



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

TO: Interested Parties / Applicant

DATE: January 22, 2010

RE: Family Express # 6 / 073-28838-00042

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



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Family Express #6
Tom Navarre
1951 Morthland Drive
Valparaiso, Indiana 46383

January 22, 2010

Re: Exempt Construction and Operation Status,
073-28838-00042

Dear Tom Navarre:

The application from Family Express #6, received on December 29, 2009, 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 low vacuum dual phase extraction (DPE) and air sparge (AS) process for remediation of soil and groundwater contamination with petroleum hydrocarbons located at 51 E SR 10, Wheatfield, Indiana 46392 is classified as exempt from air pollution permit requirements:

- (a) One (1) Low vacuum dual phase extraction (DPE) and air sparge (AS) system, identified as AS/SVE-1, approved for construction in 2010, with a maximum rated capacity of 30 gallons of water per minute and a maximum air flow rate of 300 cubic feet per minute. As the air rises, hydrocarbons are stripped from saturated, impacted soil and groundwater into the passing air stream. Hydrocarbons will be removed from a network of vertical extraction wells and piped to a centralized equipment compound.
- (b) Fugitive emissions from paved roads and parking lots with public access.

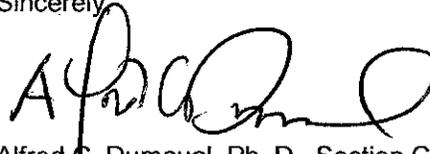
The following conditions shall be applicable:

1. 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.
2. 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.

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

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 Marcia Earl, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, at 317-233-0863 or at 1-800-451-6027 (ext 3-0863).

Sincerely,



Alfred C. Dumauval, Ph. D., Section Chief
Permits Branch
Office of Air Quality

ACD/me

cc: Filé - Jasper County
Jasper County Health Department
Compliance and Enforcement Branch
Billing, Licensing and Training Section

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for an Exemption

Source Description and Location
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Source Name:	Family Express #6
Source Location:	51 E SR 10, Wheatfield, Indiana 46392
County:	Jasper
SIC Code:	5541
Exemption No.:	073-28838-00042
Permit Reviewer:	Marcia Earl

On December 29, 2009, the Office of Air Quality (OAQ) received an application from Family Express #6 related to the construction and operation of a new low vacuum dual phase extraction (DPE) and air sparge (AS) process for remediation of soil and groundwater contamination with petroleum hydrocarbons.

Existing Approvals

There have been no previous approvals issued to this source.

County Attainment Status

The source is located in Jasper County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.
¹ 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 _{2.5} .	

- (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. Jasper 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_{2.5}**
 Jasper County has been classified as attainment for PM_{2.5}. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM_{2.5} emissions, and the effective date of these rules was 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_{2.5} emissions until 326 IAC 2-2 is revised.

- (c) Other Criteria Pollutants
 Jasper County has been classified as attainment or unclassifiable in Indiana for PM₁₀, SO₂, CO and Lead. 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

The source consists of the following emission unit:

- (a) One (1) Low vacuum dual phase extraction (DPE) and air sparge (AS) system, identified as AS/SVE-1, approved for construction in 2010, with a maximum rated capacity of 30 gallons of water per minute and a maximum air flow rate of 300 cubic feet per minute. As the air rises, hydrocarbons are stripped from saturated, impacted soil and groundwater into a passing air stream. Hydrocarbons will be removed from a network of vertical extraction wells and piped to a centralized equipment compound.
- (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, pages 1 through 4 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	PM ₁₀ *	PM _{2.5}	SO ₂	NOx	VOC	CO	Total HAPs	Worst Single HAP
Dual Phase Extraction System	0.00	0.00	0.00	0.00	0.00	5.35	0.00	1.39	0.43 Toluene
Total PTE of Entire Source	0.00	0.00	0.00	0.00	0.00	5.35	0.00	1.39	0.43 Toluene
Exemptions Levels	5	5	5	10	10	5 or 10	25	25	10
Registration Levels	25	25	25	25	25	25	100	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".

- (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 requirement of the National Emission Standards for Hazardous Air Pollutants for Site Remediation (40 CFR 63.7880 - 63.7957, Subpart GGGGG) (326 IAC 20-87), are not included in this 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 or more of any combination of hazardous air pollutants.
- (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.

State Rule Applicability Determination

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 (DPE) and air sparge (AS) system (AS/SVE-1) is not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions from AS/SVE-1 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 December 29, 2009.

