



*Mitchell E. Daniels, Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
(800) 451-6027  
[www.IN.gov/idem](http://www.IN.gov/idem)

TO: Interested Parties / Applicant  
DATE: June 27, 2007  
RE: Mid Continent Coal & CoKE Co. / 127-24238-05305  
FROM: Nisha Sizemore  
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 03/23/06



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Mr. Carl Horst  
Mid-Continent Coal and Coke Company  
915 West 175th Street  
Homewood, Illinois 60430

June 27, 2007

Re: Significant Source Modification No:  
127-24238-05305

Dear Mr. Horst:

Mid-Continent Coal and Coke Company applied for a source modification on January 19, 2007 for the construction of a portable coke fines screening operations plant, to be collocated with ISG Burns Harbor, LLC. at U.S. Highway 12, Burns Harbor, Indiana 46304. ISG Burns Harbor, LLC submitted an application for a Part 70 Permit on July 22, 1996, which is currently pending. Pursuant to 326 IAC 2-7-10.5, the following emission units are approved for construction at the source:

One (1) screening operation with a maximum capacity of fifty (50) tons per hour, and consisting of the following equipment:

- (a) One (1) coke screen;
- (b) Four (4) conveyors;
- (c) One (1) hopper;
- (d) One (1) internal combustion diesel generator, used to generate electric power, with a maximum capacity of 164 HP; and
- (e) One (1) front-end loader, consisting of an eight (8) cubic yard bucket, with capacity equal to 4.5 tons per bucket.

The proposed Significant Source Modification approval will be incorporated into the pending Part 70 permit application pursuant to 326 IAC 2-7-10.5(l)(3). If there are no changes to the proposed construction of the emission units, the source may begin operating on the date that IDEM receives an affidavit of construction pursuant to 326 IAC 2-7-10.5(h). If there are any changes to the proposed construction, the source cannot operate until an Operation Permit Validation Letter is issued.

Pursuant to Contract No. A305-5-65, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Sanobar Durrani, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7810 to speak directly to Ms. Durrani. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, Indianapolis, Indiana, 46204-2251, or call (800) 451-6027 and ask for Duane Van Laningham or extension 3-6878, or dial (317) 233-0178.

Original signed by,

Nisha Sizemore, Chief  
Permits Branch  
Office of Air Quality

#### Attachments

ERG/SD

cc: File – Porter County  
U.S. EPA, Region V  
Porter County Health Department  
Northwest Regional Office  
Air Compliance Section Inspector – Michael Hall  
Compliance Data Section  
Administrative and Development  
Technical Support and Modeling - Michele Boner  
Billing, Licensing, & Training Section - Dan Stamatkin



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## **PART 70 SIGNIFICANT SOURCE MODIFICATION OFFICE OF AIR QUALITY**

**Mid-Continent Coal and Coke Company,  
an on-site contractor for ISG Burns Harbor, LLC  
U.S. Highway 12  
Burns Harbor, Indiana 46304**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

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

Significant Source Modification: 127-24238-05305	
Original signed by:  Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: June 27, 2007

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## SECTION A SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the emission units contained in conditions A.1, A.3, and A.4 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

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The Permittee owns and operates a portable coke fines screening plant.

Source Address:	U.S. Highway 12, Burns Harbor, Indiana 46304
Mailing Address:	915 W. 175th Street, Homewood, Illinois 60430
General Source Phone Number:	(708) 798-1110
SIC Code:	5052
County Location:	Porter
Source Location Status:	Nonattainment for 8-hour ozone standard and PM2.5 Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD, Emission Offset and Nonattainment NSR Rules; Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

### A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

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This source consists of a primary source operation and the following on-site contractors:

- (1) ISG Burns Harbor, LLC (ID 00001), the primary operation, is located at U.S. Highway 12, Burns Harbor, Indiana 46304;
- (2) Mid-Continent Coal and Coke Company (previously permitted under ID 05215), a supporting operation known as Plant 1, is located at U.S. Highway 12, Burns Harbor, Indiana 46304;
- (3) Mid-Continent Coal and Coke Company (previously permitted under ID 05222), a supporting operation known as Plant 2, is located at 1150 East Boundary Road, Portage, Indiana 46368;
- (4) Mid-Continent Coal and Coke Company (previously permitted under ID 00108), a supporting operation known as the Sump Plant, is located at U.S. Highway 12, Burns Harbor, Indiana 46304; and
- (5) Mid-Continent Coal and Coke Company (previously permitted under ID 05216), a supporting operation known as Plant 3, is located at 1150 East Boundary Road, Portage, Indiana 46368.
- (6) Mid-Continent Coal and Coke Company, a supporting operation known as MCCC Plant 4, will be located at U.S. Highway 12, Burns Harbor, Indiana 46304.

IDEM has determined that ISG Burns Harbor and MCCC Plants are under the common control of ISG Burns Harbor, LLC. Therefore, they will be considered as one source, as defined by 326 IAC 2-7-1(22), based on this contractual control.

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]  
[326 IAC 2-7-5(15)]

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This portable source is approved to construct the following emission units and pollution control devices:

One (1) screening operation with a maximum capacity of fifty (50) tons per hour, and consisting of the following equipment:

- (a) One (1) coke screen;
- (b) Four (4) conveyors;
- (c) One (1) hopper;
- (d) One (1) internal combustion diesel generator, used to generate electric power, with a maximum capacity of 164 HP; and
- (e) One (1) front-end loader, consisting of an eight (8) cubic yard bucket, with capacity equal to 4.5 tons per bucket.

A.4 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)]  
[326 IAC 2-7-5(15)]

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This portable source does not currently have any insignificant activities, as defined in 326 IAC 2-7-1(21).

