



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
**Governor**

*Thomas W. Easterly*  
**Commissioner**

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

TO: Interested Parties / Applicant

DATE: September 26, 2012

RE: King Oil Company, Inc. / 017 - 32229 - 00047

FROM: Matthew Stuckey, Branch 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, Suite N 501E, 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.dot12/3/07



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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September 26, 2012

Mr. Brian King  
King Oil Company, Inc.  
516 N. Main Street  
Walton, IN 46994

Re: Exempt Construction and Operation Status,  
E017-32229-00047

Dear Mr. King:

The application from King Oil Company, Inc., received on August 20, 2012, 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 stationary soil and groundwater remediation system located at 429 North Main Street, Walton IN 46994 is classified as exempt from air pollution permit requirements:

- (a) One (1) Dual Phase Extraction System (DPE-1), approved for construction in 2012, with a maximum soil vapor extraction airflow rate of 300 actual cubic feet per minute and a maximum groundwater pump-and-treat flow rate of 15 gallons per minute, for remediation of soil and groundwater contaminated with petroleum hydrocarbons.
- (b) Fugitive emissions from paved roads and parking lots with public access.

The following conditions shall be applicable:

1. Opacity [326 IAC 5-1]  
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 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.
2. 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).

This exemption is the first air approval issued to this source. A copy of the Exemption is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.idem.in.gov](http://www.idem.in.gov)

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. If you have any questions on this matter, please contact Charles Sullivan, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, at 317-232-8422 or at 1-800-451-6027 (ext 28422).

Sincerely,



Nathan C. Bell, Section Chief  
Permits Branch  
Office of Air Quality

Attachments: Technical Support Document (TSD), Appendix A

NCB/cbs

cc: File - Cass County  
Cass County Health Department  
Compliance and Enforcement Branch  
Billing, Licensing and Training Section

**Appendix A: Emission Calculations  
Potential to Emit (PTE) VOCs and HAPs**

**Company Name:** King Oil Company, Inc.  
**Source Address:** 429 North Main Street, Walton, Indiana 46994  
**Permit Number:** E017-32229-00047  
**Reviewer:** Charles Sullivan  
**Date:** 9/7/2012

**Potential to Emit (PTE) VOCs and HAPs**

	<b>Gasoline and Diesel</b>	
<b>PTE of VOC (tons/yr)</b>	2.60	
<b>PTE of Total HAPs (tons/yr)</b>	1.62	
<b>PTE of Worst Case HAP (tons/yr)</b>	0.58	Toluene

**Methodology:**

The potential emissions rate for VOCs emitted from the DPE system was assumed to be constant during the remediation time period.  
Remediation time is assumed to be approximately 3 years  
Each petroleum hydrocarbon is considered a VOC.  
Soil is assumed to have a soil bulk density of 90 lbs/ft<sup>3</sup>

**Appendix A: Emission Calculations  
Dual Phase Extraction System**

**Company Name:** King Oil Company, Inc.  
**Source Address:** 429 North Main Street, Walton, Indiana 46994  
**Permit Number:** E017-32229-00047  
**Reviewer:** Charles Sullivan  
**Date:** 9/7/2012

**Contaminant Mass Calculations**

**1) Free Product**

Free Product has not been measured at this site.

Free Product		
<i>Constants</i>		
Volume Conversion	7.48	gal per ft <sup>3</sup>
Product Density	6.8	lbs per gal
<i>Input</i>		
Plume Area	Thickness	Soil Porosity
(ft <sup>2</sup> )	(ft)	
0	0	0.30
	FPPV:	0 ft <sup>3</sup>
	FPV:	0 ft <sup>3</sup>
	FPV:	0 gal
	<b>FPM:</b>	<b>0 lbs</b>

**Assumptions:**

-A typical soil porosity of 30% (0.30) is utilized.

