CONSTRUCTION PERMIT
OFFICE OF AIR MANAGEMENT

McCawith Energy, Inc. : Rainbow Mine
C.R. 350 S. and 400 E.,
Approx 5.5 miles SE of Rockville, IN 47872

is hereby authorized to construct

(a) one (1) coal mining operation with a maximum capacity of 240,000 tons of coal mined per year, including the following area:

the SE 1/4 Sec. 26; the NE 1/4 Sec. 35; the SW 1/4 SW 1/4 Sec. 25; and the NW 1/4 NW 1/4 Sec. 26; all in T 15 N, R 7 W, Parke County, Indiana.

(b) one (1) coal preparation plant, including coal crushing, screening, conveying, loading, unloading, storage, and transporting, each with a maximum capacity of 240,000 tons of coal per year, each with dust controlled by wet suppression on an as needed basis.

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-121-9072-00017	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

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 2-7-19 (Fees).

(e) Pursuant to 326 IAC 2-7-4, the Permittee shall apply for a Title V operating permit within twelve (12) months after the source becomes subject to Title V. This 12-month period starts at the postmarked submission date of the Affidavit of Construction. If the construction is completed in phases, the 12-month period starts at the postmarked submission date of the Affidavit of Construction that triggers the Title V applicability. 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), Parts 60.250 through 60.253, 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 coal mine and preparation plant 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 tests shall be performed for opacity from the coal processing and conveying equipment, coal storage systems, and the coal transfer and loading systems 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 3-2.1 (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 any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the right to use enforcement activities to resolve noncompliant stack tests.

   (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.

Annual Emission Reporting

8. 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

9. That pursuant to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.250 through 60.253, Subpart Y), on and 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.

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 the NSPS, 40 CFR Parts 60.250 through 60.253, Subpart Y, shall meet the following:

(a) visible emissions shall not exceed an average of 40% opacity in 24 consecutive readings.

(b) visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

10. That pursuant to 326 IAC 6-3 (Process Operations), the PM emissions from the coal loading, unloading, crushing, screening, and conveying processes shall not exceed the allowable particulate matter (PM) emission rate of 55.44 pounds per hour.

Fugitive Dust Emissions

11. That pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), the permittee shall be in violation of 326 IAC 6-4 (Fugitive Dust Emissions) if any of the 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 September 30, 1997. This plan consists of the following:

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

(b) seeding and mulching of soil stockpiles to establish long term control of water and wind erosion of the stockpiles;

(c) wet suppression of dust from soil stockpiles during construction;

(d) use of dust collectors to capture dust as it is generated in the drilling operation;

(e) wet suppression of dust from coal stockpiles;

(f) enclosing the screening and crushing machinery;

(g) use of spray bars as necessary at entrance and exit points of the crushing and screening machinery;

(h) limiting vehicle speed in the raw coal unloading area and the finished coal loading area to 10 miles per hour;

(i) wet suppression of dust from roads in the raw coal unloading area and the finished coal loading area;

(j) use of a partially enclosed hopper for dumping raw coal;

(k) minimizing free fall distance when loading coal by having the loader bucket reach over the side of the trucks.

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]

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for New Construction and Operation

Source Background and Description

Source Name:	McCawith Energy, Inc. : Rainbow Mine
Source Location:	C.R. 350 S. and 400 E., Approx 5.5 miles SE of Rockville, IN 47872
County:	Parke
Construction Permit No.:	CP-121-9072-00017
SIC Code:	1221
Permit Reviewer:	Nisha Sizemore

The Office of Air Management (OAM) has reviewed an application from McCawith Energy, Inc. : Rainbow Mine relating to the construction and operation of a surface coal mine and coal preparation plant, consisting of the following equipment:

(a) one (1) coal mining operation with a maximum capacity of 240,000 tons of coal mined per year;

(b) one (1) coal preparation plant, including coal crushing, screening, conveying, loading, unloading, storage, and transporting, each with a maximum capacity of 240,000 tons of coal per year, each with dust controlled by wet suppression on an as needed basis.

