



# 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: October 6, 2010

RE: 1<sup>st</sup> Source Corporation / 127-29680-00119

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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Douglas W. Way  
1st Source Corporation  
P.O. Box 1602  
South Bend, IN 46634

October 6, 2010

Re: Exempt Construction and Operation Status,  
127-29680-00119

Dear Mr. Way:

The application from 1st Source Corporation, received on September 14, 2010, 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 vapor extraction system to remediate soil contamination by petroleum hydrocarbons, located at 1806 West Lincolnway, Valparaiso, Indiana 46383, is classified as exempt from air pollution permit requirements:

- (a) One (1) soil vapor extraction system, identified as SVE, approved for construction in 2010, drawing from six (6) 2-inch extraction wells, exhausting to one (1) PVC stack, and consisting of the following units:
  - (1) one (1) Rotron regenerative blower, rated at 15 hp, with a maximum capacity of 425 scfm; and
  - (2) one (1) moisture separator, identified as V-102, with a maximum flow rate of 425 scfm, and a maximum capacity of 55 gallons.
- (b) Fugitive emissions from paved roads.

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:
  - (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. **326 IAC 6-4 (Fugitive Dust Emissions Limitations)**  
The source is subject to the requirements of 326 IAC 6-4 because the paved roads have the potential to emit fugitive particulate emissions. 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](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 Meredith Jones, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, at 317-234-5176 or at 1-800-451-6027 (ext 4-5176).

Sincerely,



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

ACD/MWJ

cc: File - Porter County  
Porter County Health Department  
Compliance and Enforcement Branch  
IDEM Northwest Regional Office  
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

**Source Name:** 1st Source Corporation  
**Source Location:** 1806 West Lincolnway, Valparaiso, Indiana 46383  
**County:** Porter  
**SIC Code:** 4959  
**Exemption No.:** 127-29680-00119  
**Permit Reviewer:** Meredith W. Jones

On September 14, 2010, the Office of Air Quality (OAQ) received an application from 1st Source Corporation related to the operation of an existing stationary soil vapor extraction system to remediate soil contamination by petroleum hydrocarbons.

### Existing Approvals

There have been no previous approvals issued to this source.

### County Attainment Status

The source is located in Porter County.

Pollutant	Designation
SO <sub>2</sub>	Cannot be classified for the area bounded on the north by Lake Michigan; on the west by the Lake County and Porter County line; on the south by I-80 and I-90; and on the east by the LaPorte County and Porter County line. The remainder of Porter County is better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Attainment effective June 4, 2010. <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> The U.S. EPA has acknowledged in both the proposed and final rulemaking for this redesignation that the anti-backsliding provisions for the 1-hour ozone standard no longer apply as a result of the redesignation under the 8-hour ozone standard. Therefore, permits in Porter County are no longer subject to review pursuant to Emission Offset, 326 IAC 2-3. Basic nonattainment designation effective federally 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. Porter 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>*  
U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Porter County as nonattainment for PM<sub>2.5</sub>. On March 7, 2005 the Indiana Attorney General's

Office, on behalf of IDEM, filed a lawsuit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's New Source Review Rule for PM<sub>2.5</sub> promulgated on May 8, 2008. These rules became effective on July 15, 2008. Therefore, direct PM<sub>2.5</sub> and SO<sub>2</sub> emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.

(c) *Other Criteria Pollutants*

Porter 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.

### **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 Office of Air Quality (OAQ) has reviewed an application, submitted by 1st Source Corporation on September 14, 2010, relating to the operation of an existing stationary soil vapor extraction system to remediate soil contamination by petroleum hydrocarbons.

The source consists of the following existing emission units:

- (a) One (1) soil vapor extraction system, identified as SVE, approved for construction in 2010, drawing from six (6) 2-inch extraction wells, exhausting to one (1) PVC stack, and consisting of the following units:
  - (1) one (1) Rotron regenerative blower, rated at 15 hp, with a maximum capacity of 425 scfm; and
  - (2) one (1) moisture separator, identified as V-102, with a maximum flow rate of 425 scfm, and a maximum capacity of 55 gallons.
- (b) Fugitive emissions from paved roads.