**Calculation Explanation:**

FPPV (Free Product Plume Volume) (ft<sup>3</sup>) = Plume Area (ft<sup>2</sup>) \* Thickness (ft)

FPV (Free Product Volume) (ft<sup>3</sup>) = FPPV (ft<sup>3</sup>) \* Soil Porosity

FPV (gal) = FPV (ft<sup>3</sup>) \* 7.48 (gal/ft<sup>3</sup>)

FPM (Free Product Mass) (lbs) = FPV (gal) \* Product Density (6.8 lbs/gal)

**Appendix A: Emission Calculations  
Dual Phase Extraction System**

**Company Name:** King Oil Company, Inc.  
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**Permit Number:** E017-32229-00047  
**Reviewer:** Charles Sullivan  
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**2) Dissolved Phase Contaminant Mass**

<b>Dissolved Phase Gasoline</b>			
<i>Constants</i>			
Volume Conversion	7.48	gal per ft <sup>3</sup>	
Water Density	8.35	lbs per gal	
<i>Input</i>			
Influence Area	Thickness	Soil Porosity	Contam. Conc.
(ft <sup>2</sup> )	(ft)		(ppb)
18,439	14	0.30	16,358
	TPV:	258,146	ft <sup>3</sup>
	IGWV:	77,444	ft <sup>3</sup>
	IGWV:	579,280	gal
	IGWM:	4,836,985	lbs
	<b>DPHM-G:</b>	<b>79</b>	<b>lbs</b>

**Assumptions:**

- Plume Area values are based on the maximum extent of the historical estimated benzene contaminated Plume in groundwater as depicted in Figure 1.
- Thickness of groundwater contamination is estimated to correspond to the depth of impacted soil in the boring observed to have the deepest soil impacts (Boring B-9). Soil is considered impacted if PID readings exceed 100 (Table 1).
- A typical soil porosity of 30% (0.30) is utilized.
- The contaminant concentration is the average of the historical maximum BTEX, MTBE, and naphthalene concentrations as measured in the nine(9) monitoring wells located within the benzene groundwater plumes (MW-1, MW-2, MW-3, MW-5, MW-7, DPE-1, DPE-2, DPE-3, TP-1) depicted on Figure 2 of submitted application package and summarized on Table 2.

**Calculation Explanation:**

TPV (Total Plume Volume) (ft<sup>3</sup>)= Plume Area (ft<sup>2</sup>) \* Thickness (ft)

IGWV (Impacted Groundwater Volume) (ft<sup>3</sup>)= TPV (ft<sup>3</sup>) \* Soil Porosity

IGWV (gallons) = IGWV (ft<sup>3</sup>) \* 7.48 (gal/ft<sup>3</sup>)

IGWM (Impacted Groundwater Mass) (lbs) = IGWV (gal) \* Water Density (lbs/gal)

DPHM-G/D (Dissolved Phase Hydrocarbon Mass for Gasoline/Diesel) (lbs) = (Contaminant Concentrations (ppb) / 10<sup>9</sup>) \* IGWM (lbs)

**Appendix A: Emission Calculations  
Dual Phase Extraction System**

**Company Name:** King Oil Company, Inc.  
**Source Address:** 429 North Main Street, Walton, Indiana 46994  
**Permit Number:** E017-32229-00047  
**Reviewer:** Charles Sullivan  
**Date:** 9/7/2012

**Contaminant Mass Calculations - Continued**

**3) Adsorbed Hydrocarbon Mass (Hydrocarbons adsorbed to soil above and below water table)**

Soil Adsorbed Gasoline				Soil Adsorbed Diesel and/or Kerosene			
Constants				Constants			
Solid Mineral Density (Quartz)	165.4	lbs/ft <sup>3</sup>		Solid Mineral Density (Quartz)	165.4	lbs/ft <sup>3</sup>	
Input				Input			
Influence Area	Thickness	Soil Porosity	Contam. Conc.	Influence Area	Thickness	Soil Porosity	Contam. Conc.
(ft <sup>2</sup> )	(ft)		(ppm)	(ft <sup>2</sup> )	(ft)		(ppm)
18,523	7.4	0.30	865.0	18,523	7.4	0.30	114
	TISV:	137,070	ft <sup>3</sup>		TISV:	137,070	ft <sup>3</sup>
	SMV:	95,949	ft <sup>3</sup>		SMV:	95,949	ft <sup>3</sup>
	SMM:	15,869,988	lbs		SMM:	15,869,988	lbs
	<b>AHM-G:</b>	<b>13,728</b>	<b>lbs</b>		<b>AHM-D:</b>	<b>1,809</b>	<b>lbs</b>

**Assumptions:**

-The influence area value is based on the total vacuum radius of influence of the high vacuum remediation system as depicted in Figure 1 of the application package.

