

April 24, 2003

**Re: Quicksilver Resources 061-16815-00025**

TO: Interested Parties / Applicant

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

### **Notice of Decision: Approval - Effective Immediately**

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

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, ISTA Building, 150 W. Market Street, Suite 618, Indianapolis, IN 46204, **within (18) eighteen 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 consideration 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.

Enclosure

FNPER.wpd 8/21/02



Frank O'Bannon  
Governor

Lori F. Kaplan  
Commissioner

100 North Senate Avenue  
P. O. Box 6015  
Indianapolis, Indiana 46206-6015  
(317) 232-8603  
(800) 451-6027  
www.state.in.us/idem

April 24, 2003

Mr. Warren Hanks  
Quicksilver Resources, Inc.  
777 W. Rosedale Street, Suite 300  
Fort Worth, Texas 76104

Re: 061-16815-00025  
First Significant Permit Revision to  
FESOP 061-14874-00025

Dear Mr. Hanks:

Quicksilver Resources, Inc. was issued a permit on January 29, 2002 for a natural gas pipeline compressor station. A letter requesting changes to this permit was received on November 25, 2002. Pursuant to the provisions of 326 IAC 2-8-11.1(f), a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document.

The revision consists of the construction and operation conditions for a new 500 horsepower (3.8 MMBtu/hr), natural gas-fired, four-stroke compressor engine (#EU3), which will be equipped with a NSCR unit and an air fuel ratio controller as control. This revision also revised the CO and NO<sub>x</sub> emission limits for the existing 500 horsepower engine (#EU2). In addition, the catalyst replacement frequency has been extended from every 18 months to every 5 years, based on the manufacturer's suggestion.

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions  
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval 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.
3. Effective Date of the Permit  
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 (Revocation), 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.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Please find attached a copy of this revised permit.

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Yu-Lien Chu, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7871 to speak directly to Ms. Chu. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original Signed by Paul Dubenetzky  
Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

Attachments

ERG/YC

cc: File - Harrison County  
U.S. EPA, Region V  
Harrison County Health Department  
Air Compliance Section Inspector - Ray Schick  
Compliance Data Section - Karen Nowak  
Administrative and Development - Sara Cloe  
Technical Support and Modeling - Michele Boner



Frank O'Bannon  
Governor

Lori F. Kaplan

100 North Senate Avenue  
P. O. Box 6015  
Indianapolis, Indiana 46206-6015  
(317) 232-8603  
(800) 451-6027  
www.state.in.us/idem

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

**Quicksilver Resources, Inc.  
SW/4, Section 9, T5S-R4E  
Laconia, Indiana 47135**

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

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

Operation Permit No.: F061-14874-00025	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: January 29, 2002 Expiration Date: January 29, 2007

First Administrative Amendment No.: 061-15332-00025, issued April 11, 2002  
First Minor Permit Revision No.: 061-15426-00025, issued June 4, 2002  
Second Administrative Amendment No.: 061-16089-00025, issued June 17, 2002

First Significant Permit Revision No.: 061-16815-00025	Page Affected: 4, 23, 24, 25
Issued by: Original Signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: April 24, 2003

## TABLE OF CONTENTS

### SECTION A SOURCE SUMMARY

- A.1 General Information [326 IAC 2-8-3(b)]
- A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]
- A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]
- A.4 FESOP Applicability [326 IAC 2-8-2]
- A.5 Prior Permit Conditions

### SECTION B GENERAL CONDITIONS

- B.1 Permit No Defense [IC 13]
- B.2 Definitions [326 IAC 2-8-1]
- B.3 Permit Term [326 IAC 2-8-4(2)]
- B.4 Enforceability [326 IAC 2-8-6]
- B.5 Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3(h)]
- B.6 Severability [326 IAC 2-8-4(4)]
- B.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]
- B.8 Duty to Supplement and Provide Information [326 IAC 2-8-3(f)] [326 IAC 2-8-4(5)(E)]  
[326 IAC 2-8-5(a)(4)]
- B.9 Compliance Order Issuance [326 IAC 2-8-5(b)]
- B.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]
- B.11 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]
- B.12 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]
- B.13 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]
- B.14 Emergency Provisions [326 IAC 2-8-12]
- B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]
- B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination  
[326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]
- B.17 Permit Renewal [326 IAC 2-8-3(h)]
- B.18 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]
- B.19 Operational Flexibility [326 IAC 2-8-15]
- B.20 Permit Revision Requirement [326 IAC 2-8-11.1]
- B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2]
- B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]
- B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16]

### SECTION C SOURCE OPERATION CONDITIONS

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

- C.1 Overall Source Limit [326 IAC 2-8]
- C.2 Opacity [326 IAC 5-1]
- C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]
- C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]
- C.5 Fugitive Dust Emissions [326 IAC 6-4]
- C.6 Operation of Equipment [326 IAC 2-8-5(a)(4)]
- C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

- C.8 Performance Testing [326 IAC 3-6]

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

- C.9 Compliance Requirements [326 IAC 2-1.1-11]

