

**NEW SOURCE CONSTRUCTION PERMIT  
and MINOR SOURCE OPERATING PERMIT  
OFFICE OF AIR MANAGEMENT**

**ExxonMobil  
1701 East 116<sup>th</sup> Street  
Carmel, Indiana 46032**

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

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-5.1 and 40 CFR 52.780, with conditions listed on the attached pages.

|   |                |
|---|----------------|
| Operation Permit No.: MSOP 057-12390-00031                              |                |
| Issued by:<br>Paul Dubenetzky, Branch Chief<br>Office of Air Management | Issuance Date: |

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## SECTION A

## SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). 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 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates portable source groundwater remediation facility.

Authorized Individual: Jonathan Hamilton  
Source Address: 1701 East 116<sup>th</sup> Street, Carmel, Indiana 46032  
Mailing Address: No. 30 Oak Hollow Suite 245, Joliet, Illinois 60434  
Phone Number: (815) 423-7668  
SIC Code: 5541  
County Location: Hamilton  
County Status: Attainment for all criteria pollutants  
Source Status: Minor Source Operating Permit

### A.2 Emissions units and Pollution Control Equipment Summary

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

One (1) portable High Vacuum Dual Phase (HVDP), to extract liquid and vapor petroleum hydrocarbons from the groundwater. This system has a maximum water flow of 10 gallons per minute (gpm) and 13 cubic feet per minute (cfm) of air flow. A Foxboro flame ionization detector and a Dwyer or Kurz meter will be installed to monitor the VOC emissions.

### A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

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

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) After 12 months from the postmarked submission date of the Affidavit of Construction, the source can choose to operate under the Part 70 Permit Program, Federally Enforceable State Operating Permit Program (FESOP), or Permit by Rule and an application shall be submitted to the OAM.

## **SECTION B GENERAL CONSTRUCTION CONDITIONS**

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

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

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This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

### **B.2 Definitions**

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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, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

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

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

### **B.4 Revocation of Permits [326 IAC 2-1.1-9(5)]**

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

### **B.5 Modification to Permit [326 IAC 2]**

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All requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

### **B.6 Minor Source Operating Permit [326 IAC 2-6.1]**

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This document shall also become a minor source operating permit pursuant to 326 IAC 2-6.1 when, prior to start of operation, the following requirements are met:

- (a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the emissions units were constructed as proposed in the application. The emissions units covered in the New Source Construction Permit may begin operating on the date the affidavit of construction is postmarked or hand delivered to IDEM.
- (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (c) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.

- (d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-7-19 (Fees).
- (e) Pursuant to 326 IAC 2-7-4 and 326 IAC 2-5.1-4, the Permittee shall apply for a Title V operating permit within twelve (12) months after the source becomes subject to Title V. This 12-month period starts at the postmarked submission date of the Affidavit of Construction. If the construction is completed in phases, the 12-month period starts at the postmarked submission date of the Affidavit of Construction that triggers the Title V applicability. The operation permit issued shall contain as a minimum the conditions in Section C and Section D of this permit.

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source

### C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

- (a) The total source potential to emit of volatile organic compound (VOC) is less than 250 tons per year. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.

### C.2 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days (this time frame is determined on a case by case basis but no more than ninety (90) days) after issuance of this permit, including the following information on each emissions unit:
- (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;
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP 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 Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that lack of proper maintenance does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM.

### C.3 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

- (a) The Permittee must comply with the requirements of [326 IAC 2-6.1-6] 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 Management  
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.

