TO: Interested Parties / Applicant

RE: Former Retail Shell Station / E097-24344-00601

FROM: Felicia A. Robinson
Administrator
City of Indianapolis
Office of Environmental Services

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 Indianapolis Office of Environmental Services, Air Permits at (317) 327-2234.

Enclosures

Department of Public Works
Office of Environmental Services
2700 Belmont Avenue
Indianapolis, IN 46221
317-327-2234
Fax 327-2274
TDD 327-5186
indygov.org/dpw

March 22, 2007

Mr. Shailendra Ganna
NESA & Associates
6824 Hawthorn Park Drive
Indianapolis, IN 46220

CERTIFIED MAIL

Re: Exempt Construction and Operation Status
Former Retail Shell Station - Indianapolis
E097-24344-00601

Dear Mr. Ganna:

The application from the Former Retail Shell Station, received on January 8, 2007, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following soil remediation operation, to be located at 3801 North Lafayette Road, Indianapolis, Indiana, 46254, is classified as exempt from air pollution permit requirements:

(a) Internal Combustion Engine (ICE) based High Vacuum Remediation (HVR) System, incorporating fluid extraction/knockout/oil-water separation and transfer into separation and storage tanks, vapor abatement, and water treatment and discharge, with maximum water removal rate of 0.548 gallons per minute, planned to start operation in August of 2007.

(b) Natural Gas fired Internal Combustion Engine (ICE), model LSG-875, with maximum capacity of 148 HP.

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 thirty percent (30%) 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.

(b) Pursuant to 326 IAC 6-4, the source 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 this regulation.

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 IDEM, Office of Air Quality (OAQ) and Indianapolis Office of Environmental Services (OES) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Felicia A. Robinson
Administrator

BG

cc: Files
Air Compliance – Matt Mosier
IDEM, OAQ – Mindy Hahn
Indiana Health Department

Department of Public Works
Office of Environmental Services
2700 Belmont Avenue
Indianapolis, IN 46221
317-327-2234
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Indiana Department of Environmental Management
Office of Air Quality
and
City Of Indianapolis Office of Environmental Services

Technical Support Document (TSD) for an Exemption

Source Background and Description

Source Name:	Former Retail Shell Station
Source Location:	3801 North Lafayette Road, Indianapolis, Indiana, 46254
County:	Marion
SIC Code:	5541
Exemption No.:	E097-24344-00601
Permit Reviewer:	Boris Gorlin

The Indiana Department of Environmental Management (IDEM) Office of Air Quality (OAQ) and Indianapolis Office of Environmental Services (OES) have reviewed an application from the Former Retail Shell Station relating to the dual phase vacuum extraction site remediation operation.

Exempt Emission Units and Pollution Control Equipment

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

(a) Internal Combustion Engine (ICE) based High Vacuum Remediation (HVR) System, incorporating fluid extraction/knockout/oil-water separation and transfer into separation and storage tanks, vapor abatement, and water treatment and discharge, with maximum water removal rate of 0.548 gallons per minute; operation start is planned for April of 2007.

(b) Natural Gas fired Internal Combustion Engine, model LSG-875, with maximum capacity of 148 HP.

Existing Approvals

The source has no existing approvals.

Enforcement Issues

There are no enforcement actions pending. Pursuant to 326 IAC 2-1.1-3(e)(1), this source is exempt from permitting requirements.

Recommendation

The staff recommends to the Administrator that an exemption from air pollution permitting requirements be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the source's application received on January 8, 2007.

Emission Calculations

Soil Remediation System emission calculations submitted by the applicant have been verified and found to be accurate and correct. These calculations, along with Natural Gas fired Internal Combustion Engine emission calculation, are provided in Appendix A of this document (three pages).

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, inclulding 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/yr)
PM	0.163
PM10	0.016
SO_2	0.001
VOC	0.737
CO	6.134
NO_x	3.743

HAPs	Potential to Emit (tons/yr)
Highest single HAP	0.116 (Formaldehyde)
Combination of HAPs	0.171

The potential to emit (as defined in 326 IAC 2-7-1(29)) of criteria air pollutant are less than the levels listed in 326 IAC 2-1.1-3(d)(1), the potential to emit of any single HAP is less than ten (10) tons per year, and/or the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Pursuant to 326 IAC 2-1.1-3, an exemption will be issued.