-The contaminated thickness was estimated by summing the total thickness of all soil sample intervals exhibiting soil vapor concentrations greater than 100 parts per million (ppm) as measured by a MiniRae 2000 photoionization detector (PID) (Table 1). For calculations, the impacted soil thickness value used is the average thickness observed in borings within the influence area of the remediation system that were advanced through the full depth of the impacted zone (B-1 through B-5, B-8 through B-11, B-15, B-21, B-22, and B-23).

-A typical soil porosity of 30% (0.30) is utilized.

-The contaminant concentration is the average of the maximum GRO or DRO concentration (Table 3) measured in each boring located within the remediation system radius of influence.

**Calculation Explanation:**

TISV (Total Impacted Soil Volume) (ft<sup>3</sup>) = Plume Area (ft<sup>2</sup>) \* Thickness (ft)

SMV (Soil Mineral Volume) (ft<sup>3</sup>) = TISV (ft<sup>3</sup>) \* (1 - Soil Porosity)

SMM (Soil Mineral Mass) (lbs) = SMV (ft<sup>3</sup>) \* Solid Mineral Density (lbs/ft<sup>3</sup>)

AHM-G/D (Adsorbed Hydrocarbon Mass for Gasoline/Diesel) (lbs) = (Contaminant Concentration (ppm) / 10<sup>6</sup>) \* SMM (lbs)

**Appendix A: Emission Calculations  
Dual Phase Extraction System**

**Company Name:** King Oil Company, Inc.  
**Source Address:** 429 North Main Street, Walton, Indiana 46994  
**Permit Number:** E017-32229-00047  
**Reviewer:** Charles Sullivan  
**Date:** 9/7/2012

**Contaminant Mass Calculations - Continued**

**4) Total Volatile Organic Compounds (VOCs) Potential to Emit**

Free Product Mass (lbs):	0	
Potential Gasoline Range Mass (lbs):	13,807	(Sum of DPHM-G and AHM-G)
Potential Diesel Range Mass (lbs):	1,809	(Sum of DPHM-D and AHM-D)
Total Hydrocarbon Mass (lbs):	<b>15,616</b>	(Sum of Free Product, Dissolved Phase, and Adsorbed Hydrocarbons)
System Operational Period :	3	years
<b>VOC PTE:</b>	<b>2.60</b>	<b>tons/year</b>

**Assumptions:**

- System Operational Period is the estimated time that will be required to reduce petroleum impacts at this site to below IDEM closure levels.
- It is assumed that all potential hydrocarbons that can be captured and emitted by the remediation system are composed of 100% VOCs.

**Calculation Explanation:**

VOC PTE (Total VOCs Potential to Emit) (tons/year) = Total Hydrocarbon Mass (lbs) / 2000 (lbs/ton) / System Operational Period (years)



**Appendix A: Emission Calculations  
Dual Phase Extraction System**

**Company Name:** King Oil Company, Inc.  
**Source Address:** 429 North Main Street, Walton, Indiana 46994  
**Permit Number:** E017-32229-00047  
**Reviewer:** Charles Sullivan  
**Date:** 9/7/2012