## TABLE OF CONTENTS (Continued)

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

- C.10 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]
- C.11 Maintenance of Emission Monitoring Equipment [326 IAC 2-8-4(3)(A)(iii)]
- C.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]
- C.13 Temperature Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]

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

- C.14 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]
- C.15 Compliance Response Plan - Failure to Take Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5]
- C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

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

- C.17 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]
- C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]
- C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

## **SECTION D.1 FACILITY OPERATION CONDITIONS**

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

- D.1.1 Carbon Monoxide and Nitrogen Oxides FESOP Limits [326 IAC 2-8]
- D.1.2 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

### **Compliance Determination Requirements**

- D.1.3 Testing Requirements [326 IAC 2-8-5(a),(1)(4)] [326 IAC 2-1.1-11]
- D.1.4 NSCR Unit

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

- D.1.5 Monitoring
- D.1.6 NSCR Catalyst Replacement
- D.1.7 Visible Emissions Notations

### **Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]**

- D.1.8 Record Keeping Requirements

Certification Form  
Emergency Occurrence Form  
Quarterly Deviation and Compliance Monitoring Report Form

## SECTION A SOURCE SUMMARY

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

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

---

The Permittee owns and operates a natural gas pipeline compressor station.

Authorized individual:	Eastern Region Operations Manager
Source Address:	SW/4, Section 9, T5S-R4E, Laconia, Indiana 47135
Mailing Address:	777 W. Rosedale St., Suite 300, Fort Worth, Texas 76104
SIC Code:	1311
Source Location Status:	Harrison
County Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD and Emission Offset Rules; Minor Source, Section 112 of the Clean Air Act

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

---

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

- (a) One (1) 11.14 MMBtu per hour, natural gas fired, twelve (12)-cylinder and four (4)-cycle compressor engine, identified as #EU1, using a non-selective catalytic reduction (NSCR) unit as control and exhausting to S1.
- (b) One (1) 500 horsepower (3.8MMBtu/hr), natural gas-fired, four-stroke compressor engine, identified as #EU2, using a NSCR unit and an air fuel ratio controller as control.
- (c) One (1) 500 horsepower (3.8MMBtu/hr), natural gas-fired, four-stroke compressor engine, identified as #EU3, using a NSCR unit and an air fuel ratio controller as control.

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

---

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

- (a) Emission units with PM and PM10 emissions less than five (5) tons per year, SO<sub>2</sub>, NO<sub>x</sub>, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five (25) tons per year, lead emissions less than two-tenths (0.2) tons per year, single HAP emissions less than one (1) ton per year, and combination of HAPs emissions less than two and a half (2.5) tons per year:

- (1) One (1) glycol dehydrator including on one (1) natural gas-fired burner rated at 0.25 million Btu (MMBtu) per hour.

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

---

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

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

---

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

## SECTION B GENERAL CONDITIONS

### B.1 Permit No Defense [IC 13]

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

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

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

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

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

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

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

### B.5 Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3(h)]

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

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

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

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

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

### B.8 Duty to Supplement and Provide Information [326 IAC 2-8-3(f)] [326 IAC 2-8-4(5)(E)] [326 IAC 2-8-5(a)(4)]

(a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

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

The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The Permittee shall furnish to IDEM, OAQ within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit or, for

information claimed to be confidential, the Permittee may furnish such records directly to the U. S. EPA along with a claim of confidentiality.[326 IAC 2-8-4(5)(E)]

- (c) The Permittee may include a claim of confidentiality in accordance with 326 IAC 17. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.9 Compliance Order Issuance [326 IAC 2-8-5(b)]

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

B.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]

- (a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:
- (1) Enforcement action;
  - (2) Permit termination, revocation and reissuance, or modification; and
  - (3) Denial of a permit renewal application.
- (b) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (c) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in condition B, Emergency Provisions.

B.11 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an authorized individual of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) An authorized individual is defined at 326 IAC 2-1.1-1(1).

B.12 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

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

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

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

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

B.13 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall 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.

If due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

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

The PMP and the PMP extension notification do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper

maintenance causes or contributes to any violation. The PMP does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept 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 within a reasonable time.

B.14 Emergency Provisions [326 IAC 2-8-12]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes the following:

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section) or,  
Telephone No.: 317-233-5674 (ask for Compliance Section)  
Facsimile No.: 317-233-5967

Failure to notify IDEM, OAQ by telephone or facsimile within four (4) daytime business hours after the beginning of the emergency, or after the emergency is discovered or reasonably should have been discovered, shall constitute a violation of 326 IAC 2-8 and any other applicable rules. [326 IAC 2-8-12(f)]

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

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

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

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

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

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

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

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

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

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

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

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

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.
- (c) Emergencies shall be included in the Quarterly Deviation and Compliance Monitoring Report.

**B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination**

[326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]

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

**B.17 Permit Renewal [326 IAC 2-8-3(h)]**

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

Request for renewal shall be submitted to:

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

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

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

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

(B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(2) If IDEM, OAQ upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.

