



*Mitchell E. Daniels, Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
(800) 451-6027  
www.IN.gov/idem

TO: Interested Parties / Applicant  
DATE: October 30, 2006  
RE: SER Indiana / 141-23693-00166  
FROM: Nisha Sizemore  
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, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days from the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the 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.dot 03/23/06



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We make Indiana a cleaner, healthier place to live.*

Mitchell E. Daniels, Jr.  
Governor

Thomas W. Easterly  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204-2251  
(317) 232-8603  
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Ms. Becky Brown  
SER Indiana, LLC  
1122 Division Street  
Mishawaka, Indiana 46545

October 30, 2006

Dear Ms. Brown:

Re: Exemption No.:141-23693-00166

The application from SER Indiana, LLC was received on September 22, 2006, to change the operating name of the source. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the operation of the wastewater storage/transfer and used oil treatment facility, located at 1122 Division Street, Mishawaka, Indiana, remains classified as exempt from air pollution permit requirements:

- (a) One (1) wastewater storage/transfer facility, constructed in 1998, with the maximum capacity to store 167,000 gallons of wastewater, exhausting through stacks F1 and F2, and consisting of the following equipment:  
  
Fifteen (15) wastewater storage tanks (Tanks 4, 5, 6, 7, 8, G, H, L, M, N, Q, R, S, T, and U) with capacities of 20,100 gallons, 20,100 gallons, 20,100 gallons, 20,100 gallons, 20,100 gallons, 4,000 gallons, 5,000 gallons, 11,500 gallons, 5,500 gallons, 5,500 gallons, 7,500 gallons, 7,500 gallons, 7,500 gallons, 7,500 gallons, and 5,000 gallons, respectively.
- (b) One (1) waste oil treatment facility, constructed in 1989, with a capacity to process 362 gallons of oil per hour, exhausting through stacks F1 and F2, and consists of the following equipment:
  - (1) Seven (7) storage tanks (Tanks 1, 2, 3, 9, 10, 11, 12) with capacities ranging between 6,750 gallons to 20,100 gallons; and
  - (2) Eleven (11) waste oil treatment tanks (Tanks A thru F, I, J, K, O, and P) with capacities of 7,500 gallons, 10,000 gallons, 2,800 gallons, 2,800 gallons, 4,000 gallons, 3,800 gallons, 11,500 gallons, 11,500 gallons, 12,500 gallons, 18,200 gallons, and 18,200 gallons, respectively.
- (c) One (1) bulk petroleum storage facility, containing the following tanks:
  - (1) Five (5) tanks for mineral spirits (Tanks M1 through M5) with capacities of 1,750 gallons, 1,750 gallons, 1,750 gallons, 1,750 gallons and 2,750 gallons, respectively; and
  - (2) One (1) tank for diesel fuel storage (Tank T1) with a capacity of 10,500 gallons.
- (d) Two (2) degreasing operations, constructed after 1980 and with combined annual solvent usage of 90 gallons per year.



- (e) One (1) natural gas fired boiler with maximum heat input rate of 2.0 MMBtu/hr, installed in 1997, and exhausting to stack B1.
- (f) Two (2) natural gas fired power washers, each with maximum heat input rate of 0.35 MMBtu/hr.
- (g) Storage vessels storing lubricants.
- (h) Laboratory operation as defined in 326 IAC 2-7-1(21)(C).
- (i) Touch up painting of parts washers.

The following conditions shall be applicable:

- (1) 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%) 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) Pursuant to 326 IAC 6-2-4(a) (Particulate Emission Limitations for Sources of Indirect Heating) the particulate emissions from the one natural gas fired boiler and the two (2) parts washers shall be limited to 0.6 pounds per MMBtu heat input.
- (3) Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operation), the owner or operator of the two (2) degreasers shall:
  - (a) Equip the cleaner with a cover;
  - (b) Equip the cleaner with a facility for draining cleaned parts;
  - (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
  - (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
  - (e) Provide a permanent, conspicuous label summarizing the operation requirements;
  - (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

The above listed emission units were originally permitted in Part 70 permit No. 141-13475-00166, issued December 31, 1998. The permitting level of the source has been updated to be at exemption level due to process changes at the source and the correction to the emissions calculation methodology.

This exemption supersedes the Part 70 Permit 141-13475-00166, issued on December 31, 1998 and Exemption 141-17287-00166, issued June 3, 2003.

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.