**Contaminant Mass Calculations - Continued**

**5) Individual Hazardous Air Pollutants (HAPs) Potential to Emit**

HAP	Gasoline		Diesel		Total Hydrocarbon Mass	
	Concentration	Total Mass PTE (lbs)	Concentration	Total Mass PTE (lbs)	Totals lbs	tons/year (3 years)
Benzene	4.9%	676.53	1%	18.09	694.62	0.116
Toluene	25.0%	3451.67	1%	18.09	3469.76	0.578
Ethylbenzene	3.0%	414.20	1%	18.09	432.29	0.072
Xylenes	15.0%	2071.00	1%	18.09	2089.09	0.348
MTBE	15.0%	2071.00	0%	0.00	2071.00	0.345
Naphthalene	5.0%	690.33	0.01%	0.18	690.51	0.115
Isopropyl- benzene	2.0%	276.13	0%	0.00	276.13	0.046
					Sum:	1.621

**Assumptions:**

-Maximum HAPs percentages in gasoline based on attached MSDS (benzene 4.9%, toluene 25%, ethylbenzene 3.0%, xylene 15%, MTBE 5%)  
 ASSUMED maximum concentrations in gasoline of other HAPs constituents detected at the site: naphthalene 5%, isopropylbenzene 2%

-Maximum HAPs percentages in diesel based on attached MSDS (naphthalene 0.01%). ASSUMED maximum concentrations in diesel of other HAPs constituents detected at the site: benzene 1.0%, toluene 1.0%, ethylbenzene 1.0%, xylenes 1.0%

**Calculation Explanation:**

-The individual HAP PTE is estimated by multiplying the total Potential Gasoline Range Mass or Potential Extended Range mass by the corresponding percentage composition in gasoline or diesel fuels.

**Appendix A: Emission Calculations  
Fugitive Dust Emissions - Paved Roads**

**Company Name:** King Oil Company, Inc.  
**Source Address:** 429 North Main Street, Walton, Indiana 46994  
**Permit Number:** E017-32229-00047  
**Reviewer:** Charles Sullivan  
**Date:** 9/7/2012

**Paved Roads at Industrial Site**

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (12/2003).

Vehicle Information (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Vehicle (entering plant) (one-way trip)	800.0	1.0	1050.0	5.0	5250.0	275	0.052	54.7	19960.9
Vehicle (leaving plant) (one-way trip)	800.0	1.0	1050.0	5.0	5250.0	275	0.052	54.7	19960.9
<b>Total</b>			<b>2100.0</b>		<b>10500.0</b>			<b>109.4</b>	<b>39921.9</b>

Average Vehicle Weight Per Trip =  $\frac{5.0}{1.0}$  tons/trip  
 Average Miles Per Trip =  $\frac{0.05}{1.0}$  miles/trip

Unmitigated Emission Factor,  $E_f = [k * (sL/2)^{0.65} * (W/3)^{1.5} * C]$  (Equation 1 from AP-42 13.2.1)

	PM	PM10	
where k =	0.082	0.016	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	5.0	5.0	tons = average vehicle weight (provided by source)
C =	0.00047	0.00047	lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-2)
sL =	0.6	0.6	g/m <sup>2</sup> = Ubiquitous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer months)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor,  $E_{ext} = E * [1 - (p/4N)]$

Mitigated Emission Factor,  $E_{ext} = E_f * [1 - (p/4N)]$   
 where p =  $\frac{125}{365}$  days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)  
 N = 365 days per year

	PM	PM10	
Unmitigated Emission Factor, $E_f$ =	0.08	0.02	lb/mile
Mitigated Emission Factor, $E_{ext}$ =	0.07	0.01	lb/mile
Dust Control Efficiency =	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)
Vehicle (entering plant) (one-way trip)	0.80	0.15	0.73	0.14	0.37	0.07
Vehicle (leaving plant) (one-way trip)	0.80	0.15	0.73	0.14	0.37	0.07
<b>Total</b>	<b>1.60</b>	<b>0.30</b>	<b>1.46</b>	<b>0.28</b>	<b>0.73</b>	<b>0.14</b>

**Methodology**

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] \* [Maximum trips per day (trip/day)]  
 Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]  
 Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] \* [Maximum one-way distance (mi/trip)]  
 Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]  
 Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]  
 Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] \* [Unmitigated Emission Factor (lb/mile)] \* (ton/2000 lbs)  
 Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] \* [Mitigated Emission Factor (lb/mile)] \* (ton/2000 lbs)  
 Controlled PTE (tons/yr) = [Mitigated PTE (tons/yr)] \* [1 - Dust Control Efficiency]