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 September 30, 1997.

Emissions Calculations

See Appendix A (Emissions Calculation Spreadsheets) for detailed calculations (8 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)	2296	1094
Particulate Matter (PM10)	422	422
Sulfur Dioxide (SO_2)	0.00	0.00
Volatile Organic Compounds (VOC)	0.00	0.00
Carbon Monoxide (CO)	0.00	0.00
Nitrogen Oxides (NO_x)	0.00	0.00
Single Hazardous Air Pollutant (HAP)	0.00	0.00
Combination of HAPs	0.00	0.00

(a) Allowable emissions are determined from the applicability of rule 326 IAC 6-3. See attached spreadsheets for detailed calculations.

(b) The potential emissions before control are less than the allowable emissions, therefore, the potential emissions before control are used for the permitting determination.

(c) Allowable emissions (as defined in the Indiana Rule) of PM are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.

County Attainment Status

(a) Volatile organic compounds (VOC) and oxides of nitrogen are precursors for the formation of ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Parke County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Parke 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.

(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 for the mining operation that were in effect on August 7, 1980, the fugitive PM emissions from the mining operation are not counted toward determination of PSD and Emission Offset applicability. However, since there is an applicable New Source Performance Standard for the preparation plant that was in effect on August 7, 1980, the fugitive PM emissions from the preparation plant are counted toward determination of PSD and Emission Offset applicability.

Source Status

New Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	9.06
PM10	3.85
SO_2	0.00
VOC	0.00
CO	0.00
NO_x	0.00
Single HAP	0.00
Combination HAPs	0.00

This new source is **not** a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is greater than or equal to 100 tons per year,
(b) a single hazardous air pollutant (HAP) is greater than or equal to 10 tons per year, or
(c) any combination of HAPs is greater than or equal to 25 tons/year.

This new source shall apply for a Part 70 (Title V) operating permit within twelve (12) months after this source becomes subject to Title V.

Federal Rule Applicability

The coal preparation plant is subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.250 through 60.253, Subpart Y).

On and 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.
(enclosed is a copy of this federal rule)

State Rule Applicability

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/operator 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 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 coal processing and conveying equipment, coal storage systems, and the coal transfer and loading systems 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 3-2.1 (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.

326 IAC 5-1-2 (Visible Emission Limitations)

Pursuant to this rule, except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions from all processes not otherwise limited by the NSPS, 40 CFR Parts 60.250 through 60.253, Subpart Y, shall meet the following:

(a) visible emissions shall not exceed an average of 40% opacity in 24 consecutive readings.

(b) 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)

Pursuant to this rule, the PM emissions from the coal loading, unloading, crushing, screening, and conveying processes shall not exceed the allowable particulate matter (PM) emission rate of 55.44 pounds per hour.

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 of the 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 this rule, fugitive particulate matter emissions shall be controlled according to the plan submitted on September 30, 1997. This plan consists of the following:

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

(b) seeding and mulching of soil stockpiles to establish long term control of water and wind erosion of the stockpiles;

(c) wet suppression of dust from soil stockpiles during construction;

(d) use of dust collectors to capture dust as it is generated in the drilling operation;

(e) wet suppression of dust from coal stockpiles;

(f) enclosing the screening and crushing machinery;

(g) use of spray bars as necessary at entrance and exit points of the crushing and screening machinery;

(h) limiting vehicle speed in the raw coal unloading area and the finished coal loading area to 10 miles per hour;

(i) wet suppression of dust from roads in the raw coal unloading area and the finished coal loading area;

(j) use of a partially enclosed hopper for dumping raw coal;

(k) minimizing free fall distance when loading coal by having the loader bucket reach over the side of the trucks.