- (c) The Permittee shall notify the OAM within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.4 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, the Permittee shall allow IDEM, OAM, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a permitted 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 this title or the conditions of this permit or any operating permit revisions;
- (c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;
- (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.
  - (1) The Permittee may assert a claim that, in the opinion of the Permittee, information removed or about to be removed from the source by IDEM, OAM, or an authorized representative, contains information that is confidential under IC 5-14-3-4(a). The claim shall be made in writing before or at the time the information is removed from the source. In the event that a claim of confidentiality is so asserted, neither IDEM, OAM, nor an authorized representative, may disclose the information unless and until IDEM, OAM, makes a determination under 326 IAC 17-1-7 through 326 IAC 17-1-9 that the information is not entitled to confidential treatment and that determination becomes final. [IC 5-14-3-4; IC 13-14-11-3; 326 IAC 17-1-7 through 326 IAC 17-1-9]
  - (2) The Permittee, and IDEM, OAM, acknowledge that the federal law applies to claims of confidentiality made by the Permittee with regard to information removed or about to be removed from the source by U.S. EPA. [40 CFR Part 2, Subpart B]

C.5 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAM, Permits Branch, within thirty (30) days of the change.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).
- (c) IDEM, OAM, shall issue a revised permit.

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.

**C.6 Permit Revocation [326 IAC 2-1-9]**

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

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

**C.7 Opacity [326 IAC 5-1]**

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Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), 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.8 Fugitive Dust Emissions [326 IAC 6-4]**

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The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

**Testing Requirements**

**C.9 Performance Testing [326 IAC 3-6]**

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- (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 methods approved by IDEM, OAM.

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 Management  
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 Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAM within forty-five (45) days after the completion of the testing. An extension may be granted by the Commissioner, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

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

### **Compliance Monitoring Requirements**

#### **C.10 Compliance Monitoring [326 IAC 2-1.1-11]**

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment, no more than ninety (90) days after receipt of this permit. If due to circumstances beyond its control, this schedule cannot be met, the Permittee may extend the compliance schedule an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Management  
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 the 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.

#### **C.11 Maintenance of Monitoring Equipment [IC 13-14-1-13]**

- (a) In the event that a breakdown of the 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 less than one (1) hour 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]**

Any monitoring or testing performed to meet the applicable requirements of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

C.13 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 1-6]

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- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:
- (1) This condition;
  - (2) The Compliance Determination Requirements in Section D of this permit;
  - (3) The Compliance Monitoring Requirements in Section D of this permit;
  - (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
  - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAM upon request and shall be subject to review and approval by IDEM, OAM. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of :
    - (A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
    - (B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.
- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
- (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that 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 or;
  - (3) An automatic measurement was taken when the process was not operating; or
  - (4) The process has already returned to operating within "normal" parameters and no response steps are required.

- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps 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.

### **Record Keeping and Reporting Requirements**

#### **C.14 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]**

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- (a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

#### **C.15 General Record Keeping Requirements [326 IAC 2-6.1-2]**

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- (a) Records of all required monitoring data 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 and available upon the request of an IDEM, OAM, representative. 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 written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:
  - (1) The date, place, and time of sampling or measurements;
  - (2) The dates analyses were performed;
  - (3) The company or entity performing the analyses;

- (4) The analytic techniques or methods used;
  - (5) The results of such analyses; and
  - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
- (1) Copies of all reports required by this permit;
  - (2) All original strip chart recordings for continuous monitoring instrumentation;
  - (3) All calibration and maintenance records;
  - (4) Records of preventive maintenance shall be sufficient to demonstrate that improper maintenance did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.
- (d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.16 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Quarterly Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC2-1.1-1(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 Management  
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, OAM, on or before the date it is due.

- (d) Unless otherwise specified in this permit, any semi-annual report shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) All instances of deviations as described in Section B- Deviations from Permit Requirements Conditions must be clearly identified in such reports. The Emergency/Deviation Occurrence Report does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