Sincerely,

Originally Signed By:  
Nisha Sizemore, Chief  
Permits Branch  
Office of Air Quality

NS/gkf

cc: File - St. Joseph County  
St. Joseph County Health Department  
Air Compliance - Rick Reynolds  
IDEM Northern Regional Office  
Permit Review Section 1 – Gary Freeman  
Billing, Licensing and Training Section

# Indiana Department of Environmental Management Office of Air Quality

## Technical Support Document (TSD) for a Name Change of an Exempted Source

### Source Background and Description

**Source Name:** SER Indiana, LLC  
**Source Location:** 1122 Division Street, Mishawaka, Indiana 46545  
**County:** St. Joseph  
**SIC Code:** 9511  
**Operation Permit No.:** 141-23693-00166  
**Permit Reviewer:** Gary Freeman

The Office of Air Quality (OAQ) has reviewed an application from SER Indiana LLC., received on September 22, 2006, relating to the change of the operating name of the wastewater storage/transfer and used oil treatment facility.

### History

Safety & Environmental Resources, Inc. (SER) submitted an application on February 25, 2003 for a Title V permit renewal. SER was issued a Title V permit (141-7673-00166) on December 31, 1998. During this permit renewal process, the permitting level of the source has been determined to be at exemption level due to process changes at the source and a correction to the emissions calculation methodology.

The following changes have been made at the source:

1. Elimination of the solids processing operation
2. Conversion of the 2.0 MMBtu/hr heat input boiler from No. 2 diesel fuel to natural gas.
3. Elimination of the use of sulfuric acid in oil processing applications.

In addition, upon further review IDEM determined that the emissions calculations for the wastewater storage/transfer facility in the original Title V permit (141-7673-00166) were done incorrectly. Safety & Environmental Resources, Inc. (SER) is a transfer facility for non-RCRA regulated wastewater. Wastewater that is collected from various generators is hauled to the SER facility and placed into storage tanks for the purpose of collection. Wastewater is shipped to SER's parent company for treatment. Wastewater collection is limited by the Resource Conservation and Recovery Act (RCRA) influent limits and process limits of the parent treatment facility. No more than 100 ppm VOC can be accepted in the wastewater streams based upon the treatment facility's design specifications. Therefore, due to the process limitation, the maximum VOC concentration that can be present in the wastewater collected is 100 ppm. Wastewater could contain HAPs concentrations as well as some of the compounds which qualify as both VOC and HAP. Therefore, the maximum single HAP emission rate from the wastewater facility is equal to the maximum emission rate of VOC (100 ppm). The combined total HAP limit is equal to the maximum VOC limit (100 ppm) plus the allowable concentration of metals. The combination of VOC/HAP may change however, the total cannot exceed 100 ppm. Emission calculations done for the original Title V permit, didn't take into account the VOC process limitation limit of 100 ppm, but instead emissions from all pollutants were calculated based on the RCRA limit and were summed up to calculate total VOC and combined HAPs emissions of 36.82 and 30.43 tons per year, respectively. However, during the permit renewal process, the total VOC and combined HAPs emissions are calculated to be 3.20 and 3.75 tons per year, respectively, based on the maximum possible VOC/HAP concentration of 100 ppm in the wastewater (see Pages 2 and 3 of Appendix A for detailed emission calculations). The potential to emit of all the regulated pollutants for the emission units at the source is lower than the registration applicability thresholds therefore the source status has changed to an exemption level.

This exemption will supersede the Part 70 Permit 141-7673-00166, issued December 31, 1998 and Exemption 141-17287-00166, issued June 3, 2003.

### **Permitted Emission Units and Pollution Control Equipment**

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

- (a) One (1) wastewater storage/transfer facility, constructed in 1998, with the maximum capacity to store 167,000 gallons of wastewater, exhausting through stacks F1 and F2, and consisting of the following equipment:  
  
Fifteen (15) wastewater storage tanks (Tanks 4, 5, 6, 7, 8, G, H, L, M, N, Q, R, S, T, and U) with capacities of 20,100 gallons, 20,100 gallons, 20,100 gallons, 20,100 gallons, 20,100 gallons, 4,000 gallons, 5,000 gallons, 11,500 gallons, 5,500 gallons, 5,500 gallons, 7,500 gallons, 7,500 gallons, 7,500 gallons, 7,500 gallons, and 5,000 gallons, respectively.
- (b) One (1) waste oil treatment facility, constructed in 1989, with a capacity to process 362 gallons of oil per hour, exhausting through stacks F1 and F2, and consists of the following equipment:
  - (1) Seven (7) storage tanks (Tanks 1, 2, 3, 9, 10, 11, 12) with capacities ranging between 6,750 gallons to 20,100 gallons; and
  - (2) Eleven (11) waste oil treatment tanks (Tanks A thru F, I, J, K, O, and P) with capacities of 7,500 gallons, 10,000 gallons, 2,800 gallons, 2,800 gallons, 4,000 gallons, 3,800 gallons, 11,500 gallons, 11,500 gallons, 12,500 gallons, 18,200 gallons, and 18,200 gallons, respectively.
- (c) One (1) bulk petroleum storage facility, containing the following tanks:
  - (1) Five (5) tanks for mineral spirits (Tanks M1 through M5) with capacities of 1,750 gallons, 1,750 gallons, 1,750 gallons, 1,750 gallons and 2,750 gallons, respectively; and
  - (2) One (1) tank for diesel fuel storage (Tank T1) with a capacity of 10,500 gallons.
- (d) Two (2) degreasing operations, constructed after 1980 and with combined annual solvent usage of 90 gallons per year.
- (e) One (1) natural gas fired boiler with maximum heat input rate of 2.0 MMBtu/hr, installed in 1997, and exhausting to stack B1.
- (f) Two (2) natural gas fired power washers, each with maximum heat input rate of 0.35 MMBtu/hr.
- (g) Storage vessels storing lubricants.
- (h) Laboratory operation as defined in 326 IAC 2-7-1(21)(C).
- (i) Touch up painting of parts washers.

