line (ID #6) utilizing methods as approved by the Commissioner. This test shall be performed no later than October 13, 2006 and shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. PM-10 includes filterable and condensible PM-10. Testing shall be conducted in accordance with Section C- Performance Testing.

D.1.7 Particulate Control

In order to comply with Conditions D.1.1 and D.1.2, the baghouses for particulate control shall be in operation and control emissions from the Rotary Dryer Line (ID# 6), natural gas-fired Rotary Dryer (ID# 6E), Crushing Line (ID# 7), Two-Meter Screen Line (ID# 8), Bulk Loadout Line (ID# 18), One-Meter Screen Line (ID# 10), Bagging Line (ID# 14), Supersacker Line (ID# 15) and Bulk Loadout Line (ID# 16), at all times that the facilities are in operation. The cyclone for particulate control shall be in operation and control emissions from the Rotary Dryer Line (ID #6) at all times that the dryer is in operation.

D.1.8 Sulfur Dioxide Emissions and Sulfur Content

Compliance with Condition D.1.4 shall be determined utilizing one of the following options:

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the fuel oil sulfur content from the Rotary Dryer Line (ID#6E) does not exceed five-tenths percent (0.5%) by weight by:
 - (1) Providing vendor analysis of fuel delivered (including Btu per gallon and percent sulfur), if accompanied by a vendor certification, or;
 - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.1.9 Visible Emissions Notations

- (a) Once per shift visible emission notations of the Rotary Dryer Line (ID# 6), Crushing Line (ID# 7), Two-Meter Screen Line (ID# 8), Bulk Loadout Line (ID# 18), One-Meter Screen Line (ID# 10), Bagging Line (ID# 14), Supersacker Line (ID# 15), and Bulk Loadout Line (ID# 16) stack exhaust shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

D.1.10 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouses used in conjunction with the Rotary Dryer Line (ID# 6), Crushing Line (ID# 7), Two-Meter Screen Line (ID# 8), Bulk Loadout Line (ID# 18), One-Meter Screen Line (ID# 10), Bagging Line (ID# 14), Supersacker Line (ID# 15), and Bulk Loadout Line (ID# 16) at least once per shift when the facilities are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.5 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan -Failure to Take Response. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instruments Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.11 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the Rotary Dryer Line (ID# 6), Crushing Line (ID# 7), Two-Meter Screen Line (ID# 8), Bulk Loadout Line (ID# 18), One Meter Screen Line (ID# 10) and Bulk Loadout Line (ID# 16). Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

D.1.12 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in

accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.1.13 Cyclone Inspections

An inspection shall be performed each calendar quarter of the cyclone controlling emissions from the Rotary Dryer Line (ID #6). A cyclone inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors.

D.1.14 Cyclone Failure Detection

In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.15 Record Keeping Requirements

- (a) To document compliance with Condition D.1.4, the Permittee shall maintain records in accordance with (1) through (4) below:

- (1) Calendar dates covered in the compliance determination period;
- (2) Actual fuel oil usage since last compliance determination period;
- (3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period, the natural gas fired boiler certification does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1); and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

- (4) Fuel supplier certifications;
- (5) The name of the fuel supplier; and
- (6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

- (b) Pursuant to 326 IAC 6-1-11.1 (Lake County Fugitive Particulate Matter Control Requirements), the source shall keep the following documentation to show compliance with each of its control measures and control practices:
- (1) A map or diagram showing the location of all emission sources controlled, including the location, identification, length, and width of roadways.
 - (2) For each application of water or chemical solution to roadways, the following shall be recorded:
 - (A) The name and location of the roadway controlled
 - (B) Application rate
 - (C) Time of each application
 - (D) Width of each application
 - (E) Identification of each method of application
 - (F) Total quantity of water or chemical used for each application
 - (G) For each application of chemical solution, the concentration and identity of the chemical
 - (H) The material data safety sheets for each chemical
 - (3) For application of physical or chemical control agents not covered by 326 IAC 6-1-11.1(B), the following:
 - (A) The name of the agent
 - (B) Location of application
 - (C) Application rate
 - (D) Total quantity of agent used
 - (E) If diluted, percent of concentration
 - (F) The material data safety sheets for each chemical
 - (4) A log recording incidents when control measures were not used and a statement of explanation.
 - (5) Copies of all records required by this section shall be submitted to the department within twenty (20) working days of a written request by the department.
- (c) To document compliance with Condition D.1.9, the Permittee shall maintain records of visible emission notations of the Rotary Dryer Line (ID# 6), Crushing Line (ID# 7), Two-

Meter Screen Line (ID# 8), Bulk Loadout Line (ID# 18), One-Meter Screen Line (ID# 10) and Bulk Loadout Line (ID# 16) stack exhaust once per shift.

- (d) To document compliance with Condition D.1.10, the Permittee shall maintain records once per shift of the total static pressure drop.
- (e) To document compliance with Conditions D.1.11 and D.1.13, the Permittee shall maintain records of the results of the inspections required under Conditions D.1.11 and D.1.13.
- (f) To document compliance with Condition D.1.5, the Permittee shall maintain of records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.16 Reporting Requirements

- (a) A quarterly summary of the information to document compliance with Condition D.1.4 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1). The reports shall include the following:
 - (1) The total number of gallons of No. 2 distillate fuel oil used for each month and previous twelve (12) month period; and
 - (2) Monthly average sulfur content of the No. 2 distillate fuel oil used.
- (b) Pursuant to 326 IAC 6-1-11.1 (Lake County Fugitive Particulate Matter Control Requirements), a quarterly report shall be submitted, stating the following:
 - (1) The dates any required control measures were not implemented
 - (2) A listing of those control measures
 - (3) The reasons that the control measures were not implemented
 - (4) Any corrective action taken

These reports shall be submitted within thirty (30) calendar days following the end of each calendar quarter and in accordance with Section C - General Reporting Requirements of this permit.

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities

- (a) Emission units located outdoors:
 - (1) Outside storage piles (ID# 1) [326 IAC 6-1-11.1][326 IAC 6-1-11.2].
 - (2) Crushing Line (ID# 3), with a maximum capacity of 36 tons of metallurgical coke per hour, consisting of the following equipment [326 IAC 6-1-11.1][326 IAC 6-1-11.2]:
 - (A) One (1) vibrating pan feeder (ID# 3A).
 - (B) Two (2) conveyors (ID#s 3B and 3C).
 - (C) One (1) enclosed crusher (ID# 3D).
 - (D) One (1) holding bin (ID# 3E).
- (b) Emission units located at the dryer building:

Bulk Truck Unloading (ID# 5), with a maximum capacity of 250 tons of metallurgical coke per hour [326 IAC 6-1-11.1][326 IAC 6-1-11.2].
- (c) Emission units located at the mix/storage building:

Blending Line (ID# 12), with a maximum capacity of 17 tons of metallurgical coke-petroleum coke blend per hour, consisting of the following equipment [326 IAC 6-1-11.1][326 IAC 6-1-11.2]:

 - (A) Various metallurgical coke inside storage bins (ID# 12A).
 - (B) One (1) petroleum coke inside storage pile (ID# 12B).
 - (C) One (1) blending area (ID# 12C).
- (d) Emission units located at the sand mix building:

Sand Mix Line (ID# 17), with a maximum capacity of 20 tons of sand per hour, consisting of the following equipment [326 IAC 6-1-11.1][326 IAC 6-1-11.2]:

 - (1) One (1) intermediate outside storage area (ID# 17A).
 - (2) One (1) wet yellow sand inside storage bin (ID# 17B).
 - (3) One (1) wet torpedo sand inside storage bin (ID# 17C).
 - (4) One (1) bond clay inside storage bin (ID# 17D).
 - (5) One (1) pitch inside storage bin (ID# 17E).
 - (6) One (1) feed hopper (ID# 17F).
 - (7) One (1) conveyor (ID# 17G).
 - (8) One (1) self-contained muller (ID# 17H).
 - (9) One (1) belt conveyor with pulley mixer (ID# 17I).

SECTION D.2 FACILITY OPERATION CONDITIONS (Continued)

Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities (Continued)

- (10) One (1) inside runner-sand mix storage bin (ID# 17J).
- (e) The following equipment related to manufacturing activities not resulting in the emissions of HAPs: brazing equipment, cutting torches, soldering equipment, and welding equipment. [326 IAC 6-1-2]
- (f) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. [326 IAC 8-3-2][326 IAC 8-3-5]

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 Non-attainment Particulate Emission Limitations [326 IAC 6-1-2]

Pursuant to 326 IAC 6-1-2(a) (Non-attainment Particulate Emission Limitations), particulate emissions from the following equipment related to manufacturing activities not resulting in the emissions of HAPs: brazing equipment, cutting torches, soldering equipment, and welding equipment shall not exceed 0.03 grains per dry standard cubic foot.

D.2.2 Lake County Fugitive Particulate Matter Control Requirements [326 IAC 6-1-11.1]

Pursuant to 326 IAC 6-1-11.1 (Lake County Fugitive Particulate Matter Control Requirements), compliance with the opacity limits specified in Condition C.6 (Fugitive Dust Emissions - 326 IAC 6-1-11.1) shall be achieved by controlling fugitive particulate matter emissions from Outside Storage Piles (ID# 1), Bulk Truck Unloading (ID# 5), Blending Line (ID# 12), and Sand Mix Line (ID# 17) according to the Fugitive Dust Control Plan (FDCP). If it is determined that the control procedures specified in the FDCP do not demonstrate compliance with the fugitive emission limitations, IDEM, OAQ may request that the FDCP be revised and submitted for approval.

D.2.3 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.2.4 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:

- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
 - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
 - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), for cold cleaning facility construction of which commenced after July 1, 1990, the Permittee shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

Compliance Determination Requirements

D.2.5 Fugitive Particulate Matter (PM)

Pursuant to 326 IAC 6-1-11.1 (Lake County Fugitive Particulate Matter Control Requirements), opacity from the activities shall be determined as follows:

(a) Paved Roads and Parking Lots

The average instantaneous opacity shall be the average of twelve (12) instantaneous opacity readings, taken for four (4) vehicle passes, consisting of three (3) opacity readings for each vehicle pass. The three (3) opacity readings for each vehicle pass shall be taken as follows:

- (1) The first will be taken at the time of emission generation.
- (2) The second will be taken five (5) seconds later.
- (3) The third will be taken five (5) seconds later or ten (10) seconds after the first.

The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand approximately fifteen (15) feet from the plume and at approximately right angles to the plume. Each reading shall be taken approximately four (4) feet above the surface of the roadway or parking area.

(b) Unpaved Roads and Parking Lots

The fugitive particulate emissions from unpaved roads shall be controlled by the implementation of a work program and work practice under the fugitive dust control plan.

(c) Batch Transfer

The average instantaneous opacity shall consist of the average of three (3) opacity readings taken five (5) seconds, ten (10) seconds, and fifteen (15) seconds after the end of one (1) batch loading or unloading operation. The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand approximately fifteen (15) feet from the plume and at approximately right angles to the plume.

(d) Continuous Transfer

The opacity shall be determined using 40 CFR 60, Appendix A, Method 9. The opacity readings shall be taken at least four (4) feet from the point of origin.

(e) Wind Erosion from Storage Piles

The opacity shall be determined using 40 CFR 60, Appendix A, Method 9, except that the opacity shall be observed at approximately four (4) feet from the surface at the point of maximum opacity. The observer shall stand approximately fifteen (15) feet from the plume and at approximately right angles to the plume. The limitations may not apply during periods when application of fugitive particulate control measures are either ineffective or unreasonable due to sustained very high wind speeds. During such periods, the company must continue to implement all reasonable fugitive particulate control measures and maintain records documenting the application of measures and the basis for a claim that meeting the opacity limitation was not reasonable given prevailing wind conditions.

(f) Wind Erosion from Exposed Areas

The opacity shall be determined using 40 CFR 60, Appendix A, Method 9.

(g) Material Transported by Truck or Rail

Compliance with this limitation shall be determined by 40 CFR 60, Appendix A, Method 22, except that the observation shall be taken at approximately right angles to the prevailing wind from the leeward side of the truck or railroad car. Material transported by truck or rail that is enclosed and covered shall be considered in compliance with the inplant transportation requirement.

(h) Material Transported by Front End Loader or Skip Hoist

Compliance with this limitation shall be determined by the average of three (3) opacity readings taken at five (5) second intervals. The three (3) opacity readings shall be taken as follows:

- (1) The first will be taken at the time of emission generation.
- (2) The second will be taken five (5) seconds later.
- (3) The third will be taken five (5) seconds later or ten (10) seconds after the first.

The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand at least fifteen (15) feet from the plume approximately and at right angles to the plume. Each reading shall be taken approximately four (4) feet above the surface of the roadway or parking area.

- (i) **Material Processing Limitations**
Compliance with all opacity limitations from material processing equipment shall be determined using 40 CFR 60, Appendix A, Method 9. Compliance with all visible emissions limitations from material processing equipment shall be determined using 40 CFR 60, Appendix A, Method 22. Compliance with all particulate matter limitations from material processing equipment shall be determined using 40 CFR 60, Appendix A, Method 5 or 17.
- (j) **Dust Handling Equipment**
Compliance with this standard shall be determined by 40 CFR 60, Appendix A, Method 9.

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.2.6 Record Keeping Requirements

- (a) Pursuant to 326 IAC 6-1-11.1 (Lake County Fugitive Particulate Matter Control Requirements), the source shall keep the following documentation to show compliance with each of its control measures and control practices:
 - (1) A map or diagram showing the location of all emission sources controlled, including the location, identification, length, and width of roadways.
 - (2) For each application of water or chemical solution to roadways, the following shall be recorded:
 - (A) The name and location of the roadway controlled
 - (B) Application rate
 - (C) Time of each application
 - (D) Width of each application
 - (E) Identification of each method of application
 - (F) Total quantity of water or chemical used for each application
 - (G) For each application of chemical solution, the concentration and identity of the chemical
 - (H) The material data safety sheets for each chemical
 - (3) For application of physical or chemical control agents not covered by 326 IAC 6-1-11.1(B), the following:

- (A) The name of the agent
 - (B) Location of application
 - (C) Application rate
 - (D) Total quantity of agent used
 - (E) If diluted, percent of concentration
 - (F) The material data safety sheets for each chemical
- (4) A log recording incidents when control measures were not used and a statement of explanation.
 - (5) Copies of all records required by this section shall be submitted to the department within twenty (20) working days of a written request by the department.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.7 Reporting Requirements

Pursuant to 326 IAC 6-1-11.1 (Lake County Fugitive Particulate Matter Control Requirements), a quarterly report shall be submitted, stating the following:

- (1) The dates any required control measures were not implemented
- (2) A listing of those control measures
- (3) The reasons that the control measures were not implemented
- (4) Any corrective action taken

These reports shall be submitted within thirty (30) calendar days following the end of each calendar quarter and in accordance with Section C - General Reporting Requirements of this permit.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION**

Source Name: Carb-Rite Company
Source Address: 23810 Highland Street, Schneider, Indiana 46367
Mailing Address: 23810 Highland Street, Schneider, Indiana 46367
FESOP No.: F089-16701-00093

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

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

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

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
P.O. Box 6015
100 North Senate Avenue
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT**

Source Name: Carb-Rite Company
Source Address: 23810 Highland Street, Schneider, Indiana 46367
Mailing Address: 23810 Highland Street, Schneider, Indiana 46367
FESOP No.: F089-16701-00093

This form consists of 2 pages

Page 1 of 2

9 This is an emergency as defined in 326 IAC 2-7-1(12)
☐ The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
☐ The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16

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

Facility/Equipment/Operation:

Control Equipment:

Permit Condition or Operation Limitation in Permit:

Description of the Emergency:

Describe the cause of the Emergency:

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

Page 2 of 2

| |
|---|
| Date/Time Emergency started: |
| Date/Time Emergency was corrected: |
| Was the facility being properly operated at the time of the emergency? Y N Describe: |
| Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other: |
| Estimated amount of pollutant(s) emitted during emergency: |
| Describe the steps taken to mitigate the problem: |
| Describe the corrective actions/response steps taken: |
| Describe the measures taken to minimize emissions: |
| If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value: |

Form Completed by: _____
Title / Position: _____
Date: _____
Phone: _____

A certification is not required for this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: Carb-Rite Company
Source Address: 23810 Highland Street, Schneider, Indiana 46367
Mailing Address: 23810 Highland Street, Schneider, Indiana 46367
FESOP No.: F089-16701-00093
Facility: Natural gas-fired Rotary Dryer (ID #6E)
Parameter: Amount of fuel oil combusted (kilogallons per 12 consecutive month period)
Limit: 676 kilogallons per 12 consecutive month period with compliance determined for the end of each month.

YEAR: _____

| Month | Column 1 | Column 2 | Column 1 + Column 2 |
|---------|------------|--------------------|---------------------|
| | This Month | Previous 11 Months | 12 Month Total |
| Month 1 | | | |
| Month 2 | | | |
| Month 3 | | | |

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

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Carb-Rite Company
Source Address: 23810 Highland Street, Schneider, Indiana 46367
Mailing Address: 23810 Highland Street, Schneider, Indiana 46367
FESOP No.: F089-16701-00093

Months: _____ to _____ Year: _____

Page 1 of 2

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

NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

| | |
|--|-------------------------------|
| Permit Requirement (specify permit condition #) | |
| Date of Deviation: | Duration of Deviation: |
| Number of Deviations: | |
| Probable Cause of Deviation: | |
| Response Steps Taken: | |
| Permit Requirement (specify permit condition #) | |
| Date of Deviation: | Duration of Deviation: |
| Number of Deviations: | |
| Probable Cause of Deviation: | |
| Response Steps Taken: | |
| Permit Requirement (specify permit condition #) | |
| Date of Deviation: | Duration of Deviation: |
| Number of Deviations: | |
| Probable Cause of Deviation: | |
| Response Steps Taken: | |

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Federally Enforceable State Operating Permit (FESOP) Renewal

Source Background and Description

| | |
|----------------------------------|---|
| Source Name: | Carb-Rite Company |
| Source Location: | 23810 Highland Street, Schneider, Indiana 46367 |
| County: | Lake |
| SIC Code: | 2999 and 3999 |
| Operation Permit No.: | F089-8579-00093 |
| Operations Permit Issuance Date: | October 13, 1998 |
| Permit Renewal No.: | F089-16701-00093 |
| Permit Reviewer: | ERG/AO |

The Office of Air Quality (OAQ) has reviewed a FESOP renewal application from Carb-Rite Company relating to the operation of a stationary metallurgical coke and petroleum coke processing plant.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) Emission units located outdoors:

6' x 16' Scalping Screen Line (ID# 2), constructed in 2000, with a maximum capacity of 50 tons of metallurgical coke or sand per hour, consisting of the following equipment:

- (1) Six (6) conveyors (ID# 2A, 2B, 2C, 2D, 2E, 2F).
- (2) One (1) 6' x 20' scalping screen (ID# 2G).
- (3) One (1) vibrating pan feeder (ID#2H).

(b) Emission units located at the raw material storage building:

Bulk Truck Unloading (ID# 4), constructed in 1973, with a maximum capacity of 250 tons of petroleum coke per hour.

(c) Emission units located at the dryer building:

(1) Rotary Dryer Line (ID# 6), constructed in 1987, with a maximum capacity of 30 tons of metallurgical coke or metallurgical coke-petroleum coke blend, consisting of the following equipment:

- (A) One (1) dryer loading bin (ID# 6A).
- (B) One (1) feed hopper (ID# 6B).