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 1-5-2 (Emergency Reduction Plans; Submission)

Pursuant to this rule the following conditions shall apply:

(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

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.

None of these listed air toxics will be emitted from this proposed construction.

Conclusion

The construction of this coal mine and preparation plant will be subject to the conditions of the attached proposed Construction Permit No. CP-121-9072-00017.

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

McCawith Energy, Inc. : Rainbow Mine
P.O. Box 661
Linton, Indiana 47441

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 McCawith Energy, Inc. : Rainbow Mine, County Roads 350 S. and 400 E., Approx. 5.5 miles southeast of Rockville, Indiana, 47872, has constructed the coal mine and preparation plant in conformity with the requirements and intent of the construction permit application received by the Office of Air Management on September 30, 1997 and as permitted pursuant to **Construction Permit No. CP-121-9072, Plant ID No. 121-00017** issued on _____

5. I hereby certify that McCawith Energy, Inc. : Rainbow Mine is now subject to the Title V program and will submit a Title V (or FESOP) operating permit application within twelve (12) months from the postmarked submission date of this Affidavit of Construction.

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

Company Name: McCawith Energy, Inc. : Rainbow Mine
Plant Location: Rockville, Indiana
County: Parke
Date Received: September 30, 1997
Permit Reviewer: Nisha Sizemore

The application is based on a production schedule of 4160 hr/yr. To obtain maximum potential, the data has been multiplied by 2.11 (except for storage emissions, which are independent of production rates).

8760 hr/yr / 4160 hr/yr = 2.11

* * emissions before controls * *

Coal Mine:							
Drilling	3,600 holes/yr x	1.3 lb/hole	/ 2000 lb/ton x	2.11 =	4.93 tons/yr	SCC #3-05-010-33
Blasting	120 blasts/yr x	32.7 lb/blast	/ 2000 lb/ton x	2.11 =	4.13 tons/yr	SCC #3-05-010-35
Topsoil Removal	100,000 tons/yr x	0.06 lb/ton	/ 2000 lb/ton x	2.11 =	6.32 tons/yr	SCC #3-05-010-30
Loading Overburden	3,600,000 tons/yr x	0.03 lb/ton	/ 2000 lb/ton x	2.11 =	113.71 tons/yr	SCC #3-05-010-37
Unloading Overburden	3,600,000 tons/yr x	0.002 lb/ton	/ 2000 lb/ton x	2.11 =	7.58 tons/yr	SCC #3-05-010-42
Replacing Overburden	3,600,000 tons/yr x	0.012 lb/ton	/ 2000 lb/ton x	2.11 =	45.48 tons/yr	SCC #3-05-010-48
Loading Coal	240,000 tons/yr x	0.04 lb/ton	/ 2000 lb/ton x	2.11 =	10.11 tons/yr	SCC #3-05-010-38
Dumping Coal	240,000 tons/yr x	0.007 lb/ton	/ 2000 lb/ton x	2.11 =	1.77 tons/yr	SCC #3-05-010-40
Transporting		** see page 3 **			878.90 tons/yr	AP-42 Ch.11.2.1
Total for mine:					1072.93 tons/yr	
Preparation Plant:						
Storage		** see page 3 **			9.12 tons/yr	AP-42 Ch.11.2.3
Unloading raw coal	240,000 tons/yr x	0.002 lb/ton	/ 2000 lb/ton x	2.11 =	0.51 tons/yr	SCC #3-05-010-08
Crushing	240,000 tons/yr x	0.002 lb/ton	/ 2000 lb/ton x	2.11 =	0.51 tons/yr	SCC #3-05-010-10
Screening	240,000 tons/yr x	0.016 lb/ton	/ 2000 lb/ton x	2.11 =	4.04 tons/yr	SCC #3-05-010-12
Conveying	240,000 tons/yr x	0.02 lb/ton	/ 2000 lb/ton x	2.11 =	5.05 tons/yr	SCC #3-05-010-11
Loading finished coal	240,000 tons/yr x	0.01 lb/ton	/ 2000 lb/ton x	2.11 =	2.53 tons/yr	SCC #3-05-010-15
Total for preparation plant:					21.76 tons/yr	
Total Emissions Before Controls:					1094.69 tons/yr	