**Abbreviations**

PM = Particulate Matter  
 PM10 = Particulate Matter (<10 um)  
 PTE = Potential to Emit

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

Technical Support Document (TSD) for an Exemption

<b>Source Description and Location</b>
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<b>Source Name:</b>	<b>King Oil Company, Inc.</b>
<b>Source Location:</b>	<b>429 North Main Street, Walton, Indiana 46994</b>
<b>County:</b>	<b>Cass</b>
<b>SIC Code:</b>	<b>4959 (Sanitary Services) 5541 (Gasoline and Service Stations)</b>
<b>Exemption No.:</b>	<b>E017-32229-00047</b>
<b>Permit Reviewer:</b>	<b>Charles Sullivan</b>

On August 20, 2012, the Office of Air Quality (OAQ) received an application from King Oil Company, Inc. related to the construction and operation of a new high vacuum dual phase extraction (DPE) system with maximum groundwater pump-and-treat flow rate of 15 gallons per minute for remediation of soil and groundwater contaminated with petroleum hydrocarbons.

<b>Existing Approvals</b>
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There have been no previous approvals issued to this source.

<b>County Attainment Status</b>
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The source is located in Cass County.

Pollutant	Designation
SO <sub>2</sub>	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard. <sup>1</sup>
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Not designated.

<sup>1</sup>Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.

Unclassifiable or attainment effective April 5, 2005, for PM<sub>2.5</sub>.

- (a) **Ozone Standards**  
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 ozone. Cass County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
  
- (b) **PM<sub>2.5</sub>**  
Cass County has been classified as attainment for PM<sub>2.5</sub>. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM<sub>2.5</sub> emissions. These rules became effective on July 15, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements.

The May 8, 2008 rule revisions require IDEM to regulate PM10 emissions as a surrogate for PM<sub>2.5</sub> emissions until 326 IAC 2-2 is revised.

- (c) Other Criteria Pollutants  
Cass County has been classified as attainment or unclassifiable in Indiana for all regulated pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

#### **Fugitive Emissions**

The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-1.1-3 (Exemptions) applicability.

#### **Background and Description of Emission Units and Pollution Control Equipment**

On August 20, 2012, the Office of Air Quality (OAQ) received an application from King Oil Company, Inc. related to the construction and operation of a new dual phase extraction (DPE) system for remediation of soil and groundwater contaminated with petroleum hydrocarbons.

The source consists of the following existing emission unit:

- (a) One (1) Dual Phase Extraction System (DPE-1), approved for construction in 2012, with a maximum soil vapor extraction airflow rate of 300 actual cubic feet per minute and a maximum groundwater pump-and-treat flow rate of 15 gallons per minute, for remediation of soil and groundwater contaminated with petroleum hydrocarbons.
- (b) Fugitive emissions from paved roads and parking lots with public access.

#### **Enforcement Issues**

There are no pending enforcement actions related to this source.

#### **Emission Calculations**

See Appendix A of this TSD for detailed emission calculations.

#### **Permit Level Determination – Exemption**

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	Potential To Emit of the Entire Source (tons/year)									
	PM	PM10*	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHGs as CO <sub>2</sub> e**	Total HAPs	Worst Single HAP
Dual Phase Extraction System (DPE-1)	0.00	0.00	0.00	0.00	0.00	2.60	0.00	0.00	1.62	0.58 (Toluene)
Fugitives (paved roads)	0.28	0.73	0.14	0	0	0	0	0.00		
<b>Total PTE of Entire Source</b>	<b>0.28</b>	<b>0.73</b>	<b>0.14</b>	<b>0.00</b>	<b>0.00</b>	<b>2.60</b>	<b>0.00</b>	<b>0.00</b>	<b>1.62</b>	<b>0.58 (Toluene)</b>
Exemptions Levels**	5	5	5	10	10	10	25	100,000	25	10

negl. = negligible  
 \*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".  
 \*\*The 100,000 CO<sub>2</sub>e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of all regulated criteria 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 (Exemptions).
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.