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

If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as needed to process the application.

B.18 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

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

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

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

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

B.19 Operational Flexibility [326 IAC 2-8-15]

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

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

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

and

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

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

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

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

- (d) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-8-15(a) and the following additional conditions:
  - (1) A brief description of the change within the source;
  - (2) The date on which the change will occur;
  - (3) Any change in emissions; and
  - (4) Any permit term or condition that is no longer applicable as a result of the change.

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

- (c) Emission Trades [326 IAC 2-8-15(c)]  
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).

- (d) **Alternative Operating Scenarios [326 IAC 2-8-15(d)]**  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.

**B.20 Permit Revision Requirement [326 IAC 2-8-11.1]**

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

**B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2]**

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

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

**B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]**

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

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

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-11(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16]

- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action, or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAQ, Technical Support and Modeling Section), to determine the appropriate permit fee.

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

#### C.2 Opacity [326 IAC 5-1]

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

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

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

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

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

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

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

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

C.6 Operation of Equipment [326 IAC 2-8-5(a)(4)]

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

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
- (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
  - (2) If there is a change in the following:
    - (A) Asbestos removal or demolition start date;
    - (B) Removal or demolition contractor; or
    - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

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

- (e) **Procedures for Asbestos Emission Control**  
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4 emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Indiana Accredited Asbestos Inspector**  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited is federally enforceable.

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

#### **C.8 Performance Testing [326 IAC 3-6]**

---

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

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

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

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

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the source submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

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

#### **C.9 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. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U.S. EPA.

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

#### **C.10 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]**

---

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the

Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

in writing, prior to the end of the initial ninety (90) day compliance schedule with full justification of the reasons for inability to meet this date.

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

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

**C.11 Maintenance of Emission Monitoring Equipment [326 IAC 2-8-4(3)(A)(iii)]**

---

- (a) In the event that a breakdown of the emission monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no often less than once until such time as the continuous monitor is back in operation.
- (b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

**C.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

---

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

**C.13 Temperature Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]**

---

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

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

**C.14 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]**

---

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall submit:

- (a) A compliance schedule for meeting the requirements of 40 CFR 68; or

- (b) As a part of the annual compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP); and

All documents submitted pursuant to this condition shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

C.15 Compliance Response Plan - Failure to Take Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5]

- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:
  - (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.
  - (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
  - (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or
  - (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
  - (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.
  - (4) Failure to take reasonable response steps shall constitute a violation of the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
  - (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously

submitted a request for an administrative amendment to the permit, and such request has not been denied.

- (3) An automatic measurement was taken when the process was not operating.
- (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

**C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4]  
[326 IAC 2-8-5]**

---

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

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

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

**C.17 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]**

---

- (a) Records of all required data, reports and support information 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 kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:
- Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Unless otherwise specified in this permit, any quarterly report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The report does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) The first report covered the period commencing on the date of issuance of the original FESOP and ended on the last day of the reporting period. All subsequent reporting periods shall be based on calendar years.

C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

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

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

## SECTION D.1 FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-8-4(10)]

- (a) One (1) 11.14 MMBtu per hour, natural gas fired, twelve (12)-cylinder and four (4)-cycle compressor engine, identified as #EU1, using a non-selective catalytic reduction (NSCR) unit as control and exhausting to S1.
- (b) One (1) 500 horsepower (3.8MMBtu/hr), natural gas-fired, four-stroke compressor engine, identified as #EU2, using a NSCR unit and an air fuel ratio controller as control.
- (c) One (1) 500 horsepower (3.8MMBtu/hr), natural gas-fired, four-stroke compressor engine, identified as #EU3, using a NSCR unit and an air fuel ratio controller as control.

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

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

#### D.1.1 Carbon Monoxide and Nitrogen Oxides FESOP Limits [326 IAC 2-8]

Pursuant to 326 IAC 2-8-4, the CO and NO<sub>x</sub> emissions from each of the compressor engines shall not exceed the emission limits below:

Unit	CO Emission Limit (lbs/hr)	NO <sub>x</sub> Emissions Limit (lbs/hr)
Compressor Engine #EU1	5.90	4.20
Compressor Engine #EU2	2.83	0.85
Compressor Engine #EU3	2.83	0.85

This is equivalent to 50.5 tons per year of CO emissions and 26.0 tons per year of NO<sub>x</sub> emissions from these compressor engines. Combined with the emissions from the insignificant activities, the CO and NO<sub>x</sub> emissions for the entire source are each limited to less than 100 tons per year. Therefore, the requirements of 326 IAC 2-7 (Part 70 Permit Program) are not applicable.

#### D.1.2 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

### Compliance Determination Requirements

#### D.1.3 Testing Requirements [326 IAC 2-8-5(a),(1)(4)] [326 IAC 2-1.1-11]

Within 60 days after achieving maximum rate, but no more than 180 days after startup, the Permittee shall perform CO and NO<sub>x</sub> testing on the 11.14 MMBtu/hr compressor engine utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five years from the date of this valid compliance demonstration.