** emissions after controls **

Coal Mine:			
Drilling	4.93 tons/yr x	100% emitted after controls =	4.93 tons/yr
Blasting	4.13 tons/yr x	100% emitted after controls =	4.13 tons/yr
Topsoil Removal	6.32 tons/yr x	100% emitted after controls =	6.32 tons/yr
Loading Overburden	113.71 tons/yr x	100% emitted after controls =	113.71 tons/yr
Unloading Overburden	7.58 tons/yr x	100% emitted after controls =	7.58 tons/yr
Replacing Overburden	45.48 tons/yr x	100% emitted after controls =	45.48 tons/yr
Loading Coal	10.11 tons/yr x	100% emitted after controls =	10.11 tons/yr
Dumping Coal	1.77 tons/yr x	50% emitted after controls =	0.88 tons/yr
Transporting	878.90 tons/yr x	50% emitted after controls =	439.45 tons/yr
Total for mine:			632.60 tons/yr
Preparation Plant:			
Storage	9.12 tons/yr x	50% emitted after controls =	4.56 tons/yr
Unloading raw coal	0.51 tons/yr x	50% emitted after controls =	0.25 tons/yr
Crushing	0.51 tons/yr x	10% emitted after controls =	0.05 tons/yr
Screening	4.04 tons/yr x	10% emitted after controls =	0.40 tons/yr
Conveying	5.05 tons/yr x	50% emitted after controls =	2.53 tons/yr
Loading finished coal	2.53 tons/yr x	50% emitted after controls =	1.26 tons/yr
Total for preparation plant:			9.06 tons/yr
Total Emissions After Controls:			641.66 tons/yr

* * storage * *

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

Ef = 1.7*(s/1.5)*(365-p)/235*(f/15)
= 5.67 lb/acre/day
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

Ep (storage) = Ef*sc*(40 cuft/ton)/(2000 lb/ton)/(43560 sqft/acre)/(25 ft)*(365 day/yr)
= 9.12 tons/yr
where sc = 240 ,000 tons storage capacity

* * unpaved roads * *

The following calculations determine the amount of emissions created by unpaved roads, based on 8760 hours of use and AP-42, Ch 11.2.1.

For the Cat 637 Scraper
8 trips/hour x
0.2 mile/trip x
2 (round trip) x
8760 hr/yr = 28032 miles per year maximum

Ef = k*5.9*(s/12)*(S/30)*(W/3)^0.7*(w/4)^0.5*((365-p)/365)
= 11.06 lb/mile
where k = 0.8 (particle size multiplier)
s = 4.9 % silt content of unpaved roads
p = 125 days of rain greater than or equal to 0.01 inches
S = 25 miles/hr vehicle speed
W = 86 tons average vehicle weight
w = 4 wheels

$$\frac{11.06 \text{ lb/mi} \times 28032 \text{ mi/yr}}{2000 \text{ lb/ton}} = 155.05 \text{ tons/yr}$$

For the 35 ton end dump truck (hauling coal)

15	trips/hour x		
0.3	mile/trip x		
2	(round trip) x		
8760	hr/yr =	78840	miles per year maximum

Ef = k*5.9*(s/12)*(S/30)*(W/3)^0.7*(w/4)^0.5*((365-p)/365)

= 11.02 lb/mile

where k =	0.8	(particle size multiplier)
s =	4.9	% silt content of unpaved roads
p =	125	days of rain greater than or equal to 0.01 inches
S =	25	miles/hr vehicle speed
W =	64	tons average vehicle weight
w =	6	wheels