A.5 Part 70 Permit Applicability [326 IAC 2-7-2]

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This portable source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

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

## SECTION B GENERAL CONDITIONS

### B.1 Definitions [326 IAC 2-7-1]

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

### B.2 Effective Date of the Permit [IC13-15-5-3]

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Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

### B.3 Revocation of Permits [326 IAC 2-1.1-9(5)]

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Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

### B.4 Approval to Operate Significant Source Modification [326 IAC 2-7-10.5(h)]

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This document shall also become the approval to operate pursuant to 326 IAC 2-7-10.5(h) when, prior to start of operation, the following requirements are met:

- (a) The attached affidavit of construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section, verifying that the emission units were constructed as proposed in the application. The emissions units covered in the Significant Source Modification approval may begin operating on the date the affidavit of construction is postmarked or hand delivered to IDEM if constructed as proposed.
- (b) If actual construction of the emissions units differs from the construction proposed in the application, the source may not begin operation until the source modification has been revised pursuant to 326 IAC 2-7-11 or 326 IAC 2-7-12 and an Operation Permit Validation Letter is issued.
- (c) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (d) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.
- (e) In the event that the Part 70 application is being processed at the same time as this application, the following additional procedures shall be followed for obtaining the right to operate:
  - (1) If the Part 70 draft permit has not gone on public notice, then the change/addition covered by the Significant Source Modification will be included in the Part 70 draft.
  - (2) If the Part 70 permit has gone through final EPA proposal and would be issued ahead of the Significant Source Modification, the Significant Source Modification will go through a concurrent 45 day EPA review. Then the Significant Source Modification will be incorporated into the final Part 70 permit at the time of issuance.
  - (3) If the Part 70 permit has gone through public notice, but has not gone through final EPA review and would be issued after the Significant Source Modification is issued, then the Modification would be added to the proposed Part 70 permit, and the Title V permit will issued after EPA review.

**B.5 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]**

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- (a) Where specifically designated by this approval or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official 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) A responsible official is defined at 326 IAC 2-7-1(34).

**B.6 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]**

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- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, 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) 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 PMPs do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

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- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
  - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
  - (2) The permitted facility was at the time being properly operated;
  - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this approval;
  - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, and 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 Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or  
Telephone Number: 317-233-0178 (ask for Compliance Section)  
Facsimile Number: 317-233-6865

**Northwest Regional Office**

Telephone Number: 219-757-0265  
Toll Free: 888-209-8892  
Fax: 219-757-0267

- (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  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

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

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

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

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (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 condition is in addition to any emergency or upset provision contained in any applicable requirement.
  - (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.
  - (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
  - (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the

Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

B.8 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

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

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

B.9 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314][326 IAC 1-1-6]

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

## SECTION C GENERAL OPERATION CONDITIONS

Entire Source

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

#### C.1 Opacity [326 IAC 5-1]

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

- (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.2 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.3 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the plan submitted on July 31, 2002. The plan is included as Attachment A.

### Compliance Requirements [326 IAC 2-1.1-11]

#### C.4 Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

If required by Section D, all monitoring and record keeping requirements shall be implemented when operation begins. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

#### C.6 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this approval 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 methods as specified in this approval.

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

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

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
  - (1) initial inspection and evaluation;
  - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or
  - (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
  - (1) monitoring results;
  - (2) review of operation and maintenance procedures and records;
  - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
  - (1) monitoring data;
  - (2) monitor performance data, if applicable; and
  - (3) corrective actions taken.

C.8 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this approval exceed the level specified in any condition of this approval, 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 "responsible official" as defined by 326 IAC 2-7-1(34).

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

### C.9 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2] [326 IAC 2-3]

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- (a) Records of all required monitoring data, reports and support information required by this approval 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 approval, all record keeping requirements not already legally required shall be implemented within ninety (90) days of approval issuance.
- (c) If there is a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-3(II) at an existing emissions unit or at a source with Plant-wide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z) and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-3(mm)), the Permittee shall comply with following:
  - (1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II) at an existing emissions unit, document and maintain the following records:
    - (A) A description of the project.
    - (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.
    - (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:
      - (i) Baseline actual emissions;
      - (ii) Projected actual emissions;
      - (iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii) and/or 326 IAC 2-3-1(mm)(2)(A)(iii); and
      - (iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.
  - (2) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and
  - (3) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

### C.10 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 2-3]

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- (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 "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The reports required in (a) of this condition and reports required by conditions in Section D of this approval shall be submitted to:

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

- (c) Unless otherwise specified in this approval, any notice, report, or other submission required by this approval 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 approval, all reports required in Section D of this approval shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) The first report shall cover the period commencing on the date of issuance of this approval and ending on the last day of the reporting period. 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.
- (f) If the Permittee is required to comply with the recordkeeping provisions of (c) in Section C- General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:
- (1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1(xx) and/or 326 IAC 2-3-1(qq), for that regulated NSR pollutant, and
  - (2) The emissions differ from the preconstruction projection as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(ii).
- (g) The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:
- (1) The name, address, and telephone number of the major stationary source.
  - (2) The annual emissions calculated in accordance with (c)(2) and (3) in Section C- General Record Keeping Requirements.
  - (3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).
  - (4) Any other information that the Permittee deems fit to include in this report,

Reports required in this part shall be submitted to:

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

### Portable Source Requirement

#### C.11 Relocation of Portable Sources [326 IAC 2-14-4]

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- (a) This is an approval for operation all attainment areas for ozone in Indiana and in Porter County which is classified as severe nonattainment for ozone. This determination is based on the requirements of Prevention of Significant Deterioration in 326 IAC 2-2, and Emission Offset requirements in 326 IAC 2-3. Prior to locating in any other severe nonattainment area, the Permittee must submit a request and obtain a permit revision.
- (b) A request to relocate shall be submitted to IDEM, OAQ at least thirty (30) days prior to the intended date of relocation. This submittal shall include the following:
  - (1) A list of governmental officials entitled to receive notice of application to relocate. IC 13-15-3-1
  - (2) A list of adjacent landowners that the Permittee will send written notice to not more than ten (10) days after submission of the request to relocate. IC 13-15-8

The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) "Relocation Site Approval" letter shall be obtained prior to relocating.
- (d) The Permittee shall also notify the applicable local air pollution control agency when relocating to, or from, one the following:
  - (1) Madison County - (Anderson Office of Air Management)
  - (2) City of Evansville plus four (4) miles beyond the corporate limits but not outside Vanderburgh County - (Evansville EPA)
  - (3) City of Gary -(Gary Department of Environmental Affairs)
  - (4) City of Hammond - (Hammond Department of Environmental Management)
  - (5) Marion County - (Indianapolis Office of Environmental Services)
  - (6) Vigo County - (Vigo County Air Pollution Control)
- (e) A valid operation permit consists of this document and any subsequent "Relocation Site Approval" letter specifying the current location of the portable plant.