### Portable Source Requirement

#### C.17 Relocation of Portable Sources [326 IAC 2-14-4] [326 IAC 2-6.1-6(d)(2)]

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- (a) This permit is approved for operation in all areas of Indiana except in severe nonattainment areas for ozone (at the time of this permit's issuance these areas were Lake and Porter Counties). This determination is based on the requirements of Prevention of Significant Deterioration in 326 IAC 2-2 and 40 CFR 52.21, and Emission Offset requirements in 326 IAC 2-3. A thirty (30) day advance notice of relocation must be given to IDEM, OAM, and a "Relocation Site Approval" letter must be obtained before relocating.
- (b) The Permittee shall also notify the applicable local air pollution control agency when relocating to, or from, one the following:
  - (1) Madison County - (Anderson Office of Air Management)
  - (2) City of Evansville plus four (4) miles beyond the corporate limits but not outside Vanderburgh County - (Evansville EPA)
  - (3) City of Gary - (Gary Division of Air Pollution)
  - (4) City of Hammond - (Hammond Department of Environmental Management)
  - (5) Marion County - (Indianapolis Air Pollution Control Agency)
  - (6) St. Joseph County - (St. Joseph County Health Department)
  - (7) Vigo County - (Vigo County Air Pollution Department)
- (c) That a valid operation permit consists of this document and any subsequent "Relocation Site Approval" letter specifying the current location of the portable plant.

- (d) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (e) 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.
- (f) 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 EMISSIONS UNIT OPERATION CONDITIONS

One (1) portable High Vacuum Dual Phase (HVDP), to extract liquid and vapor petroleum hydrocarbons from the groundwater. This system has a maximum water flow of 10 gallons per minute (gpm) and 13 cubic feet per minute (cfm) of air flow. A Foxboro flame ionization detector and a Dwyer or Kurz meter will be installed to monitor the VOC emissions.

### Emissions Limitation and Standards

#### D.1.1 Volatile Organic Compounds [ 326 IAC 8-1-6] [326 IAC 2-4.1-1] and [326 IAC 2-3]

- (a) In order that the VOC emissions be limited to less than 25 tons per 365 day period , the following parameters shall be limited:

| Parameters                | Limit  |
|---------------------------|--|
| Exhaust Gas Concentration | 65,750 parts per million (ppm)                     |
| Air Flow                  | 28 cubic feet per minute (cfm)                     |
| Hours of Operation        | 1,947 hours/365 day period rolled on a daily basis |

Compliance with the above limitations will make 326 IAC 8-1-6 (General Reduction Requirements) and 326 IAC 2-4.1-1 (New Source Toxics Control) not applicable.

- (b) Compliance with the above limitations will also make 326 IAC 2-3, Emission Offset requirements not applicable, when the portable High Vacuum Dual Phase (HVDP) system is relocated to nonattainment areas, except Lake and Porter counties.

#### D.1.2 Portable Source

- (a) This portable source has been approved for the operation in all areas of the State, based on the requirements of 326 IAC 2-2, Prevention of Significant Deterioration (PSD), and 326 IAC 2-3, Emission Offset, except Lake and Porter counties.
- (b) A notice of relocation must be submitted to the Office of Air Management within a week of relocating and shall be deemed approved upon submittal.

#### D.1.3 Preventive Maintenance Plan

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and the Flame Ionization detector.

### Compliance Determination Requirements

#### D.1.4 Flame Ionization Detector Continuous Monitoring

- (a) The Flame Ionization detector shall always be in operation when the High Vacuum Dual Phase (HVDP), to extract liquid petroleum hydrocarbons and petroleum hydrocarbon vapors from the groundwater is in operation.

- (b) The Permittee shall calibrate, maintain and operate the Flame Ionization detector emission monitoring system for the measurement of volatile organic compounds. This system must comply with 326 IAC 3-5 (Continuous Monitoring Emissions).
- (c) Calibration of the Flame Ionization detector shall be in accordance with 40 CFR, Part 60 Appendix B, Specifications 8. Calibration shall be performed daily and at any time the detector is shut down and brought back on line.

### **Compliance Monitoring Requirements**

#### **D.1.5 Visible Emissions Notations**

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- (a) Daily visible emission notations of the truck stack exhaust shall be performed during normal daylight when the High Vacuum Dual Phase (HVDP) is in operation. 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 and Reporting Requirements**

#### **D.1.6 Record Keeping and Reporting Requirements**

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- (a) To document compliance with Conditions D.1.1, readings from the Flame Ionization detector as required in Condition D.1.4 shall be recorded and shall be reported using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.
- (b) Daily calibration of the Flame Ionization detector whenever the HVDP system is in operation shall be recorded and maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR MANAGEMENT  
 COMPLIANCE DATA SECTION  
 Quarterly Report**