The construction and operation of this source shall be subject to the conditions of the attached proposed Exemption No. 073-28838-00042. The staff recommends to the Commissioner that this Exemption be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Marcia Earl 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) 233-0863 or toll free at 1-800-451-6027 extension 3-0863.
- (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

Appendix A: Emission Summary

Company Name: Family Express #6
Address City IN Zip: 51 E SR 10, Wheatfield, Indiana 46392
Permit No: E073-28838-00042
Reviewer: Marcia Earl
Date: January 2010

Uncontrolled Emissions

Emission Units	PM	PM ₁₀	PM _{2.5}	SO ₂	VOC	CO	NOx	HAPs	Worst Case HAP
Duel Phase Extraction (DPE)	0.00	0.00	0.00	0.00	5.35	0.00	0.00	1.39	0.43 Toluene
Paved Roads	4.66	0.89	0.89	0.00	0.00	0.00	0.00	0.00	0.00
Total	4.66	0.89	0.89	0.00	5.35	0.00	0.00	1.39	0.43 Toluene

Controlled Emissions

Emission Units	PM	PM ₁₀	PM _{2.5}	SO ₂	VOC	CO	NOx	HAPs	Worst Case HAP
Duel Phase Extraction (DPE)	0.00	0.00	0.00	0.00	5.35	0.00	0.00	1.39	0.43 Toluene
Paved Roads	2.13	0.41	0.41	0.00	0.00	0.00	0.00	0.00	0.00
Total	2.13	0.41	0.41	0.00	5.35	5.35	0.00	1.39	0.43 Toluene

**Appendix A: Emissions Calculations
Dual Phase Extraction (DPE) System
Volatile Organic Compounds (VOCs)**

Company Name: Family Express #6
Address : 51 E SR 10, Wheatfield, Indiana 46392
Exemption No.: E073-28838-00042
Reviewer: Marcia Earl
Date: January 2010

Weight Of Total Petroleum Hydrocarbons (TPH) To Be Remediated By DPE System (lbs)

Groundwater TPH Contamination (Dissolved Phase)	
Plume Area (ft ²)	6850
Thickness of Soil (ft)	6
Porosity	0.3
Volume of contaminated water (ft ³)	12330
Volume of contaminated water (gal)	93954.6
Concentration of TPH (µg/L of water)	28300
Weight Of Contamination (lbs)	22.19

Total Weight of TPH in Groundwater (lbs)	22.19
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Soil TPH Contamination (Absorbed to Soil)	
Contaminated Area (ft ²)	6850
Thickness of Soil (ft)	5
Volume of contaminated soil (ft ³)	34250
Concentration of TPH (lb/MMlbs of soil)*	5659.5
Soil density (lbs/ft ³)	165.4
Weight Of Contamination (lbs)	32061.0

Total Weight of TPH in Soil (lbs)	32061.03
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METHODOLOGY:

*Based on the data provided by the applicant, the soil concentration (average of the highest concentrations measured in each boring located within the radius of influence of the remediation system) of Benzene, Toluene, Ethylbenzene, Xylenes, n-Hexane, Naphthalene, Methyl-tert-butyl ether combined is 1340.18 ppm (lb/MMlbs of soil). Based on the typical composition of gasoline (see next page), these organic compounds correspond to approximately 23.68% by weight of gasoline. Therefore, the total petroleum hydrocarbon (TPH) concentration in soil was estimated as 1340.18 ppm / 23.68% = 5659.5 ppm (lb/MMlbs of soil).

Weight of TPH in Groundwater (Dissolved Phase) (lbs) =
 [[Concentration of TPH (µg/L of water)] * [(g/1,000,000 µg)] * [3.785L/gal] * [Volume of contaminated water (gal)] * [lb/453.6g]]

Volume of contaminated water = [Plume Area (ft²)] * [Thickness of Soil (ft)] * [Porosity]

Weight of TPH in Soil (Absorbed to Soil) (lbs) =
 [Concentration of TPH (lb/million lbs of soil)] * [Volume of the contaminated soil (ft³)] * [Soil density (lbs/ft³)] * [million lbs/1,000,000 lbs]

Potential To Emit (PTE) VOC

Total VOC (Soil and Groundwater) (lbs)	32083.22
Total VOC (Soil and Groundwater) (tons)	16.04
Remediation Time (years)	3
PTE Of VOC (tons/yr)	5.35

METHODOLOGY:

The potential emissions rate for VOCs emitted from the DPE system was assumed to be constant during the remediation time period.

Based on information provided by the source, the remediation time will be 3 years.

Each of the total petroleum hydrocarbon (TPH) components is considered a VOC.