- (C) One (1) vibrating pan feeder (ID# 6C).
 - (D) One (1) conveyor (ID# 6D).
 - (E) One (1) natural gas-fired rotary dryer (ID# 6E), with a maximum heat input rate of 37.4 million British Thermal Units per hour (MMBTU/hr), controlled by a cyclone-baghouse system (ID# DSS-1) exhausting through a stack (ID# DSS-1). This dryer uses no. 2 fuel oil as a back-up fuel.
 - (F) One (1) cooling screw (ID# 6F), controlled by a cyclone-baghouse system (ID# DSS-1) exhausting through a stack (ID# DSS-1).
 - (G) One (1) belt conveyor (ID# 6G), controlled by a cyclone-baghouse system (ID# DSS-1) exhausting through a stack (ID# DSS-1).
 - (H) One (1) 5' x 14' screen (ID# 6H), controlled by a cyclone-baghouse system (ID# DSS-1) exhausting through a stack (ID# DSS-1).
 - (I) One (1) dryer discharge bin (ID# 6I).
 - (J) Various product storage bins (ID# 6J).
- (2) Crushing Line (ID# 7), constructed in 1983, with a maximum capacity of 50 tons of metallurgical coke or petroleum coke per hour, controlled by a baghouse (ID# DSS-3), exhausting through a stack (ID# DSS-3), consisting of the following equipment:
- (A) One (1) feed hopper (ID# 7A).
 - (B) One (1) vibrating pan feeder (ID# 7B).
 - (C) Two (2) belt conveyors (ID#7C, 7D).
 - (D) One (1) enclosed crusher (ID# 7C).
 - (E) One (1) discharge storage bin (ID# 7D).
- (3) Two-Meter Screen Line (ID# 8), constructed in 1986, with a maximum capacity of 25 tons of metallurgical coke per hour, controlled by a baghouse (ID# DSS-2), exhausting through a stack (ID# DSS-2), consisting of the following equipment:
- (A) One (1) feed hopper (ID# 8A).
 - (B) One (1) vibrating pan feeder (ID# 8B).
 - (C) One (1) belt conveyor (ID# 8C).
 - (D) One (1) enclosed two meter screen (ID# 8D).
 - (E) Various storage bins (ID# 8E).
- (4) Bulk Loadout Line (ID# 18), constructed 2001, with a maximum capacity of 25 tons of metallurgical coke, controlled by a dust collector (ID# WBBSS-3), exhausting through a stack (ID# WBBSS-3), consisting of the following equipment:
- (A) One (1) feed hopper (ID# 18A).

- (B) One (1) vibrating pan feeder (ID# 18B).
 - (C) One (1) belt conveyor (ID# 18C).
 - (D) One (1) loading hopper and spout (ID# 18D).
- (d) Emission units located at the screening building:
- (1) Bulk Truck Unloading (ID# 9), constructed in 1971, with a maximum capacity of 250 tons of petroleum coke per hour.
 - (2) One-Meter Screen Line (ID# 10), constructed in 1990, with a maximum capacity of 10 tons of petroleum coke per hour, controlled by a baghouse (ID# DSS-4), exhausting through a stack (ID# DSS-4), consisting of the following equipment:
 - (A) One (1) feed hopper (ID# 10A).
 - (B) One (1) vibrating pan feeder (ID# 10B).
 - (C) One (1) conveyor (ID# 10D).
 - (D) One (1) enclosed one meter screen (ID# 10E).
 - (E) One (1) inside storage bin (ID# 10F).
 - (F) One (1) inside storage area (ID# 10G).
- (e) Emission units located at the mix/storage building:
- (1) Bulk Truck Unloading (ID# 11), constructed in 1970, with a maximum capacity of 250 tons of petroleum coke per hour.
 - (2) Bulk Rail Unloading (ID# 13), constructed in 1970, with a maximum capacity of 22.5 tons of metallurgical coke or petroleum coke per hour, consisting of the following equipment:
 - (A) One (1) underground feed hopper (ID# 13A).
 - (B) One (1) fixed conveyor (ID# 13B).
 - (C) One (1) movable conveyor (ID# 13C).
 - (3) Bulk Loadout Line (ID# 16), constructed in 2000, with a maximum capacity of 25 tons of petroleum coke, consisting of the following equipment:
 - (A) One (1) feed hopper (ID# 16A).
 - (B) One (1) vibrating pan feeder (ID# 16B).
 - (C) One (1) belt conveyor (ID# 16C).
 - (D) One (1) loading hopper and spout (ID# 16D), controlled by a dust collector (ID# WBBSS-2) exhausting through a stack (ID# WBBSS-2).
- (f) Emission units located at the warehouse/bagging building:

- (1) Bagging Line (ID# 14), with a maximum capacity of 15 tons of metallurgical coke, petroleum coke, or metallurgical coke-petroleum coke blend, consisting of the following equipment [326 IAC 6-1-2]:
 - (A) One (1) feed hopper (ID# 14A).
 - (B) One (1) conveyor (ID# 14B).
 - (C) One (1) discharge tank (ID# 14C).
 - (D) One (1) bagging machine (ID# 14D), controlled by a dust collector (ID# WBBSS-1) exhausting through a stack (ID# WBBSS-1).

- (2) Supersacker Line (ID# 15), with a maximum capacity of 13 tons of metallurgical coke, petroleum coke, or metallurgical coke-petroleum coke blend, consisting of the following equipment [326 IAC 6-1-2]:
 - (A) One (1) feed hopper (ID# 15A).
 - (B) One (1) vibrating pan feeder (ID# 15B).
 - (C) One (1) bucket elevator (ID# 15C).
 - (D) One (1) discharge tank (ID# 15D).
 - (E) One (1) supersacker machine (ID# 15E), controlled by a dust collector (ID# WBBSS-1) exhausting through a stack (ID# WBBSS-1).

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

New Emission Units and Pollution Control Equipment

There are no new emission units and pollution control equipment at this source during this review process.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Emission units located outdoors:
 - (1) Outside storage piles (ID# 1) [326 IAC 6-1-11.1][326 IAC 6-1-11.2].
 - (2) Crushing Line (ID# 3), with a maximum capacity of 36 tons of metallurgical coke per hour, consisting of the following equipment [326 IAC 6-1-11.1][326 IAC 6-1-11.2]:
 - (A) One (1) vibrating pan feeder (ID# 3A).
 - (B) Two (2) conveyors (ID#s 3B and 3C).
 - (C) One (1) enclosed crusher (ID# 3D).
 - (D) One (1) holding bin (ID# 3E).

- (b) Emission units located at the dryer building:

Bulk Truck Unloading (ID# 5), with a maximum capacity of 250 tons of metallurgical coke per hour [326 IAC 6-1-11.1][326 IAC 6-1-11.2].

(c) Emission units located at the mix/storage building:

Blending Line (ID# 12), with a maximum capacity of 17 tons of metallurgical coke-petroleum coke blend per hour, consisting of the following equipment [326 IAC 6-1-11.1][326 IAC 6-1-11.2]:

- (1) Various metallurgical coke inside storage bins (ID# 12A).
- (2) One (1) petroleum coke inside storage pile (ID# 12B).
- (3) One (1) blending area (ID# 12C).

(d) Emission units located at the sand mix building:

Sand Mix Line (ID# 17), with a maximum capacity of 20 tons of sand per hour, consisting of the following equipment [326 IAC 6-1-11.1][326 IAC 6-1-11.2]:

- (1) One (1) intermediate outside storage area (ID# 17A).
- (2) One (1) wet yellow sand inside storage bin (ID# 17B).
- (3) One (1) wet torpedo sand inside storage bin (ID# 17C).
- (4) One (1) bond clay inside storage bin (ID# 17D).
- (5) One (1) pitch inside storage bin (ID# 17E).
- (6) One (1) feed hopper (ID# 17F).
- (7) One (1) conveyor (ID# 17G).
- (8) One (1) self-contained muller (ID# 17H).
- (9) One (1) belt conveyor with pulley mixer (ID# 17I).
- (10) One (1) inside runner-sand mix storage bin (ID# 17J).

(e) The following equipment related to manufacturing activities not resulting in the emissions of HAPs: brazing equipment, cutting torches, soldering equipment, and welding equipment. [326 IAC 6-1-2]

(f) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. [326 IAC 8-3-2][326 IAC 8-3-5]

(g) Paved and unpaved roadways. [326 IAC 6-4]

(h) Cleaners and solvents characterized as follows:

- (1) Having vapor pressure equal to or less than 2 kilopascals (kPa); 15 millimeters of mercury (mmHg); or 0.3 pounds per square inch (psi) measured at 38 degrees centigrade ($^{\circ}\text{C}$) (100°F) or
- (2) Having a vapor pressure equal to or less than 0.7 kPa; 5 mm Hg; or 0.1 psi measured at 20°C (68°F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

- (i) Six (6) natural gas-fired space heaters each with heat input less than ten (10) million British Thermal Units per hour (MMBTU/hr).
- (j) Combustion source flame safety purging on startup.
- (k) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.
- (l) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
- (m) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (n) Replacement or repair of electrostatic precipitators, bags in baghouses, and filters in other air filtration equipment.
- (o) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.

Existing Approvals

The source has been operating under the previous FESOP 089-8579-00093, issued on October 13, 1998 with an expiration date of October 13, 2003, and the following amendments and revisions:

- (a) MPR 089-12872-00093, issued on January 24, 2001.
- (b) AA 089-14819-00093, issued September 18, 2001.

All conditions from previous approvals were incorporated into this FESOP except the following:

- (a) All conditions pertaining to 326 IAC 6-3-2 from F089-8579-00093, issued October 13, 1998.

Reason not incorporated:

These conditions are not applicable because the source, and its particulate-emitting facilities contained therein, are subject to the requirements of 326 IAC 6-1-2. Pursuant to 326 IAC 6-3-1(c)(3) facilities subject to 326 IAC 6-1 are not subject to the requirements of 326 IAC 6-3.

- (b) All 326 IAC 2-8 conditions pertaining to fugitive emission sources from F089-8579-00093, issued October 13, 1998.

Reason not incorporated:

As stated on page 7 of the TSD for F089-8579-00093, issued on October 13, 1998, fugitive emissions are not counted towards PSD or Part 70 applicability because the source: 1) does not belong to 1 of the 28 source categories, and 2) is not subject to the requirements of any 40 CFR Part 60 (NSPS) which were in effect on August 7, 1980. Therefore, the particulate emissions limitations for fugitive sources listed in F089-8579-00093, issued October 13, 1998, under the authority of 326 IAC 2-8, are not included in this FESOP renewal.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the FESOP renewal be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete FESOP Renewal application for the purposes of this review was received on October 25, 2002.

There was no notice of completeness letter mailed to the source.

Emission Calculations

See Appendix A pages 1 through 29 of this document for detailed emissions calculations.

Unrestricted Potential Emissions

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the unrestricted potential emissions of the source, excluding the emission limits that were contained in the previous FESOP.

| Pollutant | Potential To Emit (tons/year) |
|-----------------|-------------------------------|
| PM | 516 |
| PM-10 | 250 |
| SO ₂ | 83.1 |
| VOC | 0.46 |
| CO | 5.85 |
| NO _x | 23.4 |

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

| HAPs | Potential To Emit (tons/year) |
|--------|-------------------------------|
| Hexane | 0.3 |
| TOTAL | 0.3 |

Note that the emissions listed above are non-fugitive emissions.

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM-10 are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 2-7. The source will be issued a FESOP because the source will limit its emissions below the Title V levels.
- (b) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile

organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Potential to Emit After Issuance

The source has opted to remain a FESOP source. The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered enforceable only after issuance of this FESOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit. Since the source has not constructed any new emission units, the source's potential to emit is based on the emission units included in the original FESOP.

| Process/Facility | Limited Potential to Emit (tons/year) | | | | | | |
|---|--|----------------------|-----------------------------|--------------------|--------------------|--------------------|------------|
| | PM | PM-10 | SO ₂ | VOC | CO | NO _x | HAPs |
| Dryer Building Rotary Dryer Line (ID# 6) ^(a) | 4.53 | 2.2 ^(b) | less than 25 ^(a) | 0.1 ^(a) | 1.7 ^(a) | 6.8 ^(a) | 0.3 |
| Dryer Building Crushing Line (ID# 7) | 21.38 | 10.07 ^(b) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Dryer Building Two-Meter Screen (ID# 8) | 0.38 | 0.18 ^(b) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Dryer Building Bulk Loadout Line (ID# 18) | 10.63 | 5.03 ^(b) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Screening Building One-Meter Screen Line (ID# 10) | 6.80 | 3.23 ^(b) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Mix/Storage Building Bulk Loadout Line (ID# 16) | 21.27 | 10.06 ^(b) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Bagging Line (ID#14) | 5.32 | 2.52 ^(b) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Supersacker Line (ID#15) | 6.91 | 3.27 ^(b) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Outdoors 6'x16' Scalping Screen Line (ID# 2) ^(d) | 1.29 | 0.76 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Raw Material Storage Bulk Truck Unloading (ID# 4) ^{(c)(d)} | 26.45 | 12.51 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Screening Building Bulk Truck Unloading (ID# 9) ^{(c)(d)} | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Mix Storage Building Bulk Truck Unloading (ID# 11) ^{(c)(d)} | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Mix Storage Building Bulk Rail Unloading (ID# 13) ^(d) | 21.58 | 10.20 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Transport on paved and unpaved roads ^(d) | 135.29 | 20.68 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Insignificant activities (ID #1, ID #3, ID #5, ID #12, ID #17) ^(d) | 6.03 | 3.58 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Emissions | 267.9^(e) | 84.3 | 24.0 | 0.1 | 1.7 | 6.8 | 0.3 |

Unless otherwise footnoted, the emissions presented are equal to the controlled (if applicable) potential to emit.

- (a) The fuel oil combusted by the rotary dryer shall not exceed 676.0 kgal per twelve consecutive month period with compliance determined at the end of each month. Compliance with this limit will render the requirements of 326 IAC 7-1.1 not applicable. The SO₂, VOC, CO, and NO_x emissions presented assume compliance with this limit.
- (b) The non-fugitive PM10 emissions from these facilities are controlled, as indicated. Compliance with these limits are equivalent to source-wide non-fugitive PM10 emissions of 36.56 tons per year and will render the requirements of 326 IAC 2-7 and 326 IAC 2-2 not applicable. See State Rule Applicability - 326 IAC 2-8 for more information.
- (c) These bulk truck unloading operations are performed one at a time, therefore emissions from these operations are not additive and are presented as a total.

- (d) The emissions from these facilities are fugitive and are not counted towards 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (PSD) applicability.
- (e) The total emissions include both fugitive and non-fugitive emissions. Since the source is not 1 of the 28 source categories and there are no applicable New Source Performance Standards that were in effect on August 7, 1980, fugitive emissions do not count towards PSD applicability determination. The total PM emissions from non-fugitive facilities are 77.22 tons per year which is less than the PSD threshold of 250 tons per year. Therefore, the source is not subject to the requirements of 326 IAC 2-2 (PSD).

County Attainment Status

The source is located in Lake County.

| Pollutant | Status |
|-----------------|------------------------|
| PM-10 | attainment |
| SO ₂ | attainment |
| NO ₂ | attainment |
| 1-hour Ozone | severe nonattainment |
| 8-hour Ozone | nonattainment |
| CO | maintenance attainment |
| Lead | attainment |

*Note: Lake county has been federally redesignated in 40 CFR 81.315 as attainment for PM-10. The Air Pollution Control Board will be making the same redesignation in the state rules.

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone.
 - (1) On January 26, 1996 in 40 CFR 52.777(i), the U.S. EPA granted a waiver of the requirements of Section 182(f) of the CAA for Lake and Porter Counties, including the lower NOx threshold for nonattainment new source review. Therefore, VOC emissions alone are considered when evaluating the rule applicability relating to the 1-hour ozone standards. Lake County has been designated as nonattainment in Indiana for the 1-hour ozone standard. Therefore, VOC emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability section.
 - (2) VOC and NOx emissions are considered when evaluating the rule applicability relating to the 8-hour ozone standard. Lake County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for nonattainment new source review.
- (b) Lake County has been classified as nonattainment in Indiana for PM-10, SO₂, NO₂, CO and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability section.
- (c) Fugitive Emissions
Since this type of operation is not 1 of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD and Emission Offset applicability.

Federal Rule Applicability

- (a) The source is not subject to the requirements of the New Source Performance Standard, 326 IAC 12 (40 CFR 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants) because metallurgical and petroleum coke are not nonmetallic minerals as defined in 40 CFR 60.671.

- (b) The source is not subject to the requirements of the New Source Performance Standard, 326 IAC 12 (40 CFR 60, Subpart Y - Standards of Performance for Coal Preparation Plants) because is not a coal preparation plant as defined in 40 CFR 60.251 because it processes coke and not coal.
- (c) The source is not subject to the requirements of the New Source Performance Standard, 326 IAC 12 (40 CFR 60, Subpart UUU - Standards of Performance for Calciners and Dryers in Mineral Industries) because it is not a mineral processing plant as defined in 40 CFR 60.731.
- (d) The degreasing operations are not subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 63, Subpart T, 326 IAC 20-6, because only non-halogenated solvents are used at this source.
- (e) This source is not subject to the provisions of 40 CFR Part 64, Compliance Assurance Monitoring (CAM). In order for this rule to apply, a pollutant-specific-emissions-unit at a source that requires a Part 70 or Part 71 permit must meet three criteria for a given pollutant: 1) the unit is subject to an applicable emission limitation or standard for the applicable regulated air pollutant, 2) the unit uses a control device to achieve compliance with any such emission limitation or standard, and 3) the unit has the potential to emit, of the applicable regulated air pollutant, equal or greater than 100 percent of the amount required for a source to be classified as a major source. This source is not required to have a Part 70 permit, therefore is not subject to the requirements of 40 CFR Part 64.

State Rule Applicability - Entire Source

326 IAC 1-5-2 (Emergency Reduction Plans)

The source has submitted an Emergency Reduction Plan (ERP) on January 12, 1999.

326 IAC 2-2 (Prevention of Significant Deterioration)

This source does not belong to 1 of the 28 source categories. The source was constructed in 1970, prior to the promulgation of the PSD regulations and was an existing minor source upon promulgation of PSD rules.

On January 24, 2001, the source was issued MPR 089-12872-00093 for a pollution prevention project involving the moving of existing equipment the addition of a second bulk loadout line and new two-meter screening line in the Dryer Building. The potential to emit PM and PM-10 was less than 250 and 100 tons per year, respectively, therefore the source remains a PSD minor source.

On October 13, 1998, the source was issued FESOP F089-8579-00093, which limited the criteria pollutants to less than the Part 70 major source thresholds. To ensure that the PM emissions remain below the major PSD source threshold of 250 tons per year, the PM emissions from the:

- (a) Dryer Building Rotary Dryer Line (ID# 6) shall not exceed 1.04 pounds per hour, which is equivalent to 4.56 tons per year.
- (b) Dryer Building Crushing Line (ID# 7) shall not exceed 4.9 pounds per hour, which is equivalent to 21.46 tons per year.
- (c) Dryer Building Two-Meter Screen (ID# 8) shall not exceed 0.09 pounds per hour, which is equivalent to 0.39 tons per year.