11.02 lb/mi x 78840 mi/yr = 434.31 tons/yr

2000 lb/ton

For the 35 ton end dump truck (overburden)

15	trips/hour x		
0.2	mile/trip x		
2	(round trip) x		
8760	hr/yr =	52560	miles per year maximum

Ef = k*5.9*(s/12)*(S/30)*(W/3)^0.7*(w/4)^0.5*((365-p)/365)

= 11.02 lb/mile

where k =	0.8	(particle size multiplier)
s =	4.9	% silt content of unpaved roads
p =	125	days of rain greater than or equal to 0.01 inches
S =	25	miles/hr vehicle speed
W =	64	tons average vehicle weight
w =	6	wheels

11.02 lb/mi x 52560 mi/yr = 289.54 tons/yr

2000 lb/ton

Company Name: McCawith Energy, Inc. : Rainbow Mine
Plant Location: Rockville, Indiana
County: Parke
Date Received: September 30, 1997
Permit Reviewer: Nisha Sizemore

The application is based on a production schedule of 4160 hr/yr. To obtain maximum potential, the data has been multiplied by 2.11 (except for storage emissions, which are independent of production rates).

8760 hr/yr / 4160 hr/yr = 2.11

* * emissions before controls * *

Coal Mine:							
Drilling	3,600 holes/yr x	0.16 lb/hole	/ 2000 lb/ton x	2.11 =	0.61 tons/yr	SCC #3-05-010-33
Blasting	120 blasts/yr x	32.7 lb/blast	/ 2000 lb/ton x	2.11 =	4.13 tons/yr	SCC #3-05-010-35
Topsoil Removal	100,000 tons/yr x	0.06 lb/ton	/ 2000 lb/ton x	2.11 =	6.32 tons/yr	SCC #3-05-010-30
Loading Overburden	3,600,000 tons/yr x	0.015 lb/ton	/ 2000 lb/ton x	2.11 =	56.86 tons/yr	SCC #3-05-010-37
Unloading Overburden	3,600,000 tons/yr x	0.001 lb/ton	/ 2000 lb/ton x	2.11 =	3.79 tons/yr	SCC #3-05-010-42
Replacing Overburden	3,600,000 tons/yr x	0.006 lb/ton	/ 2000 lb/ton x	2.11 =	22.74 tons/yr	SCC #3-05-010-48
Loading Coal	240,000 tons/yr x	0.005 lb/ton	/ 2000 lb/ton x	2.11 =	1.26 tons/yr	SCC #3-05-010-38
Dumping Coal	240,000 tons/yr x	0.001 lb/ton	/ 2000 lb/ton x	2.11 =	0.25 tons/yr	SCC #3-05-010-40
Transporting	** see page 3 **				316.40 tons/yr	AP-42 Ch.11.2.1
Total for mine:					412.36 tons/yr	
Preparation Plant:						
Storage	** see page 3 **				3.19 tons/yr	AP-42 Ch.11.2.3
Unloading raw coal	240,000 tons/yr x	0.001 lb/ton	/ 2000 lb/ton x	2.11 =	0.25 tons/yr	SCC #3-05-010-08
Crushing	240,000 tons/yr x	0.001 lb/ton	/ 2000 lb/ton x	2.11 =	0.25 tons/yr	SCC #3-05-010-10
Screening	240,000 tons/yr x	0.008 lb/ton	/ 2000 lb/ton x	2.11 =	2.02 tons/yr	SCC #3-05-010-12
Conveying	240,000 tons/yr x	0.01 lb/ton	/ 2000 lb/ton x	2.11 =	2.53 tons/yr	SCC #3-05-010-11
Loading finished coal	240,000 tons/yr x	0.005 lb/ton	/ 2000 lb/ton x	2.11 =	1.26 tons/yr	SCC #3-05-010-15
Total for preparation plant:					9.51 tons/yr	
Total Emissions Before Controls:					421.87 tons/yr	