### **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	PM <sub>10</sub> *	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Total HAPs	Worst Single HAP
Soil Vapor Extraction (SVE) System	-	-	-	-	-	9.5	-	2.48	0.77 (toluene)
Fugitive Emissions (Paved Roads)	0.02	1.50E-03	1.50E-03	-	-	-	-	-	-
<b>Total PTE of Entire Source</b>	<b>0.02</b>	<b>1.50E-03</b>	<b>1.50E-03</b>	<b>0.00</b>	<b>0.00</b>	<b>9.50</b>	<b>0.00</b>	<b>2.48</b>	<b>0.77 (toluene)</b>
Exemption Levels	5	5	5	10	10	5 or 10	25	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 (PM <sub>10</sub> ), not particulate matter (PM), is considered as a "regulated air pollutant".									

**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: Site Remediation (40 CFR 63, Subpart GGGGG) (326 IAC 20-87) are not included in the permit because the one (1) soil vapor extraction system, identified as SVE, is not a major source of HAPs.
- (c) There are no 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:

**326 IAC 2-1.1-3 (Exemptions)**

Exemption applicability is discussed under the Permit Level Determination – Exemption section above.

**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.

**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.

**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 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 6-4 (Fugitive Dust Emissions Limitations)**

The source is subject to the requirements of 326 IAC 6-4 because the paved roads have the potential to emit fugitive particulate emissions. 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.

**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.

**326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)**

None of the emission units at this source are subject to the requirements of 326 IAC 8-1-6 because the unlimited potential VOC emissions from each emission unit are less than twenty-five (25) tons per year.

**326 IAC 12 (New Source Performance Standards)**

See Federal Rule Applicability Section of this TSD.

**326 IAC 20 (Hazardous Air Pollutants)**

See Federal Rule Applicability Section of this TSD.

<b>Conclusion and Recommendation</b>
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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 September 14, 2010.

The operation of this source shall be subject to the conditions of the attached proposed Exemption No. 127-29680-00119. The staff recommends to the Commissioner that this Exemption be approved.

<b>IDEM Contact</b>
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- (a) Questions regarding this proposed permit can be directed to Meredith Jones at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCM 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5176 or toll free at 1-800-451-6027 extension 4-5176.
- (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)

**Company Name:** 1st Source Corporation  
**Address:** 1806 West Lincolnway, Valparaiso, Indiana 46383  
**Exemption No.:** 127-29680-00119  
**Reviewer:** Calculations submitted by 1st Source Corporation and reviewed by Meredith W. Jones  
**Date:** 9/23/2010

**\*\*Potential to Emit Summary\*\***

**Criteria Pollutants (tons/yr)**

	<i>PM</i>	<i>PM<sub>10</sub></i>	<i>PM<sub>2.5</sub></i>	<i>SO<sub>x</sub></i>	<i>NO<sub>x</sub></i>	<i>VOC</i>	<i>CO</i>
Soil Vapor Extraction (SVE) System	-	-	-	-	-	9.50	-
Paved Roads	0.02	1.50E-03	1.50E-03	-	-	-	-
<b>Total</b>	<b>0.02</b>	<b>1.50E-03</b>	<b>1.50E-03</b>	<b>0.00</b>	<b>0.00</b>	<b>9.50</b>	<b>0.00</b>

**HAPs (tons/yr)**

1,3-Butadiene =	3.52E-04	tons/yr
Benzene =	0.18	tons/yr
Toluene* =	0.77	tons/yr
Ethylbenzene =	0.16	tons/yr
m-Xylene =	0.44	tons/yr
o-Xylene =	0.24	tons/yr
p-Xylene =	0.18	tons/yr
2,2,4-Trimethylpentane =	0.23	tons/yr
n-Hexane =	0.23	tons/yr
Naphthalene =	0.02	tons/yr
Methyl-tert-butyl ether =	0.03	tons/yr
<b>Total HAPs =</b>	<b>2.48</b>	<b>tons/yr</b>

\*Highest single HAP

**Company Name:** 1st Source Corporation  
**Address:** 1806 West Lincolnway, Valparaiso, Indiana 46383  
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**Soil Vapor Extraction (SVE) System  
Volatile Organic Compounds (VOCs)**