### Stratospheric Ozone Protection

#### C.23 Compliance with 40 CFR 82 and 326 IAC 22-1

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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 2-7-5(15)]:

One (1) screening operation with a maximum capacity of fifty (50) tons per hour, and consisting of the following equipment:

- (a) One (1) coke screen;
- (b) Four (4) conveyors;
- (c) One (1) hopper;
- (d) One (1) internal combustion diesel generator, used to generate electric power, with a maximum capacity of 164 HP; and
- (e) One (1) front-end loader, consisting of an eight (8) cubic yard bucket, with capacity equal to 4.5 tons per bucket.

(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 2-7-5(1)]

#### D.1.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the particulate emissions from the MCCC Plant 4 shall be limited to less than 44.6 pounds per hour when operating at a process weight rate of 50 tons per hour.

This limit was calculated using the following equation.

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40$$

where E = rate of emission in pounds per hour and  
P = process weight rate in tons per hour

#### D.1.2 PSD, Emission Offset Minor Limits, Nonattainment NSR [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-1.1-5]

The Permittee shall limit the coke throughput to the coke screening operation to less than 99,390 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

This limit is structured such that, when including all fugitive emissions and the emissions from the combustion of diesel fuel in the 164 HP diesel generator, PM emissions from the coke screening plant are less than twenty-five (25) tons per year and PM10 emissions from the coke screening operation are less than fifteen (15) tons per year.

Compliance with these limitations renders the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) and 326 IAC 2-1.1-5 (Non-Attainment NSR) not applicable.

#### D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

## Compliance Determination Requirements

### D.1.4 Pm and PM10 Emissions Requirements

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The Permittee shall use wet suppression to control emissions of PM and PM10 from the coke screening operation and roads as necessary to ensure that the coke processed has a moisture content greater than ten (10) percent. The suppressant shall be applied in a manner and at a frequency sufficient to ensure PM and PM10 emissions are less than twenty-five (25) and less than fifteen (15) tons per year, respectively. If weather conditions preclude the use of wet suppression, the Permittee shall perform moisture content analysis to verify the moisture content of the coke is equal to or greater than ten (10) percent. The method for the moisture content analysis shall be approved by IDEM, OAQ.

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

### D.1.5 Visible Emissions Notations

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- (a) Visible emission notations of the hopper, the screen, and the conveyor transfer points shall be performed once per day during normal daylight operations when exhausting to the atmosphere. 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) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

### D.1.6 Record Keeping Requirements

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- (a) To document compliance with Condition D.1.5, the Permittee shall maintain daily records of visible emission notations of the hoppers, the screen, and the conveyor transfer points. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (b) In order to demonstrate compliance with Condition D.1.2, the Permittee shall maintain records of coke processed.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

### D.1.7 Reporting Requirements

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A quarterly summary of the information to document compliance with Condition D.1.2 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 "responsible official" as defined by 326 IAC 2-7-1(34).

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

### PART 70 SOURCE MODIFICATION CERTIFICATION

Source Name: Mid-Continent Coal and Coke Company (MCCC Plant 4)  
Source Address: U.S. Highway 12, Burns Harbor, Indiana 46304  
Mailing Address: 915 W. 175th Street, Homewood, Illinois 60430  
Significant Source Mod No.: 127-24238-05305

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

Please check what document is being certified:

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

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

Signature:

Printed Name:

Title/Position:

Phone:

Date:

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

**Part 70 Source Modification Quarterly Report**

Source Name: Mid-Continent Coal and Coke Company (MCCC Plant 4)  
Source Address: U.S. Highway 12, Burns Harbor, Indiana 46304  
Mailing Address: 915 W. 175th Street, Homewood, Illinois 60430  
Significant Source Mod No.: 127-24238-05305  
Facility: Coke screening operation  
Parameter: Coke throughput  
Limit: Less than 99,390 tons per twelve (12) consecutive month period with compliance determined at 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			

- No deviation occurred in this quarter.
- 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 BRANCH  
100 North Senate Avenue  
Indianapolis, Indiana 46204-2251  
Phone: 317-233-0178  
Fax: 317-233-6865**

**PART 70 SOURCE MODIFICATION  
EMERGENCY OCCURRENCE REPORT**

Source Name: Mid-Continent Coal and Coke Company (MCCC Plant 4)  
Source Address: U.S. Highway 12, Burns Harbor, Indiana 46304  
Mailing Address: 915 W. 175th Street, Homewood, Illinois 60430  
Significant Source Mod No.: 127-24238-05305

**This form consists of 2 pages**

**Page 1 of 2**

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

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

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

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

**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
Type of Pollutants Emitted: TSP, PM-10, SO <sub>2</sub> , VOC, NO <sub>x</sub> , 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  
 PART 70 OPERATING PERMIT  
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Mid-Continent Coal and Coke Company (MCCC Plant 4)  
 Source Address: U.S. Highway 12, Burns Harbor, Indiana 46304  
 Mailing Address: 915 W. 175th Street, Homewood, Illinois 60430  
 Significant Source Mod No.: 127-24238-05305

**Months:** \_\_\_\_\_ **to** \_\_\_\_\_ **Year:** \_\_\_\_\_

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".	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

Mail to: Office Of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

Mid-Continent Coal and Coke Company  
915 West 175th Street  
Homewood, Illinois 60430

**Affidavit of Construction**

I, \_\_\_\_\_, being duly sworn upon my oath, depose and say:  
(Name of the Authorized Representative)

1. I live in \_\_\_\_\_ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of \_\_\_\_\_ for \_\_\_\_\_.  
(Title) (Company Name)
3. By virtue of my position with \_\_\_\_\_, I have personal  
(Company Name)  
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of \_\_\_\_\_.  
(Company Name)
4. I hereby certify that Mid-Continent Coal and Coke Company, U.S. Highway 12, Burns Harbor, Indiana 46304, has constructed the coke fines screening plant in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on January 19, 2007 and as permitted pursuant to Source Modification No. 127-24238-05305 issued on \_\_\_\_\_.
5. Additional (operations/facilities) were constructed/substituted as described in the attachment to this document and were not made in accordance with the construction permit. (Delete this statement if it does not apply.)