** emissions after controls **

Coal Mine:			
Drilling	0.61 tons/yr x	100% emitted after controls =	0.61 tons/yr
Blasting	4.13 tons/yr x	100% emitted after controls =	4.13 tons/yr
Topsoil Removal	6.32 tons/yr x	100% emitted after controls =	6.32 tons/yr
Loading Overburden	56.86 tons/yr x	100% emitted after controls =	56.86 tons/yr
Unloading Overburden	3.79 tons/yr x	100% emitted after controls =	3.79 tons/yr
Replacing Overburden	22.74 tons/yr x	100% emitted after controls =	22.74 tons/yr
Loading Coal	1.26 tons/yr x	100% emitted after controls =	1.26 tons/yr
Dumping Coal	0.25 tons/yr x	50% emitted after controls =	0.13 tons/yr
Transporting	316.40 tons/yr x	50% emitted after controls =	158.20 tons/yr
Total for mine:			254.04 tons/yr
Preparation Plant:			
Storage	3.19 tons/yr x	50% emitted after controls =	1.60 tons/yr
Unloading raw coal	0.25 tons/yr x	50% emitted after controls =	0.13 tons/yr
Crushing	0.25 tons/yr x	10% emitted after controls =	0.03 tons/yr
Screening	2.02 tons/yr x	10% emitted after controls =	0.20 tons/yr
Conveying	2.53 tons/yr x	50% emitted after controls =	1.26 tons/yr
Loading finished coal	1.26 tons/yr x	50% emitted after controls =	0.63 tons/yr
Total for preparation plant:			3.85 tons/yr
Total Emissions After Controls:			257.88 tons/yr

* * storage * *

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

Ef = 1.7*(s/1.5)*(365-p)/235*(f/15)*.35
= 1.99 lb/acre/day
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

Ep (storage) = Ef*sc*(40 cuft/ton)/(2000 lb/ton)/(43560 sqft/acre)/(25 ft)*(365 day/yr)
= 3.19 tons/yr
where sc = 240 ,000 tons storage capacity

* * unpaved roads * *

The following calculations determine the amount of emissions created by unpaved roads, based on 8760 hours of use and AP-42, Ch 11.2.1.

For the Cat 637 Scraper
8 trips/hour x
0.2 mile/trip x
2 (round trip) x
8760 hr/yr = 28032 miles per year maximum

Ef = k*5.9*(s/12)*(S/30)*(W/3)^0.7*(w/4)^0.5*((365-p)/365)*.36
= 3.98 lb/mile
where k = 0.8 (particle size multiplier)
s = 4.9 % silt content of unpaved roads
p = 125 days of rain greater than or equal to 0.01 inches
S = 25 miles/hr vehicle speed
W = 86 tons average vehicle weight
w = 4 wheels

$$\frac{3.98 \text{ lb/mi} \times 28032 \text{ mi/yr}}{2000 \text{ lb/ton}} = 55.82 \text{ tons/yr}$$

For the 35 ton end dump truck (hauling coal)

15	trips/hour x		
0.3	mile/trip x		
2	(round trip) x		
8760	hr/yr =	78840	miles per year maximum

Ef = k*5.9*(s/12)*(S/30)*(W/3)^0.7*(w/4)^0.5*((365-p)/365)*.36

= 3.97 lb/mile

where k =	0.8	(particle size multiplier)
s =	4.9	% silt content of unpaved roads
p =	125	days of rain greater than or equal to 0.01 inches
S =	25	miles/hr vehicle speed
W =	64	tons average vehicle weight
w =	6	wheels

3.97 lb/mi x 78840 mi/yr = 156.35 tons/yr

2000 lb/ton

For the 35 ton end dump truck (overburden)

15	trips/hour x		
0.2	mile/trip x		
2	(round trip) x		
8760	hr/yr =	52560	miles per year maximum

