



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant
DATE: June 17, 2005
RE: Former Ricker's Petro Mart / 065-21291-00041
FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision – Approval

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 326 IAC 2, this approval was effective immediately upon submittal of the application.

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days from the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER-AM.dot 1/10/05



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

Jay Ricker
Former Ricker's Petro Mart
30 West 11th Street
Anderson, Indiana 46016

June 17, 2005

Re: Exempt Construction and Operation Status,
065-21291-00041

Dear Mr. Ricker:

The application from Former Ricker's Petro Mart received on May 17, 2005 has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, Indiana Department of Environmental Management, Office of Air Quality (IDEM, OAQ) has determined that the following soil and groundwater remediation facility located at 112 Maple Village Center, Middletown, Indiana 47356 is classified as exempt from air pollution permit requirements:

- (a) One (1) Low Vacuum Dual Phase (LVDP) extraction system to extract liquid and vapor petroleum hydrocarbons from the groundwater. This system has a maximum water flow of 10 gallons per minute (gpm) and maximum air flow of 280 cubic feet per minute (acfm), and consists of the following:
 - (1) One (1) pneumatic pump to extract impacted groundwater from one (1) groundwater pumping well, and treated with one (1) air stripper and two (2) granular activated carbon (GAC) beds.
 - (2) One (1) Regenerative blower with 5 horsepower (hp) capacity to extract petroleum vapors from five (5) vapor extraction wells, and venting to the atmosphere.

The following conditions shall be applicable:

- (a) 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:
 - (1) 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.
 - (2) 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.

This exemption is the first air approval issued to this source.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,
Nysa James, Section Chief
Permits Branch
Office of Air Quality

ERG/SD

cc: File - Henry County
Henry County Health Department
Air Compliance – D. J. Knotts
Permit Tracking
Compliance Data Section

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

Technical Support Document (TSD) for a Exemption

Source Background and Description

Source Name:	Former Ricker's Petro Mart
Source Location:	112 Maple Village Center, Middletown, Indiana 47356
County:	Henry
SIC Code:	5541
Operation Permit No.:	065-21291-00041
Permit Reviewer:	ERG/SD

The Office of Air Quality (OAQ) has reviewed an application from Former Ricker's Petro Mart relating to the construction and operation of a low vacuum dual extraction system used for soil and groundwater remediation.

New Emission Units and Pollution Control Equipment

The source consists of the following new emission units and pollution control devices:

- (a) One (1) Low Vacuum Dual Phase (LVDP) Extraction System to extract liquid and vapor petroleum hydrocarbons from the groundwater. This system has a maximum water flow of 10 gallons per minute (gpm) and a maximum air flow of 280 cubic feet per minute (acfm) and consists of the following:
 - (1) One (1) Pneumatic pump to extract impacted groundwater from one (1) groundwater pumping well, treated with one (1) air stripper and two (2) granular activated carbon (GAC) beds.
 - (2) One (1) regenerative blower with 5 hp capacity to extract petroleum vapors from five (5) vapor extraction wells, and venting to the atmosphere.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted emission units operating at this source during this review process.

Existing Approvals

There are no previous approvals issued to this source.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the construction and operation 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.

A complete application for the purposes of this review was received on May 17, 2005.

Emission Calculations

See Appendix A of this document for detailed emission calculations (page 1).

Potential to Emit of the Source Before Controls

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
PM10	0.0
SO ₂	0.0
VOC	2.09
CO	0.0
NO _x	0.0

HAPs	Potential to Emit (tons/year)
Benzene	0.07
Toluene	0.31
Ethylbenzene	0.06
Xylene	0.31
1,2,4-trimethylbenzene	0.10
Isopropylbenzene	0.04
Naphthalene	0.10
MTBE	0.10
Total	1.12

The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of pollutants are less than the levels listed in 326 IAC 2-1.1-3(e)(1). Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3. An exemption will be issued.

County Attainment Status

The source is located in Henry County.

Pollutant	Status
PM10	Attainment
PM 2.5	Attainment
SO ₂	Attainment
NO ₂	Attainment
1-hour Ozone	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and nitrogen oxide (NO_x) emissions are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Henry County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.
- (b) Henry County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the

requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.

- (c) Henry County has been classified as unclassifiable or attainment for PM_{2.5}. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM_{2.5} emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM_{2.5} emissions, it has directed states to regulate PM₁₀ emissions as surrogate for PM_{2.5} emissions. See the State Rule Applicability – Entire Source section.