#### D.1.4 NSCR Unit

The NSCR units shall be operated at a temperature at or above 900°F and less than 1200°F or a temperature range determined during compliance tests to maintain the emission rates for CO and NO<sub>x</sub> established in D.1.1.

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

### **D.1.5 Monitoring**

---

- (a) Compliance with the minimum temperature set out in D.1.5 shall be monitored by computer collected data monitored continuously.
- (b) Eight-hour average temperatures will be made available to IDEM upon request and one-hour temperature records will be made available within five business days from request.
- (c) The temperatures will be reported based on an eight-hour average.
- (d) The NSCR units shall operate with a five (5) degree buffer such that if the eight-hour average temperature falls within five (5) degrees of the minimum required temperature, corrective action shall be performed and one-hour temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature.
- (e) If during specific hours the temperature is less than the established minimum temperature, this will be considered noncompliance.

### **D.1.6 NSCR Catalyst Replacement**

---

The catalyst shall be replaced at a minimum of every five (5) years provided that the NSCR units are achieving the required efficiency for CO and NOx. The operation may continue only if the event qualifies as an emergency and the Permittee satisfies the requirement of the emergency provisions in Section B of this permit.

### **D.1.7 Visible Emissions Notations**

---

- (a) Once per shift visible emission notations of the NSCR unit exhausts shall be performed 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) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

## **Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]**

### **D.1.8 Record Keeping Requirements**

---

- (a) To document compliance with Conditions D.1.5, D.1.6, D.1.7, and D.1.8 the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken as stated below and shall be complete and sufficient to establish compliance with the CO and NOx emission limits established in Condition D.1.1.
  - (1) A log of the dates of operation.
  - (2) The continuous temperature records for the NSCR units and the temperature used to demonstrate compliance during the most recent compliance stack test.

- (3) A log of the dates of catalyst replacement.
  - (4) Once per shift visible emission notations of the NSCR unit exhausts.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

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

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

Source Name: Quicksilver Resources, Inc.  
Source Address: SW/4, Section 9, T5S-R4E, Laconia, Indiana 47135  
Mailing Address: 777 W. Rosedale St., Suite 300, Fort Worth, Texas 76104  
FESOP No.: F061-14874-00025

**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:

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

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

Signature:

Printed Name:

Title/Position:

Date:

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

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

Source Name: Quicksilver Resources, Inc.  
Source Address: SW/4, Section 9, T5S-R4E, Laconia, Indiana 47135  
Mailing Address: 777 W. Rosedale St., Suite 300, Fort Worth, Texas 76104  
FESOP No.: F061-14874-00025

**This form consists of 2 pages**

**Page 1 of 2**

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

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

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

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

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency?    Y    N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO <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**

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

Source Name: Quicksilver Resources, Inc.  
Source Address: SW/4, Section 9, T5S-R4E, Laconia, Indiana 47135  
Mailing Address: 777 W. Rosedale St., Suite 300, Fort Worth, Texas 76104  
FESOP No.: F061-14874-00025

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

Page 1 of 2

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

NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

**Permit Requirement** (specify permit condition #)

**Date of Deviation:**

**Duration of Deviation:**

**Number of Deviations:**

**Probable Cause of Deviation:**

**Response Steps Taken:**

**Permit Requirement** (specify permit condition #)

**Date of Deviation:**

**Duration of Deviation:**

**Number of Deviations:**

**Probable Cause of Deviation:**

**Response Steps Taken:**

<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.

## Indiana Department of Environmental Management Office of Air Quality

### Technical Support Document (TSD) for a Significant Permit Revision to a Federally Enforceable State Operating Permit

#### Source Background and Description

Source Name:	Quicksilver Resources, Inc.
Source Location:	SW/4 Section 9, T5S-R4E, Laconia, Indiana 47135
County:	Harrison
SIC Code:	1311
Operation Permit No.:	061-14874-00025
Operation Permit Issuance Date:	January 29, 2002
Permit Revision No.:	061-16815-00025
Permit Reviewer:	ERG/YC

The Office of Air Quality (OAQ) has reviewed a revision application from Quicksilver Resources, Inc. relating to the construction and operation of a new 500 horsepower (3.8 MMBtu/hr), natural gas-fired, four-stroke compressor engine, using a non-selective catalytic reduction (NSCR) unit and an air fuel ratio controller as control.

#### History

On November 25, 2002, Quicksilver Resources, Inc. submitted an application to the OAQ requesting to construct and operate an additional 500 horsepower (3.8 MMBtu/hr) natural gas-fired compressor engine (#EU3) at their existing plant. The source also requested to revise the frequency of the NSCR catalyst replacement requirement from every 18 months to every five (5) years based on the manufacturer's suggestion. Quicksilver Resources, Inc. was issued a FESOP on January 29, 2002.