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature

Date  
STATE OF INDIANA)  
)SS

COUNTY OF \_\_\_\_\_ )

Subscribed and sworn to me, a notary public in and for \_\_\_\_\_ County and State of  
Indiana on this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_.

My Commission expires:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name (typed or printed)

**Attachment A**  
**Fugitive Dust Control Plan**

## **Attachment A Fugitive Dust Control Plan**

### **MID-CONTINENT COAL AND COKE COMPANY**

915 WEST 175TH STREET  
HOMEWOOD, ILLINOIS 60430

PREMIUM QUALITY  
COAL AND COKE

TELEPHONE (708) 798-1110  
FACSIMILIE (708) 798-1299

FUGITIVE DUST CONTROL PLAN  
Portable Coke Fines Screening Plant  
Plant ID Number 127-24238-05305

#### Primary Contact

Carl Horst  
Manager of Operations  
915 W. 175<sup>th</sup> Street  
Homewood, IL 60430  
(708) 798-1110  
Off-hours Number (708) 267-7198

#### Roadway Control

1. Traffic is restricted to established and controlled roadways.
2. Vehicular traffic on unpaved roads is limited to 5 miles per hour (mph).
3. Paved roadways are the responsibility of the steel mill. Unpaved roadways at the plant are inspected each day of operation to determine if dust suppression is required.
4. Water sprays from a water truck or application by front-end loader bucket is used as needed to wet down unpaved areas.

#### Fines Stockpile Control Measures

1. Front-end loader bucket drop height during screening and truck loading is kept to the lowest practical elevation.
2. Water is applied to fines stockpile as necessary to prevent visible emissions from leaving the property.
3. Water will not be applied during freezing weather, typically between October 15 and April 15.

#### Unscreened Coke Control

The inherent moisture of coke fines is greater than 10%. This prevents visible emissions during screening. If excess emissions are observed during screening, operations will stop and one of two control methods will be used:

1. Water sprays may be applied to the source pile to get its moisture level above 10%
2. For small amounts of dry coke, fresh material may be dumped on top of the dry material and mixed with a loader bucket to raise the moisture content of the dry material to an acceptable level.

**Indiana Department of Environmental Management  
Office of Air Quality**

**Technical Support Document (TSD)  
for a Significant Source Modification**

**Source Description and Location**

Source Name:	Mid-Continent Coal and Coke Company, an on-site contractor of ISG Burns Harbor, LLC.
Source Location:	U.S. Highway 12, Burns Harbor, Indiana 46304
County:	Porter
SIC Code:	5052
Significant Source Modification No.:	SSM 127-24238-05305
Permit Reviewer:	ERG/SD

**History**

IDEM, OAQ has reviewed the permit application from Mid-Continent Coal and Coke Company (MCCC Plant 4) submitted on January 19, 2007, relating to the construction and operation of a portable coke fines screening plant.

Operations at MCCC Plant 4 will relocate from 3001 Dickey Road, East Chicago to U.S. Highway 12, Burns Harbor, and will be collocated with ISG Burns Harbor (see Source Definition section for details).

In lieu of a Significant Permit Modification and for administrative purposes, a separate Part 70 Permit will be issued to MCCC Plant 4 at Burns Harbor location, as an on-site contractor for ISG Burns Harbor.

Upon issuance of the Part 70 Permit (No.: 127-24404-05305), the existing Part 70 Permit (No.: 089-21801-00507, issued December 15, 2006) for MCCC at the East Chicago location shall be revoked.

ISG Burns Harbor submitted an application for a Part 70 permit on July 22, 1996, which is currently pending. The scope of this project will not affect the capacity or throughput of any other operations at ISG Burns Harbor.

**Source Definition**

- (a) Mid-Continent Coal and Coke Company (MCCC) operates existing portable coke fines screening operations, as an on-site contractor for ISG Burns Harbor, LLC. ISG Burns Harbor, LLC (ID 00001), the primary operation, is located at U.S. Highway 12, Burns Harbor, Indiana 46304.
- (1) Mid-Continent Coal and Coke Company (previously permitted under ID 05215), a supporting operation known as Plant 1, is located at U.S. Highway 12, Burns Harbor, Indiana 46304;
- (2) Mid-Continent Coal and Coke Company (previously permitted under ID 05222), a supporting operation known as Plant 2, is located at 1150 East Boundary Road, Portage, Indiana 46368;
- (3) Mid-Continent Coal and Coke Company (previously permitted under ID 00108), a supporting operation known as the Sump Plant, is located at U.S. Highway 12, Burns Harbor, Indiana 46304; and

- (4) Mid-Continent Coal and Coke Company (previously permitted under ID 05216), a supporting operation known as Plant 3, is located at 1150 East Boundary Road, Portage, Indiana 46368.

A separate Part 70 permit will be issued to ISG Burns Harbor, LLC (TV 127-6301-00001). The existing MCCC plants listed above were issued a separate Part 70 Permit (TV 127-7634-00108) on June 30, 2006, solely for administrative purposes.

- (b) IDEM has determined that ISG Burns Harbor, LLC and MCCC Plant 4 are under the common control of ISG Burns Harbor, LLC., and therefore, they will be considered as one source, as defined by 326 IAC 2-7-1(22), based on this contractual control.
- (5) Mid-Continent Coal and Coke Company, a supporting operation known as MCCC Plant 4, will be located at U.S. Highway 12, Burns Harbor, Indiana 46304.

In lieu of a Significant Permit Modification and for administrative purposes, a separate Part 70 Operating Permit shall be issued to MCCC Plant 4 (127-24404-05305).