- (d) Screening Building One-Meter Screen Line (ID# 10) shall not exceed 1.6 pounds per hour, which is equivalent to 7.0 tons per year.
- (e) Mix/Storage Building Bulk Loadout Line (ID# 16) shall not exceed 4.9 pounds per hour, which is equivalent to 21.46 tons per year.
- (f) Dryer Building Bulk Loadout Line (ID# 18) shall not exceed 2.4 pounds per hour, which is equivalent to 10.51 tons per year.
- (g) Warehouse/Bagging Building Bagging Line (ID# 14) shall not exceed 1.2 pounds per hour, which is equivalent to 5.26 tons per year.
- (h) Warehouse/Bagging Building Supersacker Line (ID# 15) shall not exceed 1.6 pounds per hour, which is equivalent to 7.00 tons per year.

Compliance with these limits is equivalent to source-wide, non-fugitive PM emissions of less than 250 tons per year and will render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

Therefore, upon issuance of FESOP F089-8579-00093 the source is a PSD minor source and is not subject to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration).

See the 326 IAC 2-8 (FESOP) section of this document for the PM-10 limits that render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable. These limits ensure that total source, non-fugitive PM-10 emissions remain less than 250 tons per year.

326 IAC 2-1.1-5; 326 IAC 2-5.1-3 (Nonattainment New Source Review)

On April 15, 2004, the United States Environmental Protection Agency (U.S. EPA) named 23 Indiana counties and one partial county nonattainment for the new 8-hour ozone standard. The designations became effective on June 15, 2004. Lake County has been designated as nonattainment for the 8-hour ozone standard.

Since no modifications have been completed since the effective date of the 8-hour ozone standard, this source is not subject to any related requirements at this time. It is therefore classified as a minor source for the 8-hour ozone standard under nonattainment new source review (NSR) because it has the potential to emit less than 25 tons of VOC and NO_x per year.

326 IAC 2-3 (Emission Offset)

Lake County has been designated as a severe nonattainment area for the 1-hour ozone standard. None of the previous modifications to the source triggered 326 IAC 2-3 because the increase in VOC emissions that resulted from them were less than the 25 ton per year applicability threshold. The VOC emissions from the entire source are less than 25 tons per year. Therefore, the source is classified as a minor source for the 1-hour ozone standard under the Emission Offset rules.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The facilities at the source are not subject to the requirements of 326 IAC 2-4.1 because they have the potential to emit less than 10 tons per year of any single HAP, and less than 25 tons per year of any combination of HAPs.

326 IAC 2-6 (Emission Reporting)

This source is located in Lake County and is not required to operate under a Part 70 permit. Therefore, the emission reporting requirements of 326 IAC 2-6 are not applicable.

326 IAC 2-8 (FESOP)

The PM-10 emissions from the:

- (a) Dryer Building Rotary Dryer Line (ID# 6) shall not exceed 0.5 pounds per hour, which is equivalent to 2.2 tons per year.
- (b) Dryer Building Crushing Line (ID# 7) shall not exceed 2.3 pounds per hour, which is equivalent to 10.1 tons per year.
- (c) Dryer Building Two-Meter Screen (ID# 8) shall not exceed 0.04 pounds per hour, which is equivalent to 0.18 tons per year.
- (d) Screening Building One-Meter Screen Line (ID# 10) shall not exceed 0.7 pounds per hour, which is equivalent to 3.0 tons per year.
- (e) Mix/Storage Building Bulk Loadout Line (ID# 16) shall not exceed 2.3 pounds per hour, which is equivalent to 10.1 tons per year.
- (f) Dryer Building Bulk Loadout Line (ID# 18) shall not exceed 1.2 pounds per hour, which is equivalent to 5.3 tons per year.
- (g) Warehouse/Bagging Building Bagging Line (ID# 14) shall not exceed 0.6 pounds per hour, which is equivalent to 2.6 tons per year.
- (h) Warehouse/Bagging Building Supersacker Line (ID# 15) shall not exceed 0.8 pounds per hour, which is equivalent to 3.5 tons per year.

Compliance with these limits is equivalent to source-wide, non-fugitive PM-10 emissions of less than 100 tons per year. This will render the requirements of 326 IAC 2-7 (Part 70 Permit Program) and 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 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.

326 IAC 6-1-2 (Non-attainment Particulate Emission Limitations)

The 6' x 16' Scalping Screen (ID# 2), Bulk Truck Unloading (ID#4), Bulk Truck Unloading (ID# 9), Bulk Truck Unloading (ID# 11), Bulk Truck Unloading (ID#13), Outside Storage Piles (ID# 1), Bulk Truck Unloading (ID# 5), Blending Line (ID# 12), Sand Mix Line (ID# 17) are not subject to the requirements of 326 IAC 6-1-2 (Non-attainment Particulate Emission Limitations) because they have the potential to emit only fugitive particulate matter.

The Rotary Dryer Line (ID# 6), natural gas-fired combustion source on the Rotary Dryer Line (ID# 6E), Crushing Line (ID# 7), Two-Meter Screen Line (ID# 8), One-Meter Screen Line (ID#1 0), Bagging Line (ID# 14), Supersacker Line (ID# 15), Bulk Loadout Line (ID#16), Bulk Loadout Line (ID# 18) and the following equipment related to manufacturing activities not resulting in the emissions of HAPs: brazing equipment, cutting torches, soldering equipment, and welding equipment are subject to the requirements of 326 IAC 6-1-2 (Non-attainment Particulate Emission Limitations) because Lake County is listed in 326 IAC 6-1 and the source has the potential to emit greater than one hundred (100) tons per year of particulate matter. Pursuant to 326 IAC 6-1-2(a) (Non-attainment Particulate Emission Limitations), particulate emissions from the these facilities

shall not exceed 0.03 grains per dry standard cubic foot.

326 IAC 6-1-10.1 (Lake County PM-10 emission requirements)

Pursuant to 326 IAC 6-1-10.1(d), this source is not subject to 326 IAC 6-1-10.1 because it does not operate any of the specifically listed facilities regulated by this rule.

326 IAC 6-1-11.1 (Lake County Fugitive Particulate Matter Control Requirements)

The Rotary Dryer Line (ID# 6), Crushing Line (ID# 7), Two Meter Screen Line (ID# 8), One Meter Screen Line (ID# 10), Bagging Line (ID#14), Supersacker Line (ID# 15), Bulk Loadout Line (ID# 16) and Bulk Loadout Line (ID# 18), are not subject to the requirements of 326 IAC 6-1-11.1 even though the source is located in Lake County because are not sources of fugitive particulate matter.

The 6' x 16' Scalping Screen (ID# 2), Bulk Truck Unloading (ID# 4), Bulk Truck Unloading (ID# 9), Bulk Truck Unloading (ID# 11), Bulk Truck Unloading (ID# 13), Outside Storage Piles (ID# 1), Bulk Truck Unloading (ID# 5), Blending Line (ID# 12), Bagging Line (ID# 14), Sand Mix Line (ID# 17) and paved and unpaved roadways are subject to the requirements of 326 IAC 6-1-11.1 because they are located in Lake County and have the potential to emit fugitive particulate matter emissions greater than five (5) tons per year.

Pursuant to 326 IAC 6-1-11.1 (Lake County Fugitive Particulate Matter Control Requirements), the particulate matter emissions from source wide activities shall meet the following requirements:

- (a) The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%).
- (b) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).
- (c) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).
- (d) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.
- (e) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.
- (f) There shall be a zero (0) percent frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time.
- (g) The opacity of fugitive particulate emissions from the inplant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).
- (h) There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.
- (i) The PM-10 emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.
- (j) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).
- (k) Any facility or operation not specified in 326 IAC 6-1-11.1(d) shall meet a twenty percent (20%), three (3) minute average opacity standard.

326 IAC 6-1-11.2 (Lake County Particulate Matter Contingency Measures)

This source is subject to the requirements of 326 IAC 6-1-11.2 because the source has a potential to emit PM-10 greater than ten (10) tons per year.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

The requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) do not apply to this source because the source is subject to the requirements of 326 IAC 6-1.

326 IAC 6-4 (Fugitive Dust Emissions)

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

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

Pursuant to 326 IAC 6-5-1(b), Bulk Truck Unloading (ID# 4), Bulk Truck Unloading (ID# 9), Bulk Truck Unloading (ID# 11) and Bulk Rail Unloading (ID# 13) are not subject to 326 IAC 6-5 because each of the facilities received all the necessary preconstruction approvals before December 13, 1985.

The 6' x 16' Scalping Screen Line (ID# 2) is not subject to 326 IAC 6-5 even though it did not receive all the necessary preconstruction approvals before December 13, 1985 because it has the potential to emit less than twenty five (25) tons per year of fugitive particulate matter.

326 IAC 8 (Volatile Organic Compounds)

This source does not conduct any of the operations specifically listed in 326 IAC 8 and emits only small amounts of VOC from the dryers. Therefore, no 326 IAC 8 rules apply to this source.

State Rule Applicability - Individual Facilities

326 IAC 1-7 (Stack Height Provisions)

The natural gas-fired Rotary Dryer (ID# 6E) is subject to the requirements of 326 IAC 1-7 because it emits greater than 25 tons per year of SO₂ from a stack (ID# DSS-1).

This rule requires that the rotary dryer line stack (ID# DSS-1) be constructed using "good engineering practices (GEP)". Since stack DSS-1 does not currently meet GEP stack height requirements, the source has agreed to limit the SO₂ emissions from the rotary dryer line to less than 25 tons per year. Pursuant to F089-8579-00093, issued on October 13, 1998, SO₂ emissions from the rotary dryer shall not exceed 24 tons per year. The fuel combusted by the rotary dryer shall not exceed 676 kilogallons per 12 consecutive month period, and sulfur content shall not exceed 0.5 percent (0.5%) by weight, with compliance determined at the end of each month.

326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitation)

The natural gas-fired Rotary Dryer (ID# 6E) is not subject to the requirements of 326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitation) even though it has the potential to emit greater than 25 tons per year of SO₂ because, pursuant to 326 IAC 1-7 and F089-8579-00093; issued on October 13, 1998 the potential to emit SO₂ is limited to 24 tons per year. The fuel oil combusted by the rotary dryer shall not exceed 676 kilogallons per 12 consecutive month period, and the sulfur content shall not exceed 0.5 percent (0.5%) by weight, with compliance determined at the end of each month. Compliance with the requirements of 326 IAC 1-7 will render the requirements of 326 IAC 7-1.1-2 not applicable.

326 IAC 7-4-1.1 (Lake County Sulfur Dioxide Emission Limitations)

The natural gas-fired Rotary Dryer (ID# 6E) is not subject to the requirements of 326 IAC 7-4-1.1 because it is not subject to the requirements of 7-1.1 and the source is not listed under 7-4-1.1(b).

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)

The natural gas-fired Rotary Dryer (ID# 6E) is not subject to the requirements of 326 IAC 8-1-6 (New Facilities; General Reduction Requirements) even though it was constructed after January 1, 1980 because it has the potential to emit less than twenty-five (25) tons of VOC per year.

State Rule Applicability - Insignificant Activities

326 IAC 8-3-2 (Cold Cleaner Operations)

The insignificant degreasing operations are subject to the requirements of 326 IAC 8-3-2 (Cold Cleaner Operations) because they were constructed after July 1, 1980.

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for the degreasing operations, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a emissions unit for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

The insignificant degreasing operations are subject to the requirements of 326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control) because they are located in Lake County, were constructed after July 1, 1990 and perform cold cleaner degreasers without remote reservoirs.

- (a) Pursuant to 326 IAC 8-3-5(a)(Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:
 - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
 - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
 - (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) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

Testing Requirements

Pursuant to F089-8579-00093, issued on October 13, 1998, PM and PM-10 testing is required for the Rotary Dryer Line (ID #6) 24 to 36 months after the issuance of FESOP 089-8579-00093, issued on October 13, 1998, and every five (5) years thereafter. Testing is required because the potential to emit PM/PM-10 of the Rotary Dryer Line (ID #6) accounts for a significant portion of the source's potential to emit PM/PM-10. The Permittee shall perform PM and PM-10 testing utilizing methods as approved by the Commissioner to document compliance with 326 IAC 2-8-4. The testing shall be repeated at least once every five years from the date of the last valid compliance demonstration. PM-10 includes filterable and condensable PM-10.

PM and PM-10 testing is not required for all other facilities located at this source because the PM/PM10 emissions from any one facility do not account for a significant portion of the source's potential to emit PM/PM-10 and the source will monitor the baghouses to ensure compliance with 326 IAC 2-2, 326 IAC 6-1-2, and 326 IAC 2-8.

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a

result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

- (a) Once per shift visible emission notations of the Rotary Dryer Line (ID# 6), Crushing Line (ID# 7), Two-Meter Screen Line (ID# 8), Bulk Loadout Line (ID# 18), One-Meter Screen Line (ID#10), Bulk Loadout Line (ID#16), Bagging Line (ID# 14) and Supersacker Line (ID# 15) stack exhaust shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (f) The Permittee shall record the total static pressure drop across the baghouses used in conjunction with the Rotary Dryer Line (ID# 6), Crushing Line (ID# 7), Two-Meter Screen Line (ID# 8), Bulk Loadout Line (ID# 18), One-Meter Screen Line (ID# 10), Bulk Loadout Line (ID# 16), Bagging Line (ID# 14) and Supersacker Line (ID# 15) at least once per shift when the facilities are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan -Failure to Take Response. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instruments Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

- (g) An inspection shall be performed each calendar quarter of all bags controlling the Rotary Dryer Line (ID# 6), Crushing Line (ID# 7), Two-Meter Screen Line (ID# 8), Bulk Loadout Line (ID# 18), One-Meter Screen Line (ID# 10), Bulk Loadout Line (ID# 16), Bagging Line

(ID# 14) and Supersacker Line (ID# 15). Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

- (h) In the event that bag failure has been observed:
- (1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
 - (2) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (i) An inspection shall be performed each calendar quarter of the cyclone controlling emissions from the Rotary Dryer Line (ID #6). A cyclone inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors.
- (j) In the event that cyclone failure has been observed failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

These monitoring conditions are necessary because the baghouses and cyclones for the metallurgical coke and petroleum coke processing operation must operate properly to ensure compliance with 326 IAC 6-1-2 (Non-attainment Particulate Emission Limitations), 326 IAC 2-8 (FESOP) and 326 IAC 2-2 (Prevention of Significant Deterioration).

Conclusion

The operation of this stationary metallurgical coke and petroleum coke processing plant shall be subject to the conditions of the attached proposed FESOP No.: F089-16701-00093.

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document (TSD) for a Federally Enforceable State Operating Permit (FESOP) Renewal

Source Background and Description

| | |
|----------------------------------|---|
| Source Name: | Carb-Rite Company |
| Source Location: | 23810 Highland Street, Schneider, Indiana 46367 |
| County: | Lake |
| SIC Code: | 2999 and 3999 |
| Operation Permit No.: | F089-8579-00093 |
| Operations Permit Issuance Date: | October 13, 1998 |
| Permit Renewal No.: | F089-16701-00093 |
| Permit Reviewer: | ERG/AO |

On August 9, 2004, the Office of Air Quality (OAQ) had a notice published in The Times, Munster, Indiana stating that Carb-Rite Company had applied for a Federally Enforceable State Operating Permit (FESOP) Renewal to operate a stationary metallurgical coke and petroleum coke processing plant. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On August 23, 2004, Carb-Rite Company submitted comments on the proposed FESOP Renewal. Revisions to the permit are shown in bolded language and the language with a line through it has been deleted. The Table Of Contents has been modified, if applicable, to reflect these changes. The summary of the comments is as follows:

Comment 1:

The source requested minor changes to the unit descriptions in the permit and TSD.

Response to Comment 1:

The following changes were made in Sections A and D.1 in response to this request:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

(a) Emission units located outdoors:

~~6' x 16'~~ **6' x 20'** Scalping Screen Line (ID# 2), constructed in 2000, with a maximum capacity of 50 tons of metallurgical coke or sand per hour, consisting of the following equipment:

...

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Individual Facilities

- (a) Emission units located outdoors:

~~6' x 16'~~ **6' x 20'** Scalping Screen Line (ID# 2), constructed in 2000, with a maximum capacity of 50 tons of metallurgical coke or sand per hour, consisting of the following equipment:

...

D.1.3 Lake County Fugitive Particulate Matter Control Requirements [326 IAC 6-1-11.1]

Pursuant to 326 IAC 6-1-11.1 (Lake County Fugitive Particulate Matter Control Requirements), compliance with the opacity limits specified in Condition C.6 (Fugitive Dust Emissions - 326 IAC 6-1-11.1) shall be achieved by controlling fugitive particulate matter emissions from ~~6' x 16'~~ **6' x 20'** Scalping Screen (ID# 2)...

No changes have been made to the TSD because the OAQ prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision.

Upon further review, the OAQ has decided to make the following revisions to the permit.

1. Condition B.3 has been revised to indicate that the revisions, modifications, or amendments do not affect the expiration date of the permit.

B.3 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5]

This permit is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date **of this permit**.

2. A statement was added to Condition B.10 to clarify that the certification form may cover more than one document that is submitted.

B.10 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]

(a)

(b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. **One (1) certification may cover multiple forms in one (1) submittal.**

3. A statement concerning backup fuel switches was added to Condition B.18(d) Operational Flexibility.

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a)

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

4. In accordance with the credible evidence rule (62 Fed. Reg. 8314, Feb 24, 1997); Section 113(a) of the Clean Air Act, 42 U.S. C. § 7413 (a); and a letter from the United States Environmental

Protection Agency (USEPA) to IDEM, OAQ dated May, 18 2004, all permits must address the use of credible evidence. Therefore, the following language has been incorporated into the permit to address credible evidence:

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

Notwithstanding the conditions of this permit that state specific methods that may be used to demonstrate compliance with, or a violation of, applicable requirements, any person (including the Permittee) may also use other credible evidence to demonstrate compliance with, or a violation of, any term or condition of this permit.

5. The term "calendar year" has been defined in Condition C.21 General Reporting Requirements.

C.21 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

...

(e) 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.**

6. The third sentence on the Quarterly Deviation and Compliance Monitoring report was changed to be consistent with the Condition B.14 Deviations from Permit Requirements and Conditions.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Carb-Rite Company
Source Address: 23810 Highland Street, Schneider, Indiana 46367
Mailing Address: 23810 Highland Street, Schneider, Indiana 46367
FESOP No.: F089-16701-00093

Months: _____ to _____ Year: _____

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. ~~Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report.~~ **A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.** Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9NO DEVIATIONS OCCURRED THIS REPORTING PERIOD. . . .