County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM10	Unclassifiable
PM2.5	Nonattainment
SO_2	Maintenance attainment
NO_X	Attainment
8-hour Ozone	Basic nonattainment
CO	Attainment
Lead	unclassifiable

(a) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) 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 NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability - Entire Source section.

(b) Marion County has been classified as nonattainment for PM2.5 in 70 FR 943 dated January 5, 2005. Until U.S. EPA adopts specific New Source Review rules for PM2.5 emissions, it has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions, pursuant to the Non-attainment New Source Review requirements. See the State Rule Applicability - Entire Source section.

(c) Marion County has been classified as attainment or unclassifiable in Indiana for PM10, SO_2, NO_2, CO, and Lead. Therefore, these emissions were reviewed pursuant to the

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

(d) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 redesignating Delaware, Greene, Jackson, Vanderburgh, Vigo and Warrick Counties to attainment for the eight-hour ozone standard, redesignating Lake County to attainment for the sulfur dioxide standard, and revoking the one-hour ozone standard in Indiana.

Source Status

New 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/yr)
PM	0.163
PM10	0.016
SO_2	0.001
VOC	0.737
CO	6.134
NO_x	3.743
Highest single HAP	0.116 (Formaldehyde)
Combination of HAPs	0.294

(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, no nonattainment pollutant is emitted at a rate of 100 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 2-3, the PSD and Emission Offset requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new 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 for this source.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63) included for this source.

(c) NESHAP 40 CFR Part 63, Subpart GGGGG (National Emission Standards for Hazardous Air Pollutants for Site Remediation) is not included for this source since the source is not a major source of HAP emissions (PTE of any single HAP is less than ten (10) tons per year and/or PTE of a combination of HAPs is less than twenty-five (25) tons per year).

(d) The NESHAP 40 CFR 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines) is not included for this source because the Internal Combustion Engine (ICE), model LSG-875, has capacity of less then 500 brake horsepower (HP), and this source is not a major source of HAP emissions.

State Rule Applicability - Entire Source

326 IAC 2-1.1-3 (Exemptions)

This source has the potential to emit (PTE) less than ten (10) tons per year (tpy) of a single hazardous air pollutant (HAP) and twenty five (25) tpy of any combination of HAPs. All other regulated pollutants are below the regulatory thresholds stated in 326 IAC 2-1.1-3(e)(1). Therefore, this source is not required to apply for and obtain a registration or permit for construction and operation.

326 IAC 2-1.1-5 (Non-attainment New Source Review)

This source is not major under nonattainment NSR because it has the potential to emit less than 100 tons of PM-10 (as surrogate for PM2.5). Therefore, the Non-attainment New Source Review requirements are not applicable.

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

This source is not major because the emissions are less than the PSD major source levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

326 IAC 2-3 (Emission Offset)

This source is not major because the emissions are less than the Emission Offset major source levels. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants - New source toxics control)

This source is not a major source of HAPs, and will emit less than ten (10) tons per year of a single HAP and twenty-five (25) tons per year of a combination of HAPs, therefore 326 IAC 2-4.1 does not apply.

326 IAC 2-5.1-1 (Construction of New Sources - Exemptions)

This is a new source that meets the criteria under 326 IAC 2-1.1-3, and therefore is exempt under this rule.

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 thirty percent (30%) 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 6-4 (Fugitive Dust Emissions Limitations)

Pursuant to 326 IAC 6-4, the source 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 this regulation.

326 IAC 6-5.1-1 (Particulate Matter Limitations except Lake County)

Although the source is located in Marion County, it does not have the potential to emit 100 tons per year or greater of particulate matter; and/or actual emissions of 10 tons or more per year of particulate matter. In addition, the source has combustion units that burn only natural gas, and is not one of the sources listed in 326 IAC 6.5-6 (formerly 326 IAC 6-1-12), therefore 326 IAC 6.5-1-1 (formerly 6-1), does not apply.

326 IAC 8 (Volatile Organic Sources)

This source does not fit any of the source categories in 326 IAC 8. Therefore, none of the rules in Article 8 are applicable.

State Rule Applicability - Individual Facilities

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

This source does not include manufacturing processes; therefore, 326 IAC 6-3 does not apply to this source.

Conclusion

The construction and operation of this dual phase vacuum extraction site remediation operation shall be subject to the conditions of this Exemption No.: 097-24344-00601.