Source Name: ExxonMobil  
 Source Address: 1701 East 116<sup>th</sup> Street, Carmel, Indiana 46032  
 Mailing Address: No. 30 Oak Hollow Suite 245, Joliet, Illinois 60434  
 MSOP No.: 057-12390-00031  
 Facility: Portable High Vacuum Dual Phase for groundwater remediation  
 Limit:

| Parameters                | Limit  |
|---------------------------|--|
| Exhaust Gas Concentration | 65,750 parts per million (ppm)                     |
| Air Flow                  | 28 cubic feet per minute (cfm)                     |
| Hours of Operation        | 1,947 hours/365 day period rolled on a daily basis |

| Month |                        |                         |                                |                        | Year |                        |                         |                                |                        |
|-------|------------------------|-------------------------|--------------------------------|------------------------|------|------------------------|-------------------------|--------------------------------|------------------------|
| Day   | Air Flow Rate (dscf/m) | VOC Concentration (ppm) | No. of Hours Operated This Day | VOC Emission (ton/day) | Day  | Air Flow Rate (dscf/m) | VOC Concentration (ppm) | No. of Hours Operated This Day | VOC Emission (ton/day) |
| 1     |                        |                         |                                |                        | 17   |                        |                         |                                |                        |
| 2     |                        |                         |                                |                        | 18   |                        |                         |                                |                        |
| 3     |                        |                         |                                |                        | 19   |                        |                         |                                |                        |
| 4     |                        |                         |                                |                        | 20   |                        |                         |                                |                        |
| 5     |                        |                         |                                |                        | 21   |                        |                         |                                |                        |
| 6     |                        |                         |                                |                        | 22   |                        |                         |                                |                        |
| 7     |                        |                         |                                |                        | 23   |                        |                         |                                |                        |
| 8     |                        |                         |                                |                        | 24   |                        |                         |                                |                        |
| 9     |                        |                         |                                |                        | 25   |                        |                         |                                |                        |
| 10    |                        |                         |                                |                        | 26   |                        |                         |                                |                        |
| 11    |                        |                         |                                |                        | 27   |                        |                         |                                |                        |
| 12    |                        |                         |                                |                        | 28   |                        |                         |                                |                        |
| 13    |                        |                         |                                |                        | 29   |                        |                         |                                |                        |
| 14    |                        |                         |                                |                        | 30   |                        |                         |                                |                        |
| 15    |                        |                         |                                |                        | 31   |                        |                         |                                |                        |
| 16    |                        |                         |                                |                        |      |                        |                         |                                |                        |

Submitted by: \_\_\_\_\_

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

Signature: \_\_\_\_\_

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

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

**NEW SOURCE REVIEW AND MINOR SOURCE OPERATING PERMIT  
QUARTERLY COMPLIANCE MONITORING REPORT**

Source Name: ExxonMobil  
Source Address: 1701 East 116<sup>th</sup> Street, Carmel, Indiana 46032  
Mailing Address: No. 30 Oak Hollow Suite 245, Joliet, Illinois 60434  
MSOP No.: 057-12390-00031

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

This report is an affirmation that the source has met all the compliance monitoring requirements stated in this permit. This report shall be submitted quarterly. Any deviation from the compliance monitoring requirements and the date(s) of each deviation must be reported. Additional pages may be attached if necessary. This form can be supplemented by attaching the Emergency/Deviation Occurrence Report. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.

| Compliance Monitoring Requirement<br>(eg. Permit Condition D.1.4, D.1.5) | Number of Deviations | Date of each Deviation |
|--|----------------------|------------------------|
|  |                      |                        |
|  |                      |                        |
|  |                      |                        |
|  |                      |                        |

Form Completed By: \_\_\_\_\_  
Title/Position: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

Attach a signed certification to complete this report.