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

<b>Soil TPH Contamination (Absorbed to Soil)</b>	
	<b>Zone 1</b>
Contaminated Area (ft <sup>2</sup> )	2400
Thickness of Soil (ft)	20
Volume of contaminated soil (ft <sup>3</sup> )	48000
Concentration of TPH (lb/MMlbs of soil)	15719
Soil density (lbs/ft <sup>3</sup> )	100.75
Weight Of Contamination (lbs)	76017.1

<b>Total Weight of TPH in Soil (lbs)</b>	<b>76017.08</b>
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**Methodology**

Weight of TPH in Soil (Absorbed to Soil) (lbs) =  
 [Concentration of TPH (lb/MMlbs of soil)] \* [Volume of the contaminated soil (ft<sup>3</sup>)] \* [Soil density (lbs/ft<sup>3</sup>)] \* [MMlbs/1,000,000 lbs]

**Potential To Emit (PTE) VOC**

<b>Total VOC in Soil (lbs)</b>	<b>76017.08</b>
<b>Total VOC in Soil (tons)</b>	<b>38.01</b>
<b>Remediation Time (years)</b>	<b>4</b>
<b>PTE Of VOC (tons/yr)</b>	<b>9.50</b>

**Methodology**

The potential emissions rate for VOCs emitted from the SVE system is assumed to be constant during the remediation time period. Based on information provided by the source, the remediation time will be 4 years. Each of the total petroleum hydrocarbon (TPH) components is considered a VOC. Soil is assumed to have bulk density of 100.75 lb/ft<sup>3</sup>

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

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 Date: 9/23/2010

**Soil Vapor Extraction (SVE) System  
 Hazardous Air Pollutants (HAPs)**

<b>PTE Of VOC (tons/yr)</b>	<b>9.50</b>
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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%	3.5E-04	yes
	cis-2-Butene	590-18-1	56.1	0.3100%	2.9E-02	
	trans-2-Butene	624-64-6	56.1	0.3600%	3.4E-02	
	2-Methyl-1-butene	563-46-2	70.1	0.5400%	5.1E-02	
	2-Methyl-2-butene	513-35-9	70.1	1.1000%	1.0E-01	
	cis-2-Pentene	627-20-3	70.1	0.3900%	3.7E-02	
	trans-2-Pentene	646-04-8	70.1	0.7200%	6.8E-02	
Alkyl-Monoaromatics	Benzene	71-43-2	78.1	1.9000%	1.8E-01	yes
	Toluene	108-88-3	92.1	8.1000%	7.7E-01	yes
	Ethylbenzene	100-41-4	106.2	1.7000%	1.6E-01	yes
	m-Xylene	108-38-3	106.2	4.6000%	4.4E-01	yes
	o-Xylene	95-47-6	106.2	2.5000%	2.4E-01	yes
	p-Xylene	106-42-3	106.2	1.9000%	1.8E-01	yes
	1,2,4-Trimethylbenzene	95-63-6	120.2	3.0000%	2.9E-01	
	1,3,5-Trimethylbenzene	108-67-8	120.2	0.9800%	9.3E-02	
	1-Methyl-2-ethylbenzene	611-14-3	120.2	0.7100%	6.7E-02	
	1-Methyl-3-ethylbenzene	620-14-4	120.2	1.8000%	1.7E-01	
	1-Methyl-4-ethylbenzene	622-96-8	120.2	0.8000%	7.6E-02	
Branched Alkanes	Isobutane	75-28-5	58.1	1.7000%	1.6E-01	
	Isopentane	78-78-4	72.1	7.9000%	7.5E-01	
	2,2-Dimethylbutane	75-83-2	86.2	0.4900%	4.7E-02	
	2,3-Dimethylbutane	79-29-8	86.2	1.0000%	9.5E-02	
	2-Methylpentane	107-83-5	86.2	3.9000%	3.7E-01	
	3-Methylpentane	96-14-0	86.2	2.5000%	2.4E-01	
	2,4-Dimethylpentane	108-08-7	100.2	0.8300%	7.9E-02	
	2-Methylhexane	591-76-4	100.2	3.0000%	2.9E-01	
	3-Methylhexane	589-34-4	100.2	1.7000%	1.6E-01	
	2,2,4-Trimethylpentane	540-84-1	114.2	2.4000%	2.3E-01	yes
	2,3,3-Trimethylpentane	560-21-4	114.2	0.6600%	6.3E-02	
	2,3,4-Trimethylpentane	565-75-3	114.2	0.9700%	9.2E-02	
	2,3-Dimethylhexane	584-94-1	114.2	0.3900%	3.7E-02	
	2,4-Dimethylhexane	589-43-5	114.2	0.4400%	4.2E-02	
	3-Methylheptane	589-81-1	114.2	0.7500%	7.1E-02	
Cycloalkanes	Cyclopentane	287-92-3	70.1	0.4700%	4.5E-02	
	Cyclohexane	110-82-7	84.2	0.3900%	3.7E-02	
	Methylcyclopentane	96-37-7	84.2	1.8000%	1.7E-01	
	Methylcyclohexane	108-87-2	98.2	0.5800%	5.5E-02	
n-Alkanes	n-Butane	106-97-8	58.1	4.7000%	4.5E-01	
	n-Pentane	109-66-0	72.1	3.9000%	3.7E-01	
	n-Hexane	110-54-3	86.2	2.4000%	2.3E-01	yes
	n-Heptane	142-82-5	100.2	1.1000%	1.0E-01	
	Naphthalene	91-20-3	128.2	0.2500%	2.4E-02	yes
	1-Methylnaphthalene	90-12-0	142.2	0.0700%	6.7E-03	
	2-Methylnaphthalene	91-57-6	142.2	0.1800%	1.7E-02	
Oxygenates	Methyl-tert-butyl ether	1634-04-4	88.1	0.3300%	3.1E-02	yes
<b>Total</b>					<b>76.21%</b>	