### **Unpermitted Emission Units and Pollution Control Equipment**

There are no unpermitted facilities operating at this source during this review process.

## Existing Approvals

The source has been operating under previous approval including, but not limited to, the following:

Exemption No. 141-17287-00166, issued on June 3, 2003.

## Enforcement Issue

There are no enforcement actions pending.

## Recommendation

The staff recommends to the Commissioner that the operation of this wastewater storage/transfer and used oil treatment facility be approved. This recommendation is based on the following facts and conditions:

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 22, 2006.

## Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, pages 1 through 9).

## Potential To Emit of Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	negl.
PM-10	0.10
SO <sub>2</sub>	negl.
VOC	7.78
CO	1.00
NO <sub>x</sub>	1.20

HAP's	Potential To Emit (tons/year)
Worst case single volatile HAP	3.20
Arsenic	0.16
Cadmium	0.03
Chromium	0.16
Lead	0.16
Mercury	0.006
Selenium	0.032
TOTAL	3.75

The potential to emit of all the regulated pollutants for the emission units at the source is lower than the registration applicability thresholds stated in 326 IAC 2-7-10.5(d)(4). Therefore, pursuant to 326 IAC 2-1.1-3(d)(3), this is an exempt source.

### County Attainment Status

The source is located in St. Joseph County.

Pollutant	Status
PM <sub>10</sub>	attainment
<b>PM<sub>2.5</sub></b>	attainment
SO <sub>2</sub>	attainment
NO <sub>x</sub>	attainment
<b>8-hour Ozone</b>	nonattainment
CO	attainment
Lead	unclassifiable

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NO<sub>x</sub>) 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 NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. St. Joseph County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (b) St. Joseph County has been classified as attainment or unclassifiable for all other criteria pollutants.
- (c) On August 7, 2006, a temporary emergency rule took revoking the one-hour ozone standard in Indiana. The Indiana Air Pollution Control Board has approved a permanent rule revision to incorporate these changes into 326 IAC 1-4-1. The permanent revision to 326 IAC 1-4-1 will take effect prior to the expiration of the emergency rule. Therefore, the following changes will be made to the permit:

### Federal Rule Applicability

- (a) Storage tanks identified as Tank 4, 5, 6, 7, 8, 1, 2, 3, 9, 10, 11 and 12 are not subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Parts 60.110, 110a-115a or 110b-117b, Subparts K, Ka and Kb), because these tanks were all constructed in 1960, prior to the earliest applicability date of June 11, 1973 for Subpart K, Ka or Kb.
- (b) Storage tanks identified as Tank G, H, M, N, Q, R, S, T, U, A, B, C, D, E, F and T1, installed between 1960 and 1978, are not subject to the requirements of 326 IAC 12, (40 CFR Parts 60.110, 110a - 115a or 110b - 117b, as Subparts K, Ka, and Kb, respectively) since each have capacities of less than 40 cubic meters (m<sup>3</sup>) (10,567 gallons), and are therefore not subject to this rule.
- (c) Storage tanks identified as Tank I, J and K, are not subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.110a, Subpart Ka), because each tank, constructed in 1978, has a storage capacity less than 40,000 gallons.

