

**CONSTRUCTION PERMIT
OFFICE OF AIR MANAGEMENT**

**PC Indiana Synthetic Fuel #2, L.L.C.
Peabody Coal Company (Lynnville Mine)
Lynnville, IN 47619**

is hereby authorized to construct

a 100 ton per hour synthetic fuel pellet production facility consisting of the equipment listed in the Table on page 2

This permit is issued to the above mentioned company (herein known as the Permittee) under the provisions of 326 IAC 2-1 and 40 CFR 52.780, with conditions listed on the attached pages.

Construction Permit No.: CP 173-9594-00041	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

Equipment	Material	Input Rate (tons/hr)
fines collecting conveyor	coal fines (includes water)	125.514
fines transfer conveyor	coal fines (includes water)	125.514
(2) feed bins with variable speed feed conveyors	coal fines (includes water)	111.2
feed conveyor	coal fines (includes water)	111.2
plant protection screen	coal fines (includes water)	111.2
mixer feed conveyor	coal fines (includes water)	111.2
(2) pugmill conveyors	coal fines, reagent, water	111.2,1.8236,4.71
mixer product conveyor	coal fines/binder/water)	117.73
(2) pellet mill feed conveyors	coal fines/binder/water)	58.865
(2) pellet mills	coal fines/binder/water)	58.865
finished product collecting conveyor	fuel pellets	117.73
pellet transfer conveyor	fuel pellets	117.73
tripper conveyor	fuel pellets	117.73
recycle material conveyor	off-spec fuel pellets	117.73
30,000 gallon reagent tank	reagent	1.8236
underpile reclaim conveyor	fuel pellets	100
loading hopper	fuel pellets	100

Construction Conditions

General Construction Conditions

1. That the data and information supplied with the application shall be considered part of this permit. Prior to any proposed change in construction which may affect allowable emissions, the change must be approved by the Office of Air Management (OAM).
2. That this permit to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

3. That pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.
4. That pursuant to 326 IAC 2-1-9(b)(Revocation of Permits), the Commissioner may revoke this permit 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.
5. That notwithstanding Construction Condition No. 6, all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

First Time Operation Permit

6. That this document shall also become a first-time operation permit pursuant to 326 IAC 2-1-4 (Operating Permits) 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 Management (OAM), Permit Administration & Development Section, verifying that the facilities were constructed as proposed in the application. The facilities covered in the Construction Permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.
 - (b) 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.
 - (c) Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.
 - (d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-1-7.1(Fees).
 - (e) Pursuant to 326 IAC 2-1-4, the Permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date established in the validation letter. The operation permit issued shall contain as a minimum the conditions in the Operation Conditions section of this permit.

NSPS Reporting Requirement

7. That pursuant to the New Source Performance Standards (NSPS), Part 60.250 through 60.254, Subpart (Y), the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:
- (a) Commencement of construction date (no later than 30 days after such date);
 - (b) Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
 - (c) Actual start-up date (within 15 days after such date); and
 - (d) Date of performance testing (at least 30 days prior to such date), when required by a condition elsewhere in this permit.

Reports are to be sent to:

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

The application and enforcement of these standards have been delegated to the IDEM-OAM. The requirements of 40 CFR Part 60 are also federally enforceable.

8. That when the facility is constructed and placed into operation the following operation conditions shall be met:

Operation Conditions

General Operation Conditions

1. That the data and information supplied in the application shall be considered part of this permit. Prior to any change in the operation which may result in an increase in allowable emissions exceeding those specified in 326 IAC 2-1-1 (Construction and Operating Permit Requirements), the change must be approved by the Office of Air Management (OAM).
2. That the permittee shall comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder.

Preventive Maintenance Plan

3. That pursuant to 326 IAC 1-6-3 (Preventive Maintenance Plans), the Permittee shall prepare and maintain a preventive maintenance plan, including the following information:
- (a) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices.
 - (b) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions.

- (c) Identification of the replacement parts which will be maintained in inventory for quick replacement.

The preventive maintenance plan shall be submitted to IDEM, OAM upon request and shall be subject to review and approval.