Upon further review, IDEM OAQ discovered that the existing 500 HP engine (#EU2) was permitted as a "lean burn" engine with a catalytic converter (the same as a NSCR unit) as control. The uncontrolled NO<sub>x</sub> and CO emissions from engine #EU2 were listed as 14.1 and 9.27 tons/yr in the First Minor Permit Revision #061-15426-00025, issued June 4, 2002. The source has stated that the existing 500 HP rich burn engine (#EU2) is identical to the proposed 500 HP engine (#EU3) and both engines are classified as "rich burn" engines. The uncontrolled NO<sub>x</sub> and CO emissions from each 500 HP "rich burn" engine are 36.8 and 61.9 tons/yr, respectively.

With the additional 500 HP engine (#EU3), the CO and NO<sub>x</sub> emissions from the entire source will each exceed 100 tons/yr. Therefore, in order to maintain the FESOP status, the source has agreed to add the federally enforceable conditions to limit the CO and NO<sub>x</sub> emissions from engines #EU2 and #EU3. The conditions of CO and NO<sub>x</sub> emission rate limits, temperature monitoring requirements for NSCR units, and the catalyst replacement requirements for both engines #EU2 and #EU3 will be added to this revised FESOP. These additional requirements ensure compliance with the FESOP limits.

#### Existing Approvals

The source was issued a FESOP (F061-14874-00025) on January 29, 2002. The source has since received the following:

- (a) First Administrative Amendment No.: 061-15332-00025, issued on April 11, 2002.
- (b) First Minor Permit Revision No.: 061-15426-00025, issued on June 4, 2002.
- (c) Second Administrative Amendment No.: 061-16089-00025, issued June 17, 2002.

### Enforcement Issue

There are no enforcement actions pending.

### Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
#S3	Engine #EU3	36	1.0	2,251	1,100

### Recommendation

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

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

An application for the purposes of this review was received on November 25, 2002. Additional information was received on January 9, 2003 and January 14, 2003.

### Emission Calculations

See Appendix A of this document for detailed emissions calculations (page 1 through 2).

### Potential To Emit of the Revision

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

This table reflects the 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	0.32
PM-10	0.32
SO <sub>2</sub>	0.01
VOC	0.49
CO	61.9
NO <sub>x</sub>	36.8

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

HAP's	Potential To Emit (tons/year)
Formaldehyde	0.34
Methanol	0.05

HAP's	Potential To Emit (tons/year)
Acetaldehyde	0.05
Acrolein	0.04
Benzene	0.03
<b>TOTAL</b>	<b>0.51</b>

**Justification for Permit Revision**

This revision is being performed as a significant permit revision pursuant to 326 IAC 2-8-11.1(f)(1)(e) as the potential to emit of NOx is greater than 25 tons per year from this new 500 horsepower engine #EU3, based on the A rated emission factors in AP-42.

**Potential to Emit After Revision**

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units after control. The control equipment is considered federally enforceable only after issuance of this Permit Revision.

Process/facility	Potential to Emit (tons/year)						
	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Compressor Engine #EU1 (in FESOP 061-14874-00025)	0.46	0.95	0.03	2.14	Less than 25.69	Less than 18.55	1.01
*Compressor Engine #EU2 (in MPR #061-15426-00025)	<del>0.16</del> <b>0.32</b>	<del>Negligible</del> <b>0.32</b>	0.01	<del>1.96</del> <b>0.49</b>	<del>9.27</del> <b>Less than 12.4</b>	<del>14.10</del> <b>Less than 3.72</b>	<del>Negligible</del> <b>Less than 0.25</b>
Proposed Compressor Engine #EU3	0.32	0.32	0.01	0.49	Less than 12.4	Less than 3.72	Less than 0.25
Insignificant Units	0.01	0.01	Negligible	0.01	0.09	0.11	Negligible
Total Emissions	1.11	1.60	0.05	3.13	Less than 50.6	Less than 26.1	Less than 1.51
Title V Major Source Thresholds	100	100	100	100	100	100	Less than 10 for a single HAP and 25 for any combination of HAPs.

\*Note: In MPR#061-15426-00025, issued June 4, 2002, the potential to emit from compressor engine #EU2 was calculated as the potential to emit from a "lean burn" engine before control. The Permittee has stated that this engine is a "rich burn" engine with control and is identical to the proposed engine #EU3. Therefore, the potential to emit from engine #EU2 has been revised in this permit revision and it reflects the potential to emit from this unit after control.

After adding the new 500 horsepower compressor engine (#EU3), the potential to emit of the criteria pollutants from the entire source is still less than the Title V major source thresholds. Therefore, the requirements of 326 IAC 2-7 are not applicable to this source.

**County Attainment Status**

The source is located in Harrison County.