Appendix A1: Emission Calculations

Company Name: Carb - Rite Company
Plant Location: 23810 Highland Street, Schneider, Indiana 46376
County: Lake County
FESOP No.: F 089-16701-00093
Permit Reviewer: ERG/AO
Date: 4/21/03

I. Facility Description

A. Insignificant Outside storage piles (ID# 1)

1. Area N, with a maximum storage capacity of 875 tons of met coke
2. Area X, with a maximum storage capacity of 5,000 tons of met coke
3. Area L, with a maximum storage capacity of 1,600 tons of met coke
4. Area M1 and M2, with a maximum storage area of 2,800 tons of met coke

Emission controls: none

B. Outside Screening Line - 6' x16' screen (ID#2) with a maximum capacity of 50 tons per hour

1. One (1) conveyor
2. One (1) 6' x 16' screen

Emission controls: enclosure for screen

C. Insignificant Outside Crushing Line (ID# 3) with a maximum capacity of 36 tons per hour

1. One (1) vibrating pan feeder
2. Two (2) conveyors
3. One (1) crusher
4. One (1) holding bin

Emission controls: enclosure for crusher

II. Potential Emissions

| Process: Fugitives | Rate (tons mat'l/hr) | Pollutant | Ef (lb/ton mat'l) | Ebc (ton/yr) | Eac (ton/yr) | Type of control - efficiency | Comments |
|--|-------------------------|--------------|----------------------|-----------------|-----------------|---------------------------------|-----------------------|
| Insignificant Storage Piles (ID# 1) | --- | PM | --- | 1.86 | 1.86 | none | 0.0% AP-42 equation |
| | | PM-10 | | 1.86 | 1.86 | none | 0.0% AP-42 equation |
| SUBTOTAL (ID# 1) | | PM | | 1.86 | 1.86 | | |
| | | PM-10 | | 1.86 | 1.86 | | |
| Transporting (see Appendices 8 and 9) | --- | PM | --- | 135.29 | 135.29 | none | 0.0% AP-42 equation |
| | | PM-10 | | 20.68 | 20.68 | none | 0.0% AP-42 equation |
| SUBTOTAL (Transporting) | | PM | | 135.29 | 135.29 | | |
| | | PM-10 | | 20.68 | 20.68 | | |
| Insignificant Outside Crushing Line (ID# 3) - Met Coke | | | | | | | |
| Material Handling 1 (3 transfer pts) | 36.0 | PM | 0.0006 | 0.29 | 0.29 | none | 0.0% AP-42 equation |
| | | PM-10 | 0.0003 | 0.14 | 0.14 | none | 0.0% AP-42 equation |
| Outside Crushing, enclosed (SCC# 3-05-010-10) | 36.0 | PM | 0.02 | 3.15 | 0.16 | enclosure | 95.0% FIRE (1995) |
| | | PM-10 | 0.01 | 0.95 | 0.05 | enclosure | 95.0% FIRE (1995) |
| Material Handling 2 (2 transfer pts) | 36.0 | PM | 0.0006 | 0.19 | 0.19 | none | 0.0% AP-42 equation |
| | | PM-10 | 0.0003 | 0.09 | 0.09 | none | 0.0% AP-42 equation |
| SUBTOTAL (ID# 3) | | PM | | 3.64 | 0.64 | | |
| | | PM-10 | | 1.17 | 0.28 | | |
| Outside Screening Line (6' x16' screen) (ID# 2) - Met Coke | | | | | | | |
| Material Handling 3 (2 transfer pts) | 50.0 | PM | 0.0006 | 0.27 | 0.27 | none | 0.0% AP-42 equation |
| | | PM-10 | 0.0003 | 0.25 | 0.25 | none | 0.0% AP-42 equation |
| 6' x 16' Screen, enclosed (SCC# 3-03-003-12) | 50.0 | PM | 0.08 | 17.52 | 0.88 | enclosure | 95.0% AIRS (Mar 1990) |
| | | PM-10 | 0.04 | 8.76 | 0.44 | enclosure | 95.0% AIRS (Mar 1990) |
| Material Handling 4 (1 transfer pt) | 48.0 | PM | 0.0006 | 0.13 | 0.13 | none | 0.0% AP-42 equation |
| | | PM-10 | 0.0003 | 0.06 | 0.06 | none | 0.0% AP-42 equation |
| Material Handling 5 (1 transfer pt) | 2.0 | PM | 0.0006 | 0.02 | 0.02 | none | 0.0% AP-42 equation |
| | | PM-10 | 0.0003 | 0.01 | 0.01 | none | 0.0% AP-42 equation |
| SUBTOTAL (ID# 2) | | PM | | 17.94 | 1.29 | | |
| | | PM-10 | | 9.08 | 0.76 | | |
| TOTAL (fugitives) | | PM | | 158.72 | 137.15 | | |
| | | PM-10 | | 32.80 | 22.54 | | |

Since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, fugitive emissions (i.e., from storage and transporting) are not counted toward determination of Title V applicability.

III. Allowable Emissions

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates greater than 30 tons per hour:

$$\text{limit} = 55 \times (P \wedge 0.11) - 40$$

| Process: | Rate, P (tons mat'l/hr) | Allowable PM Emissions (lb/hr) | Potential Emissions after ctrls (lb/hr) | Status |
|---|----------------------------|-----------------------------------|--|------------------|
| Insignificant Outside Crushing Line (ID# 3) | 36.0 | 41.57 | 182.10 | 0.15 will comply |
| Screening Line (6' x 16' screen) (ID# 2) | 50.0 | 44.58 | 195.24 | 0.30 will comply |
| Insignificant Storage Piles (ID# 1) | | | | 1.86 |
| TOTAL (fugitives) | | 86.15 | 377.34 | 0.44 3.80 |

IV. Methodology

** storage **

Storage emissions, which result from wind erosion, were determined by using the formulations found in AP-42 (January 1995), Chapter 13.2.5 (Industrial Wind Erosion).

$$E_f = 1.7 \cdot (s/1.5) \cdot (365-p)/235 \cdot (f/15)$$

= 1.85 lb/acre/day
 where s = 1.6 % silt content of material
 p = 125 days of rain greater than or equal to 0.01 inches
 f = 15 % of wind greater than or equal to 12 mph

$$E_p (\text{storage}) = E_f \cdot sc \cdot (40 \text{ cuft/ton}) / (2000 \text{ lb/ton}) / (43560 \text{ sqft/acre}) / (25 \text{ ft}) \cdot (365 \text{ day/yr})$$

= 1.86 tons/yr
 where sc = 150,000 tons storage capacity

** paved and unpaved roads **

Transporting emissions, which result from traveling through paved and unpaved roadways, were determined by using the formulations found in AP-42 (January 1995), Ch 13.2.1 and 13.2.2.

** material handling 1 through 5 **

The following calculations determine the amount of emissions created by truck loading and unloading of met coke and continuous dropping operations, based on 8760 hours of use and AP-42 (Jan 1995), Ch 13.2.4.

$$\begin{aligned} E_f &= k \cdot (0.0032) \cdot (U/5)^{1.3} / (M/2)^{1.4} \\ &= 0.0006 \text{ lb PM/ton} \\ \text{where } k &= 0.74 \text{ (particle size multiplier)} \\ U &= 10 \text{ mile/hr mean wind speed} \\ M &= 10 \% \text{ material moisture content} \end{aligned}$$

$$\begin{aligned} E_f &= k \cdot (0.0032) \cdot (U/5)^{1.3} / (M/2)^{1.4} \\ &= 0.0003 \text{ lb PM-10/ton} \\ \text{where } k &= 0.35 \text{ (particle size multiplier)} \\ U &= 10 \text{ mile/hr mean wind speed} \\ M &= 10 \% \text{ material moisture content} \end{aligned}$$

Appendix A2: Emission Calculations

Raw Material Storage Building

Company Name: Carb - Rite Company
Plant Location: 23810 Highland Street, Schneider, Indiana 46376
County: Lake County
FESOP No.: F 089-16701-00093
Permit Reviewer: ERG/AO
Date: 4/21/03

I. Facility Description

Bulk Truck Unloading - Pet Coke (ID# 4) with a maximum capacity of 250 tons per hour

Emission controls: none

II. Potential Emissions

| Process: Fugitives | Rate (tons mat'l/hr) | Pollutant | Ef (lb/ton mat'l) | Ebc (ton/yr) | Eac (ton/yr) | Type of control | Comments |
|---|-------------------------|--------------|----------------------|-----------------|-----------------|-----------------|----------------|
| Bulk Truck Unloading (ID# 4) - Pet Coke | | | | | | | |
| Material Handling 1 (1 transfer pt) | 250.00 | PM | 0.02 | 26.45 | 26.45 | none | AP-42 equation |
| | | PM-10 | 0.01 | 12.51 | 12.51 | none | AP-42 equation |
| TOTAL (fugitives) | | PM | | 26.45 | 26.45 | | |
| | | PM-10 | | 12.51 | 12.51 | | |

III. Allowable Emissions

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates greater than 30 tons per hour:

$$\text{limit (lb/hr)} = 55 \times (P^{0.11}) - 40.00$$

| Process: | Rate, P (tons mat'l/hr) | Allowable PM Emissions (lb/hr) | Potential Emissions (lb/hr) | Potential Emissions after ctrls (tons/yr) | Status |
|------------------------------|----------------------------|-----------------------------------|--------------------------------|--|-------------------|
| Bulk Truck Unloading (ID# 4) | 250.00 | 60.96 | 266.99 | 6.04 | 26.45 will comply |
| TOTAL (fugitives) | | 60.96 | 266.99 | 6.04 | 26.45 |

IV. Methodology

** material handling 1 **

The following calculations determine the amount of emissions created by truck loading and unloading of petroleum coke and continuous dropping operations, based on 8760 hours of use and AP-42 (Jan 1995), Ch 13.2.4.

| | | | |
|-----------|--|-----------|--|
| Ef = | $k \cdot (0.0032) \cdot (U/5)^{1.3} / (M/2)^{1.4}$ | Ef = | $k \cdot (0.0032) \cdot (U/5)^{1.3} / (M/2)^{1.4}$ |
| = | 0.02 lb PM/ton | = | 0.01 lb PM-10/ton |
| where k = | 0.74 (particle size multiplier) | where k = | 0.35 (particle size multiplier) |
| U = | 2.50 mile/hr mean wind speed | U = | 2.50 mile/hr mean wind speed |
| M = | 0.20 % material moisture content | M = | 0.20 % material moisture content |

Appendix A3: Emission Calculations

| | |
|-------------------------|--|
| | Dryer Building |
| Company Name: | Carb - Rite Company |
| Plant Location: | 23810 Highland Street, Schneider, Indiana 46376 |
| County: | Lake County |
| FESOP No.: | F 089-16701-00093 |
| Permit Reviewer: | ERG/AO |
| Date: | 4/21/03 |

I. Facility Description

A. Insignificant Bulk Truck Unloading (ID# 5) with a maximum capacity of 250 tons of pet coke per hour

Emission controls: none

B. Rotary Dryer Line (ID# 6) with a maximum capacity of 30 tons of met coke and/or pet coke per hour

1. One (1) dryer loading bin
2. One (1) feed hopper
3. One (1) vibrating pan feeder
4. One (1) conveyor
5. One (1) natural gas-fired rotary dryer, with a maximum heat input rate of 37.4 million Btu/hr and a maximum drying rate of 30 tons per hour
6. One (1) cooling screw
7. One (1) belt conveyor
8. One (1) screen
9. One (1) dryer discharge bin
10. Various product storage bins

Emission controls: cyclone and baghouse system (ID# DSS-1) for screen
cyclone and baghouse system (ID# DSS-1) for dryer

C. Crushing Line (ID# 7) with a maximum capacity of 50 tons of met coke or pet coke per hour

1. One (1) feed hopper
2. One (1) belt conveyor
3. One (1) crusher
4. One (1) discharge storage bin

Emission controls: enclosure for crusher

D. Two Meter Screen Line (ID# 8) with a maximum capacity of 15 tons of met coke per hour

1. One (1) feed hopper
2. One (1) bucket elevator
3. One (1) belt conveyor
4. One (1) two meter screen
5. Various storage bins

Emission controls: enclosure, filter boxes (ID# DSS-2) for 2 meter screen

E. Bulk Loadout Line (ID# 18) with a maximum capacity of 25 tons of met coke

1. One (1) feed hopper
2. One (1) vibrating pan elevator
3. One (1) belt conveyor
4. One (1) loading hopper and spout
5. Various storage bins

Emission controls: dust collector (WBBSS-3) for loading hopper and spout

II. Potential Emissions

| Process: Fugitives | Rate (tons mat'l/hr) | Pollutant | Ef (lb/ton mat'l) | Ebc (ton/yr) | Eac (ton/yr) | Type of control | - efficiency | Comments |
|---|-------------------------|--------------|----------------------|-----------------|-----------------|-----------------|-----------------|---------------------|
| Insignificant Bulk Truck Unloading (ID# 5) - Pet Coke | | | | | | | | |
| Material Handling 13 (1 transfer pt) | 250.0 | PM | 0.0001 | 0.11 | 0.11 | none | | 0.0% AP-42 equation |
| | | PM-10 | 0.00005 | 0.05 | 0.05 | none | | 0.0% AP-42 equation |
| SUBTOTAL (ID# 5) | | PM | | 0.11 | 0.11 | | | |
| | | PM-10 | | 0.05 | 0.05 | | | |

| Process: Drying Line (ID# 6) <i>Met Coke and Blends of Met and Pet Coke</i> | Rate (tons mat'l/hr) | Pollutant | Ef (lb/ton mat'l) | Ebc (ton/yr) | Eac (ton/yr) | Type of control | - efficiency | Hood capture efficiency | Cyc/Bh control efficiency | Comments |
|--|-------------------------|--------------|----------------------|-----------------|-----------------|-----------------|-----------------|----------------------------|------------------------------|--------------------------|
| Material Handling 1 (3 transfer pts) | 30.0 | PM | 0.0001 | 0.04 | 0.04 | none | NA | NA | | 0.0% AP-42 equation |
| | | PM-10 | 0.00005 | 0.02 | 0.02 | none | NA | NA | | 0.0% AP-42 equation |
| Material Handling 2 (1 transfer pt) | 30.0 | PM | 0.0001 | 0.01 | 0.01 | none | NA | NA | | 0.0% AP-42 equation |
| | | PM-10 | 0.00005 | 0.01 | 0.01 | none | NA | NA | | 0.0% AP-42 equation |
| Material Handling 3 (1 transfer pt) | 30.0 | PM | 0.0001 | 0.01 | 0.01 | none | NA | NA | | 0.0% AP-42 equation |
| | | PM-10 | 0.00005 | 0.01 | 0.01 | none | NA | NA | | 0.0% AP-42 equation |
| * Drying (SCC# 3-05-002-05) | 30.0 | PM | 3.1 | 406.29 | 3.98 | cyc/bh system | NA | 98.0% | | 99.0% mass balance |
| | | PM-10 | 1.5 | 197.10 | 1.93 | cyc/bh system | NA | 98.0% | | 99.0% mass balance |
| * Material Handling 4 (3 transfer pts) | 30.0 | PM | 0.0000 | 0.00 | 0.00 | cyc/bh system | NA | 98.0% | | 99.0% mass balance |
| | | PM-10 | 0.0000 | 0.00 | 0.00 | cyc/bh system | NA | 98.0% | | 99.0% mass balance |
| 4' x 8' Screen, open (SCC# 3-03-003-12) | 30.0 | PM | 0.0000 | 0.00 | 0.00 | cyc/bh system | NA | 98.0% | | 99.0% mass balance |
| | | PM-10 | 0.0000 | 0.00 | 0.00 | cyc/bh system | NA | 98.0% | | 99.0% mass balance |
| * Natural gas/no. 2 fuel oil combustion (SCC# 1-02-006-02) | see page 5 | PM | --- | 2.34 | 0.02 | cyc/bh system | NA | 98.0% | | 99.0% mass balance |
| | | PM-10 | --- | 2.24 | 0.02 | cyc/bh system | NA | 98.0% | | 99.0% mass balance |
| | | SO2 | --- | 83.08 | 83.08 | none | NA | 98.0% | | 0.0% AP-42, Ef (lb/MMcf) |
| | | NOx | --- | 23.40 | 23.40 | none | NA | 98.0% | | 0.0% AP-42, Ef (lb/MMcf) |
| | | VOC | --- | 0.46 | 0.46 | none | NA | 98.0% | | 0.0% AP-42, Ef (lb/MMcf) |
| | | CO | --- | 5.85 | 5.85 | none | NA | 98.0% | | 0.0% AP-42, Ef (lb/MMcf) |
| Material Handling 5 (2 transfer pts) | 18.2 | PM | 0.0014 | 0.23 | 0.23 | none | NA | NA | | 0.0% AP-42 equation |
| | | PM-10 | 0.0007 | 0.11 | 0.11 | none | NA | NA | | 0.0% AP-42 equation |
| Material Handling 6 (1 transfer pt) | 9.8 | PM | 0.0014 | 0.25 | 0.25 | none | NA | NA | | 0.0% AP-42 equation |
| | | PM-10 | 0.0007 | 0.12 | 0.12 | none | NA | NA | | 0.0% AP-42 equation |
| SUBTOTAL (ID# 6) | | PM | | 409.16 | 4.53 | | | | | |
| | | PM-10 | | 199.60 | 2.20 | | | | | |
| | | SO2 | | 83.08 | 83.08 | | | | | |
| | | NOx | | 23.40 | 23.40 | | | | | |
| | | VOC | | 0.46 | 0.46 | | | | | |
| | | CO | | 5.85 | 5.85 | | | | | |

| Process: Two Meter Screen Line (ID# 8) <i>Met Coke</i> | Rate (tons mat'l/hr) | Pollutant | Ef (lb/ton mat'l) | Ebc (ton/yr) | Eac (ton/yr) | Type of control | - efficiency | Hood capture efficiency | Filter box control efficiency | Comments |
|---|-------------------------|--------------|----------------------|-----------------|-----------------|---------------------|-----------------|----------------------------|----------------------------------|-----------------------|
| Material Handling 7 (2 transfer pts) | 15.0 | PM | 0.0014 | 0.19 | 0.19 | none | NA | NA | | 0.0% AP-42 equation |
| | | PM-10 | 0.0007 | 0.09 | 0.09 | none | NA | NA | | 0.0% AP-42 equation |
| Two Meter Screen, enclosed (SCC# 3-03-003-12) | 15.0 | PM | 0.08 | 5.26 | 0.06 | encl., filter boxes | 95.0% | 80.0% | | 70.0% AIRS (Mar 1990) |
| | | PM-10 | 0.04 | 2.63 | 0.03 | encl., filter boxes | 95.0% | 80.0% | | 70.0% AIRS (Mar 1990) |
| Material Handling 8 (1 transfer pt) | 9.0 | PM | 0.0014 | 0.06 | 0.06 | none | NA | NA | | 0.0% AP-42 equation |
| | | PM-10 | 0.0007 | 0.03 | 0.03 | none | NA | NA | | 0.0% AP-42 equation |
| Material Handling 9 (2 transfer pts) | 6.0 | PM | 0.0014 | 0.08 | 0.08 | none | NA | NA | | 0.0% AP-42 equation |
| | | PM-10 | 0.0007 | 0.04 | 0.04 | none | NA | NA | | 0.0% AP-42 equation |
| SUBTOTAL (ID# 8) | | PM | | 5.58 | 0.38 | | | | | |
| | | PM-10 | | 2.78 | 0.18 | | | | | |