Transfer of Permit

4. That pursuant to 326 IAC 2-1-6 (Transfer of Permits):

- (a) In the event that ownership of this 100 ton per hour synthetic fuel pellet production facility is changed, the Permittee shall notify OAM, Permit Branch, within thirty (30) days of the change. Notification shall include the date or proposed date of said change.
- (b) The written notification shall be sufficient to transfer the permit from the current owner to the new owner.
- (c) The OAM shall reserve the right to issue a new permit.

Permit Revocation

5. That pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of 326 IAC 2-1 (Permit Review Rules).

Availability of Permit

6. That pursuant to 326 IAC 2-1-3(l), the Permittee shall maintain the applicable permit on the premises of this source and shall make this permit available for inspection by the IDEM, or other public official having jurisdiction.

Performance Testing

7. That pursuant to 326 IAC 2-1-3 (Construction and Operating Permit Requirements) compliance stack tests shall be performed for opacity from the conveying equipment, and unloading equipment within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. These tests shall be performed according to 326 IAC 3-6 (Source Sampling Procedures) using the methods specified in the rule or as approved by the Commissioner.

- (a) A test protocol shall be submitted to the OAM, Compliance Data Section, 35 days in advance of the test.
- (b) The Compliance Data Section shall be notified of the actual test date at least two (2) weeks prior to the date.
- (c) All test reports must be received by the Compliance Data Section within 45 days of completion of the testing.
- (d) Whenever the results of the stack test performed exceed the level specified in this permit, appropriate corrective actions shall be implemented within thirty (30) days of receipt of the test results. These actions shall be implemented immediately unless notified by OAM that they are acceptable. The Permittee shall minimize emissions while the corrective actions are being implemented.
- (e) Whenever the results of the stack test performed exceed the level specified in this permit, a second test to demonstrate compliance shall be performed within 120 days. Failure of the second test to demonstrate compliance may be grounds for immediate revocation of this permit to operate the affected facility.

Malfunction Condition

8. That pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

Annual Emission Reporting

9. That pursuant to 326 IAC 2-6 (Emission Reporting), the Permittee must annually submit an emission statement for the source. This statement must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31.

Opacity Limitations

10. (a) That pursuant to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.250 through 60.254, Subpart Y, on or after the date on which the performance test required to be conducted by 40 CFR Part 60.8 is completed, the emissions from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal shall not exceed 20 percent opacity.
- (b) That pursuant to 326 IAC 5-1-2 (Visible Emission Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions from all processes not otherwise limited by NSPS, 40 CFR Part 60.250 through 60.253, Subpart Y, shall meet the following:
- (1) visible emissions shall not exceed an average of 40% opacity in 24 consecutive readings.
 - (2) visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

Fugitive Dust Emissions

11. That pursuant to this rule, the Permittee shall be in violation of 326 IAC 6-4 (Fugitive Dust Emissions) if any criteria specified in 326 IAC 6-4-2(1) through (4) are violated. Observations of visible emissions crossing the property line of the source at or near ground level must be made by a qualified representative of IDEM. [326 IAC 6-4-5(c)].

Fugitive Dust Emissions

12. That pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emissions Limitations), fugitive particulate matter emissions shall be controlled according to the plan submitted on March 23, 1998. This plan consists of:

- (a) wet suppression of dust from unpaved haul roads on an as needed basis.

Open Burning

13. That 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.

Emergency Reduction Plans

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

(a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) These ERPs shall be submitted for approval to:

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

within 180 calendar days from the date on which this source commences operation.

(c) If the ERP is disapproved by IDEM, OAM, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP. If after this time, the Permittee does not submit an approvable ERP, IDEM, OAM, shall supply such a plan.

(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(f) Upon direct notification by IDEM, OAM, 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 level. [326 IAC 1-5-3]

Reagent Tank

15. The reagent tank (TK-1) is subject to the record keeping requirements of 40 CFR 60.116b(b). Pursuant to these requirements, the owner or operator shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. Records shall be kept for the life of the vessel.