Pollutant	Status
PM-10	Attainment
SO <sub>2</sub>	Attainment
NO <sub>2</sub>	Attainment
Ozone	Attainment

Pollutant	Status
CO	Attainment
Lead	Attainment

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

**Federal Rule Applicability**

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) The requirements of the New Source Performance Standard for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants (40 CFR 60.630-636, Subpart KKK) are not applicable to this source. This NSPS applies only to emission units located at “natural gas processing plants,” which are defined in the rule as “any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products or both.” No extraction or fractionation of natural gas liquids (such as ethane, propane, or butane) will be conducted at this source.
- (c) The requirements of the New Source Performance Standards for Onshore Natural Gas Processing: SO<sub>2</sub> Emissions (40 CFR 60.640-60.648, Subpart LLL) are not applicable to this source. This NSPS applies to facilities (called sweetening units) that separate H<sub>2</sub>S and CO<sub>2</sub> from sour natural gas streams. This source does not plan to operate any sweetening units at this location.
- (d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

**State Rule Applicability - Entire Source**

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This source was constructed in 2002 and is not 1 of 28 source categories defined in 326 IAC 2-2-1(p)(1). The source has agreed to take FESOP conditions to limit the emissions of each criteria pollutant to less than 100 tons/yr. Therefore, the potential to emit of all regulated pollutants from the entire source is also limited to less than two hundred and fifty (250) tons per year and the requirements of 326 IAC 2-2 are not applicable.

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

The HAP emissions from this proposed natural gas-fired engine are less than 10 tons/yr for a single HAP and less than 25 tons/yr for combination of HAPs. Therefore, the requirements of 326 IAC 2-4.1 are not applicable.

326 IAC 2-8-4 (FESOP)

The potential to emit before control from the proposed 500 engine (#E3) is 61.9 tons/yr of CO and 36.8 tons/yr of NO<sub>x</sub>. Pursuant to 326 IAC 2-8-4, to maintain the FESOP status, the emissions from the proposed 500 HP engine shall not exceed the emission rates listed in the table below:

Unit	CO Emission Limit (lbs/hr)	NO <sub>x</sub> Emission Limit (lbs/hr)
------	-------------------------------	--

500 HP Engine #E3	2.83	0.85
-------------------	------	------

The emission limits above are equivalent to 12.4 tons/yr of CO emissions and 3.72 tons/yr of NO<sub>x</sub>. According to the emission calculations in Appendix A, the CO and NO<sub>x</sub> emissions after the NSCR control are less than the emission limits above. The use of the NSCR unit and the air fuel ratio controller ensures compliance with the CO and NO<sub>x</sub> emission limits above.

The source indicated that compressor engine #EU2 (which was permitted to construct and operate in MPR #061-15426-00025, issued June 4, 2002) is identical to the proposed engine #EU3 with the same type of control. The source agreed to operate and maintain the NSCR unit and the air fuel ratio controller equipped with engine #EU2 properly to ensure that the NO<sub>x</sub> and CO emissions are each less than 100 tons/yr. Therefore, the CO and NO<sub>x</sub> emission rates of engine #EU2 shall also be limited to the emission rates listed in the above table.

Based on the emission limits above for engines #EU2 and #EU3, and the existing emission limits for engine #EU1 (which was established in FESOP 061-14874-00025, issued January 29, 2002), the CO and NO<sub>x</sub> emissions from the entire source are each limited to less than 100 tons/yr. Therefore, the requirements of 326 IAC 2-7 are not applicable.

#### 326 IAC 2-6 (Emission Reporting)

This source is located in Harrison County and the potential to emit all criteria pollutants is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

#### 326 IAC 5-1 (Opacity Limitations)

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

- (a) Opacity shall not exceed an average of forty percent (40%) 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.

### State Rule Applicability - Individual Facilities

#### 326 IAC 9-1-2 (Carbon Monoxide Emission Requirements)

This source is not among the listed source categories in 326 IAC 9-1-2. Therefore, the requirements of 326 IAC 9-1-2 are not applicable.

#### 326 IAC 10-1-3 (Nitrogen Oxide Emission Requirements)

This source is not located in Clark or Floyd County. Therefore, the requirements of 326 IAC 10-1-3 are not applicable.

### Testing Requirements

Stack tests for the existing and the proposed 500 HP engines (#EU2 and #EU3) are not required because each 500HP engine emits less than 40% of the total major pollutant emissions (NO<sub>x</sub> and CO). In addition, the potential to emit NO<sub>x</sub> and CO from engines #EU2 and #EU3 are calculated based on the A rated emission factors in AP-42 and the control efficiencies of the NSCR units are based on the "Emission Calculation Fact Sheet" published by the Michigan Department of Environmental Quality. Therefore, the potential to emit from engines #EU2 and #EU3 after control are not required to be verified through stack testing.

## Compliance Requirements

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

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

1. The existing and the proposed 500 HP engines (#EU2 and #EU3) have applicable compliance monitoring conditions as specified below:
  - (a) Visible emissions notations of the engine exhausts shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. 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. 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. 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. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
  - (b) The Permittee shall monitor and record the temperatures of the NSCR units used in conjunction with the engines #EU2 and #EU3 continuously when the associated engines are in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the temperature of the catalytic converter shall be maintained at a temperature above 900°F and less than 1200°F, or a temperature range established during the latest stack test. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for a temperature below the above mentioned minimum.
  - (c) The catalyst used in the NSCR units shall be replaced at a minimum of every five (5) years provided that the NSCR units are achieving the required efficiency for CO and NO<sub>x</sub>.