| Process: Crushing Line (ID# 7) | Rate (tons mat'l/hr) | Pollutant | Ef (lb/ton mat'l) | Ebc (ton/yr) | Eac (ton/yr) | Type of control | - efficiency | Hood capture efficiency | Comments |
|---|-------------------------|--------------|----------------------|-----------------|-----------------|-----------------|-----------------|----------------------------|----------------|
| Met Coke | | | | | | | | | |
| Material Handling 10 (3 transfer pts) | 50.0 | PM | 0.0014 | 0.95 | 0.95 | none | NA | 0.0% | AP-42 equation |
| | | PM-10 | 0.0007 | 0.45 | 0.45 | none | NA | 0.0% | AP-42 equation |
| Inside Crushing, enclosed (SCC# 3-05-010-10) | 50.0 | PM | 0.02 | 4.38 | 0.22 | enclosure | 95.0% | NA | AP-42 equation |
| | | PM-10 | 0.01 | 1.31 | 0.07 | enclosure | 95.0% | NA | AP-42 equation |
| Material Handling 11 (1 transfer pt) | 50.0 | PM | 0.0014 | 0.32 | 0.32 | none | NA | 0.0% | AP-42 equation |
| | | PM-10 | 0.0007 | 0.15 | 0.15 | none | NA | 0.0% | AP-42 equation |
| SUBTOTAL (ID# 7) | | PM | | 5.64 | 1.48 | | | | |
| | | PM-10 | | 1.91 | 0.66 | | | | |
| ** Pet Coke | | | | | | | | | |
| Material Handling 12 (4 transfer pts) | 50.0 | PM | 0.02 | 21.16 | 21.16 | none | NA | 0.0% | AP-42 equation |
| | | PM-10 | 0.01 | 10.01 | 10.01 | none | NA | 0.0% | AP-42 equation |
| Inside Crushing, enclosed (SCC# 3-05-010-10) | 50.0 | PM | 0.02 | 4.38 | 0.22 | enclosure | 95.0% | NA | AP-42 equation |
| | | PM-10 | 0.01 | 1.31 | 0.07 | enclosure | 95.0% | NA | AP-42 equation |
| SUBTOTAL (ID# 7) | | PM | | 25.54 | 21.38 | | | | |
| | | PM-10 | | 11.32 | 10.07 | | | | |

| Process: Bulk Loadout Line (ID# 18) | Rate (tons mat'l/hr) | Pollutant | Ef (lb/ton mat'l) | Ebc (ton/yr) | Eac (ton/yr) | Type of control | Hood capture - efficiency | efficiency | Comments |
|---------------------------------------|-------------------------|--------------|----------------------|-----------------|-----------------|-----------------|------------------------------|------------|----------------|
| Met Coke | | | | | | | | | |
| Material Handling 13 (4 transfer pts) | 25.0 | PM | 0.0014 | 0.63 | 0.63 | none | NA | NA | AP-42 equation |
| | | PM-10 | 0.0007 | 0.30 | 0.30 | none | NA | NA | AP-42 equation |
| Material Handling 14 (2 transfer pts) | 25.0 | PM | 0.0014 | 0.32 | 0.003 | dust collector | 98.0% | 99.0% | AP-42 equation |
| | | PM-10 | 0.0007 | 0.15 | 0.001 | dust collector | 98.0% | 99.0% | AP-42 equation |
| SUBTOTAL (ID# 18) | | PM | | 0.95 | 0.63 | | | | |
| | | PM-10 | | 0.45 | 0.30 | | | | |
| ** Pet Coke | | | | | | | | | |
| Material Handling 15 (4 transfer pts) | 25.0 | PM | 0.0242 | 10.58 | 10.58 | none | NA | NA | AP-42 equation |
| | | PM-10 | 0.0114 | 5.00 | 5.00 | none | NA | NA | AP-42 equation |
| Material Handling 16 (2 transfer pts) | 25.0 | PM | 0.0242 | 5.29 | 0.05 | dust collector | 98.0% | 99.0% | AP-42 equation |
| | | PM-10 | 0.0114 | 2.50 | 0.02 | dust collector | 98.0% | 99.0% | AP-42 equation |
| SUBTOTAL (ID# 18) | | PM | | 15.87 | 10.63 | | | | |
| | | PM-10 | | 7.51 | 5.03 | | | | |
| TOTAL (excluding fugitives) | | PM | | 456.15 | 36.93 | | | | |
| | | PM-10 | | 221.20 | 17.49 | | | | |
| | | SO2 | | 83.08 | 83.08 | | | | |
| | | NOx | | 23.40 | 23.40 | | | | |
| | | VOC | | 0.46 | 0.46 | | | | |
| | | CO | | 5.85 | 5.85 | | | | |

Note: ** stands for worst case scenario

III. Allowable Emissions

A. The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than or equal to 30 tons per hour:

$$\text{limit (lb/hr)} = 4.1 \times (P)^{0.67}$$

| Process: | Rate, P | Allowable PM Emissions | | Potential Emissions after ctrls | | Status |
|-------------------------------|-----------------|------------------------|---------------|---------------------------------|--------------|-------------|
| | (tons mat'l/hr) | (lb/hr) | (tons/yr) | (lb/hr) | (tons/yr) | |
| Rotary Dryer Line (ID# 6) | 30.0 | 40.04 | 175.36 | 1.04 | 4.53 | will comply |
| Two Meter Screen Line (ID# 8) | 15.0 | 25.16 | 110.21 | 0.09 | 0.38 | will comply |
| **Bulk Loadout Line (ID# 18) | 25.0 | 35.43 | 155.20 | 2.43 | 10.63 | will comply |
| SUBTOTAL | | 25.16 | 440.77 | 3.55 | 15.55 | |

B. The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates greater than 30 tons per hour:

$$\text{limit (lb/hr)} = 55 \times (P)^{0.11} - 40$$

| Process: | Rate, P | Allowable PM Emissions | | Potential Emissions after ctrls | | Status |
|--|-----------------|------------------------|---------------|---------------------------------|--------------|-------------|
| | (tons mat'l/hr) | (lb/hr) | (tons/yr) | (lb/hr) | (tons/yr) | |
| ** Crushing Line (ID# 7) | 50.0 | 44.58 | 195.24 | 0.34 | 1.48 | will comply |
| Insignificant Bulk Truck Unloading (ID# 5) | 250.0 | 60.96 | 266.99 | 0.03 | 0.11 | will comply |
| SUBTOTAL | | 105.53 | 462.24 | 0.36 | 1.59 | |
| TOTAL (excluding fugitives) | | 69.74 | 636.01 | 3.89 | 17.03 | |

Note: ** stands for worst case scenario

C. The following calculations determine the maximum sulfur content of distillate fuel oil allowable by 326 IAC 7:

$$\begin{aligned} \text{limit: } & 0.5 \text{ lb SO}_2/\text{MMBtu} & 18.7 \text{ lb/hr} & 81.9 \text{ tons/yr} \\ & 0.5 \text{ lb/MMBtu} \times & 140,000 \text{ Btu/gal} = & 70 \text{ lb/1000gal} \\ & 70 \text{ lb/1000gal} / & 144 \text{ lb/1000 gal} = & 0.49 \end{aligned}$$

Sulfur content must be less than or equal to 0.49% to comply with 326 IAC 7 and to limit SO2 emissions to 99 tons per year or less.

Fuel Combustion

The following calculations determine the amount of emissions created from fuel combustion on units with heat input capacities within 10 - 100 MMBtu/hr:

$$\begin{aligned} \text{Total heat input (MMBtu/hr)} &= 37.4 \text{ S \% sulfur content of fuel oil} = 0.50 \\ \text{Potential Throughput of natural gas (MMcf/yr)} &= 327.6 \text{ Potential throughput of fuel oil (kgal/yr)} = 2340.2 \end{aligned}$$

| Pollutant | Natural Gas | | | Distillate (No. 2) Fuel Oil | | | | Worst Case | |
|-----------|------------------|-------------------------------|---------|-----------------------------|---------------------|---------|---------------------|------------|--|
| | Ef3 (lb/MMcf) | Potential Emissions lbs/hr | tons/yr | Ef2 (lb/kgal) | Potential Emissions | | Potential Emissions | | |
| | | | | | lbs/hr | tons/yr | lbs/hr | tons/yr | |
| PM | 13.7 | 0.5 | 2.2 | 2.0 | 0.5 | 2.3 | 0.5 | 2.3 | |
| PM-10 | 13.7 | 0.5 | 2.2 | 1.0 | 0.3 | 1.2 | 0.5 | 2.2 | |
| SO2 | 0.6 | 0.0 | 0.1 | 142.0 S | 19.0 | 83.1 | 19.0 | 83.1 | |
| NOx | 140.0 | 5.2 | 22.9 | 20.0 | 5.3 | 23.4 | 5.3 | 23.4 | |
| VOC | 2.8 | 0.1 | 0.5 | 0.2 | 0.1 | 0.2 | 0.1 | 0.5 | |
| CO | 35.0 | 1.3 | 5.7 | 5.0 | 1.3 | 5.9 | 1.3 | 5.9 | |

IV. Methodology

** material handling 1, 2, 3, and 13**

The following calculations determine the amount of emissions created by truck loading and unloading of metallurgical coke and continuous dropping operations, based on 8760 hours of use and AP-42 (Jan 1995), Ch 13.2.4.

| | | | |
|-----------|--------------------------------------|-----------|--------------------------------------|
| Ef = | $k*(0.0032)*(U/5)^{1.3}/(M/2)^{1.4}$ | Ef = | $k*(0.0032)*(U/5)^{1.3}/(M/2)^{1.4}$ |
| = | 0.0001 lb PM/ton | = | 0.00005 lb PM-10/ton |
| where k = | 0.74 (particle size multiplier) | where k = | 0.35 (particle size multiplier) |
| U = | 2.5 mile/hr mean wind speed | U = | 2.5 mile/hr mean wind speed |
| M = | 10 % material moisture content | M = | 10 % material moisture content |

** drying, material handling 4, and natural gas combustion**

The combined particulate (PM and PM-10) emission factors for these operations were determined by the source via mass balance.

** material handling 5, 6, 7, 8, 9, 10, and 11**

The following calculations determine the amount of emissions created by truck loading and unloading of metallurgical coke and continuous dropping operations, based on 8760 hours of use and AP-42 (Jan 1995), Ch 13.2.4.

| | | | |
|-----------|--------------------------------------|-----------|--------------------------------------|
| Ef = | $k*(0.0032)*(U/5)^{1.3}/(M/2)^{1.4}$ | Ef = | $k*(0.0032)*(U/5)^{1.3}/(M/2)^{1.4}$ |
| = | 0.0014 lb PM/ton | = | 0.0007 lb PM-10/ton |
| where k = | 0.74 (particle size multiplier) | where k = | 0.35 (particle size multiplier) |
| U = | 2.5 mile/hr mean wind speed | U = | 2.5 mile/hr mean wind speed |
| M = | 1.5 % material moisture content | M = | 1.5 % material moisture content |

** material handling 12**

The following calculations determine the amount of emissions created by truck loading and unloading of petroleum coke and continuous dropping operations, based on 8760 hours of use and AP-42 (Jan 1995), Ch 13.2.4.

| | | | |
|-----------|--------------------------------------|-----------|--------------------------------------|
| Ef = | $k*(0.0032)*(U/5)^{1.3}/(M/2)^{1.4}$ | Ef = | $k*(0.0032)*(U/5)^{1.3}/(M/2)^{1.4}$ |
| = | 0.0242 lb PM/ton | = | 0.0114 lb PM-10/ton |
| where k = | 0.74 (particle size multiplier) | where k = | 0.35 (particle size multiplier) |
| U = | 2.5 mile/hr mean wind speed | U = | 2.5 mile/hr mean wind speed |
| M = | 0.2 % material moisture content | M = | 0.2 % material moisture content |

** HAPS Emissions**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

(SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A4: Emission Calculations

Screening Building

Company Name: Carb - Rite Company
Plant Location: 23810 Highland Street, Schneider, Indiana 46376
County: Lake County
FESOP No.: F 089-16701-00093
Permit Reviewer: ERG/AO
Date: 4/21/03

I. Facility Description

- A. Bulk Truck Unloading (ID# 9) with maximum capacity of 250 tons of pet coke per hour
 - B. One Meter Screen Line (ID# 10) with a maximum capacity of 10 tons of pet coke per hour
 - 1. One (1) feed hopper
 - 2. One (1) vibrating pan feeder
 - 3. One (1) bucket elevator
 - 4. One (1) conveyor
 - 5. One (1) 1 meter screen with a maximum capacity of 10 tons per hour
 - 6. One (1) inside storage bin
 - 7. One (1) inside storage area
- Emission controls: enclosure for screen

II. Potential Emissions

| Fugitives | Rate (tons mat'l/hr) | Pollutant | Ef (lb/ton mat'l) | Ebc (ton/yr) | Eac (ton/yr) | Type of control | Hood capture efficiency | - efficiency | Comments |
|---|-------------------------|--------------|----------------------|-----------------|-----------------|-----------------|----------------------------|-----------------|---------------------|
| Bulk Truck Unloading (ID# 9) - Pet Coke | | | | | | | | | |
| Material Handling 4 (1 transfer pt) | 250.0 | PM | 0.0242 | 26.45 | 26.45 | none | NA | | 0.0% AP-42 equation |
| | | PM-10 | 0.0114 | 12.51 | 12.51 | none | NA | | 0.0% AP-42 equation |
| SUBTOTAL(ID# 9) | | PM | | 26.45 | 26.45 | | | | |
| | | PM-10 | | 12.51 | 12.51 | | | | |

| Process: Screening Line (ID# 10) | Rate (tons mat'l/hr) | Pollutant | Ef (lb/ton mat'l) | Ebc (ton/yr) | Eac (ton/yr) | Type of control | Hood capture efficiency | - efficiency | Comments |
|--|-------------------------|--------------|----------------------|-----------------|-----------------|-----------------|----------------------------|-----------------|-----------------------|
| Pet Coke (1 meter screen) | | | | | | | | | |
| Material Handling 1 (5 transfer pts) | 10.0 | PM | 0.0242 | 5.29 | 5.29 | none | NA | | 0.0% AP-42 equation |
| | | PM-10 | 0.0114 | 2.50 | 2.50 | none | NA | | 0.0% AP-42 equation |
| 1 Meter Screen, enclosed (SCC# 3-05-010-12) | 10.0 | PM | 0.16 | 7.01 | 0.35 | enclosure | NA | | 95.0% AIRS (Mar 1990) |
| | | PM-10 | 0.08 | 3.50 | 0.18 | enclosure | NA | | 95.0% AIRS (Mar 1990) |
| Material Handling 2 (1 transfer pt) | 8.8 | PM | 0.0242 | 0.93 | 0.93 | none | NA | | 0.0% AP-42 equation |
| | | PM-10 | 0.0114 | 0.44 | 0.44 | none | NA | | 0.0% AP-42 equation |
| Material Handling 3 (1 transfer pt) | 2.2 | PM | 0.0242 | 0.23 | 0.23 | none | NA | | 0.0% AP-42 equation |
| | | PM-10 | 0.0114 | 0.11 | 0.11 | none | NA | | 0.0% AP-42 equation |
| SUBTOTAL (ID# 10) | | PM | | 13.46 | 6.80 | | | | |
| | | PM-10 | | 6.56 | 3.23 | | | | |
| TOTAL (excluding fugitives) | | PM | | 13.46 | 6.80 | | | | |
| | | PM-10 | | 6.56 | 3.23 | | | | |

Appendix A5: Emission Calculations

Mix/Storage Building
Company Name: Carb - Rite Company
Plant Location: 23810 Highland Street, Schneider, Indiana 46376
County: Lake County
FESOP No.: F 089-16701-00093
Permit Reviewer: ERG/AO
Date: 4/21/03

I. Facility Description

A. Bulk Truck Unloading (ID# 11) with a maximum capacity of 250 tons of pet coke per hour

Emission controls: none

B. Insignificant Blending Line (ID# 12) with a maximum capacity of 17 tons of met coke/pet coke blend per hour

1. Metallurgical coke inside storage bins
2. Petroleum coke inside storage pile
3. Blending area

Emission controls: none

C. Bulk Rail Unloading (ID# 13) with a maximum capacity of 22.5 tons of met coke or pet coke per hour

1. One (1) underground feed hopper
2. One (1) fixed conveyor
3. One (1) movable conveyor

Emission controls: none

D. Bulk Loadout Line (ID# 16) with a maximum capacity of 50 tons of met coke and/or pet coke per hour

1. One (1) feed hopper
2. One (1) vibrating pan feeder
3. One (1) belt conveyor
4. One (1) loading hopper and spout

Emission controls: dust collector (WBBSS-2) for loading hopper and spout

II. Potential Emissions

| Process: Fugitives | Rate (tons mat'l/hr) | Pollutant | Ef (lb/ton mat'l) | Ebc (ton/yr) | Eac (ton/yr) | Type of control | Comments |
|--|-------------------------|--------------|----------------------|-----------------|-----------------|-----------------|----------------|
| Insignificant Blending Line (ID# 12) - Met and Pet Coke | | | | | | | |
| Material Handling 1 (1 transfer pt) - <i>Met Coke</i> | 8.5 | PM | 0.0014 | 0.05 | 0.05 | none | AP-42 equation |
| | | PM-10 | 0.0007 | 0.03 | 0.03 | none | AP-42 equation |
| Material Handling 2 (1 transfer pt) - <i>Pet Coke</i> | 8.5 | PM | 0.0242 | 0.90 | 0.90 | none | AP-42 equation |
| | | PM-10 | 0.0114 | 0.43 | 0.43 | none | AP-42 equation |
| Blending Area (Material Handling 3: assume 10 drop points) - <i>Met and Pet Coke Blend</i> | 17.0 | PM | 0.0032 | 2.37 | 2.37 | none | AP-42 equation |
| | | PM-10 | 0.0015 | 1.12 | 1.12 | none | AP-42 equation |
| SUBTOTAL (ID# 12) | | PM | | 3.33 | 3.33 | | |
| | | PM-10 | | 1.57 | 1.57 | | |
| Bulk Truck Unloading (ID# 11) - Pet Coke | | | | | | | |
| Material Handling 4 (1 transfer pt) | 250.0 | PM | 0.0242 | 26.45 | 26.45 | none | AP-42 equation |
| | | PM-10 | 0.0114 | 12.51 | 12.51 | none | AP-42 equation |
| SUBTOTAL (ID# 11) | | PM | | 26.45 | 26.45 | | |
| | | PM-10 | | 12.51 | 12.51 | | |

Bulk Rail Unloading (ID# 13)

Met Coke

| | | | | | |
|--------------------------------------|---------|--------|------|-----------|----------------|
| Material Handling 5 (1 transfer pt) | 22.5 PM | 0.0087 | 0.86 | 0.86 none | AP-42 equation |
| | PM-10 | 0.0041 | 0.41 | 0.41 none | AP-42 equation |
| Material Handling 6 (3 transfer pts) | 22.5 PM | 0.0014 | 0.43 | 0.43 none | AP-42 equation |
| | PM-10 | 0.0007 | 0.20 | 0.20 none | AP-42 equation |
| SUBTOTAL (ID# 13) | PM | | 1.28 | 1.28 | |
| | PM-10 | | 0.61 | 0.61 | |

**** Pet Coke**

| | | | | | |
|--------------------------------------|---------|--------|-------|------------|----------------|
| Material Handling 7 (1 transfer pt) | 22.5 PM | 0.1465 | 14.43 | 14.43 none | AP-42 equation |
| | PM-10 | 0.0693 | 6.83 | 6.83 none | AP-42 equation |
| Material Handling 8 (3 transfer pts) | 22.5 PM | 0.0242 | 7.14 | 7.14 none | AP-42 equation |
| | PM-10 | 0.0114 | 3.38 | 3.38 none | AP-42 equation |
| SUBTOTAL (ID# 13) | PM | | 21.58 | 21.58 | |
| | PM-10 | | 10.20 | 10.20 | |

| Process: Bulk Loadout Line (ID# 16) | Rate (tons mat'l/hr) | Pollutant | Ef (lb/ton mat'l) | Ebc (ton/yr) | Eac (ton/yr) | Type of control | Hood capture efficiency | - efficiency | Comments |
|-------------------------------------|----------------------|-----------|-------------------|--------------|--------------|-----------------|-------------------------|--------------|----------|
|-------------------------------------|----------------------|-----------|-------------------|--------------|--------------|-----------------|-------------------------|--------------|----------|