\*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 for Environmental Health and Science. Available on the Internet at: <http://www.aehsfoundation.org/Publications.aspx>

**Hazardous Air Pollutants (HAPs) Summary**

Compound	Potential to Emit (tons/yr)
1,3-Butadiene	3.5E-04
Benzene	0.18
Toluene	0.77
Ethylbenzene	0.16
m-Xylene	0.44
o-Xylene	0.24
p-Xylene	0.18
2,2,4-Trimethylpentane	0.23
n-Hexane	0.23
Naphthalene	0.02
Methyl-tert-butyl ether	0.03

<b>Total PTE of HAPs (tons/yr)</b>	<b>2.48</b>
<b>PTE of Worst Case HAP (tons/yr)</b>	<b>0.77</b>

**Methodology**

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

**Company Name:** 1st Source Corporation  
**Address:** 1806 West Lincolnway, Valparaiso, Indiana 46383  
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**Reviewer:** Calculations submitted by 1st Source Corporation and reviewed by Meredith W. Jones  
**Date:** 9/23/2010

**Fugitive Dust Emissions  
Paved Roads at Industrial Site**

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

Vehicle Information (provided by source)

Activity	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 (tons/day)	Maximum one-way distance (ft/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (mi/day)	Maximum one-way miles (mi/yr)
Vehicle entering plant (one-way trip)	60.0	60.0	3600.0	1.0	3600.0	30	0.006	20.5	7465.9
Vehicle leaving plant (one-way trip)	60.0	60.0	3600.0	1.0	3600.0	30	0.006	20.5	7465.9
<b>Total</b>			<b>7200.0</b>		<b>7200.0</b>			<b>40.9</b>	<b>14931.8</b>

Average Vehicle Weight Per Trip =  tons  
 Average Distance Per Trip =  miles

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

	<b>PM</b>	<b>PM<sub>10</sub>/PM<sub>2.5</sub></b>	
where k =	0.082	0.016	lb/mi (particle size multiplier; from AP-42 Table 13.2.1-1)
W =	1.0	1.0	tons (average vehicle weight; provided by source)
C =	0.00047	0.00047	lb/mi (emission factor for vehicle exhaust, brake wear, and tire wear; from AP-42 Table 13.2.1-2)
sL =	0.2	0.2	g/m <sup>2</sup> (Ubiquitous Baseline Silt Loading Values of paved roads; from Table 13.2.1-3, 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 =  days with rain greater than or equal to 0.01 inches (from Fig. 13.2.1-2)  
 N =  days per year