Appendix A: Emissions Calculations

Site Remediation

Dual phase vacuum extraction operation

Company Name:	Former Retail Shell Station
Address City IN Zip:	3801 North Lafayette Road, Indianapolis, Indiana 46220
Permit Number:	E097-24344-00601
Plt ID:	097-00601
Reviewer:	Boris Gorlin

Assumptions:		
Benzene = C6H6 = 78 grams per mole	78	grams/mole
Maximum BTEX/M Concentration (parts per millions volume)	0.126	ppmv
Maximum Flow Rate (standard cubic feet per minute)	45	scfm
Conversion Ratios:		
1) 1 cubic foot	7.48	gallons
2) 1 gallon	3.785	liters
3) 1 gram	2.205E-03	pounds
Calculations (BTEX/M emission @ measured air temperature):		
Discharge Volume	4.39E-07	grams/liter *
Discharge Rate	5.59E-04	grams/min
Daily Discharge	1.77E-03	lb/day
Monthly Discharge	5.32E-02	lb/month
Potential to Emit	**294**	**lb/yr**
	0.147	**ton/yr**

BTEX - benzene, toluene, ethylbenzene, and **xylene**

Compound	**Maximum Concentration mg/cu.m**	**Potential to Emit ton/yr**
Benzene	370	0.0007
Toluene	1,600	0.0029
Ethyl Benzene	580	0.0010
Xylene	2,780	0.0050
TPH (Total Petroleum Hydrocarbons)	76,000	0.1373
Total:	**81,330**	**0.147**

Methodology

Discharge Volume (grams/liter) = [Volume Concentration (ppmv) / 1,000,000] x Mole Concentration (grams/mole) x [1/22.4 (liter/mole)]

Discharge Rate (grams/min) = Discharge Volume (grams/liter) x Max. Flow Rate (scfm) x 7.48 (gal/cu. ft) x 3.785 (liter/gal)

Monthly Discharge (lb/month) = Discharge Rate (grams/min) x 60 (min/hr) x 24 (hr/day) x 30 (days/month) x 2.205E-03 (gram/lb)

Daily Discharge (lb/day) = Monthly Discharge (lb/month) / 30 (days/month)

Appendix A: Emission Calculations
Natural Gas Combustion Only
Internal Combustion Engine

Company Name: Former Retail Shell Station
Address City IN Zip: 3801 North Lafayette Road, Indianapolis, Indiana 46220
Permit Number: E097-24344-00601
Plt ID: 097-00601
Reviewer: Boris Gorlin

Heat Input Capacity
HP
148
Btu/hr
376,438

Potential Throughput
MMCF/yr
3,297.6

	Pollutant						
	PM*	PM2.5	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	9.91E-02	9.50E-03	9.50E-03	5.88E-04	2.27E+00	3.58E-01	3.72E+00
Potential Emission in tons/yr	0.163	0.016	0.016	0.001	3.743	0.590	6.134

*PM emission factor is Condensable PM only. PM10 and PM2.5 emission factors are filterable (AP-42, Table 3.2-3, 7/2000).

Methodology

1 HP = 2,544 Btu/hr
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Potential Throughput (MMCF) = [Heat Input Capacity (Btu/hr) / 1,000,000 BTU/MMBTU] x 8,760 hr/yr x 1 MMCF/1,000 MM
Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-01-006-01, 1-01-006-04
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emission Calculations
Natural Gas Combustion Only
Internal Combustion Engine
HAPs Emissions

Company Name: Former Retail Shell Station
Address City IN Zip: 3801 North Lafayette Road, Indianapolis, Indiana 46220
Permit Number: E097-24344-00601
Plt ID: 097-00601
Reviewer: Boris Gorlin

	HAPs - Organics						
	Acetaldehyde	Acrolein	Benzene	Ethane	Formaldehyde	Methanol	Toluene
Emission Factor in lb/MMcf	2.79E-03	2.63E-03	1.58E-03	7.04E-02	2.05E-02	3.06E-03	5.58E-04
Potential Emission in tons/yr	4.60E-03	4.34E-03	4.34E-03	2.61E-03	1.16E-01	3.38E-02	5.05E-03

Methodology is the same as page 2.
AP-42, Table 3.2-3, 7/2000
The seven highest organic HAPs emission factors are provided above.

Total Emissions, ton/yr:

PM	PM10	SO2	NOx	VOC	CO	HAPs (total)
0.163	**0.016**	**0.001**	**3.743**	**0.737**	**6.134**	**0.171**