Ef = k*5.9*(s/12)*(S/30)*(W/3)^0.7*(w/4)^0.5*((365-p)/365)*.36

= 3.97 lb/mile

where k =	0.8	(particle size multiplier)
s =	4.9	% silt content of unpaved roads
p =	125	days of rain greater than or equal to 0.01 inches
S =	25	miles/hr vehicle speed
W =	64	tons average vehicle weight
w =	6	wheels

3.97 lb/mi x 52560 mi/yr = 104.23 tons/yr

2000 lb/ton

Appendix A: Emission Calculations

Company Name: McCawith Energy, Inc. : Rainbow Mine
Plant Location: Rockville, Indiana
County: Parke
Date Received: September 30, 1997
Permit Reviewer: Nisha Sizemore

The application is based on a production schedule of 4160 hr/yr. To obtain maximum potential, the data has been multiplied by 1.00 (except for storage emissions, which are independent of production rates).

8760 hr/yr / 4160 hr/yr = 1.00

* * emissions before controls * *

Coal Mine:							
Drilling	3,600 holes/yr x	1.3 lb/hole	/ 2000 lb/ton x	1.00 =	2.34 tons/yr	SCC #3-05-010-33
Blasting	120 blasts/yr x	32.7 lb/blast	/ 2000 lb/ton x	1.00 =	1.96 tons/yr	SCC #3-05-010-35
Topsoil Removal	100,000 tons/yr x	0.06 lb/ton	/ 2000 lb/ton x	1.00 =	3.00 tons/yr	SCC #3-05-010-30
Loading Overburden	3,600,000 tons/yr x	0.03 lb/ton	/ 2000 lb/ton x	1.00 =	54.00 tons/yr	SCC #3-05-010-37
Unloading Overburden	3,600,000 tons/yr x	0.002 lb/ton	/ 2000 lb/ton x	1.00 =	3.60 tons/yr	SCC #3-05-010-42
Replacing Overburden	3,600,000 tons/yr x	0.012 lb/ton	/ 2000 lb/ton x	1.00 =	21.60 tons/yr	SCC #3-05-010-48
Loading Coal	240,000 tons/yr x	0.04 lb/ton	/ 2000 lb/ton x	1.00 =	4.80 tons/yr	SCC #3-05-010-38
Dumping Coal	240,000 tons/yr x	0.007 lb/ton	/ 2000 lb/ton x	1.00 =	0.84 tons/yr	SCC #3-05-010-40
Transporting		** see page 3 **			417.38 tons/yr	AP-42 Ch.11.2.1
Total for mine:					509.52 tons/yr	
Preparation Plant:						
Storage		** see page 3 **			9.12 tons/yr	AP-42 Ch.11.2.3
Unloading raw coal	240,000 tons/yr x	0.02 lb/ton	/ 2000 lb/ton x	1.00 =	2.40 tons/yr	SCC #3-05-010-08
Crushing	240,000 tons/yr x	0.02 lb/ton	/ 2000 lb/ton x	1.00 =	2.40 tons/yr	SCC #3-05-010-10
Screening	240,000 tons/yr x	0.16 lb/ton	/ 2000 lb/ton x	1.00 =	19.20 tons/yr	SCC #3-05-010-12
Conveying	240,000 tons/yr x	0.2 lb/ton	/ 2000 lb/ton x	1.00 =	24.00 tons/yr	SCC #3-05-010-11
Loading finished coal	240,000 tons/yr x	0.1 lb/ton	/ 2000 lb/ton x	1.00 =	12.00 tons/yr	SCC #3-05-010-15
Total for preparation plant:					69.12 tons/yr	
Total Emissions Before Controls:					578.64 tons/yr	