These monitoring conditions are necessary because the NSCR units and the 500 HP engines (#EU2 and #EU3) must operate properly to ensure compliance with 326 IAC 2-8 (FESOP).

## Proposed Changes

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

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

- (a) One (1) 11.14 MMBtu per hour, natural gas fired, twelve (12)-cylinder and four (4)-cycle compressor engine, **identified as #EU1**, using a non-selective catalytic reduction (NSCR) unit as control and exhausting to S1.
- (b) One (1) 500 horsepower (3.8MMBtu/hr), natural gas-fired, four-stroke compressor engine, **identified as #EU2**, using a catalytic converter NSCR unit and an air fuel ratio controller as control.
- (c) **One (1) 500 horsepower (3.8MMBtu/hr), natural gas-fired, four-stroke compressor engine, identified as #EU3, using a NSCR unit and an air fuel ratio controller as control.**

**SECTION D.1 FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-8-4(10)]**

- (a) One (1) 11.14 MMBtu per hour, natural gas fired, twelve (12)-cylinder and four (4)-cycle compressor engine, **identified as #EU1**, using a non-selective catalytic reduction (NSCR) unit as control and exhausting to S1.
- (b) One (1) 500 horsepower (3.8MMBtu/hr), natural gas-fired, four-stroke compressor engine, **identified as #EU2**, using a catalytic converter NSCR unit and an air fuel ratio controller as control.
- (c) **One (1) 500 horsepower (3.8MMBtu/hr), natural gas-fired, four-stroke compressor engine, identified as #EU3, using a NSCR unit and an air fuel ratio controller as control.**

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

**D.1.1 Carbon Monoxide and Nitrogen Oxides FESOP Limits [326 IAC 2-8]**

- ~~(a) CO emissions from the outlet of the NSCR control equipment, which is installed with the 11.14 MMBtu/hr compressor engine, shall not exceed 5.9 pounds per hour. For continuous operation, this emission rate is equivalent to 25.7 tons of CO, per twelve consecutive month period.~~
- ~~(b) NOx emissions from the outlet of the NSCR control equipment, which is installed with the 11.14 MMBtu/hr compressor engine, shall not exceed 4.2 pounds per hour. For continuous operation, this emission rate is equivalent to 18.6 tons of NOx, per twelve consecutive month period.~~
- ~~(c) Compliance with these conditions limits both CO and NOx emissions for the entire source to less than 100 tons per year. This renders the requirements of 326 IAC 2-7 (Part 70 Permit Program) not applicable.~~

**Pursuant to 326 IAC 2-8-4, the CO and NO<sub>x</sub> emissions from each of the compressor engines shall not exceed the emission limits below:**

Unit	CO Emission Limit (lbs/hr)	NO <sub>x</sub> Emissions Limit (lbs/hr)
Compressor Engine #EU1	5.90	4.20

Compressor Engine #EU2	2.83	0.85
Compressor Engine #EU3	2.83	0.85

This is equivalent to 50.5 tons per year of CO emissions and 26.0 tons per year of NO<sub>x</sub> emissions from these compressor engines. Combined with the emissions from the insignificant activities, the CO and NO<sub>x</sub> emissions for the entire source are each limited to less than 100 tons per year. Therefore, the requirements of 326 IAC 2-7 (Part 70 Permit Program) are not applicable.

~~D.1.3 Removal of Unpermitted Emission Units~~

~~This 11.14 MMBtu/hr compressor engine shall not be put into service until the two previous engines are taken out of service and then removed from the pipeline.~~

D.1.54 NSCR Unit

The NSCR units, which is installed with the 11.14 MMBtu/hr compressor engine shall be operated at a temperature at or above 900°F and less than 1200°F or a temperature range determined during compliance tests to maintain the emission rates for CO and NO<sub>x</sub> established in D.1.1.

D.1.65 Monitoring

- (d) The NSCR units shall operate with a five (5) degree buffer such that if the eight-hour average temperature falls within five (5) degrees of the minimum required temperature, corrective action shall be performed and one-hour temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature.

D.1.76 NSCR Catalyst Replacement

The catalyst shall be replaced at a minimum of every ~~eighteen (18) months~~ **five (5) years** provided that the NSCR units **are** achieving the required efficiency for CO and NO<sub>x</sub>. The operation may continue only if the event qualifies as an emergency and the Permittee satisfies the requirement of the emergency provisions in Section B of this permit.

D.1.87 Visible Emissions Notations

- (a) Once per shift visible emission notations of the NSCR unit exhausts shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

D.1.98 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.5, D.1.6, ~~and D.1.7, and D.1.8~~ the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken as stated below and shall be complete and sufficient to establish compliance with the CO and NO<sub>x</sub> emission limits established in Condition D.1.1.

