



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: September 9, 2008

RE: Thermal Remediation Services, Inc. / 031-26829-00032

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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September 9, 2008

Mr. Chris Thomas
Thermal Remediation Services, Inc.
1466 Forest Avenue
Des Plaines, Illinois 60018

Re: Exempt Construction and Operation Status,
031-26829-00032

Dear Mr. Thomas:

The application from Thermal Remediation Services, Inc., received on July 28, 2008, 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 operation located at 1515 West Main Street, Greensburg, Indiana 47240 is classified as exempt from air pollution permit requirements:

One (1) soil and groundwater remediation system, identified as Emission Unit 001, approved for construction in 2008, consisting of Electrical Resistance Heating (ERH) and Soil Vapor Extraction (SVE) with an exhaust air flow rate of 675 scfm, with volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) exhausted to the atmosphere or controlled by a granular activated carbon bed.

The following conditions shall be applicable:

- (a) 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.
- (b) 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 Gary Freeman, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, at 317-233-5334 or at 1-800-451-6027 (ext 3-5334).

Sincerely,

Original signed by

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

ACD/gkf

cc: File - Decatur County
Decatur County Health Department
Air Compliance Section
Compliance Data Section
Permits Administrative and Support
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:	Thermal Remediation Services, Inc.
Source Location:	1515 West Main Street, Greensburg, Indiana 47240
County:	Decatur
SIC Code:	4959
Exemption No.:	031-26829-00032
Permit Reviewer:	Gary Freeman

On July 28, 2008, the Office of Air Quality (OAQ) has received an application from Thermal Remediation Services, Inc., related to the construction and operation of a soil vapor extraction (SVE) system for remediation of soil and groundwater contaminated with trichloroethylene (TCE).

Source Definition

Advanced Bearing Materials, LLC, owns and operates a stationary a bearing material manufacturing plant (plant ID 031-00002), located at 1515 W. Main Street, Greensburg, Indiana 47240. Advanced Bearing Materials, LLC, has contracted with Thermal Remediation Services, Inc., to install and operate a SVE system to remediate TCE contamination in the soil and groundwater at the Advanced Bearing Materials, LLC, plant site. IDEM, OAQ has decided to examine whether the two plants are part of the same major source.

In order to consider both plants as one major source, as defined by 326 IAC 2-7-1(22), all three of the following criteria must be met:

- (1) The plants must have common ownership or common control;
- (2) The plants must have the same two digit SIC code or a support relationship; and
- (3) The plants must be located on contiguous or adjacent properties.

Advanced Bearing Materials, LLC, owns and operates a bearing material manufacturing plant (plant ID 031-00002). Thermal Remediation Services, Inc., owns and operates a SVE remediation system. Advanced Bearing Materials, LLC, and Thermal Remediation Services, Inc., are unrelated companies. There is no common ownership or evidence of common control between the two companies. The two companies do not meet the first criteria of the definition of one major source.

Advanced Bearing Materials, LLC, operates the bearing material manufacturing plant under the two-digit SIC code 37, Transportation Equipment. Thermal Remediation Services, Inc., operates the SVE remediation system under the two-digit SIC code 49, Electric, Gas and Sanitary Service. Neither plant will provide any support to the other plant. Thermal Remediation Services, Inc., will not convey, store, or otherwise assist Advanced Bearing Materials, LLC, in the production or distribution of the principal product (bearing materials) or assist in any service rendered by Advanced Bearing Materials, LLC (the primary activity). Alternatively, Advanced Bearing Materials, LLC, will not convey, store, or otherwise assist Thermal Remediation Services, Inc., in the SVE remediation operation or assist in any service rendered by Thermal Remediation Services, Inc. Therefore, the two companies do not meet the second criteria of the definition of one major source.

The two companies will operate on the same property, so the third element of the definition is met. Since the two companies did not meet all three of the elements of the definition of one major source, IDEM, OAQ has determined that the plants are not one major source.

Existing Approvals

There have been no previous approvals issued to this source.

County Attainment Status

The source is located in Decatur 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 PM2.5.	

(a) Ozone Standards

- (1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (2) On September 6, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Allen, Clark, Elkhart, Floyd, LaPorte, St. Joseph as attainment for the 8-hour ozone standard.
- (3) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Joseph as attainment for the 8-hour ozone standard.
- (4) 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. Decatur 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) PM2.5

Decatur County has been classified as attainment for PM2.5. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions, and the effective date of these rules was July 15th, 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 PM2.5 emissions until 326 IAC 2-2 is revised.