Met Coke

| | | | | | | | |
|---------------------------------------|---------|--------|------|----------------------|-------|-------|----------------|
| Material Handling 13 (4 transfer pts) | 50.0 PM | 0.0014 | 1.26 | 1.26 none | NA | NA | AP-42 equation |
| | PM-10 | 0.0007 | 0.60 | 0.60 none | NA | NA | AP-42 equation |
| Material Handling 14 (2 transfer pts) | 50.0 PM | 0.0014 | 0.63 | 0.01 dust collector | 98.0% | 99.0% | AP-42 equation |
| | PM-10 | 0.0007 | 0.30 | 0.003 dust collector | 98.0% | 99.0% | AP-42 equation |
| SUBTOTAL (ID# 16) | PM | | 1.89 | 1.27 | | | |
| | PM-10 | | 0.89 | 0.60 | | | |

**** Pet Coke**

| | | | | | | | |
|---------------------------------------|---------|--------|-------|---------------------|-------|-------|----------------|
| Material Handling 15 (4 transfer pts) | 50.0 PM | 0.0242 | 21.16 | 21.16 none | NA | NA | AP-42 equation |
| | PM-10 | 0.0114 | 10.01 | 10.01 none | NA | NA | AP-42 equation |
| Material Handling 16 (2 transfer pts) | 50.0 PM | 0.0242 | 10.58 | 0.10 dust collector | 98.0% | 99.0% | AP-42 equation |
| | PM-10 | 0.0114 | 5.00 | 0.05 dust collector | 98.0% | 99.0% | AP-42 equation |
| SUBTOTAL (ID# 16) | PM | | 31.74 | 21.27 | | | |
| | PM-10 | | 15.01 | 10.06 | | | |

TOTAL (excluding fugitives)

| | | |
|-------|-------|-------|
| PM | 31.74 | 21.27 |
| PM-10 | 15.01 | 10.06 |

Note: ** stands for worst case scenario

III. Allowable Emissions

A. The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than or equal to 30 tons per hour:

$$\text{limit (lb/hr)} = 4.1 \times (P \wedge 0.67)$$

| Process: | Rate, P (tons mat'l/hr) | Allowable PM Emissions (lb/hr) | Potential Emissions after ctrls (lb/hr) | Status |
|--------------------------------------|-------------------------|--------------------------------|---|------------------------|
| Insignificant Blending Line (ID# 12) | 17.0 | 27.36 | 119.86 | 0.76 3.33 will comply |
| ** Bulk Rail Unloading (ID#13) | 22.5 | 33.02 | 144.62 | 4.93 21.58 will comply |
| SUBTOTAL | | 60.38 | 264.47 | 5.69 24.90 |

Note: ** stands for worst case scenario

B. The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates greater than 30 tons per hour:

$$\text{limit (lb/hr)} = 55 \times (P \wedge 0.11) - 40$$

| Process: | Rate, P (tons mat'l/hr) | Allowable PM Emissions (lb/hr) | Potential Emissions after ctrls (lb/hr) | Status |
|------------------------------------|-------------------------|--------------------------------|---|------------------------|
| Bulk Truck Unloading (ID# 11) | 250.0 | 60.96 | 266.99 | 6.04 26.45 will comply |
| Bulk Loadout Line (ID# 16) | 50.0 | 44.58 | 195.24 | 4.86 21.27 |
| SUBTOTAL | | 105.53 | 462.24 | 10.89 47.72 |
| TOTAL (excluding fugitives) | | 44.58 | 195.24 | 4.86 21.27 |

IV. Methodology

** material handling 1 and 6 **

The following calculations determine the amount of emissions created by truck loading and unloading of metallurgical coke and continuous dropping operations, based on 8760 hours of use and AP-42 (Jan 1995), Ch 13.2.4.

| | | | |
|-----------|--|-----------|--|
| Ef = | $k \cdot (0.0032)^2 \cdot (U/5)^{1.3} / (M/2)^{1.4}$ | Ef = | $k \cdot (0.0032)^2 \cdot (U/5)^{1.3} / (M/2)^{1.4}$ |
| = | 0.0014 lb PM/ton | = | 0.0007 lb PM-10/ton |
| where k = | 0.74 (particle size multiplier) | where k = | 0.35 (particle size multiplier) |
| U = | 2.5 mile/hr mean wind speed | U = | 2.5 mile/hr mean wind speed |
| M = | 1.5 % material moisture content | M = | 1.5 % material moisture content |

** material handling 2, 4, and 8 **

The following calculations determine the amount of emissions created by truck loading and unloading of petroleum coke and continuous dropping operations, based on 8760 hours of use and AP-42 (Jan 1995), Ch 13.2.4.

| | | | |
|-----------|--|-----------|--|
| Ef = | $k \cdot (0.0032)^2 \cdot (U/5)^{1.3} / (M/2)^{1.4}$ | Ef = | $k \cdot (0.0032)^2 \cdot (U/5)^{1.3} / (M/2)^{1.4}$ |
| = | 0.0242 lb PM/ton | = | 0.0114 lb PM-10/ton |
| where k = | 0.74 (particle size multiplier) | where k = | 0.35 (particle size multiplier) |
| U = | 2.5 mile/hr mean wind speed | U = | 2.5 mile/hr mean wind speed |
| M = | 0.2 % material moisture content | M = | 0.2 % material moisture content |

** material handling 3 **

The following calculations determine the amount of emissions created by truck loading and unloading of blend of metallurgical and petroleum coke and continuous dropping operations, based on 8760 hours of use and AP-42 (Jan 1995), Ch 13.2.4.

| | | | |
|-----------|--|-----------|--|
| Ef = | $k \cdot (0.0032)^2 \cdot (U/5)^{1.3} / (M/2)^{1.4}$ | Ef = | $k \cdot (0.0032)^2 \cdot (U/5)^{1.3} / (M/2)^{1.4}$ |
| = | 0.0032 lb PM/ton | = | 0.0015 lb PM-10/ton |
| where k = | 0.74 (particle size multiplier) | where k = | 0.35 (particle size multiplier) |
| U = | 2.5 mile/hr mean wind speed | U = | 2.5 mile/hr mean wind speed |
| M = | 0.9 % material moisture content | M = | 0.9 % material moisture content |

** material handling 5 **

The following calculations determine the amount of emissions created by truck loading and unloading of metallurgical coke and continuous dropping operations, based on 8760 hours of use and AP-42 (Jan 1995), Ch 13.2.4.

| | | | |
|-----------|--|-----------|--|
| Ef = | $k \cdot (0.0032)^2 \cdot (U/5)^{1.3} / (M/2)^{1.4}$ | Ef = | $k \cdot (0.0032)^2 \cdot (U/5)^{1.3} / (M/2)^{1.4}$ |
| = | 0.0087 lb PM/ton | = | 0.0041 lb PM-10/ton |
| where k = | 0.74 (particle size multiplier) | where k = | 0.35 (particle size multiplier) |
| U = | 10 mile/hr mean wind speed | U = | 10 mile/hr mean wind speed |
| M = | 1.5 % material moisture content | M = | 1.5 % material moisture content |

** material handling 7 **

The following calculations determine the amount of emissions created by truck loading and unloading of petroleum coke and continuous dropping operations, based on 8760 hours of use and AP-42 (Jan 1995), Ch 13.2.4.

| | | | |
|-----------|--|-----------|--|
| Ef = | $k \cdot (0.0032)^2 \cdot (U/5)^{1.3} / (M/2)^{1.4}$ | Ef = | $k \cdot (0.0032)^2 \cdot (U/5)^{1.3} / (M/2)^{1.4}$ |
| = | 0.1465 lb PM/ton | = | 0.0693 lb PM-10/ton |
| where k = | 0.74 (particle size multiplier) | where k = | 0.35 (particle size multiplier) |
| U = | 10 mile/hr mean wind speed | U = | 10 mile/hr mean wind speed |
| M = | 0.2 % material moisture content | M = | 0.2 % material moisture content |

Appendix A6: Emission Calculations

Warehouse/Bagging Building

Company Name: Carb - Rite Company
Plant Location: 23810 Highland Street, Schneider, Indiana 46376
County: Lake County
FESOP No.: F 089-16701-00093
Permit Reviewer: ERG/AO
Date: 4/21/03

I. Facility Description

A. Insignificant Bagging Line (ID# 14) with maximum capacity of 15 tons of met coke and/or pet coke per hour

1. One (1) feed hopper
2. One (1) conveyor
3. One (1) discharge tank
4. One (1) bagging machine

Emission controls: dust collector (WBBSS-1) for bagging machine

B. Insignificant Super Sacker Line (ID# 15) with a maximum capacity of 13 tons of met coke and/or pet coke per hour

1. One (1) feed hopper
2. One (1) vibrating pan feeder
3. One (1) bucket elevator
4. One (1) discharge tank
5. One (1) super sacker machine

Emission controls: dust collector (WBBSS-1) for supersacker machine

II. Potential Emissions

| Process: Insignificant Bagging Line (ID# 14) | Rate (tons mat'l/hr) | Pollutant | Ef (lb/ton mat'l) | Ebc (ton/yr) | Eac (ton/yr) | Type of control | Hood capture efficiency | - efficiency | Comments |
|--|-------------------------|--------------|----------------------|-----------------|-----------------|-----------------|----------------------------|-----------------|----------------|
| Met Coke | | | | | | | | | |
| Material Handling 1 (3 transfer pts) | 15.0 | PM | 0.0014 | 0.28 | 0.28 | none | NA | NA | AP-42 equation |
| | | PM-10 | 0.0007 | 0.13 | 0.13 | none | NA | NA | AP-42 equation |
| Material Handling 2 (1 transfer pt) | 15.0 | PM | 0.0005 | 0.03 | 0.03 | none | NA | NA | AP-42 equation |
| | | PM-10 | 0.0002 | 0.02 | 0.02 | none | NA | NA | AP-42 equation |
| Bagging, Material Handling 3 (1 transfer pt) | 15.0 | PM | 0.0014 | 0.09 | 0.001 | dust collector | 98.0% | 99.0% | AP-42 equation |
| | | PM-10 | 0.0007 | 0.04 | 0.000 | dustcollector | 98.0% | 99.0% | AP-42 equation |
| SUBTOTAL (ID# 14) | | PM | | 0.41 | 0.32 | | | | |
| | | PM-10 | | 0.19 | 0.15 | | | | |

Carb - Rite Company
 23810 Highland Street, Schneider, Indiana 46376

Appendix A6: Emission Calculations
 F 089-16701-00093

**** Pet Coke**

| | | | | | | | | | |
|--|------|--------------|--------|-------------|-------------|----------------|-------|-------|----------------|
| Material Handling 4 (3 transfer pts) | 15.0 | PM | 0.0242 | 4.76 | 4.76 | none | NA | NA | AP-42 equation |
| | | PM-10 | 0.0114 | 2.25 | 2.25 | none | NA | NA | AP-42 equation |
| Material Handling 5 (1 transfer pt) | 15.0 | PM | 0.0083 | 0.55 | 0.55 | none | NA | NA | AP-42 equation |
| | | PM-10 | 0.0039 | 0.26 | 0.26 | none | NA | NA | AP-42 equation |
| Bagging, Material Handling 6 (1 transfer pt) | 15.0 | PM | 0.0242 | 1.59 | 0.02 | dust collector | 98.0% | 99.0% | AP-42 equation |
| | | PM-10 | 0.0114 | 0.75 | 0.01 | dustcollector | 98.0% | 99.0% | AP-42 equation |
| SUBTOTAL (ID# 14) | | PM | | 6.89 | 5.32 | | | | |
| | | PM-10 | | 3.26 | 2.52 | | | | |

| Process: Insignificant Supersacker Line (ID# 15) | Rate (tons mat'l/hr) | Pollutant | Ef (lb/ton mat'l) | Ebc (ton/yr) | Eac (ton/yr) | Type of control | Hood capture efficiency | - efficiency | Comments |
|--|-------------------------|--------------|----------------------|-----------------|-----------------|-----------------|----------------------------|-----------------|----------------|
| Met Coke | | | | | | | | | |
| Material Handling 7 (4 transfer pts) | 13.0 | PM | 0.0014 | 0.33 | 0.33 | none | NA | NA | AP-42 equation |
| | | PM-10 | 0.0007 | 0.15 | 0.15 | none | NA | NA | AP-42 equation |
| Material Handling 8 (1 transfer pt) | 13.0 | PM | 0.0005 | 0.03 | 0.03 | none | NA | NA | AP-42 equation |
| | | PM-10 | 0.0002 | 0.01 | 0.01 | none | NA | NA | AP-42 equation |
| Ssacking, Material Handling 9 (1 transfer pt) | 13.0 | PM | 0.0014 | 0.08 | 0.00 | dust collector | 98.0% | 99.0% | AP-42 equation |
| | | PM-10 | 0.0007 | 0.04 | 0.00 | dustcollector | 98.0% | 99.0% | AP-42 equation |
| SUBTOTAL (ID# 15) | | PM | | 0.44 | 0.36 | | | | |
| | | PM-10 | | 0.21 | 0.17 | | | | |
| ** Pet Coke | | | | | | | | | |
| Material Handling 10 (4 transfer pts) | 13.0 | PM | 0.0242 | 6.35 | 6.35 | none | NA | NA | AP-42 equation |
| | | PM-10 | 0.0114 | 3.00 | 3.00 | none | NA | NA | AP-42 equation |
| Material Handling 11 (1 transfer pt) | 13.0 | PM | 0.0083 | 0.55 | 0.55 | none | NA | NA | AP-42 equation |
| | | PM-10 | 0.0039 | 0.26 | 0.26 | none | NA | NA | AP-42 equation |
| Ssacking, Material Handling 12 (1 transfer pt) | 13.0 | PM | 0.0242 | 1.59 | 0.02 | dust collector | 98.0% | 99.0% | AP-42 equation |
| | | PM-10 | 0.0114 | 0.75 | 0.01 | dust collector | 98.0% | 99.0% | AP-42 equation |
| SUBTOTAL (ID# 15) | | PM | | 8.48 | 6.91 | | | | |
| | | PM-10 | | 4.01 | 3.27 | | | | |

| | | | |
|-----------------------------|--------------|--------------|--------------|
| TOTAL (no fugitives) | PM | 15.38 | 12.23 |
| | PM-10 | 7.27 | 5.79 |

Note: ** stands for worst case scenario

III. Allowable Emissions

A. The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than or equal to 30 tons per hour:

$$\text{limit (lb/hr)} = 4.1 \times (P \quad \wedge 0.67 \quad)$$

| Process: | Rate, P (tons mat/hr) | Allowable PM Emissions (lb/hr) | Potential Emissions after ctrls (lb/hr) | Status | |
|---|--------------------------|-----------------------------------|--|-------------|------------------|
| Insignificant Bagging Line (ID# 14) | 15.0 | 25.16 | 110.21 | 1.22 | 5.32 will comply |
| Insignificant Supersacker Line (ID# 15) | 13.0 | 22.86 | 100.14 | 1.58 | 6.91 will comply |
| SUBTOTAL | | 48.03 | 210.35 | 2.79 | 12.23 |
| TOTAL (no fugitives) | | 48.03 | 210.35 | 2.79 | 12.23 |

IV. Methodology

** material handling 1, 3, 7, 9, 13 and 14 **

The following calculations determine the amount of emissions created by truck loading and unloading of metallurgical coke and continuous dropping operations, based on 8760 hours of use and AP-42 (Jan 1995), Ch 13.2.4.

| | | | |
|-----------|--|-----------|--|
| Ef = | $k \cdot (0.0032) \cdot (U/5)^{1.3} / (M/2)^{1.4}$ | Ef = | $k \cdot (0.0032) \cdot (U/5)^{1.3} / (M/2)^{1.4}$ |
| = | 0.0014 lb PM/ton | = | 0.0007 lb PM-10/ton |
| where k = | 0.74 (particle size multiplier) | where k = | 0.35 (particle size multiplier) |
| U = | 2.5 mile/hr mean wind speed | U = | 2.5 mile/hr mean wind speed |
| M = | 1.5 % material moisture content | M = | 1.5 % material moisture content |

** material handling 2 and 8 **

The following calculations determine the amount of emissions created by truck loading and unloading of metallurgical coke and continuous dropping operations, based on 8760 hours of use and AP-42 (Jan 1995), Ch 13.2.4.

| | | | |
|-----------|--|-----------|--|
| Ef = | $k \cdot (0.0032) \cdot (U/5)^{1.3} / (M/2)^{1.4}$ | Ef = | $k \cdot (0.0032) \cdot (U/5)^{1.3} / (M/2)^{1.4}$ |
| = | 0.0005 lb PM/ton | = | 0.0002 lb PM-10/ton |
| where k = | 0.74 (particle size multiplier) | where k = | 0.35 (particle size multiplier) |
| U = | 1.1 mile/hr mean wind speed | U = | 1.1 mile/hr mean wind speed |
| M = | 1.5 % material moisture content | M = | 1.5 % material moisture content |

** material handling 4, 6, 10, 12, 15 and 16 **

The following calculations determine the amount of emissions created by truck loading and unloading of petroleum coke and continuous dropping operations, based on 8760 hours of use and AP-42 (Jan 1995), Ch 13.2.4.

| | | | |
|-----------|--|-----------|--|
| Ef = | $k \cdot (0.0032) \cdot (U/5)^{1.3} / (M/2)^{1.4}$ | Ef = | $k \cdot (0.0032) \cdot (U/5)^{1.3} / (M/2)^{1.4}$ |
| = | 0.0242 lb PM/ton | = | 0.0114 lb PM-10/ton |
| where k = | 0.74 (particle size multiplier) | where k = | 0.35 (particle size multiplier) |
| U = | 2.5 mile/hr mean wind speed | U = | 2.5 mile/hr mean wind speed |
| M = | 0.2 % material moisture content | M = | 0.2 % material moisture content |

** material handling 5 and 11 **

The following calculations determine the amount of emissions created by truck loading and unloading of petroleum coke and continuous dropping operations, based on 8760 hours of use and AP-42 (Jan 1995), Ch 13.2.4.

| | | | |
|-----------|--|-----------|--|
| Ef = | $k \cdot (0.0032) \cdot (U/5)^{1.3} / (M/2)^{1.4}$ | Ef = | $k \cdot (0.0032) \cdot (U/5)^{1.3} / (M/2)^{1.4}$ |
| = | 0.0083 lb PM/ton | = | 0.0039 lb PM-10/ton |
| where k = | 0.74 (particle size multiplier) | where k = | 0.35 (particle size multiplier) |
| U = | 1.1 mile/hr mean wind speed | U = | 1.1 mile/hr mean wind speed |
| M = | 0.2 % material moisture content | M = | 0.2 % material moisture content |

Appendix A7: Emission Calculations

Company Name: Sand Mix Building
Plant Location: Carb - Rite Company
 23810 Highland Street, Schneider, Indiana 46376
County: Lake County
FESOP No.: F 089-16701-00093
Permit Reviewer: ERG/AO
Date: 4/21/03

I. Facility Description

A. Insignificant Sand Mix Line (ID# 17) with a maximum capacity of 20 tons of sand per hour

1. One (1) intermediate outside storage area
2. One (1) wet yellow sand inside storage bin
3. One (1) wet torpedo sand inside storage bin
4. One (1) bond clay inside storage bin
5. One (1) pitch inside storage bin
6. One (1) feed hopper
7. One (1) conveyor
8. One (1) mixer (muller), self contained
9. One (1) belt conveyor with pulley mixer
10. One (1) inside runner-sand mix storage bin