MALFUNCTION REPORT

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
FAX NUMBER - 317 233-5967**

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6
and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE: IT HAS POTENTIAL TO EMIT 25 LBS/HR PARTICULATES ? _____, 100 LBS/HR VOC ? _____, 100 LBS/HR SULFUR DIOXIDE ? _____ OR 2000 LBS/HR OF ANY OTHER POLLUTANT ? _____ EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

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

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

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

COMPANY: _____ PHONE NO. () _____

LOCATION: (CITY AND COUNTY) _____

PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP: _____

CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: ____/____/19____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION:

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE ____/____/19____ AM/PM

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

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____

INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

MALFUNCTION REPORTED BY:

TITLE: _____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

**Please note - This form should only be used to report malfunctions
applicable to Rule 326 IAC 1-6 and to qualify for
the exemption under 326 IAC 1-6-4.**

326 IAC 1-6-1 Applicability of rule

Sec. 1. The requirements of this rule (326 IAC 1-6) shall apply to the owner or operator of any facility which has the potential to emit twenty-five (25) pounds per hour of particulates, one hundred (100) pounds per hour of volatile organic compounds or SO₂, or two thousand (2,000) pounds per hour of any other pollutant; or to the owner or operator of any facility with emission control equipment which suffers a malfunction that causes emissions in excess of the applicable limitation.

326 IAC 1-2-39 “Malfunction” definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. (Air Pollution Control Board; 326 IAC 1-2-39; filed Mar 10, 1988, 1:20 p.m. : 11 IR 2373)

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

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

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for New Construction and Operation

Source Background and Description

Source Name:	PC Indiana Synthetic Fuel #2, L.L.C.
Source Location:	Peabody Coal Company (Lynnville Mine) West of Lynnville Road, Lynnville 47619
County:	Warrick
Construction Permit No.:	CP 173-9594-00018
SIC Code:	2999
Permit Reviewer:	M. E. Sims

The Office of Air Management (OAM) has reviewed an application from PC Indiana Synthetic Fuel #2, L.L.C. relating to the construction and operation of a 100 ton per hour synthetic fuel pellet production facility, consisting of the following equipment:

Equipment	Material	Input Rate (tons/hr)
finer collecting conveyor	coal fines (includes water)	125.514
finer transfer conveyor	coal fines (includes water)	125.514
(2) feed bins with variable speed feed conveyors	coal fines (includes water)	111.2
feed conveyor	coal fines (includes water)	111.2
plant protection screen	coal fines (includes water)	111.2
mixer feed conveyor	coal fines (includes water)	111.2
(2) pugmill conveyors	coal fines, reagent, water	111.2,1.8236,4.71
mixer product conveyor	coal fines/binder/water)	117.73
(2) pellet mill feed conveyors	coal fines/binder/water)	58.865
(2) pellet mills	coal fines/binder/water)	58.865
finished product collecting conveyor	fuel pellets	117.73
pellet transfer conveyor	fuel pellets	117.73
tripper conveyor	fuel pellets	117.73
recycle material conveyor	off-spec fuel pellets	117.73
30,000 gallon reagent tank	reagent	1.8236
underpile reclaim conveyor	fuel pellets	100
loading hopper	fuel pellets	100

Source Definition

PC Indiana Synthetic Fuel #2 will produce coal-based synthetic fuel pellets utilizing coal fines recovered from refuse impoundments at the Peabody Coal Company Lynnville Mine. As such, PC Indiana Synthetic Fuel #2 will be located at the coal mine site.

PC Indiana Synthetic Fuel #2 and the Peabody Coal Company Lynnville Mine are considered the same source for the following reasons:

- (a) Common control is established through the contractual agreement between PC Indiana Synthetic Fuel #2 and the Peabody Coal Company Lynnville Mine.
- (b) A support relationship exist between PC Indiana Synthetic Fuel #2 and the Peabody Coal Company Lynnville Mine because at least 50% of the input raw materials used by PC Indiana Synthetic Fuel #2 come from the Peabody Coal Company Lynnville Mine.
- (c) The sources are located on contiguous properties.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
E001	reagent tank	15	0.33	n/a	150-200

Recommendation

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

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

A complete application for the purposes of this review was received on March 23, 1998.