** emissions after controls **

Coal Mine:				
Drilling	2.34 tons/yr x	100% emitted after controls =	2.34 tons/yr
Blasting	1.96 tons/yr x	100% emitted after controls =	1.96 tons/yr
Topsoil Removal	3.00 tons/yr x	100% emitted after controls =	3.00 tons/yr
Loading Overburden	54.00 tons/yr x	100% emitted after controls =	54.00 tons/yr
Unloading Overburden	3.60 tons/yr x	100% emitted after controls =	3.60 tons/yr
Replacing Overburden	21.60 tons/yr x	100% emitted after controls =	21.60 tons/yr
Loading Coal	4.80 tons/yr x	100% emitted after controls =	4.80 tons/yr
Dumping Coal	0.84 tons/yr x	50% emitted after controls =	0.42 tons/yr
Transporting	417.38 tons/yr x	50% emitted after controls =	208.69 tons/yr
Total for mine:			300.41 tons/yr
Preparation Plant:			
Storage	9.12 tons/yr x	50% emitted after controls =	4.56 tons/yr
Unloading raw coal	2.40 tons/yr x	50% emitted after controls =	1.20 tons/yr
Crushing	2.40 tons/yr x	50% emitted after controls =	1.20 tons/yr
Screening	19.20 tons/yr x	50% emitted after controls =	9.60 tons/yr
Conveying	24.00 tons/yr x	50% emitted after controls =	12.00 tons/yr
Loading finished coal	12.00 tons/yr x	50% emitted after controls =	6.00 tons/yr
Total for preparation plant:			34.56 tons/yr
Total Emissions After Controls:			334.97 tons/yr

* * storage * *

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

Ef = 1.7*(s/1.5)*(365-p)/235*(f/15)
= 5.67 lb/acre/day
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

Ep (storage) = Ef*sc*(40 cuft/ton)/(2000 lb/ton)/(43560 sqft/acre)/(25 ft)*(365 day/yr)
= 9.12 tons/yr
where sc = 240 ,000 tons storage capacity

* * unpaved roads * *

The following calculations determine the amount of emissions created by unpaved roads, based on 8760 hours of use and AP-42, Ch 11.2.1.

For the Cat 637 Scraper
8 trips/hour x
0.2 mile/trip x
2 (round trip) x
4160 hr/yr = 13312 miles per year maximum

Ef = k*5.9*(s/12)*(S/30)*(W/3)^0.7*(w/4)^0.5*((365-p)/365)
= 11.06 lb/mile
where k = 0.8 (particle size multiplier)
s = 4.9 % silt content of unpaved roads
p = 125 days of rain greater than or equal to 0.01 inches
S = 25 miles/hr vehicle speed
W = 86 tons average vehicle weight
w = 4 wheels

11.06 lb/mi x 13312 mi/yr = 73.63 tons/yr

2000 lb/ton

For the 35 ton end dump truck (hauling coal)

15 trips/hour x

0.3 mile/trip x

2 (round trip) x

4160 hr/yr = 37440 miles per year maximum

Ef = k*5.9*(s/12)*(S/30)*(W/3)^0.7*(w/4)^0.5*((365-p)/365)

= 11.02 lb/mile

where k = 0.8 (particle size multiplier)

s = 4.9 % silt content of unpaved roads

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

S = 25 miles/hr vehicle speed

W = 64 tons average vehicle weight

w = 6 wheels

11.02 lb/mi x 37440 mi/yr = 206.25 tons/yr

2000 lb/ton

For the 35 ton end dump truck (overburden)

15 trips/hour x

0.2 mile/trip x

2 (round trip) x

4160 hr/yr = 24960 miles per year maximum

Ef = k*5.9*(s/12)*(S/30)*(W/3)^0.7*(w/4)^0.5*((365-p)/365)

= 11.02 lb/mile

where k = 0.8 (particle size multiplier)

s = 4.9 % silt content of unpaved roads

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

S = 25 miles/hr vehicle speed

W = 64 tons average vehicle weight

w = 6 wheels

11.02 lb/mi x 24960 mi/yr = 137.50 tons/yr

2000 lb/ton