Emission controls: none

II. Potential Emissions

| Process: Fugitives | Rate (tons mat'l/hr) | Pollutant | Ef (lb/ton mat'l) | Ebc (ton/yr) | Eac (ton/yr) | Type of control | Comments |
|--------------------------------------|-------------------------|--------------|----------------------|-----------------|-----------------|-----------------|----------------|
| Insignificant Sand Mix Line (ID# 17) | | | | | | | |
| Material Handling 1 (1 transfer pt) | 20.0 | PM | 0.0003 | 0.02 | 0.02 | none | AP-42 equation |
| | | PM-10 | 0.0001 | 0.01 | 0.01 | none | AP-42 equation |
| Material Handling 2 (4 transfer pts) | 20.0 | PM | 0.00004 | 0.02 | 0.02 | none | AP-42 equation |
| | | PM-10 | 0.00002 | 0.01 | 0.01 | none | AP-42 equation |
| Material Handling 3 (2 transfer pts) | 20.0 | PM | 0.00004 | 0.01 | 0.01 | none | AP-42 equation |
| | | PM-10 | 0.00002 | 0.00 | 0.00 | none | AP-42 equation |
| Material Handling 4 (2 transfer pts) | 20.0 | PM | 0.0003 | 0.05 | 0.05 | none | AP-42 equation |
| | | PM-10 | 0.0001 | 0.02 | 0.02 | none | AP-42 equation |
| TOTAL (ID #17) (fugitive) | | PM | | 0.09 | 0.09 | | |
| | | PM-10 | | 0.04 | 0.04 | | |

III. Allowable Emissions

A. The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than or equal to 30 tons per hour:

$$\text{limit (lb/hr)} = 4.1 \times (P \wedge 0.67)$$

| Process: | Rate, P (tons mat'l/hr) | Allowable PM Emissions (lb/hr) | Potential Emissions (lb/hr) | Potential Emissions after ctrls (tons/yr) | Status |
|--------------------------------------|----------------------------|-----------------------------------|--------------------------------|--|------------------|
| Insignificant Sand Mix Line (ID# 17) | 20.0 | 30.51 | 133.64 | 0.02 | 0.09 will comply |
| TOTAL (fugitive) | | 30.51 | 133.64 | 0.02 | 0.09 |

IV. Methodology

** material handling 1 and 4 **

The following calculations determine the amount of emissions created by outside truck loading and unloading of wet yellow sand, wet torpedo sand, bond clay, pitch, and runner-sand product; and continuous dropping operations based on 8760 hours of use and AP-42 (Jan 1995), Ch 13.2.4.

| | | | |
|-----------|--------------------------------------|-----------|--------------------------------------|
| Ef = | $k*(0.0032)*(U/5)^{1.3}/(M/2)^{1.4}$ | Ef = | $k*(0.0032)*(U/5)^{1.3}/(M/2)^{1.4}$ |
| = | 0.0003 lb PM/ton | = | 0.0001 lb PM-10/ton |
| where k = | 0.74 (particle size multiplier) | where k = | 0.35 (particle size multiplier) |
| U = | 10 mile/hr mean wind speed | U = | 10 mile/hr mean wind speed |
| M = | 18 % material moisture content | M = | 18 % material moisture content |

** material handling 2 and 3 **

The following calculations determine the amount of emissions created by inside truck loading and unloading of wet yellow sand, wet torpedo sand, bond clay, pitch, and runner-sand product; and continuous dropping operations based on 8760 hours of use and AP-42 (Jan 1995), Ch 13.2.4.

| | | | |
|-----------|--------------------------------------|-----------|--------------------------------------|
| Ef = | $k*(0.0032)*(U/5)^{1.3}/(M/2)^{1.4}$ | Ef = | $k*(0.0032)*(U/5)^{1.3}/(M/2)^{1.4}$ |
| = | 0.0000 lb PM/ton | = | 0.0000 lb PM-10/ton |
| where k = | 0.74 (particle size multiplier) | where k = | 0.35 (particle size multiplier) |
| U = | 2.5 mile/hr mean wind speed | U = | 2.5 mile/hr mean wind speed |
| M = | 18 % material moisture content | M = | 18 % material moisture content |

**Appendix A8: Emission Calculations
Transporting on Unpaved Roadways**

Company Name: Carb - Rite Company
Plant Location: 23810 Highland Street, Schneider, Indiana 46376
County: Lake County
FESOP No.: F 089-16701-00093
Permit Reviewer: ERG/AO
Date: 4/21/03

I. Potential PM Emissions (fugitive)

The following calculations determine the amount of PM emissions created by:

A. Dump Trucks 1 - for met coke and runner-sand pick up

$$0.8 \text{ trip/hr} \times 0.14 \text{ mile/trip} \times 8760 \text{ hr/yr} = 1029.21 \text{ miles per year}$$

$$E_f = k \cdot 5.9 \cdot (s/12) \cdot (S/30) \cdot (W/3)^{0.7} \cdot (w/4)^{0.5} \cdot ((365-p)/365)$$

= 7.29 lb/mile

where k = 1 (particle size multiplier)

s = 14 % silt content of unpaved roads

p = 120 days of rain greater than or equal to 0.01 inches

- 5 miles/hr vehicle speed

W = 25.4 tons average vehicle weight

- 18 wheels

$$\frac{7.29 \text{ lb/mi} \times 1029.21 \text{ mi/yr}}{2000 \text{ lb/ton}} = 3.75 \text{ tons/yr}$$

B. Dump Trucks 2 - for met coke delivery to outside storage pads

$$0.8 \text{ trip/hr} \times 0.15 \text{ mile/trip} \times 8760 \text{ hr/yr} = 1102.73 \text{ miles per year}$$

$$E_f = k \cdot 5.9 \cdot (s/12) \cdot (S/30) \cdot (W/3)^{0.7} \cdot (w/4)^{0.5} \cdot ((365-p)/365)$$

= 7.29 lb/mile

where k = 1 (particle size multiplier)

s = 14 % silt content of unpaved roads

p = 120 days of rain greater than or equal to 0.01 inches

- 5 miles/hr vehicle speed

W = 25.4 tons average vehicle weight

- 18 wheels

$$\frac{7.29 \text{ lb/mi} \times 1102.73 \text{ mi/yr}}{2000 \text{ lb/ton}} = 4.02 \text{ tons/yr}$$

C. Dump Trucks 3 - for met coke delivery to dryer building

| | | | |
|---------------|---|--------------|-----------------------|
| 0.8 trip/hr x | 0.14 mile/trip x | 8760 hr/yr = | 947.45 miles per year |
| Ef = | $k \cdot 5.9 \cdot (s/12) \cdot (S/30) \cdot (W/3)^{0.7} \cdot (w/4)^{0.5} \cdot ((365-p)/365)$ | | |
| = | 7.29 lb/mile | | |
| where k = | 1 (particle size multiplier) | | |
| s = | 14 % silt content of unpaved roads | | |
| p = | 120 days of rain greater than or equal to 0.01 inches | | |
| - | 5 miles/hr vehicle speed | | |
| W = | 25.4 tons average vehicle weight | | |
| - | 18 wheels | | |
| <hr/> | | | |
| 7.29 lb/mi x | 947.45 mi/yr = | 3.45 tons/yr | |
| <hr/> | | 2000 lb/ton | |

D. Dump Trucks 4 - for pet coke delivery to mix storage building

| | | | |
|---------------|---|--------------|---------------------|
| 0.2 trip/hr x | 0 mile/trip x | 8760 hr/yr = | 0.00 miles per year |
| Ef = | $k \cdot 5.9 \cdot (s/12) \cdot (S/30) \cdot (W/3)^{0.7} \cdot (w/4)^{0.5} \cdot ((365-p)/365)$ | | |
| = | 7.29 lb/mile | | |
| where k = | 1 (particle size multiplier) | | |
| s = | 14 % silt content of unpaved roads | | |
| p = | 120 days of rain greater than or equal to 0.01 inches | | |
| - | 5 miles/hr vehicle speed | | |
| W = | 25.4 tons average vehicle weight | | |
| - | 18 wheels | | |
| <hr/> | | | |
| 7.29 lb/mi x | 0.00 mi/yr = | 0.00 tons/yr | |
| <hr/> | | 2000 lb/ton | |

E. Flat Bed Trucks - for pick up of bagged and supersacked products

| | | | |
|---------------|---|---------------|------------------------|
| 2.2 trip/hr x | 0.14 mile/trip x | 8760 hr/yr = | 2645.18 miles per year |
| Ef = | $k \cdot 5.9 \cdot (s/12) \cdot (S/30) \cdot (W/3)^{0.7} \cdot (w/4)^{0.5} \cdot ((365-p)/365)$ | | |
| = | 7.57 lb/mile | | |
| where k = | 1 (particle size multiplier) | | |
| s = | 14 % silt content of unpaved roads | | |
| p = | 120 days of rain greater than or equal to 0.01 inches | | |
| - | 5 miles/hr vehicle speed | | |
| W = | 26.8 tons average vehicle weight | | |
| - | 18 wheels | | |
| <hr/> | | | |
| 7.57 lb/mi x | 2645.17647 mi/yr = | 10.01 tons/yr | |
| <hr/> | | 2000 lb/ton | |

F. Tank Trucks - for pick up of bulk products

| | | | |
|------------------|---|----------------------|------------------------|
| 2.0 trip/hr x | 0.14 mile/trip x | 8760 hr/yr = | 2404.71 miles per year |
| Ef = | $k \cdot 5.9 \cdot (s/12) \cdot (S/30) \cdot (W/3)^{0.7} \cdot (w/4)^{0.5} \cdot ((365-p)/365)$ | | |
| = | 7.66 lb/mile | | |
| where k = | 1 (particle size multiplier) | | |
| s = | 14 % silt content of unpaved roads | | |
| p = | 120 days of rain greater than or equal to 0.01 inches | | |
| - | 5 miles/hr vehicle speed | | |
| W = | 27.3 tons average vehicle weight | | |
| - | 18 wheels | | |
| <hr/> | | | |
| 7.66 lb/mi x | 2404.70588 mi/yr = | 9.21 tons/yr | |
| <hr/> | | | |
| 2000 lb/ton | | | |
| TOTAL PM: | | 30.44 tons/yr | |

II. Potential PM-10 Emissions (fugitive)

The following calculations determine the amount of PM-10 emissions created by:

A. Dump Trucks 1 - for met coke and runner-sand pick up

| | | | |
|---------------|---|--------------|------------------------|
| 0.8 trip/hr x | 0.14 mile/trip x | 8760 hr/yr = | 1029.21 miles per year |
| Ef = | $k \cdot 5.9 \cdot (s/12) \cdot (S/30) \cdot (W/3)^{0.7} \cdot (w/4)^{0.5} \cdot ((365-p)/365)$ | | |
| = | 2.62 lb/mile | | |
| where k = | 0.36 (particle size multiplier) | | |
| s = | 14 % silt content of unpaved roads | | |
| p = | 120 days of rain greater than or equal to 0.01 inches | | |
| - | 5 miles/hr vehicle speed | | |
| W = | 25.4 tons average vehicle weight | | |
| - | 18 wheels | | |
| <hr/> | | | |
| 2.62 lb/mi x | 1029.21 mi/yr = | 1.35 tons/yr | |
| <hr/> | | | |
| 2000 lb/ton | | | |

B. Dump Trucks 2 - for met coke delivery to outside storage pads

| | | | |
|---------------|---|--------------|------------------------|
| 0.8 trip/hr x | 0.15 mile/trip x | 8760 hr/yr = | 1102.73 miles per year |
| Ef = | $k \cdot 5.9 \cdot (s/12) \cdot (S/30) \cdot (W/3)^{0.7} \cdot (w/4)^{0.5} \cdot ((365-p)/365)$ | | |
| = | 2.62 lb/mile | | |
| where k = | 0.36 (particle size multiplier) | | |
| s = | 14 % silt content of unpaved roads | | |
| p = | 120 days of rain greater than or equal to 0.01 inches | | |
| - | 5 miles/hr vehicle speed | | |
| W = | 25.4 tons average vehicle weight | | |
| - | 18 wheels | | |
| <hr/> | | | |
| 2.62 lb/mi x | 1102.73 mi/yr = | 1.45 tons/yr | |
| <hr/> | | | |
| 2000 lb/ton | | | |

C. Dump Trucks 3 - for met coke delivery to dryer building

| | | | |
|---------------|---|--------------|-----------------------|
| 0.8 trip/hr x | 0.14 mile/trip x | 8760 hr/yr = | 947.45 miles per year |
| Ef = | $k \cdot 5.9 \cdot (s/12) \cdot (S/30) \cdot (W/3)^{0.7} \cdot (w/4)^{0.5} \cdot ((365-p)/365)$ | | |
| = | 2.62 lb/mile | | |
| where k = | 0.36 (particle size multiplier) | | |
| s = | 14 % silt content of unpaved roads | | |
| p = | 120 days of rain greater than or equal to 0.01 inches | | |
| - | 5 miles/hr vehicle speed | | |
| W = | 25.4 tons average vehicle weight | | |
| - | 18 wheels | | |
| <hr/> | | | |
| 2.62 lb/mi x | 947.45 mi/yr = | 1.24 tons/yr | |
| <hr/> | | 2000 lb/ton | |

D. Dump Trucks 4 - for pet coke delivery to mix storage building

| | | | |
|---------------|---|--------------|---------------------|
| 0.2 trip/hr x | 0 mile/trip x | 8760 hr/yr = | 0.00 miles per year |
| Ef = | $k \cdot 5.9 \cdot (s/12) \cdot (S/30) \cdot (W/3)^{0.7} \cdot (w/4)^{0.5} \cdot ((365-p)/365)$ | | |
| = | 2.62 lb/mile | | |
| where k = | 0.36 (particle size multiplier) | | |
| s = | 14 % silt content of unpaved roads | | |
| p = | 120 days of rain greater than or equal to 0.01 inches | | |
| - | 5 miles/hr vehicle speed | | |
| W = | 25.4 tons average vehicle weight | | |
| - | 18 wheels | | |
| <hr/> | | | |
| 2.62 lb/mi x | 0.00 mi/yr = | 0.00 tons/yr | |
| <hr/> | | 2000 lb/ton | |

E. Flat Bed Trucks - for pick up of bagged and supersacked products

| | | | |
|---------------|---|--------------|------------------------|
| 2.2 trip/hr x | 0.14 mile/trip x | 8760 hr/yr = | 2645.18 miles per year |
| Ef = | $k \cdot 5.9 \cdot (s/12) \cdot (S/30) \cdot (W/3)^{0.7} \cdot (w/4)^{0.5} \cdot ((365-p)/365)$ | | |
| = | 2.72 lb/mile | | |
| where k = | 0.36 (particle size multiplier) | | |
| s = | 14 % silt content of unpaved roads | | |
| p = | 120 days of rain greater than or equal to 0.01 inches | | |
| - | 5 miles/hr vehicle speed | | |
| W = | 26.8 tons average vehicle weight | | |
| - | 18 wheels | | |
| <hr/> | | | |
| 2.72 lb/mi x | 2645.17647 mi/yr = | 3.60 tons/yr | |
| <hr/> | | 2000 lb/ton | |

F. Tank Trucks - for pick up of bulk products

| | | | |
|---------------|---|--------------|------------------------|
| 2.0 trip/hr x | 0.14 mile/trip x | 8760 hr/yr = | 2404.71 miles per year |
| Ef = | $k \cdot 5.9 \cdot (s/12) \cdot (S/30) \cdot (W/3)^{0.7} \cdot (w/4)^{0.5} \cdot ((365-p)/365)$ | | |
| = | 2.76 lb/mile | | |
| where k = | 0.36 (particle size multiplier) | | |
| s = | 14 % silt content of unpaved roads | | |
| p = | 120 days of rain greater than or equal to 0.01 inches | | |
| - | 5 miles/hr vehicle speed | | |
| W = | 27.3 tons average vehicle weight | | |
| - | 18 wheels | | |
| <hr/> | | | |
| 2.76 lb/mi x | 2404.70588 mi/yr = | 3.32 tons/yr | |
| <hr/> | | 2000 lb/ton | |

TOTAL PM-10: 10.96 tons/yr

**Appendix A9: Emission Calculations
Transporting on Paved Roadways**

Company Name: Carb - Rite Company
Plant Location: 23810 Highland Street, Schneider, Indiana 46376
County: Lake County
FESOP No.: F 089-16701-00093
Permit Reviewer: ERG/AO
Date: 4/21/03

I. Potential PM Emissions (fugitive)

The following calculations determine the amount of PM emissions created by:

A. Dump Trucks 1 - for met coke and runner-sand pick up

| | | | |
|---------------|---|--------------|---------------------|
| 0.8 trip/hr x | 0.22 mile/trip x | 8760 hr/yr = | 1617 miles per year |
| Ef = | $k \cdot [(sL/2)^{0.65}] \cdot [(W/3)^{1.5}]$ | | |
| = | 2.07 lb/mile | | |
| where k = | 0.082 lb/mile (particle size multiplier) | | |
| sL = | 2.07 gr/ft ² (paved road surface silt loading) | | |
| W = | 25.4 tons (average vehicle weight) | | |
| <hr/> | | | |
| 2.07 lb/mi x | 1617 mi/yr = | | 1.67 tons/yr |
| <hr/> | | | |
| | 2000 lb/ton | | |

B. Dump Trucks 2 - for met coke delivery to outside storage pads

| | | | |
|---------------|---|--------------|---------------------|
| 0.8 trip/hr x | 0.26 mile/trip x | 8760 hr/yr = | 1911 miles per year |
| Ef = | $k \cdot [(sL/2)^{0.65}] \cdot [(W/3)^{1.5}]$ | | |
| = | 2.07 lb/mile | | |
| where k = | 0.082 lb/mile (particle size multiplier) | | |
| sL = | 2.07 gr/ft ² (paved road surface silt loading) | | |
| W = | 25.4 tons (average vehicle weight) | | |
| <hr/> | | | |
| 2.07 lb/mi x | 1911 mi/yr = | | 1.97 tons/yr |
| <hr/> | | | |
| | 2000 lb/ton | | |

C. Dump Trucks 3 - for met coke delivery to dryer building

| | | | |
|---------------|---|--------------|---------------------|
| 0.8 trip/hr x | 0.23 mile/trip x | 8760 hr/yr = | 1557 miles per year |
| Ef = | $k \cdot [(sL/2)^{0.65}] \cdot [(W/3)^{1.5}]$ | | |
| = | 2.07 lb/mile | | |
| where k = | 0.082 lb/mile (particle size multiplier) | | |
| sL = | 2.07 gr/ft ² (paved road surface silt loading) | | |
| W = | 25.4 tons (average vehicle weight) | | |
| <hr/> | | | |
| 2.07 lb/mi x | 1557 mi/yr = | | 1.61 tons/yr |
| <hr/> | | | |
| | 2000 lb/ton | | |

D. Dump Trucks 4 - for pet coke delivery to mix storage building

| | | | |
|---------------|---|--------------|--------------------|
| 0.2 trip/hr x | 0.21 mile/trip x | 8760 hr/yr = | 317 miles per year |
| Ef = | $k \cdot [(sL/2)^{0.65}] \cdot [(W/3)^{1.5}]$ | | |
| = | 2.07 lb/mile | | |
| where k = | 0.082 lb/mile (particle size multiplier) | | |
| sL = | 2.07 gr/ft ² (paved road surface silt loading) | | |
| W = | 25.4 tons (average vehicle weight) | | |
| <hr/> | | | |
| 2.07 lb/mi x | 317 mi/yr = | | 0.33 tons/yr |
| <hr/> | | | |
| 2000 lb/ton | | | |