Emissions Calculations

See Appendix A (Emission Calculations) for detailed calculations (3 pages).

Total Potential and Allowable Emissions

Indiana Permit Allowable Emissions Definition (after compliance with applicable rules, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Allowable Emissions (tons/year)	Potential Emissions (tons/year)
Particulate Matter (PM)	948.74	778.61
Particulate Matter (PM ₁₀)	948.74	778.61
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Single Hazardous Air Pollutant (HAP)	0	0
Combination of HAPs	0	0

- (a) Allowable emissions are determined from the applicability of rule 326 IAC 6-3. See Appendix A Emission Calculations for detailed calculations.
- (b) The potential emissions before controls are less than the allowable emissions, therefore, the potential emissions are used for the permitting determination.
- (c) Allowable emissions (as defined in the Indiana Rule) of PM/PM₁₀ are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.
- (d) Non fugitive PM/PM₁₀ emissions equal 55 tons per year. See Appendix A Emission Calculations for detailed calculations.

County Attainment Status

- (a) Warrick County has been classified as attainment or unclassifiable for particulate matter. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Fugitive Emissions
 Since this type of operation is not one 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 PM emissions from the haul road is not counted toward determination of PSD and Emission Offset applicability.

Source Status

The existing source (Peabody Coal Company - Lynnville Mine) was issued a Source Specific Operating Agreement (SSOA) S-173-7255-00018 on December 30, 1997. This existing source is not a major source because it operates under the terms and conditions of this agreement.

Proposed Modification

PTE from the proposed modification (based on 8,760 hours of operation per year at rated capacity including enforceable emission control and production limits, where applicable):

	PM (ton/yr)	PM ₁₀ (ton/yr)	SO _x (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO _x (ton/yr)
Proposed Modification	29.9	29.9	0	0	0	0
PSD Threshold Level	250	250	250	250	250	250

- (a) This modification to an existing minor stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.
- (b) Although the coal mine and prep plant can still comply with their existing SSOA status, a source cannot be issued an SSOA and an operating permit at the same time. Therefore, this source will be in a state operating permit status. This permit is being proposed for now, but the SSOA issued to the coal mine and prep plant should be changed to an operating permit at a later time.

- (c) Fugitive Emissions
Since this type of operation is not one 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 PM emissions from the haul road is not counted toward determination of PSD and Emission Offset applicability.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source and modification is not subject to the Part 70 Permit requirements because:

- (a) the potential to emit (PTE) of each criteria pollutant is less than 100 tons per year,
- (b) the potential to emit (PTE) of a single hazardous air pollutant (HAP) is less than 10 tons per year,
- (c) the potential to emit (PTE) of any combination of HAPs is less than 25 tons/year, and
- (d) the existing source has been issued an operating agreement under 326 IAC 2-9.

Federal Rule Applicability

The fines collecting conveyor, fines transfer conveyor, feed conveyor, plant protection screen and mixer feed conveyor are subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60250 through 60.253, Subpart Y).

On or after the date on which the performance test required to be conducted by 40 CFR Part 60.8 is completed, the emissions from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal shall not exceed 20 percent opacity.

The reagent tank (TK-1) is subject only to the record keeping requirements of 40 CFR 60.116b(b) because the design capacity is less than 75 m³.

There are no NESHAP 40 CFR Part 63 applicable to this facility

State Rule Applicability

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

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

- (a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) These ERPs shall be submitted for approval to:

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

within 180 calendar days from the date on which this source commences operation.

- (c) If the ERP is disapproved by IDEM, OAM, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP. If after this time, the Permittee does not submit an approvable ERP, IDEM, OAM, shall supply such a plan.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (f) Upon direct notification by IDEM, OAM, 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 level. [326 IAC 1-5-3]

326 IAC 2-6 (Emission Reporting)

This facility is subject to 326 IAC 2-6 (Emission Reporting), because the source emits more than 100 tons per year of particulate matter. Pursuant to this rule, the owner of this facility must annually submit an emission statement of the facility. The annual statement must be received by July 1 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

326 IAC 4-1 (Open Burning)

Pursuant to this rule, 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.