	<b>PM</b>	<b>PM<sub>10</sub>/PM<sub>2.5</sub></b>	
Unmitigated Emission Factor, $E_f =$	3.06E-03	2.19E-04	lb/mile
Mitigated Emission Factor, $E_{ext} =$	2.80E-03	2.01E-04	lb/mile

Activity	Unmitigated PTE (tons/yr)		Mitigated PTE (tons/yr)	
	PM	PM <sub>10</sub> /PM <sub>2.5</sub>	PM	PM <sub>10</sub> /PM <sub>2.5</sub>
Vehicle entering plant (one-way trip)	1.14E-02	8.19E-04	1.05E-02	7.49E-04
Vehicle leaving plant (one-way trip)	1.14E-02	8.19E-04	1.05E-02	7.49E-04
<b>Total</b>	<b>0.02</b>	<b>1.64E-03</b>	<b>0.02</b>	<b>1.50E-03</b>

**Methodology**

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

**Abbreviations**

PM = Particulate Matter  
 PTE = Potential to Emit  
 PM<sub>10</sub> = Particulate Matter (<10 um)  
 PM<sub>2.5</sub> = Particulate Matter (<2.5 um)



# 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: Mr. Douglas Way  
1<sup>st</sup> Source Corporation  
P.O. Box 1602  
South Bend, IN 46634

DATE: October 6, 2010

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

SUBJECT: Final Decision  
Exempt Construction & Operation Status  
127-29680-00119

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:  
Robert Reynolds (Bureau Veritas North America)  
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

IDEM Staff	MIDENNEY 10/6/2010 1st Source Corporation 127-29680-00119 (final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING	
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail:  <b>CERTIFICATE OF MAILING ONLY</b>	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Douglas W Way 1st Source Corporation PO Box 1602 South Bend IN 46634 (Source CAATS) via confirmed delivery										
2		Laurence A. McHugh Barnes & Thornburg 100 North Michigan South Bend IN 46601-1632 (Affected Party)										
3		Porter County Board of Commissioners 155 Indiana Ave, Ste 205 Valparaiso IN 46383 (Local Official)										
4		Porter County Health Department 155 Indiana Ave, Suite 104 Valparaiso IN 46383-5502 (Health Department)										
5		Shawn Sobocinski 3229 E. Atlanta Court Portage IN 46368 (Affected Party)										
6		Mr. Ed Dybel 2440 Schrage Avenue Whiting IN 46394 (Affected Party)										
7		Ms. Carolyn Marsh Lake Michigan Calumet Advisory Council 1804 Oliver St Whiting IN 46394-1725 (Affected Party)										
8		Mr. Dee Morse National Park Service 12795 W Alameda Pky, P.O. Box 25287 Denver CO 80225-0287 (Affected Party)										
9		Valparaiso City Council and Mayors Office 166 Lincolnway Valparaiso IN 46383-5524 (Local Official)										
10		Mr. Joseph Virgil 128 Kinsale Avenue Valparaiso IN 46385 (Affected Party)										
11		Mark Coleman 9 Locust Place Ogden Dunes IN 46368 (Affected Party)										
12		Mr. Chris Hernandez Pipefitters Association, Local Union 597 8762 Louisiana St., Suite G Merrillville IN 46410 (Affected Party)										
13		Eric & Sharon Haussman 57 Shore Drive Ogden Dunes IN 46368 (Affected Party)										
14		Joseph Hero 11723 S Oakridge Drive St. John IN 46373 (Affected Party)										
15		Gitte Laasby Post Tribune 1433 E. 83rd Ave Merrillville IN 46410 (Affected Party)										

Total number of pieces Listed by Sender  <b>14</b>	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See <b>Domestic Mail Manual R900, S913, and S921</b> for limitations of coverage on inured and COD mail. See <b>International Mail Manual</b> for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Robert J. Reynolds Bureau Veritas North America 9376 Castlegate Dr Indianapolis IN 46256 (Consultant)										
2		Joe E. Feller 246 S. 150 E Valparaiso IN 46383 (Affected Party)										
3		Harvey Miller 13627 Deering Bay Drive Miami FL 33158 (Affected Party)										
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