Soil is assumed to have bulk density of 165.4 lb/ft³

PTE of VOCs (tons/yr) = [Total VOC (Soil and Groundwater) (tons)] / [Remediation Time (years)]

**Appendix A: Emissions Calculations
Dual Phase Extraction (DPE) System
Hazardous Air Pollutants (HAPs)**

TSD Appendix A: Page 3 of 4

Company Name: Family Express #6
Address : 51 E SR 10, Wheatfield, Indiana 46392
Exemption No.: E073-28838-00042
Reviewer: Marcia Earl
Date: January 2010

PTE Of VOC (tons/yr)	5.35
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Potential To Emit (PTE) of TPH Constituents (Assuming Gasoline)

Compound Class	Compound	CAS#	Molecular Weight (g/mol)	Average Composition (% by weight)*	Potential to Emit (tons/yr)	Hazardous Air Pollutant
	1,3-Butadiene	106-99-0	54.1	0.0037%	2.0E-04	HAP
	cis-2-Butene	590-18-1	56.1	0.3100%	1.7E-02	
	trans-2-Butene	624-64-6	56.1	0.3600%	1.9E-02	
	2-Methyl-1-butene	563-46-2	70.1	0.5400%	2.9E-02	
	2-Methyl-2-butene	513-35-9	70.1	1.1000%	5.9E-02	
	cis-2-Pentene	627-20-3	70.1	0.3900%	2.1E-02	
	trans-2-Pentene	646-04-8	70.1	0.7200%	3.8E-02	
Alkyl-Monoaromatics	Benzene	71-43-2	78.1	1.9000%	1.0E-01	HAP
	Toluene	108-88-3	92.1	8.1000%	4.3E-01	HAP
	Ethylbenzene	100-41-4	106.2	1.7000%	9.1E-02	HAP
	m-Xylene	108-38-3	106.2	4.6000%	2.5E-01	HAP
	o-Xylene	95-47-6	106.2	2.5000%	1.3E-01	HAP
	p-Xylene	106-42-3	106.2	1.9000%	1.0E-01	HAP
	1,2,4-Trimethylbenzene	95-63-6	120.2	3.0000%	1.6E-01	
	1,3,5-Trimethylbenzene	108-67-8	120.2	0.9800%	5.2E-02	
	1-Methyl-2-ethylbenzene	611-14-3	120.2	0.7100%	3.8E-02	
	1-Methyl-3-ethylbenzene	620-14-4	120.2	1.8000%	9.6E-02	
	1-Methyl-4-ethylbenzene	622-96-8	120.2	0.8000%	4.3E-02	
Branched Alkanes	Isobutane	75-28-5	58.1	1.7000%	9.1E-02	
	Isopentane	78-78-4	72.1	7.9000%	4.2E-01	
	2,2-Dimethylbutane	75-83-2	86.2	0.4900%	2.6E-02	
	2,3-Dimethylbutane	79-29-8	86.2	1.0000%	5.3E-02	
	2-Methylpentane	107-83-5	86.2	3.9000%	2.1E-01	
	3-Methylpentane	96-14-0	86.2	2.5000%	1.3E-01	
	2,4-Dimethylpentane	108-08-7	100.2	0.8300%	4.4E-02	
	2-Methylhexane	591-76-4	100.2	3.0000%	1.6E-01	
	3-Methylhexane	589-34-4	100.2	1.7000%	9.1E-02	
	2,2,4-Trimethylpentane	540-84-1	114.2	2.4000%	1.3E-01	HAP
	2,3,3-Trimethylpentane	560-21-4	114.2	0.6600%	3.5E-02	
	2,3,4-Trimethylpentane	565-75-3	114.2	0.9700%	5.2E-02	
	2,3-Dimethylhexane	584-94-1	114.2	0.3900%	2.1E-02	
	2,4-Dimethylhexane	589-43-5	114.2	0.4400%	2.4E-02	
	3-Methylheptane	589-81-1	114.2	0.7500%	4.0E-02	
Cycloalkanes	Cyclopentane	287-92-3	70.1	0.4700%	2.5E-02	
	Cyclohexane	110-82-7	84.2	0.3900%	2.1E-02	
	Methylcyclopentane	96-37-7	84.2	1.8000%	9.6E-02	
	Methylcyclohexane	108-87-2	98.2	0.5800%	3.1E-02	
n-Alkanes	n-Butane	106-97-8	58.1	4.7000%	2.5E-01	
	n-Pentane	109-66-0	72.1	3.9000%	2.1E-01	
	n-Hexane	110-54-3	86.2	2.4000%	1.3E-01	HAP
	n-Heptane	142-82-5	100.2	1.1000%	5.9E-02	
	Naphthalene	91-20-3	128.2	0.2500%	1.3E-02	HAP
	1-Methylnaphthalene	90-12-0	142.2	0.0700%	3.7E-03	
	2-Methylnaphthalene	91-57-6	142.2	0.1800%	9.6E-03	
Oxygenates	Methyl-tert-butyl ether	1634-04-4	88.1	0.3300%	1.8E-02	HAP
	Total			76.21%		

*Composition of TPH assuming that site is contaminated with gasoline. Composition Data Obtained from: Potter, T.L. and K.E. Simmons. 1998. Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 2. Composition of Petroleum Mixtures. The Association of Environmental and Sanitary Engineers.