E. Flat Bed Trucks - for pick up of bagged and supersacked products

| | | | |
|---------------|---|--------------|---------------------|
| 2.2 trip/hr x | 0.25 mile/trip x | 8760 hr/yr = | 4724 miles per year |
| Ef = | $k \cdot [(sL/2)^{0.65}] \cdot [(W/3)^{1.5}]$ | | |
| = | 2.07 lb/mile | | |
| where k = | 0.082 lb/mile (particle size multiplier) | | |
| sL = | 2.07 gr/ft ² (paved road surface silt loading) | | |
| W = | 25.4 tons (average vehicle weight) | | |
| <hr/> | | | |
| 2.07 lb/mi x | 4724 mi/yr = | | 4.88 tons/yr |
| <hr/> | | | |
| 2000 lb/ton | | | |

F. Tank Trucks - for pick up of bulk products

| | | | |
|---------------|---|--------------|---------------------|
| 2.0 trip/hr x | 0.22 mile/trip x | 8760 hr/yr = | 3779 miles per year |
| Ef = | $k \cdot [(sL/2)^{0.65}] \cdot [(W/3)^{1.5}]$ | | |
| = | 2.07 lb/mile | | |
| where k = | 0.082 lb/mile (particle size multiplier) | | |
| sL = | 2.07 gr/ft ² (paved road surface silt loading) | | |
| W = | 25.4 tons (average vehicle weight) | | |
| <hr/> | | | |
| 2.07 lb/mi x | 3779 mi/yr = | | 3.90 tons/yr |
| <hr/> | | | |
| 2000 lb/ton | | | |

G. Front-end Loaders

| | | | |
|--------------|---|------------------------|----------------------|
| 2 loaders x | 5 miles/hr x | 8760 hours/loader/yr = | 87600 miles per year |
| Ef = | $k \cdot [(sL/2)^{0.65}] \cdot [(W/3)^{1.5}]$ | | |
| = | 2.07 lb/mile | | |
| where k = | 0.082 lb/mile (particle size multiplier) | | |
| sL = | 2.07 gr/ft ² (paved road surface silt loading) | | |
| W = | 25.4 tons (average vehicle weight) | | |
| <hr/> | | | |
| 2.07 lb/mi x | 87600 mi/yr = | | 90.48 tons/yr |
| <hr/> | | | |
| 2000 lb/ton | | | |

| | |
|------------------|-----------------------|
| TOTAL PM: | 104.85 tons/yr |
|------------------|-----------------------|

II. Potential PM-10 Emissions (fugitive)

The following calculations determine the amount of PM-10 emissions created by:

A. Dump Trucks 1 - for met coke and runner-sand pick up

| | | | |
|--|---|--------------|---------------------|
| 0.8 trip/hr x | 0.22 mile/trip x | 8760 hr/yr = | 1617 miles per year |
| Ef = | $k \cdot [(sL/2)^{0.65}] \cdot [(W/3)^{1.5}]$ | | |
| = | 0.16 lb/mile | | |
| where k = | 0.016 lb/mile (particle size multiplier) | | |
| sL = | 2.07 gr/ft ² (paved road surface silt loading) | | |
| W = | 13.9 tons (average vehicle weight) | | |
| $\frac{0.16 \text{ lb/mi} \times 1617 \text{ mi/yr}}{2000 \text{ lb/ton}}$ | | | 0.13 tons/yr |

B. Dump Trucks 2 - for met coke delivery to outside storage pads

| | | | |
|--|---|--------------|---------------------|
| 0.8 trip/hr x | 0.26 mile/trip x | 8760 hr/yr = | 1911 miles per year |
| Ef = | $k \cdot [(sL/2)^{0.65}] \cdot [(W/3)^{1.5}]$ | | |
| = | 0.40 lb/mile | | |
| where k = | 0.016 lb/mile (particle size multiplier) | | |
| sL = | 2.07 gr/ft ² (paved road surface silt loading) | | |
| W = | 25.4 tons (average vehicle weight) | | |
| $\frac{0.40 \text{ lb/mi} \times 1911 \text{ mi/yr}}{2000 \text{ lb/ton}}$ | | | 0.39 tons/yr |

C. Dump Trucks 3 - for met coke delivery to dryer building

| | | | |
|--|---|--------------|---------------------|
| 0.8 trip/hr x | 0.23 mile/trip x | 8760 hr/yr = | 1557 miles per year |
| Ef = | $k \cdot [(sL/2)^{0.65}] \cdot [(W/3)^{1.5}]$ | | |
| = | 0.40 lb/mile | | |
| where k = | 0.016 lb/mile (particle size multiplier) | | |
| sL = | 2.07 gr/ft ² (paved road surface silt loading) | | |
| W = | 25.4 tons (average vehicle weight) | | |
| $\frac{0.40 \text{ lb/mi} \times 1557 \text{ mi/yr}}{2000 \text{ lb/ton}}$ | | | 0.31 tons/yr |

D. Dump Trucks 4 - for pet coke delivery to mix storage building

| | | | |
|---------------|---|--------------|--------------------|
| 0.2 trip/hr x | 0.21 mile/trip x | 8760 hr/yr = | 317 miles per year |
| Ef = | $k \cdot [(sL/2)^{0.65}] \cdot [(W/3)^{1.5}]$ | | |
| = | 0.40 lb/mile | | |
| where k = | 0.016 lb/mile (particle size multiplier) | | |
| sL = | 2.07 gr/ft ² (paved road surface silt loading) | | |
| W = | 25.4 tons (average vehicle weight) | | |
| <hr/> | | | |
| 0.40 lb/mi x | 317 mi/yr = | | 0.06 tons/yr |
| <hr/> | | 2000 lb/ton | |

E. Flat Bed Trucks - for pick up of bagged and supersacked products

| | | | |
|---------------|---|--------------|---------------------|
| 2.2 trip/hr x | 0.25 mile/trip x | 8760 hr/yr = | 4724 miles per year |
| Ef = | $k \cdot [(sL/2)^{0.65}] \cdot [(W/3)^{1.5}]$ | | |
| = | 0.40 lb/mile | | |
| where k = | 0.016 lb/mile (particle size multiplier) | | |
| sL = | 2.07 gr/ft ² (paved road surface silt loading) | | |
| W = | 25.4 tons (average vehicle weight) | | |
| <hr/> | | | |
| 0.40 lb/mi x | 4724 mi/yr = | | 0.95 tons/yr |
| <hr/> | | 2000 lb/ton | |

F. Tank Trucks - for pick up of bulk products

| | | | |
|---------------|---|--------------|---------------------|
| 2.0 trip/hr x | 0.22 mile/trip x | 8760 hr/yr = | 3779 miles per year |
| Ef = | $k \cdot [(sL/2)^{0.65}] \cdot [(W/3)^{1.5}]$ | | |
| = | 0.40 lb/mile | | |
| where k = | 0.016 lb/mile (particle size multiplier) | | |
| sL = | 2.07 gr/ft ² (paved road surface silt loading) | | |
| W = | 25.4 tons (average vehicle weight) | | |
| <hr/> | | | |
| 0.40 lb/mi x | 3779 mi/yr = | | 0.76 tons/yr |
| <hr/> | | 2000 lb/ton | |

G. Front-end Loaders

| | | | |
|--------------|---|------------------------|----------------------|
| 2 loaders x | 5 miles/hr x | 8760 hours/loader/yr = | 87600 miles per year |
| Ef = | $k \cdot [(sL/2)^{0.65}] \cdot [(W/3)^{1.5}]$ | | |
| = | 0.16 lb/mile | | |
| where k = | 0.016 lb/mile (particle size multiplier) | | |
| sL = | 2.07 gr/ft ² (paved road surface silt loading) | | |
| W = | 13.9 tons (average vehicle weight) | | |
| <hr/> | | | |
| 0.16 lb/mi x | 87600 mi/yr = | | 7.12 tons/yr |
| <hr/> | | 2000 lb/ton | |

| | |
|---------------------|---------------------|
| TOTAL PM-10: | 9.72 tons/yr |
|---------------------|---------------------|

Appendix A10: Emission Calculations

Emissions Summary

Company Name: Carb - Rite Company
Plant Location: 23810 Highland Street, Schneider, Indiana 46376
County: Lake County
FESOP No.: F 089-16701-00093
Permit Reviewer: ERG/AO
Date: 4/21/03

I. PM

| Building | Process Line Description | Potential PM Emissions Before Ctrl's | | | Potential PM Emissions After Ctrl's | | 326 IAC 6-3 Allowable PM Emissions | |
|-------------------------------|---------------------------------|--------------------------------------|----------------|--------------|-------------------------------------|---------------|------------------------------------|----------------|
| | | (lb/hr) | (lb/day) | (tons/yr) | (lb/hr) | (tons/yr) | (lb/hr) | (tons/yr) |
| Dryer Building | Rotary Dryer Line | 93.42 | 2241.97 | 409.16 | 1.04 | 4.53 | 40.04 | 175.36 |
| | Screening Line (2 Meter Screen) | 1.27 | 30.56 | 5.58 | 0.09 | 0.38 | 25.16 | 110.21 |
| | Crushing Line ** | 5.83 | 139.95 | 25.54 | 4.88 | 21.38 | 44.58 | 195.24 |
| | Bulk Loadout Line ** | 3.62 | 86.97 | 15.87 | 2.43 | 10.63 | 35.43 | 155.20 |
| | <i>Bulk Truck Unloading</i> | 0.03 | 0.61 | 0.11 | 0.03 | 0.11 | 60.96 | 266.99 |
| Screening Building | Screening Line | 3.07 | 73.77 | 13.46 | 1.55 | 6.80 | 19.18 | 84.00 |
| | Bulk Truck Unloading * | 6.04 | 144.94 | 26.45 | 6.04 | 26.45 | 60.96 | 266.99 |
| Mix/Storage Building | <i>Blending Line</i> | 0.76 | 18.22 | 3.33 | 0.76 | 3.33 | 27.36 | 119.86 |
| | Bulk Loadout Line ** | 7.25 | 173.93 | 31.74 | 4.86 | 21.27 | 44.58 | 195.24 |
| | Bulk Truck Unloading * | 6.04 | 144.94 | 26.45 | 6.04 | 26.45 | 60.96 | 266.99 |
| | Bulk Rail Unloading ** | 4.93 | 118.22 | 21.58 | 4.93 | 21.58 | 33.02 | 144.62 |
| Warehouse/Bagging Building | Bagging Line ** | 1.57 | 37.78 | 6.89 | 1.22 | 5.32 | 25.16 | 110.21 |
| | Supersacker Line ** | 1.94 | 46.47 | 8.48 | 1.58 | 6.91 | 22.86 | 100.14 |
| Sand Mix Building | <i>Sand Mix Line</i> | 0.02 | 0.52 | 0.09 | 0.02 | 0.09 | 30.51 | 133.64 |
| Raw Material Storage Building | Bulk Truck Unloading * | 6.04 | 144.94 | 26.45 | 6.04 | 26.45 | 60.96 | 266.99 |
| Outdoors | <i>Outside Crusher Line</i> | 0.83 | 19.93 | 3.64 | 0.15 | 0.64 | 41.57 | 182.10 |
| | Outside Screening Line | 4.10 | 98.29 | 17.94 | 0.30 | 1.29 | 44.58 | 195.24 |
| | <i>Outside Storage Piles</i> | 0.43 | 10.20 | 1.86 | 0.43 | 1.86 | - | - |
| | Transport (Paved and Unpaved) | 30.89 | 741.29 | 135.29 | 30.89 | 135.29 | - | - |
| TOTAL | | 165.98 | 3983.62 | 727.0 | 61.16 | 267.88 | 555.95 | 2435.05 |

* represents operations that are performed one at a time, therefore emissions from these operations are not additive.

** represents worst case emissions for lines that process either met coke or pet coke.

II. PM-10

| Building | Process Line Description | Potential PM-10 Emissions Before Ctrl's | | | Potential PM-10 Emissions After Ctrl's | |
|-------------------------------|---------------------------------|---|----------------|--------------|--|--------------|
| | | (lb/hr) | (lb/day) | (tons/yr) | (lb/hr) | (tons/yr) |
| Dryer Building | Rotary Dryer Line | 45.57 | 1093.67 | 199.60 | 0.50 | 2.20 |
| | Screening Line (2 Meter Screen) | 0.63 | 15.23 | 2.78 | 0.04 | 0.18 |
| | Crushing Line ** | 2.59 | 62.04 | 11.32 | 2.30 | 10.07 |
| | Bulk Loadout Line ** | 1.71 | 41.13 | 7.51 | 1.15 | 5.03 |
| | <i>Bulk Truck Unloading</i> | 0.01 | 0.29 | 0.05 | 0.01 | 0.05 |
| Screening Building | Screening Line | 1.50 | 35.93 | 6.56 | 0.74 | 3.23 |
| | Bulk Truck Unloading * | 2.86 | 68.55 | 12.51 | 2.86 | 12.51 |
| Mix/Storage Building | <i>Blending Line</i> | 0.36 | 8.62 | 1.57 | 0.36 | 1.57 |
| | Bulk Loadout Line ** | 3.43 | 82.26 | 15.01 | 2.30 | 10.06 |
| | Bulk Truck Unloading * | 2.86 | 68.55 | 12.51 | 2.86 | 12.51 |
| | Bulk Rail Unloading ** | 2.33 | 55.92 | 10.20 | 2.33 | 10.20 |
| Warehouse/Bagging Building | Bagging Line ** | 0.74 | 17.87 | 3.26 | 0.57 | 2.52 |
| | Supersacker Line ** | 0.92 | 21.98 | 4.01 | 0.75 | 3.27 |
| Sand Mix Building | <i>Sand Mix Line</i> | 0.01 | 0.24 | 0.04 | 0.01 | 0.04 |
| Raw Material Storage Building | Bulk Truck Unloading * | 2.86 | 68.55 | 12.51 | 2.86 | 12.51 |
| Outdoors | <i>Outside Crusher Line</i> | 0.01 | 0.33 | 0.06 | 0.01 | 0.06 |
| | Outside Screening Line | 2.07 | 49.78 | 9.08 | 0.17 | 0.76 |
| | <i>Outside Storage Piles</i> | 0.43 | 10.20 | 1.86 | 0.43 | 1.86 |
| | Transport (Paved and Unpaved) | 4.72 | 113.33 | 20.68 | 4.72 | 20.68 |
| TOTAL | | 69.89 | 1677.39 | 306.1 | 19.25 | 84.32 |

* represents operations that are performed one at a time, therefore emissions from these operations are not additive.

** represents worst case emissions for lines that process either met coke or pet coke.

III. SO2, NOx, VOC, and CO

| Pollutant | Potential Emissions Before Ctrl's | | Potential Emissions After Ctrl's | | Limited Emissions | |
|-----------|-----------------------------------|--------------|----------------------------------|--------------|-------------------|--------------|
| | (lb/hr) | (tons/yr) | (lb/hr) | (tons/yr) | (lb/hr) | (tons/yr) |
| SO2 | 18.97 | 83.08 | 18.97 | 83.08 | 5.48 | 24.00 |
| NOx | 5.34 | 23.40 | 5.34 | 23.40 | 1.54 | 6.76 |
| VOC | 0.10 | 0.46 | 0.10 | 0.46 | 0.02 | 0.07 |
| CO | 1.34 | 5.85 | 1.34 | 5.85 | 0.39 | 1.69 |

Note: An additional one (1) ton per year is added to PM and PM-10 emissions to account for other insignificant activities.

TOTAL NON-FUGITIVE EMISSIONS

IV. PM

| Building | Process Line Description | Potential PM Emissions Before Ctrls | | | Potential PM Emissions After Ctrls | | 326 IAC 6-3 Allowable PM Emissions | |
|----------------------------|---------------------------------|-------------------------------------|----------------|--------------|------------------------------------|--------------|------------------------------------|----------------|
| | | (lb/hr) | (lb/day) | (tons/yr) | (lb/hr) | (tons/yr) | (lb/hr) | (tons/yr) |
| Dryer Building | Rotary Dryer Line | 93.42 | 2241.97 | 409.16 | 1.04 | 4.53 | 40.04 | 175.36 |
| | Screening Line (2 Meter Screen) | 1.27 | 30.56 | 5.58 | 0.09 | 0.38 | 25.16 | 110.21 |
| | Crushing Line ** | 5.83 | 139.95 | 25.54 | 4.88 | 21.38 | 44.58 | 195.24 |
| | Bulk Loadout Line ** | 3.62 | 86.97 | 15.87 | 2.43 | 10.63 | 35.43 | 155.20 |
| Screening Building | Screening Line | 3.07 | 73.77 | 13.46 | 1.55 | 6.80 | 19.18 | 84.00 |
| Mix/Storage Building | Bulk Loadout Line ** | 7.25 | 173.93 | 31.74 | 4.86 | 21.27 | 44.58 | 195.24 |
| Warehouse/Bagging Building | Bagging Line ** | 1.57 | 37.78 | 6.89 | 1.22 | 5.32 | 25.16 | 110.21 |
| | Supersacker Line ** | 1.94 | 46.47 | 8.48 | 1.58 | 6.91 | 22.86 | 100.14 |
| TOTAL | | 117.97 | 2831.40 | 516.7 | 17.63 | 77.24 | 256.99 | 1125.61 |

* represents operations that are performed one at a time, therefore emissions from these operations are not additive.

** represents worst case emissions for lines that process either met coke or pet coke.

V. PM-10

| Building | Process Line Description | Potential PM-10 Emissions Before Ctrls | | | Potential PM-10 Emissions After Ctrls | |
|----------------------------|---------------------------------|--|----------------|--------------|---------------------------------------|--------------|
| | | (lb/hr) | (lb/day) | (tons/yr) | (lb/hr) | (tons/yr) |
| Dryer Building | Rotary Dryer Line | 45.57 | 1093.67 | 199.60 | 0.50 | 2.20 |
| | Screening Line (2 Meter Screen) | 0.63 | 15.23 | 2.78 | 0.04 | 0.18 |
| | Crushing Line ** | 2.59 | 62.04 | 11.32 | 2.30 | 10.07 |
| | Bulk Loadout Line ** | 1.71 | 41.13 | 7.51 | 1.15 | 5.03 |
| Screening Building | Screening Line | 1.50 | 35.93 | 6.56 | 0.74 | 3.23 |
| Mix/Storage Building | Bulk Loadout Line ** | 3.43 | 82.26 | 15.01 | 2.30 | 10.06 |
| Warehouse/Bagging Building | Bagging Line ** | 0.74 | 17.87 | 3.26 | 0.57 | 2.52 |
| | Supersacker Line ** | 0.92 | 21.98 | 4.01 | 0.75 | 3.27 |
| TOTAL | | 57.09 | 1370.12 | 250.0 | 8.35 | 36.56 |

* represents operations that are performed one at a time, therefore emissions from these operations are not additive.

** represents worst case emissions for lines that process either met coke or pet coke.

Italicized processes are considered insignificant activities since the uncontrolled potential emissions from each of these are less than 5 pounds per hour or 25 pounds per day of PM or PM-10. Units which have potential to emit less than 5 pounds per day but greater than 25 pounds per hour have been classified as significant emission units.