## Indiana Department of Environmental Management Office of Air Management

### Technical Support Document (TSD) for a New Source Construction and Minor State Operating Permit (MSOP)

#### Source Background and Description

Source Name: Exxon Mobil  
 Source Location: 1701 East 116<sup>th</sup> Street, Carmel, Indiana 46032  
 County: Hamilton  
 SIC Code: 5541  
 Operation Permit No.: 057-12390-00031  
 Permit Reviewer: Aida De Guzman

The Office of Air Management (OAM) has reviewed an application from Exxon Mobil relating to the construction and operation of a portable High Vacuum Dual Phase (HVDP), to extract liquid and vapor petroleum hydrocarbons from the groundwater. This system has a maximum water flow of 10 gallons per minute (gpm) and 13 cubic feet per minute (cfm) of air flow. A Foxboro flame ionization detector and a Dwyer or Kurz meter will be installed to monitor the VOC emissions.

#### Stack Summary

| Stack ID | Operation               | Height (feet) | Diameter (feet) | Flow Rate (acfm) | Temperature (°F) |
|----------|-------------------------|---------------|-----------------|------------------|------------------|
| 001      | groundwater remediation | 9.5           | 0.218           | 13               | 180              |

#### Recommendation

The staff recommends to the Commissioner that the construction and operation of the groundwater remediation source 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 June 20, 2000 with additional information received on July 5, 2000.

#### Emission Calculations

- (a) VOC Emissions:  
 The portable High Vacuum Dual Phase (HVDP) will be utilized to extract liquid and vapor petroleum hydrocarbons from the groundwater. This system has a maximum water flow of 10 gallons per minute (gpm) and 13 cubic feet per minute (cfm) of air flow.

Handex was commissioned by Exxon Mobil to do the petroleum hydrocarbon extraction.

The VOC emissions depend upon the petroleum contamination present in the groundwater. Handex will perform four (4) to six (6) HDVP events during the months of

July through December that will last for five (5) years. The VOC and HAP concentration were determined through laboratory testing. Although, this is not a continuous process the potential to emit (PTE) will be based on 8760 hours/yr, using the following equation:

$$ER = \frac{(C) (MW) (Q) (T)}{c}$$

Where: ER = emission rate in pounds per hour (lbs/hr)  
 C = exhaust gas concentration in parts per million (ppm)  
 MW = molecular weight in lb/lb-mole  
 Q = air flow rate in cubic feet per minute (cfm)  
 T = 60 min/hr  
 c = 385,260,000 cuft/lb-mole  
 = constant at standard condition at 68 °F, 29.92 inches HG.

Maximum air concentration = 65,750 ppm  
 Maximum air flow rate = 28 cfm  
 Gasoline molecular weight = 86 lb/lb-mole

$$VOC = \frac{(65,750 \text{ ppm}) (86 \text{ lb/lb-mole}) (28 \text{ cfm}) (60 \text{ min/hr})}{385,260,000 \text{ cuft/lb-mole}}$$

$$= 24.7 \text{ lbs/hr}$$

$$VOC \text{ Emissions} = 24.7 \text{ lb/hr} * 8760 \text{ hrs/yr} * \text{ton}/2000 \text{ lb}$$

$$= 108 \text{ tons/year}$$

Limit in the Hours of Operation to avoid 326 IAC 8-1-6:

$$\frac{108 \text{ tons/yr}}{8760 \text{ hrs/yr}} \times \frac{24 \text{ tons/yr VOC limit}}{X} = \text{limit in hours}$$

$$X = 1947 \text{ hours/yr}$$

The limit in the maximum gas concentration and air flow, and hours of operation will limit the VOC to less than 25 tons/year. Hence, 326 IAC 8-1-6 is not applicable. These limitations will also limit the HAPs emissions below the major threshold levels.