326 IAC 5-1 (Visible Emissions)

Pursuant to 326 IAC 5-1-2 (Visible Emission Limitations) except as provided in 326 IAC 5-1-3 (temporary Exemptions), the visible emissions shall meet the following:

- (1) visible emissions shall not exceed an average of 40% opacity in 24 consecutive readings.
- (2) visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

326 IAC 6-3 (Process Operations)

The 100 ton per hour synthetic fuel pellet production facility shall comply with 326 IAC 6-3-2(c) using the following equation:

$$E = 4.10 (P^{0.67}) \quad \text{where: } E = \text{rate of emission in pounds per hour}$$

P = process weight in tons per hour, if
P is equal to or less than 60,000 lbs/hr (30 tons/hr)

The PM emissions from the 100 ton per hour synthetic fuel pellet production facility satisfies the requirements of this rule. (See Appendix A for detailed calculations.)

326 IAC 6-4 (Fugitive Dust Emissions)

Pursuant to this rule, the Permittee shall be in violation of 326 IAC 6-4 (Fugitive Dust Emissions) if any criteria specified in 326 IAC 6-4-2(1) through (4) are violated. Observations of visible emissions crossing the property line of the source at or near ground level must be made by a qualified representative of IDEM. [326 IAC 6-4-5(c)].

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

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emissions Limitations), fugitive particulate matter emissions shall be controlled according to the plan submitted on March 23, 1998. This plan consists of:

- (a) wet suppression of dust from unpaved haul roads on an as needed basis.

326 IAC 12 (New Source Performance Standard)

Pursuant to the New Source Performance Standard, 326 IAC 12, 40 CFR Part 60.250 through 60.253, Subpart Y) compliance stack tests shall be performed for opacity from the conveying

equipment, storage piles, and unloading equipment within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. These tests shall be performed according to 326 IAC 3-6 (Source Sampling Procedures) using the methods specified in the rule or as approved by the Commissioner.

- (a) A test protocol shall be submitted to the OAM, Compliance Data Section, 35 days in advance of the test.
- (b) The Compliance Data Section shall be notified of the actual test date at least two (2) weeks prior to the date.
- (c) All test reports must be received by the Compliance Data Section within 45 days of completion of the testing.
- (d) Whenever the results of the stack test performed exceed the level specified in this permit, appropriate corrective actions shall be implemented within thirty (30) days of receipt of the test results. These actions shall be implemented immediately unless notified by OAM that they are acceptable. The Permittee shall minimize emissions while the corrective actions are being implemented.
- (e) Whenever the results of the stack test performed exceed the level specified in this permit, a second test to demonstrate compliance shall be performed within 120 days. Failure of the second test to demonstrate compliance may be grounds for immediate revocation of this permit to operate the affected facility.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

- (a) This 100 ton per hour synthetic fuel pellet production facility will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Amendments to Clean Air Act.

Conclusion

The construction of this 100 ton per hour synthetic fuel pellet production facility will be subject to the conditions of the attached proposed **Construction Permit No. CP173-9594-00018**.

Indiana Department of Environmental Management Office of Air Management

Addendum to the Technical Support Document for New Construction and Operation

Source Name:	PC Indiana Synthetic Fuel #2, L.L.C.
Source Location:	Peabody Coal Company (Lynnville Mine) West of Lynnville Road, Lynnville 47619
County:	Warrick
Construction Permit No.:	CP 173-9594-00041
SIC Code:	2999
Permit Reviewer:	M. E. Sims

On May 22, 1998, the Office of Air Management (OAM) had a notice published in the Evansville Courier, Evansville, Indiana, stating that PC Indiana Synthetic Fuel #2, L.L.C. had applied for a construction permit to construct and operate a 100 ton per hour synthetic fuel pellet production facility. The notice also stated that OAM proposed to issue a permit for this installation 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.

No public comments were received regarding the proposed permit. However, upon further review by OAM the following clarifications, additions and changes to the construction permit have been made.