Hazardous Air Pollutants (HAPs) Summary

Compound	Potential to Emit (tons/yr)
1,3-Butadiene	2.0E-04
Benzene	1.0E-01
Toluene	0.43
Ethylbenzene	9.1E-02
m-Xylene	0.25
o-Xylene	1.3E-01
p-Xylene	1.0E-01
2,2,4-Trimethylpentane	1.3E-01
n-Hexane	1.3E-01
Naphthalene	1.3E-02
Methyl-tert-butyl ether	1.8E-02

Total PTE of HAPs (tons/yr)	1.39
PTE of Worst Case HAP (tons/yr)	0.43

METHODOLOGY:

PTE of HAPS (tons/yr) = [PTE of VOC (tons/yr)] * [Average HAP Composition (% by weight)]

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

Company Name: Family Express #6
Address City IN Zip: 51 E SR 10, Wheatfield, IN 46392
Permit Number: E073-28838-00042
Reviewer: Marcia Earl
Date: January 2010

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)	3500.0	1.0	3500.0	5.0	17500.0	240	0.045	159.1	58068.2
Vehicle (leaving plant) (one-way trip)	3500.0	1.0	3500.0	5.0	17500.0	240	0.045	159.1	58068.2
			0.0		0.0		0.000	0.0	0.0
			0.0		0.0		0.000	0.0	0.0
Total			7000.0		35000.0			318.2	116136.4

Average Vehicle Weight Per Trip =

5.0	tons/trip
-----	-----------

Average Miles Per Trip =

0.05	miles/trip
------	------------

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

where k =	PM	PM10	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
	0.082	0.016	
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 ² = 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, $E_{ext} = Ef * [1 - (p/4N)]$
where p =

125	days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
-----	---

N =

365	days per year
-----	---------------

Unmitigated Emission Factor, Ef =	PM	PM10	lb/mile
	0.08	0.02	
Mitigated Emission Factor, Eext =	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)	2.33	0.44	2.13	0.41	1.06	0.20
Vehicle (leaving plant) (one-way trip)	2.33	0.44	2.13	0.41	1.06	0.20
	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	0.00
	4.66	0.89	4.26	0.81	2.13	0.41

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

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

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

TO: Tom Navarre
Family Express #6
1951 Morthland Dr
Valparaiso, IN 46383

DATE: January 22, 2010

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

SUBJECT: Final Decision
Exemption
073-28838-00042

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:
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.

Final Applicant Cover letter.dot 11/30/07

Mail Code 61-53

IDEM Staff	CDENNY 1/22/2010 Family Express #6 073-28838-00042 (final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING	
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2		Mike Whited Dir of Ops Family Express #6 PO Box 114 Montpelier IN 47359 (RO CAATS)										
3		Mr. Charles L. Berger Berger & Berger, Attorneys at Law 313 Main Street Evansville IN 47700 (Affected Party)										
4		Jasper County Commissioners 115 W. Washington Street Rensselaer IN 47978 (Local Official)										
5		Jasper County Health Department 105 W. Kellner St Rensselaer IN 47978-2623 (Health Department)										
6		Mr. Kenny Haun P.O. Box 280 Rensselaer IN 47978 (Affected Party)										
7		Wheatfield Town Council 170 S Grace Street Wheatfield IN 46392 (Local Official)										
8		Sam Taylor Creek Run, LLC P.O. Box 114 Montpelier IN 47359 (Consultant)										
9		Louis D & Mary Stowers rvoc Trust PO Box 265 Wheatfield IN 46392 (Affected Party)										
10		First National Bank of Valparaiso PO Box 1602 South Bend IN 46634 (Affected Party)										
11		William S. & Christine M. Davis PO Box 47 Wheatfield IN 46392 (Affected Party)										
12		William Bodnar 901 Daumer Road Kouts IN 46347 (Affected Party)										
13		Family Express Corporation 213 South State Road 49 Valparaiso IN 46383 (Affected Party)										
14		Haldon A. & Mary Spriggs 91 East State Road 10 Wheatfield IN 46392 (Affected Party)										
15		Occupant 490 South Hilliard Street Wheatfield IN 46392 (Affected Party)										

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