**Federal Rule Applicability Determination**

New Source Performance Standards (NSPS)

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (b) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Site Remediation, 40 CFR 63.7880-40 through CFR 63.7957, Subpart GGGGG (326 IAC 20-87), are not included in the permit, since the source does not have the potential to emit 10 tons per year or more of any hazardous air pollutant or 25 tons per year of any combination of hazardous air pollutants and since the remediation is conducted at a gasoline service station in order to clean up remediation material from a leaking underground storage tank (40 CFR 63.7881(b)(4)).
- (c) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

Compliance Assurance Monitoring (CAM)

- (d) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

<b>State Rule Applicability Determination</b>
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The following state rules are applicable to the source:

- (a) 326 IAC 2-1.1-3 (Exemptions)  
Exemption applicability is discussed under the Permit Level Determination – Exemption section above.
- (b) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))  
The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-4.1.
- (c) 326 IAC 2-6 (Emission Reporting)  
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (d) 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:
  - (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.
- (e) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)  
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), 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 326 IAC 6-4.
- (f) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)  
The source is not subject to the requirements of 326 IAC 6-5, because the source does not have potential fugitive particulate emissions greater than 25 tons per year. Therefore, 326 IAC 6-5 does not apply.
- (g) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)  
The Dual Phase Extraction System (DPE-1) emission unit at this source is not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions from each emission unit is less than twenty-five (25) tons per year.
- (h) 326 IAC 12 (New Source Performance Standards)  
See Federal Rule Applicability Section of this TSD.
- (i) 326 IAC 20 (Hazardous Air Pollutants)  
See Federal Rule Applicability Section of this TSD.

### Conclusion and Recommendation

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 August 20, 2012.

The construction and operation of this source shall be subject to the conditions of the attached proposed Exemption No. E017-32229-00047. The staff recommends to the Commissioner that this Exemption be approved.

### IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Charles Sullivan at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 232-8422 or toll free at 1-800-451-6027 extension 28422.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.idem.in.gov](http://www.idem.in.gov)



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
**Governor**

*Thomas W. Easterly*  
**Commissioner**

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

## **SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED**

**TO:** Brian King  
King Oil Company, Inc.  
516 N Main St  
Walton, IN 46994

**DATE:** September 26, 2012

**FROM:** Matt Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

**SUBJECT:** Final Decision  
Exemption  
017 - 32229 - 00047

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.


A copy of the final decision and supporting materials has also been sent via standard mail to:  
Jeff Jacob Creek Run LLC Environmental Engineering  
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at [jbrush@idem.IN.gov](mailto:jbrush@idem.IN.gov).

Final Applicant Cover letter.dot 11/30/07



# Mail Code 61-53

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2		Mr. Harry D. DuVall P.O. Box 147 Idaville IN 47950 (Affected Party)									
3		Cass County Board of Commissioner 200 Court Park Logansport IN 46947 (Local Official)									
4		Cass County Health Department 512 High Street Logansport IN 46947-2766 (Health Department)									
5		Mr. Robert Kelley 2555 S 30th Street Lafayette IN 44909 (Affected Party)									
6		Mr. Tim Thomas c/o Boilermakers Local 374 6333 Kennedy Ave. Hammond IN 46333 (Affected Party)									
7		Walton Town Council PO Box 322 Walton IN 46994 (Local Official)									
8		Kurt Brandstatter Central Paving, Inc. P.O. Box 357 Logansport IN 46947 (Affected Party)									
9		Murray Weaver Funeral Home 401 N Main St Walton IN 46994 (Affected Party)									
10		Mr. Clyde Thomas 400 N Main St Walton IN 46994 (Affected Party)									
11		Mr. John Pyle 404 N Maple St Walton IN 46994 (Affected Party)									
12		Ms. Kim Craig 410 N Maple Walton IN 46994 (Affected Party)									
13		Jeff Jacob Creek Run LLC Environmental Engineering PO Box 114 Montpelier IN 47359 (Consultant)									
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