Information received from Peabody Coal Company indicates that PC Indiana Synthetic Fuel #2, L.L.C. has purchased the land and coal fines slurry from Peabody Coal Company. There is no contractual agreement between Peabody Coal Company and PC Indiana Synthetic Fuel #2, L.L.C. This removes the common control and support relationship thought to have previously existed between these two companies. As such, Peabody Coal Company and PC Indiana Synthetic Fuel #2, L.L.C. are considered separate sources. Peabody Coal Company will continue to operate under their existing Source Specific Operating Agreement (SSOA) 173-7255-00018 with the source id# 173-00018 unaffected by the operating status of PC Indiana Synthetic Fuel #2, L.L.C. PC Indiana Synthetic Fuel #2, L.L.C. will become source id# 173-00041 and will operate under the conditions of construction permit CP 173-9594-00041. The construction permit has been changed to reflect the change in source id# for PC Indiana Synthetic Fuel #2, L.L.C from 173-00018 to 173-00041.

The following paragraph has been added to Construction Condition 6 "First Time Operation Permit".

6. (e) Pursuant to 326 IAC 2-1-4, the Permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date established in the validation letter. The operation permit issued shall contain as a minimum the conditions in the Operation Conditions section of this permit.

The following condition has been revised for clarification.

Performance Testing

7. That pursuant to 326 IAC 2-1-3 (Construction and Operating Permit Requirements) compliance stack tests shall be performed for opacity from the conveying equipment, ~~storage piles~~ and unloading equipment within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. These tests shall be performed according to 326 IAC 3-6 (Source Sampling Procedures) using the methods specified in the rule or as approved by the Commissioner.
- (a) A test protocol shall be submitted to the OAM, Compliance Data Section, 35 days in advance of the test.
 - (b) The Compliance Data Section shall be notified of the actual test date at least two (2) weeks prior to the date.
 - (c) All test reports must be received by the Compliance Data Section within 45 days of completion of the testing.
 - (d) Whenever the results of the stack test performed exceed the level specified in this permit, appropriate corrective actions shall be implemented within thirty (30) days of receipt of the test results. These actions shall be implemented immediately unless notified by OAM that they are acceptable. The Permittee shall minimize emissions while the corrective actions are being implemented.
 - (e) Whenever the results of the stack test performed exceed the level specified in this permit, a second test to demonstrate compliance shall be performed within 120 days. Failure of the second test to demonstrate compliance may be grounds for immediate revocation of this permit to operate the affected facility.

This new source is not subject to the Part 70 Permit requirements because fugitive PM emissions from the haul road are not counted toward determination of PSD and Emission Offset applicability since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2. Non fugitive potential PM/PM₁₀ emissions are equal to 55 tons per year and below the applicability threshold for Part 70 requirements.

Mail to: Permit Administration & Development Section
Office Of Air Management
100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015

PC Indiana Synthetic Fuel #2, L.L.C.
1111 3rd Avenue West, Ste 140
Bradenton, FL 34205

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 PC Indiana Synthetic Fuel #2, L.L.C., Lynnville, Indiana, 47619, has constructed the 100 ton/hr synthetic fuel pellet production facility in conformity with the requirements and intent of the construction permit application received by the Office of Air Management on March 23, 1998 and as permitted pursuant to **Construction Permit No. CP-173-9594, Plant ID No. 173-00041** issued on _____.

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 _____, 19 _____.

My Commission expires: _____

Signature

Name (typed or printed)

APPENDIX A Emission Calculations

Technical Support Document (TSD) for New Construction and Operation

Source Background and Description

Source Name:	PC Indiana Synthetic Fuel #2, L.L.C.
Source Location:	Peabody Coal Company (Lynnville Mine) West of Lynnville Road, Lynnville 47619
County:	Warrick
Construction Permit No.:	CP 173-9594-00018
SIC Code:	2999
Permit Reviewer:	M. E. Sims