- (1) A log of the dates of operation.
- (2) The continuous temperature records for the NSCR units and the temperature used to demonstrate compliance during the most recent compliance stack test.
- (3) A log of the dates of catalyst replacement.
- (4) **Once per shift** ~~Daily~~ visible emission notations of the NSCR unit exhausts.

- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**Conclusion**

This permit revision shall be subject to the conditions of the attached proposed FESOP Significant Permit Revision No. 061-16815-00025.

**Appendix A: Emission Calculations**  
**Natural Gas Combustion**  
**Emissions from 500 HP Engine #EU3 (3.8 MMBtu/hr)**

**Company Name: Quicksilver Resources, Inc. - Wimp Central Processing Facility**  
**Address City IN Zip: SW/4 Section 9, T5S-R4E, Laconia, Indiana 47135**  
**SPR: 061-16815-00025**  
**Reviewer: ERG/YC**  
**Date: January 9, 2003**

**1. Potential to Emit Before Control:**

Heat Input Capacity  
MMBtu/hr

3.8
-----

Emission Factor in lb/MMBtu	Pollutant					
	PM <sup>a</sup>	PM10 <sup>b</sup>	SO <sub>2</sub>	NO <sub>x</sub> <sup>c</sup>	VOC	CO <sup>c</sup>
	0.02	0.02	5.88E-04	2.21	2.96E-02	3.72
<b>Potential to Emit before Control in tons/yr</b>	<b>0.32</b>	<b>0.32</b>	<b>0.01</b>	<b>36.78</b>	<b>0.49</b>	<b>61.92</b>

Note: (a) PM emission factor is condensable PM and filterable PM10 combined.  
(b) Assume all the PM emissions are PM10 emissions.  
(c) NO<sub>x</sub> and CO emission factors are the emission factors for 90-105% load.

**Methodology**

Emission Factors from AP-42, Chapter 3.2, Table 3.2-3: Uncontrolled Emission Factors for 4-Stroke Rich-Burn Engines, SCC 2-02-002-53.  
(AP-42 Supplement F 07/2000)

Emission (tons/yr) = Heat Input Capacity (MMBtu/hr) x Emission Factor (lb/MMBtu) x 8760 hr/yr x 1 ton/2000 lbs

**2. Potential to Emit After Control:**

Control Device: Non-Selective Catalytic Reduction (NSCR) unit

*Control Efficiency	Pollutant					
	PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
	-	-	-	90%	50%	80%
<b>Potential to Emit after Control in tons/yr</b>	<b>0.32</b>	<b>0.32</b>	<b>0.01</b>	<b>3.68</b>	<b>0.25</b>	<b>12.38</b>

\* Control efficiencies are based on the "Emission Calculation Fact Sheet" published by the Michigan Department of Environmental Quality.

**Methodology**

Emission (tons/yr) = Potential to Emit before Control x (1-Control Efficiency)

**Appendix A: Emission Calculations**  
**Natural Gas Combustions**  
**HAPs Emissions from 500 HP Engine #EU3 (3.8 MMBtu/hr)**

**Company Name: Quicksilver Resources, Inc. - Wimp Central Processing Facility**  
**Address City IN Zip: SW/4 Section 9, T5S-R4E, Laconia, Indiana 47135**  
**SPR: 061-16815-00025**  
**Reviewer: ERG/YC**  
**Date: January 9, 2003**

**1. Potential to Emit Before Control:**

Heat Input Capacity  
MMBtu/hr

3.8
-----

Emission Factor in lb/MMBtu	Pollutant				
	Formaldehyde 2.05E-02	Methanol 3.06E-03	Acetaldehyde 2.79E-03	Acrolein 2.63E-03	Benzene 1.58E-03
<b>Potential to Emit before Control in tons/yr</b>	<b>0.34</b>	<b>0.05</b>	<b>0.05</b>	<b>0.04</b>	<b>0.03</b>

**Total Potential to Emit HAPs before Control = 0.51 tons/yr**

**Methodology**

Emission Factors from AP-42, Chapter 3.2, Table 3.2-3: Uncontrolled Emission Factors for 4-Stroke Rich-Burn Engines, SCC 2-02-002-53.  
(AP-42 Supplement F 07/2000)

Emission (tons/yr) = Heat Input Capacity (MMBtu/hr) x Emission Factor (lb/MMBtu) x 8760 hr/yr x 1 ton/2000 lbs

**2. Potential to Emit After Control:**

Control Device: Catalytic Converter

*Control Efficiency	Pollutant				
	Formaldehyde 50%	Methanol 50%	Acetaldehyde 50%	Acrolein 50%	Benzene 50%
<b>Potential to Emit after Control in tons/yr</b>	<b>0.17</b>	<b>0.03</b>	<b>0.02</b>	<b>0.02</b>	<b>0.01</b>

\* The HAP control efficiency is assumed to be same as the VOC control efficiency.

**Total Potential to Emit HAPs after Control = 0.25 tons/yr**

**Methodology**

Emission (tons/yr) = Potential to Emit before Control x (1-Control Efficiency)