#### Existing Approvals

MCCC (henceforth known as MCCC Plant 4) has been operating under Part 70 Permit.: 089-21801-00507, issued on December 15, 2006. Upon issuance of the Part 70 Permit No.: 127-24404-00507 (this permit) for the Burns Harbor location, the existing Part 70 Permit No.:089-21801-00507 for the East Chicago location shall be revoked. See the History section of this TSD for details.

#### County Attainment Status

The source is located in Porter County.

Pollutant	Status
PM10	Attainment
PM2.5	Nonattainment
SO <sub>2</sub>	Attainment
NO <sub>x</sub>	Attainment
8-hour Ozone	Nonattainment
CO	Attainment
Lead	Attainment

- (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. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standard. Porter County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (b) U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Porter County as nonattainment for PM2.5. On March 7, 2005 the Indiana Attorney General's Office, on behalf of IDEM, filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's guidance to regulate PM10 emissions as a surrogate for PM2.5 emissions pursuant to the requirements of Emission Offset, 326 IAC 2-3.
- (c) Porter County has been classified as attainment or unclassifiable in Indiana for SO<sub>2</sub>, CO, NO<sub>2</sub>, and Lead (Pb). Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

### Source Status - ISG Burns Harbor and Mid-Continent Coal and Coke Company Plant 4

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Pollutant	Emissions (tons/year)
PM	>100
PM10	>100
SO <sub>2</sub>	>100
VOC	>100
CO	>100
NO <sub>x</sub>	>100

- (a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a regulated pollutant is emitted at a rate of 100 tons per year or more, and it is in one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (b) This existing source is a major stationary source under Emission Offset (326 IAC 2-3) because a nonattainment regulated pollutant is emitted at a rate of 100 tons per year or more.

The table below summarizes the potential to emit HAPs for the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

HAPs	Potential To Emit (tons/year)
Single HAP	>10
Combination of HAPs	>25

This existing source is a major source of HAPs, as defined in 40 CFR 63.41, because HAPs emissions are greater than ten (10) tons per year for any single HAP and greater than twenty-five (25) tons per year of a combination of HAPs.

### Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed an application, submitted by MCCC Plant 4 on January 19, 2007 relating to the construction and operation of a portable coke fines screening plant. This source will function as an on-site contractor of ISG Burns Harbor, LLC. The following is a list of the proposed emissions units and pollution control devices:

One (1) screening operation with a maximum capacity of fifty (50) tons per hour, and consisting of the following equipment:

- (a) One (1) coke screen;
- (b) Four (4) conveyors;
- (c) One (1) hopper;
- (d) One (1) internal combustion diesel generator, used to generate electric power, with a maximum capacity of 164 HP; and
- (e) One (1) front-end loader, consisting of an eight (8) cubic yard bucket, with a capacity equal to 4.5 tons per bucket.

### Enforcement Issues

There are no pending enforcement actions.

**Emission Calculations**

See Appendix A of this document for detailed emission calculations (pages 1 through 4).

**Permit Level Determination – Part 70**

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

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	71.8
PM10	48.1
SO <sub>2</sub>	1.47
VOC	1.81
CO	4.80
NO <sub>x</sub>	22.3

There are no HAP emissions from the new emission units, except from diesel fired units which are considered as negligible.

This source modification is subject to 326 IAC 2-7-10.5(f)(4)(a) because this modification results in a potential to emit of PM and PM10 greater than 25 tons per year. In lieu of a Significant Permit Modification and for administrative purposes, a separate Part 70 Operating Permit shall be issued to MCCC Plant 4, an on-site contractor of ISG Burns Harbor.

**Permit Level Determination – PSD or Emission Offset**

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 source modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Emission Unit	Potential to Emit (tons/year)						
	PM	PM10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Storage Silos/Transport	4.50	2.69	0	0	0	0	0
Coke Processing	<14.9	<9.94	0	0	0	0	0
Internal Combustion Engine (164 HP)	<1.58	<1.58	1.47	1.81	4.80	22.3	0
<b>Total Emissions From Portable Plant (MCCC 4)</b>	<b>21.0</b>	<b>14.2</b>	<b>1.47</b>	<b>1.81</b>	<b>4.80</b>	<b>22.3</b>	<b>0</b>
PSD/Emission Offset Thresholds	25	15	40	40	100	40	NA

- (a) This modification to an existing major stationary source is not major because the emissions increase for each criteria pollutant is less than the PSD and Emission Offset significant levels. Therefore, the provisions of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) do not apply.
- (b) Porter County has been designated as nonattainment for PM2.5 in 70 FR 943 dated January 5, 2005. According to the April 5, 2005 EPA memo titled “Implementation of New Source Review Requirements in PM2.5 Nonattainment Areas” authored by Steve Page,

Director of OAQPS, until EPA promulgates the PM2.5 major NSR regulations, states should assume that a major stationary source's PM10 emissions represent PM2.5 emissions. IDEM will use the PM10 nonattainment major NSR program as a surrogate to address the requirements of nonattainment major NSR for the PM2.5 NAAQS. A significant emissions increase would be a net emissions increase or the potential of fifteen (15) tons per year or greater of PM10. MCCC Plant 4 has opted to limit potential to emit of PM10 from the modification to less than fifteen (15) tons per year. See PSD and Emission Offset discussion under the State Rule Applicability section.

#### **Federal Rule Applicability Determination**

- (a) There are no New Source Performance Standards (NSPS), 326 IAC 12 and 40 CFR Part 60 included in this permit for MCCC Plant 4.
- (b) The requirements of the New Source Performance Standard (NSPS), 40 CFR 60.670 through 60.676, Subpart OOO -Standards of Performance for Nonmetallic Mineral Processing Plants (326 IAC 12) are not included in this permit for MCCC Plant 4 since the coke is not a nonmetallic mineral pursuant to 40 CFR 60.671.
- (c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14, 326 IAC 20, 40 CFR Part 61 and 40 CFR Part 63) included in this permit for MCCC Plant 4.
- (d) The requirements of 40 CFR Part 64, Compliance Assurance Monitoring, are not included in this permit because this permit does not involve a pollutant-specific emissions unit as defined in 40 CFR 64:
  - (1) with the potential to emit before controls equal to or greater than the major source threshold,
  - (2) that is subject to an emission limitation or standard, and
  - (3) uses a control device as defined in 40 CFR 64.1 to comply with that emission limitation or standard.