100 ton per hour synthetic fuel pellet production facility emission units

- 1) conveyors
- 2) screens
- 3) unloading
- 4) storage
- 5) haulroads

1) Conveyors

Conveyors PM/PM ₁₀ Emissions							
	throughput tons/yr	EF lb/ton	Before Controls tons/yr	lbs/hr	control %	After Controls tons/yr	lbs/hr
feed bin feed	974112	0.01	4.87	1.11	50	2.44	0.56
feed bin feed	974112	0.01	4.87	1.11	50	2.44	0.56
feed	974112	0.01	4.87	1.11	50	2.44	0.56
mixer feed	974112	0.01	4.87	1.11	50	2.44	0.56
mixer product	1031314.8	0.01	5.16	1.18	50	2.58	0.59
finished product	1031314.8	0.01	5.16	1.18	50	2.58	0.59
pellet transfer	1031314.8	0.01	5.16	1.18	50	2.58	0.59
tripper	1031314.8	0.01	5.16	1.18	50	2.58	0.59
recycle material	1031314.8	0.01	5.16	1.18	50	2.58	0.59
underpile reclaim	876000	0.01	4.38	1.0	50	2.19	0.5
Totals			49.66	11.34		24.85	5.69

2) Screens

Screens PM/PM ₁₀ Emissions							
	throughput tons/yr	EF lb/ton	Before Controls tons/yr lbs/hr		control %	After Controls tons/yr lbs/hr	
plant protection	974112	0.008	3.89	0.89	0	3.89	0.89

3) Unloading

Unloading PM/PM ₁₀ Emissions							
	throughput tons/yr	EF lb/ton	Before Controls tons/yr lbs/hr		control %	After Controls tons/yr lbs/hr	
	974112	0.001	0.49	0.11	0	0.49	0.11
loading hopper	876000	0.001	0.44	0.1	0	0.44	0.1
Totals			0.93	0.21		0.93	0.21

4) Storage

Storage PM/PM ₁₀ Emissions							
	capacity tons	Ep lb/ton	Before Controls tons/yr lbs/hr		control %	After Controls tons/yr lbs/hr	
outside stockpile	6000	0.22810	0.23	0.05	0	0.23	0.05
inside stockpile	9000	0.34216	0.34	0.08	100	0	0
Totals			0.57	0.13		0.23	0.05

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

where s = 4.9% silt

p = 125 days of rain greater than or equal to 0.01 inches

f = 15% of wind greater than or equal to 12 mph

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

5) Haulroad (fugitives)

$(4.17 \text{ trips/hour})(4 \text{ miles/trip})(2)(8760 \text{ hr/yr}) = 292233.6 \text{ miles per year maximum}$

$E_f = (k)(5.9)(s/12)(S/30)(W/3)^{0.7}(w/4)^{0.5}((365-p)/365) = 4.95 \text{ lbs/mile}$

where $k = 0.36$ (particle size multiplier)
 $s = 8.4 \%$ silt content of unpaved road
 $p = 125$ days of rain greater than or equal to 0.01 inches
 $S = 15$ miles/hr vehicle speed
 $W = 28$ tons average vehicle weight
 $w = 18$ wheels

Emissions before controls

$PM/PM_{10} = (4.95 \text{ lb/mi} \times 292233.6 \text{ mi/yr})/2000 \text{ lb/ton} = 723.56 \text{ tons/yr} = 165.2 \text{ lbs/hr}$

Emissions after controls (water trucks will be used to minimize dust from haulroads)

$PM/PM_{10} = (723.56 \text{ tons/yr})(1 - 0.50) = 361.78 \text{ tons /yr} = 82.6 \text{ lbs/hr}$

Allowable Emissions (326 IAC 6-3-2(c) Particulate Emissions Limitations)

$E = 55.0(P)^{0.11} - 40 = 51.28 \text{ lbs/hr}$

where E = rate of emissions in lbs/hr
 P = process weight in tons per hour = 100

The conveying, screening and unloading emissions are subject to this requirement. These emissions satisfy the requirements of 326 IAC 6-3-2(c).

Summary of Emissions

PM/PM ₁₀ Emissions (tons/yr)			
	Potential	Allowable	PTE
conveying	49.66	224.61	24.85
screens	3.89		3.89
unloading	0.93		0.93
storage	0.57	0.57	0.23
haulroads	723.56	723.56	361.78
Total (with fugitives)	778.61	948.74	391.78
Total (without fugitives)	55.05	225.18	29.9