Source Status

Existing Source PSD Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	0.0
PM ₁₀	0.0
SO ₂	0.0
VOC	2.09
CO	0.0
NO _x	0.0
Single HAP	<10
Combination HAPs	<25

This 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, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

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

This is the first air approval issued to this source.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this exemption for this source.
- (b) The source is not subject to the requirements of 40 CFR 63, Subpart GGGGG – National Emission Standards for Hazardous Air Pollutants (HAPs): Site Remediation because this source is not major for HAPs.
- (c) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63) included in this exemption for this source.

State Rule Applicability – Entire Source

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

This source is located at a former convenience store and gas station which was constructed prior to August 7, 1977. It is not in one of the 28 listed source categories. On May 17, 2005, the

Permittee submitted an application requesting the construction and operation of a Low Vacuum Dual Phase Extraction (DPE) System to extract liquid and vapor petroleum hydrocarbons from the groundwater. The Low vacuum DPE, a remediation technology, employs a pneumatic pump to extract impacted groundwater and a regenerative blower to extract petroleum vapors. Hydrocarbons will be removed from the one (1) groundwater pumping well and five (5) vapor extraction wells. The extracted vapors will be vented to the atmosphere while the impacted groundwater will be treated with an air stripper and two (2) granular activated carbon (GAC) beds. The potential to emit of VOC and HAPs are equal to 2.09 and 1.12 tons per year, respectively. The potential to emit of all other criteria pollutants are less than 250 tons per year. Therefore, this source is not subject to the provisions of 326 IAC 2-2 (PSD).

326 IAC 2-6 (Emission Reporting)

This source is located in Henry County and is not required to operate under the provisions of 326 IAC 2-7, Part 70 Permit Program. 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 the permit:

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

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

The operation of a gasoline service station will emit less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

State Rule Applicability – Low Vacuum Dual Phase Extraction System

326 IAC 8-1-6 (BACT)

The potential VOC emissions from the Low Vacuum DPE system is less than twenty-five (25) tons per year. Therefore, the provisions of 326 IAC 8-1-6 are not applicable.

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

The provisions of 326 IAC 6-3-2 are not applicable because there are no particulate emissions from the Low Vacuum DPE system.

Conclusion

The construction and operation of the new low vacuum dual phase extraction (LDPE) system used for soil and groundwater remediation shall be subject to the conditions of the attached Exemption No.: 065-21291-00041.

**Appendix A: Emission Calculations
VOC and HAP Emissions
From Gasoline Service Stations**

Company Name: Former Ricker's Petro Mart
Address: 112 Maple Village Center, Middletown, Indiana 47356
Permit: 065-21291
Plt ID: 065-00041
Reviewer: ERG/SD
Date: June 1, 2005

A. Dissolved Phase (Hydrocarbons Below Water Table) :

1. Impacted Ground Water (gallons/year) = Estimated Plume Size (690,590 cubic feet) * Porosity (0.30) * 7.26 gallons/ cubic feet = 1,577,340
2. Maximum Concentration of Total Organics (ppb) as based on analytical results dated 02/05 are equal to = 23,400
3. Gasoline Equivalent (gallons) = 23,400 ppb/10³ * Impacted Ground water (gallons) = 36.9
4. Maximum Concentration of Total Organics (lbs./year) = Gasoline Equivalent (gallons) * 6.8 lbs/gallon = **251**

B. Adsorbed Phase (Solid Hydrocarbons Adsorbed in Soil Above and Below the Water Table) :

1. Impacted Area (cubic feet) = Area (27,000 cubic feet) * Thickness (10 feet) * Porosity (0.30) * 7.26 gallons/cubic feet = 617,220
2. Maximum Concentration of Gasoline Range Organics in Soil (ppm) as based on analytical results dated 02/05 are equal to = 935
3. Gasoline Equivalent (gallons) = 935 ppm/10³ * Impacted Area (cubic feet) = 577
4. Maximum Concentration of Gasoline Range Organics in Soil (lbs/year) = Gasoline Equivalent (gallons) * 6.8 lbs/gallon = **3,924**

Total Organic Contamination (VOCs)(tons/year)	HAP	Weight %	PTE of HAP (tons/year)
2.09	Benzene	3.50%	0.07
	Toluene	15.0%	0.31
	Ethylbenzene	3.00%	0.06
	Xylene	15.0%	0.31
	1,2,4-trimethylbenzene	5.00%	0.10
	Isopropylbenzene	2.00%	0.04
	Naphthalene	5.00%	0.10
	MTBE	5.00%	0.10
TOTALS			1.12

METHODOLOGY

Total Organic Contamination (tons/year) = Max. concentration of total organics (in dissolved phase) + Max. concentration of organics (adsorbed phase)
 PTE of HAPs (tons/year) = Total Organic Contamination (tons/year) * Weight % HAP