- (b) HAPs Emissions (Using the “Chemical Property Estimation For Synthetic Gasoline And Constituents” table found in EPA Publication “Estimating Air Emissions from Petroleum Storage Tanks (UST) Cleanups” :

| HAP                     | Rate of Emissions (lbs/hr) | Rate of Emissions (tons/yr) |
|-------------------------|----------------------------|-----------------------------|
| Benzene                 | 0.74                       | 3.2                         |
| Ethylbenzene            | 0.49                       | 2.1                         |
| Methyl tert-butyl ether | 3.46                       | 15.1                        |

|          |      |      |
|----------|------|------|
| Toluene  | 1.24 | 5.4  |
| o-xylene | 0.58 | 2.5  |
| m-xylene | 0.58 | 2.5  |
| p-xylene | 0.58 | 2.5  |
| TOTAL    | 7.67 | 32.6 |

**Potential To Emit Before Controls (Modification)**

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

| Pollutant       | Potential To Emit (tons/year) |
|-----------------|-------------------------------|
| PM              | 0.0                           |
| PM-10           | 0.0                           |
| SO <sub>2</sub> | 0.0                           |
| VOC             | 108                           |
| CO              | 0.0                           |
| NO <sub>x</sub> | 0.0                           |

| HAP                     | Rate of Emissions (tons/yr) |
|-------------------------|-----------------------------|
| Benzene                 | 3.2                         |
| Ethyl benzene           | 2.1                         |
| Methyl tert-butyl ether | 15.1                        |
| Toluene                 | 5.4                         |
| o-xylene                | 2.5                         |
| m-xylene                | 2.5                         |
| p-xylene                | 2.5                         |
| TOTAL                   | 32.6                        |

**Justification for Modification**

This is a proposed new source, which meets the applicability in 326 IAC 2-5.1-3. The source will be issued a New Source Construction Permit and Minor Source Operating Permit (MSOP).

After 12 months from the postmarked submission date of the Affidavit of Construction, the source can choose to operate under the Part 70 Permit Program, Federally Enforceable State Operating Permit Program (FESOP), or Permit by Rule and an application shall be submitted to

the OAM.

**County Attainment Status**

The source is located in Hamilton County.

| Pollutant       | Status (attainment, maintenance attainment, or unclassifiable; severe, moderate, or marginal nonattainment) |
|-----------------|---|
| PM-10           | attainment  |
| SO <sub>2</sub> | attainment  |
| NO <sub>2</sub> | attainment  |
| Ozone           | attainment  |
| CO              | attainment  |
| Lead            | not determined  |

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Hamilton County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Hamilton County has been classified as attainment or unclassifiable for all the 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.

**Source Status**

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

| Pollutant        | Emissions (ton/yr) |
|------------------|--------------------|
| PM               | 0.0                |
| PM10             | 0.0                |
| SO <sub>2</sub>  | 0.0                |
| VOC              | <25                |
| CO               | 0.0                |
| NO <sub>x</sub>  | 0.0                |
| Single HAP       | <10                |
| Combination HAPs | <25                |

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

## Part 70 Permit Determination

### 326 IAC 2-7 (Part 70 Permit Program)

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

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

This is the first air approval issued to this source.

After 12 months from the postmarked submission date of the Affidavit of Construction, the source can choose to operate under the Part 70 Permit Program, Federally Enforceable State Operating Permit Program (FESOP), or Permit by Rule and an application shall be submitted to the OAM.

## 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) 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

- (a) 326 IAC 2-6 (Emission Reporting)  
This source is not subject to 326 IAC 2-6, because its potential to emit VOC will be limited to less than 100 tons per year.
- (b) 326 IAC 8 (Volatile Organic Sources)  
There are no provisions under Article 8 that will apply to this groundwater remediation source, because it does not fit any of the source categories in the rule.
- (c) 326 IAC 8-1-6 (General Reduction Requirements)  
This rule applies to new facility as of January 1, 1980 which have potential VOC emissions of 25 tons per year. The groundwater remediation facility was limited to less than 25 tons per year, in order to avoid the applicability of this rule.
- (d) 326 IAC 2-4.1-1 (New Source Toxics Control)  
This rule applies to sources who construct or reconstructs a major source of hazardous air pollutants after July 27, 1997. This rule is not applicable to this source because the VOC limitation will also limit the HAPs emissions below the major threshold levels.

## Conclusion

The construction and operation of this portable ground remediation system shall be subject to the conditions of the attached **Minor State Operating Permit 057-12390-00031**.