- (c) Other Criteria Pollutants
Decatur 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 source consists of the following new emission unit:

One (1) soil and groundwater remediation system, identified as Emission Unit 001, approved for construction in 2008, consisting of Electrical Resistance Heating (ERH) and Soil Vapor Extraction (SVE) with an exhaust air flow rate of 675 scfm, with volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) exhausted to the atmosphere or controlled by a granular activated carbon bed.

Enforcement Issues

There are no pending enforcement actions related to this source.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations (Appendix A, page 1 through 1)

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*	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Soil Vapor Extraction System	0	0	0	0	4.51	0	4.51	4.51 (TCE)
Total PTE of Entire Source	0	0	0	0	4.51	0	4.51	4.51 (TCE)
Exemptions Levels	5	5	10	10	5 or 10	25	2.5	1.0

* 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". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

- (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 exemption for this source.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (b) The requirements of 40 CFR 63, Subpart GGGGG (63.7880 through 63.7957), National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Site Remediation (326 IAC 20-87-1) are not included in this exemption, based on the following:
- (1) pursuant to 40 CFR 63.7881(a)(2), this soil remediation system is not co-located with any other stationary sources that emit HAP and meet an affected source definition specified for a source category that is regulated by another subpart under 40 CFR part 63, and
 - (2) pursuant to 40 CFR 63.7881(a)(3), this soil remediation system is not a major source of HAP, as defined in 40 CFR 63.2, or co-located with major source of HAP.

Note: Advanced Bearing Materials, LLC, where the remediation site is located, does not meet an affected source definition specified for a source category that is regulated by another subpart under 40 CFR part 63, and is not a major source of HAP. In addition, the two plants operated by Thermal Remediation Services, Inc., and Advanced Bearing Materials, LLC, are considered separate sources (see Source Definition section above).

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

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 2-2 (Prevention of Significant Deterioration (PSD))
This source is not a major stationary source, under PSD (326 IAC 2-2), because the potential to emit particulate matter (PM) and all other attainment regulated pollutants are each less than 250 tons per year, and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1). Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

- (c) 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.
- (d) 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 located in Decatur County, it has potential to emit of NOx and VOC of less than twenty-five (25) tons per year, 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.
- (e) 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.
- (f) 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.
- (g) 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.
- (h) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The SVE system 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.
- (i) 326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.
- (j) 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 July 28, 2008.

The construction and operation of this source shall be subject to the conditions of the attached proposed Exemption No. 031-26829-00032. The staff recommends to the Commissioner that this Exemption be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Gary Freeman 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) 317-233-5334 or toll free at 1-800-451-6027 extension 3-5334.
- (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: Emissions Calculations
Soil Vapor Extraction (SVE) System
Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs)**

**Company Name: Thermal Remediation Services, Inc.
Address : 1515 West Main Street, Greensburg, Indiana 47240
Exemption No.: 031-26829-00032
Reviewer: Gary Freeman**

Weight Of Trichloroethylene (TCE) (VOC and HAP) To Be Remediated By SVE System (lbs)

Soil TCE Contamination (Absorbed to Soil)								
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8
Contaminated Area (ft ²)	3453	10825	9204	2954	1033	129	377	144
Thickness of Soil (ft)	31.98	17.36	16.37	36.50	10.01	6.91	3.01	3.94
Volume of contaminated soil (ft ³)	110430	187947	150687	107811	10341	891	1134	567
Concentration of TCE (lb/MMlbs of soil)	234.14	140.91	76.65	62.5	137	48.83	6.9	3.1
Soil density (lbs/ft ³)	125	125	125	125	125	125	125	125
Weight Of Contamination (lbs)	3232.0	3310.5	1443.8	842.3	177.1	5.4	0.98	0.22

Total Weight of TCE in Soil (lbs)	9012.23
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METHODOLOGY:

Weight of TCE in Soil (Absorbed to Soil) (lbs) = [Concentration of TCE (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) Trichloroethylene (TCE) (VOC and HAP)

Total TCE in Soil (lbs)	9012.23
Total TCE in Soil (tons)	4.51
Remediation Time (years)	1
PTE Of VOC (tons/yr)	4.51
PTE Of HAP (tons/yr)	4.51

METHODOLOGY:

For this exemption, remediation time assumed to be 1 year. Based on information provided by the source, the remediation time is expected to be a maximum of 170 days. Soil is assumed to have bulk density of 125 lb/ft³

PTE of VOCs (tons/yr) = [Total Weight of TCE Soil (tons)] / [Remediation Time (years)]
Trichloroethylene (TCE) is a volatile organic compound (VOC) and a hazardous air pollutant (HAP)