#### **Relocation of Portable Sources**

- (a) This permit is approved for operation in Indiana. This determination is based on the requirements of Prevention of Significant Deterioration in 326 IAC 2-2, and Emission Offset requirements in 326 IAC 2-3. Prior to locating in any other nonattainment area, the Permittee must submit a request and obtain a permit modification.
- (b) A request to relocate shall be submitted to IDEM, OAQ at least thirty (30) days prior to the intended date of relocation. This submittal shall include the following:
  - (1) A list of governmental officials entitled to receive notice of application to relocate. [IC 13-15-3-1]
  - (2) A list of adjacent landowners that the Permittee will send written notice to not more than ten (10) days after submission of the request to relocate. IC 13-15-8 The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) "Relocation Site Approval" letter shall be obtained prior to relocating.
- (d) The Permittee shall also notify the applicable local air pollution control agency when relocating to, or from, one the following:
  - (1) Madison County - (Anderson Office of Air Management)

- (2) City of Evansville plus four (4) miles beyond the corporate limits but not outside Vanderburgh County - (Evansville EPA)
  - (3) City of Gary -(Gary Department of Environmental Affairs)
  - (4) City of Hammond - (Hammond Department of Environmental Management)
  - (5) Marion County - (Indianapolis Office of Environmental Services)
  - (6) Vigo County - (Vigo County Air Pollution Control)
- (e) A valid operation permit consists of this document and any subsequent "Relocation Site Approval" letter specifying the current location of the portable plant.

### State Rule Applicability Determination

The following state rules are applicable to the source due to the modification:

326 IAC 2-2 (PSD), 326 IAC 2-3 (Emission Offset), and 326 IAC 2-1.1-5 (Nonattainment NSR)  
MCCC Plant 4 will function as a contractor for ISG Burns Harbor, LLC and is considered as one source due to this contractual control. It is in one of the 28 listed source categories, and it is a major source under 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset).

- (a) Porter County has been designated as nonattainment for PM 2.5 (see Permit Level Determination section). IDEM will use the PM10 nonattainment major NSR program as a surrogate to address the requirements of nonattainment major NSR for the PM 2.5 NAAQS. MCCC Plant 4 has opted to limit the potential to emit of PM10 below 15 tons per year as described below. MCCC Plant 4 has also opted to limit the potential to emit of PM below 25 tons per year.

The Permittee shall limit the coke throughput to the coke screening operation to less than 99,390 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

The above limit is structured such that, when including all fugitive emissions and emissions from the combustion of diesel fuel in the 164 HP diesel generator, PM emissions from the coke screening plant are less than twenty-five (25) tons per year and PM10 emissions from the coke screening operation are less than fifteen (15) tons per year.

Compliance with this limitation renders the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable. Compliance with the PM10 limit also satisfies PM2.5 requirements under 326 IAC 2-1.1-5 (Nonattainment NSR).

- (b) Porter County has been designated as attainment for CO and SO<sub>2</sub>. The potential to emit of CO and SO<sub>2</sub> from the coke fines screening plant is less than one hundred (100) tons per year. Therefore, the coke fines screening operation is not subject to the provisions of 326 IAC 2-2 (PSD).

- (c) Porter County has been designated as nonattainment for Ozone under the 8-hour Ozone standard. Therefore, VOC and NO<sub>x</sub> emissions were evaluated under the provisions of 326 IAC 2-3 (Emission Offset) as described below:

At its maximum operating capacity, the potential VOC and NO<sub>x</sub> emissions from the coke fines screening plant are less than forty (40) tons per year, respectively. Therefore, the coke fines screening operation is not subject to the provisions of 326 IAC 2-2 (PSD) or 326 IAC 2-3 (Emissions Offset).

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

The operation of this portable coke fines screening plant will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, the requirements of 326 IAC 2-4.1 do not apply to this modification.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit under 326 IAC 2-7, Part 70 program, and it is located in Porter County. Pursuant to this rule, the Permittee shall submit an emission statement certified pursuant to the requirements of 326 IAC 2-6. This statement must be received in accordance with the compliance schedule specified in 326 IAC 2-6-3 and must comply with the minimum requirements specified in 326 IAC 2-6-4. The submittal should cover the period identified in 326 IAC 2-6. The provisions of 326 IAC 2-6 shall be included in the Part 70 Permit No.: 127-24404-05305.

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 the 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 6-4-2 (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.

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

This source is subject to the requirements of 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations) because it is a new source of particulate matter as described in 326 IAC 6-5-1(b). Pursuant to this rule, the Permittee shall control fugitive particulate matter emissions according to the Fugitive Dust Control Plan, submitted on July 31, 2002. This plan indicates that the fugitive emissions will be controlled by spraying the unpaved roads with water on an as-needed basis. A copy of the Fugitive Dust Control Plan is included in the permit as Attachment A.

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

The coke fines screening plant is not subject to the provisions of 326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations) because the coke fines screening plant has potential to emit of SO<sub>2</sub> less than twenty-five (25) tons per year.

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

The coke fines screening plant does not have potential VOC emissions equal to or greater than twenty five (25) tons per year. Therefore this source is not subject to the requirements of 326 IAC 8-1-6 (New Facilities; General Reduction Requirements).

326 IAC 9 (Carbon Monoxide Emission Limitations)

There are no specific emission limitations required by this rule because the source is not an operation listed in 326 IAC 9-1-2.

326 IAC 10 (Nitrogen Oxide Emission Limitations)

This source is located in Porter County. Therefore, the provisions of 326 IAC 10-1 (Nitrogen Oxides Control in Clark and Floyd Counties) do not apply.

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

The Permittee is subject to the requirements of 326 IAC 6-3 because the coke fines screening plant is located in Porter County, which is not covered by the provisions of 326 IAC 6.8 or 326 IAC 6.5 as described in 326 IAC 6-3-1(c)(3). Therefore, pursuant to 326 IAC 6-3-2, the particulate emissions from the MCCC Plant 4 shall be limited to less than 44.6 pounds per hour when operating at a process weight rate of 50 tons per hour.

This limit was calculated using the following equation.

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40$$

where E = rate of emission in pounds per hour and  
P = process weight rate in tons per hour

#### 326 IAC 6-2-1 (Particulate Matter Emissions Limitations for Sources of Indirect Heating)

The diesel generator is a type of internal combustion engine in which the fuel is ignited by being suddenly exposed to the high temperature and pressure of the compressed gas. The Permittee uses the engine to power their plant. This is not a steam generator or indirect heating unit. Therefore, the provisions of 326 IAC 6-2-1 are not applicable.

### **Compliance Determination and Monitoring Requirements**

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

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

The following compliance determination and monitoring requirements are applicable to this source:

- (a) The Permittee shall use wet suppression to control emissions of PM and PM10 from the coke screening operation and roads as necessary to ensure that the coke processed has a moisture content greater than ten (10) percent. The suppressant shall be applied in a manner and at a frequency sufficient to ensure PM and PM10 emissions are less than twenty-five (25) and less than fifteen (15) tons per year, respectively. If weather conditions preclude the use of wet suppression, the Permittee shall perform moisture content analysis to verify the moisture content of the coke is equal to or greater than ten (10) percent. The method for the moisture content analysis shall be approved by IDEM, OAQ.
- (b) Visible emission notations of the hoppers, the screens, and the conveyor transfer points shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

- (c) 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.
- (d) 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.
- (e) 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.
- (f) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

<b>Conclusion and Recommendation</b>
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The construction of this proposed modification (portable coke fines screening plant) shall be subject to the conditions of the attached proposed Significant Source Modification No. 127-24238-05305.

**Appendix A: Emissions Calculations  
PM/PM10 Emissions from Coke Processing**

**Company Name:** Mid-Continent Coal and Coke Company  
**Address:** 3001 Dickey Road, East Chicago, Indiana 46312  
**Source Mod.:** 127-24238  
**Plant ID:** 127-05305  
**Reviewer:** ERG/SD  
**Date:** April 2, 2007

**Coke Processing Operations (Uncontrolled)**

Activity	Capacity (tons/year)	PM Emission Factor (lb/ton)	Uncontrolled PTE of PM (tons/year)
Storage Silos	** see page 2 **	NA	0.00
Transporting	** see page 2 **	NA	0.00
Unloading Raw Coke	438,000	0.020	4.38
Screening	438,000	0.090	19.7
Conveying	438,000	0.090	19.7
Loading Finished Coke	438,000	0.100	21.9

**Total Potential to Emit PM = 65.7**  
**Total Potential to Emit PM10 = 43.8**

**Coke Processing Operations (Controlled)**

Activity	Uncontrolled PTE of PM (tons/year)	Control Efficiency %	Controlled PTE of PM (tons/year)
Storage Silos	** see page 2 **	NA	0.00
Transporting	** see page 2 **	NA	0.00
Unloading Raw Coke	4.38	50%	2.19
Screening	19.7	50%	9.86
Conveying	19.7	50%	9.86
Loading Finished Coke	21.9	50%	11.0

**Total Controlled Potential to Emit PM = 32.9**  
**Total Controlled Potential to Emit PM10 = 21.9**

**Coke Processing Operations (Limited)**

Limited throughput = 99,390 ton/year

Activity	Limited Throughput (tons/year)	PM Emission Factor (lb/ton)	Limited PTE of PM (ton/year)
Storage Silos	** see page 2 **	NA	0.00
Transporting	** see page 2 **	NA	0.00
Unloading Raw Coke	99,390	0.020	0.99
Screening	99,390	0.090	4.47
Conveying	99,390	0.090	4.47
Loading Finished Coke	99,390	0.100	4.97

**Total Potential to Emit PM = 14.9**  
**Total Potential to Emit PM10 = 9.94**

The source wets the coke to control PM/PM10 emissions. This activity has an estimated 50% control efficiency.  
 The PM10 emission factor for screening and conveying is 0.04 lb/ton. Therefore, potential PM10 emissions are 66.67% of PM emissions.  
 The emission factors used are from SPM No.: 089-15497-05217, issued to the source on February 3, 2003.

**METHODOLOGY**

Uncontrolled PTE of PM (tons/year) = Capacity (tons/year) \* PM Emission Factor (lb/ton) \* 1 ton/2000 lbs  
 Controlled PTE of PM (tons/year) = Capacity (tons/year) \* PM Emission Factor (lb/ton) \* 1 ton/2000 lbs \* Control Efficiency %  
 Limited PTE of PM (tons/year) = Limited Throughput (tons/year) \* PM Emission Factor (lb/ton) \* 1 ton/2000 lbs

**Appendix A: Emissions Calculations  
PM & PM10 Emissions from Coke Processing**

**Company Name:** Mid-Continent Coal and Coke Company  
**Address:** 9001 Dickey Road, East Chicago, Indiana 46312  
**Source Mod.:** 127-24238  
**Plant ID:** 127-05305  
**Reviewer:** ERG/SD  
**Date:** April 2, 2007

**1. Fugitive Emissions from Coke Storage Piles**

Storage pile emissions, which result from wind erosion, are determined by the following calculations:

$$EF = 1.7 (s/1.5)^3 (365-p) / 235 * (f/15)$$

$$= 5.67 \text{ lb/ac/day}$$

where:	s =	4.9	% 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

Storage capacity (SC) of site (tons) = (# acres)\*(43560 sqft/acre)\*(25 ft high)\*(1/40 ton/cuft)  
 Storage capacity (SC) of site (tons) = 54450

$$PTE \text{ of PM (tons/year)} = EF * SC * (40 \text{ cuft/ton}) / 365 \text{ days/year} / (2000 \text{ lbs/ton} * 43560 \text{ sqft/acre} * 25 \text{ ft})$$

**PTE of PM (tons/year) = 2.07**  
**PTE of PM10 (tons/year) = 2.07**

**2. Storage Pile Handling**

$$EF \text{ (lb/ton)} = k * (0.0032)^3 * (U/5)^{1.3} / (M/2)^{1.4}$$

where: k value for:

PM	PM10
0.74	0.35

U value =	10	mph
M value =	12	%
Storage capacity =	54450	tons

PM EF =	4.75E-04	lb/ton
PM10 EF =	2.24E-04	lb/ton

$$PTE \text{ of PM (tons/year)} = EF \text{ (lb/ton)} * \text{Storage Capacity (tons)} * 1 \text{ ton}/2000 \text{ lbs}$$

**PTE of PM (tons/year) = 0.013**

$$PTE \text{ of PM10 (tons/year)} = EF \text{ (lb/ton)} * \text{Storage Capacity (tons)} * 1 \text{ ton}/2000 \text{ lbs}$$

**PTE of PM10 (tons/year) = 0.006**

**4. Unpaved Road Emission Factors: AP-42**

According to AP-42, Section 13.2.2 Unpaved Roads, November 2006, the PM/PM10 emission factors for unpaved roads can be estimated from the following equation:

$$\text{lbs/VMT Equation: } E = k (s/12)^3 (W/3)^9$$

Where:

Particle size multiplier k	4.9	dimensionless (PM-30 or TSP)	1.5 dimensionless PM-10
surface material silt content (%) s	4.8	Table 13.2.2-1	
mean vehicle weight W	18.0	tons	0.9 PM-10 Table 13.2.2-2
Equation constants a	0.7	PM-30 or TSP Table 13.2.2-2	0.45 PM-10 Table 13.2.2-2
b	0.45	PM-30 or TSP Table 13.2.2-2	

$$\text{PM Emission Factor} = (4.9) \times (8.5/12)^{3.7} \times (5/3)^{9.45} = 5.78 \text{ lbs PM / mile}$$

$$\text{PM10 Emission Factor} = (1.5) \times (8.5/12)^{3.7} \times (5/3)^{9.45} = 1.47 \text{ lbs PM10 / mile}$$

**5. Potential to Emit (PTE) of PMPM10 from unpaved Roads:**

Emission Area	Vehicle Weight (tons)	Unpaved Total VMT	Total Vehicle Emissions (lb/year)	Total Vehicle Emissions (tons/year)
Maintenance Roads (PM)	18.0	835	4,825	2.41
Maintenance Roads (PM10)	18.0	835	1,230	0.61

**Methodology**

Total Vehicle Emissions (tons/yr) = Unpaved Total VMT (miles/year) \* PM/PM10 Emission Factor \* 1 ton/2000 lbs

**TOTAL FUGITIVE PM EMISSIONS (tons/year) = 4.50**  
**TOTAL FUGITIVE PM10 EMISSIONS (tons/year) = 2.69**

Distance per trip one way (miles) = 0.0378  
 Capacity of load (tons per trip) = 4.5  
 Coke throughput limit (tons/year) = 99,390  
 VMT (miles/year) = [Capacity of load (tons/trip) \* 1/Coke throughput (tons/year)] = 835

**Appendix A: Emissions Calculations**  
**Potential Emissions from Internal Combustion Engine (164 hp)**  
**[Diesel Fuel]**

**Company Name:** Mid-Continent Coal and Coke Company  
**Address:** 3001 Dickey Road, East Chicago, Indiana 46312  
**Source Mod.:** 127-24238  
**Plant ID:** 127-05305  
**Reviewer:** ERG/SD  
**Date:** April 2, 2007

<b>Output (hp)</b>	<b>Output (hp-hour/year)</b>
164	1,436,640

Pollutant						
Emission Factor (lb/hp-hour)	PM 2.20E-03	PM10 2.20E-03	SO <sub>2</sub> 2.05E-03	NO <sub>x</sub> 3.10E-02	VOC 2.51E-03	CO 6.68E-03
PTE (tons/year)	1.58	1.58	1.47	22.3	1.81	4.8

One Reciprocating IC Engine

Emission factors are from AP-42, Chapter 3.3, Table 3.3-1, SCC #2-02-001-02 and 2-03-001-01. (October, 1996)  
 Assume all PM10 emissions are equal to PM.

**METHODOLOGY**

Output (hp-hour/year) = Output (hp) \* 8760 hours/year

PTE (tons/year) = Output (hp-hour/year) \* Emission Factor (lb/hp-hour) \* 1 ton/2000 lbs

**Appendix A: Emissions Calculations**  
**Emissions Summary**

**Company Name:** Mid-Continent Coal and Coke Company  
**Address:** 3001 Dickey Road, East Chicago, Indiana 46312  
**Source Mod.:** 127-24238  
**Plant ID:** 127-05305  
**Reviewer:** ERG/SD  
**Date:** April 2, 2007

**Uncontrolled PTE**

Emission Units/Process Equipment	PM	PM10	SO <sub>2</sub>	NOx	VOC	CO
Storage Silos	4.50	2.69				
Transporting						
Coke Processing Operations	65.7	43.8				
Internal Combustion Engine (164 hp)	1.58	1.58	1.47	22.3	1.81	4.80
<b>TOTAL</b>	<b>71.8</b>	<b>48.1</b>	<b>1.47</b>	<b>22.3</b>	<b>1.81</b>	<b>4.80</b>

**Controlled PTE**

Emission Units/Process Equipment	PM	PM10	SO <sub>2</sub>	NOx	VOC	CO
Storage Silos	4.50	2.69				
Transporting						
Coke Processing Operations	32.9	21.9				
Internal Combustion Engine (164 hp)	1.58	1.58	1.47	22.3	1.81	4.80
<b>TOTAL</b>	<b>38.9</b>	<b>26.2</b>	<b>1.47</b>	<b>22.3</b>	<b>1.81</b>	<b>4.80</b>

**Limited PTE**

Emission Units/Process Equipment	PM	PM10	SO <sub>2</sub>	NOx	VOC	CO
Storage Silos	4.50	2.69				
Transporting						
* Coke Processing Operations	14.9	9.94				
* Internal Combustion Engine (164 hp)	1.58	1.58	1.47	22.3	1.8	4.80
<b>TOTAL</b>	<b>21.0</b>	<b>14.2</b>	<b>1.47</b>	<b>22.3</b>	<b>1.81</b>	<b>4.80</b>

\* Limited raw material throughput.