- (d) Storage tanks identified as Tank L, O and P are not subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.110, Subpart Kb) where construction, reconstruction, or modification commenced after July 23, 1984. Each tank has storage capacity of less than 75 m<sup>3</sup> (19,813 gallons), therefore, pursuant to 40 CFR 60.110b (b), these tanks are exempt from all provisions of this Subpart.
- (e) One (1) natural gas fired boiler constructed in 1997, rated at 2.0 MMBtu per hour is not subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.40c, Subpart Dc) because the boiler's capacity is less than the rule applicability threshold of 10 MMBtu per hour.
- (f) The wastewater treatment facility, waste oil treatment facility and solids processing facility are not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63.680, Subpart DD. The plant site is not a major source of hazardous pollutant (HAP) emissions as defined in 40 CFR 63.2.
- (c) The two degreasing operations are not subject to the National Emission Standards for Hazardous Air Pollutants, 326 IAC 20, (40 CFR 63, Subpart T). Subpart T applies to degreasing operations using one of six listed halogenated solvents, or any combination of the solvents in a concentration greater than 5 percent by weight, as a cleaning or drying agent. The source uses part washing solvent which contains no halogenated solvent, therefore, Subpart T does not apply.

#### **Part 70 Permit Determination**

##### **326 IAC 2-7 (Part 70 Permit Program)**

This source is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source. This status has been verified by the OAQ inspector assigned to the source.

#### **State Rule Applicability - Entire Source**

##### **326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))**

The operation of this source will emit less than 10 tons per year of a single HAP or 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

##### **326 IAC 2-6 (Emission Reporting)**

Revisions to 326 IAC 2-6 (emission Reporting) became effective March 27, 2004. The Permittee is no longer required to submit an emission statement therefore the emission statement will be removed from the permit.

##### **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%) 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.

### State Rule Applicability - Individual Facilities

#### 326 IAC 6-2-1 (Particulate Emission Limitations for Sources of Indirect Heating)

The PM emissions from the two (2) power washers and one (1) boiler shall be limited by the following:

- (a) The two (2) power washers, with a combined maximum heat input capacity of 0.70 MMBtu per hour, each constructed in 1989, are subject to 326 IAC 6-2-4. Pursuant to this rule, PM emissions from indirect heating facilities existing and in operation after September 21, 1983, shall be limited by the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

$$Pt = \frac{1.09}{0.70^{0.26}} = 1.20 \text{ lb/MMBtu}$$

The allowable PM emission rate from the two (2) power washers, based on the above equation, is 1.20 pounds per MMBtu heat input. However, pursuant to 326 IAC 6-2-4(a), the allowable PM emission rate, from facilities with heat input rating of less than 10 MMBtu per hour, shall in no case exceed 0.6 pounds per MMBtu heat input. Therefore, the allowable PM emission rate from the two (2) power washers is limited to 0.6 pounds per MMBtu heat input. The two (2) power washers have a potential PM emission rate of 0.0019 pounds per MMBtu heat input, therefore, they will comply with 326 IAC 6-2-3.

- (b) The one (1) boiler, with a maximum heat input capacity of 2.0 MMBtu per hour, constructed in 1997, is subject to 326 IAC 6-2-4. Pursuant to this rule, PM emissions from indirect heating facilities existing and in operation after September 21, 1983, shall be limited by the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

$$Pt = \frac{1.09}{2.7^{0.26}} = 0.84 \text{ lb/MMBtu}$$

The allowable PM emission rate from the boiler, based on the above equation, is 0.84 pounds per MMBtu heat input. However, pursuant to 326 IAC 6-2-4(a), the allowable PM emission rate, from facilities with heat input rating of less than 10 MMBtu per hour, shall in no case exceed 0.6 pounds per MMBtu heat input. Therefore, the allowable PM emission rate from boiler is limited to 0.6 pounds per MMBtu heat input. The boiler has a potential PM emission rate of 0.0019 pounds per MMBtu heat input, therefore, it will comply with 326 IAC 6-2-3.

#### 326 IAC 8-1-6 (New Facilities, General Reduction Requirements)

The requirement to reduce VOC emissions using the Best Available Control Technology (BACT) does not apply to any of the emission units at this facility because VOC emissions from all emission units are less than twenty-five (25) tons per year.

#### 326 IAC 8-3-2 (Cold Cleaner Operation)

This rule applies to new facilities after January 1, 1980, performing organic solvent degreasing operations located anywhere in the state. The two (2) degreasing operations, each constructed after the rule applicability date of January 1, 1980, are subject to 326 IAC 8-3-2.

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operation), the owner or operator shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

**326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)**

The requirements of this rule apply to cold cleaning degreasers without remote solvent reservoir that either, existed as of July 1, 1990 and was located in a specified county, or the cleaning facility was constructed after July 1, 1990 and was located anywhere in the state. This source, located in St. Joseph County which is a listed county, is not subject to the applicable rule requirements since each degreaser has a remote solvent reservoir.

**326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)**

The source is not subject to 326 IAC 8-4-3 (Petroleum Liquid Storage Facilities) because all the petroleum liquid storage vessels have capacities less than 39,000 gallons.

**326 IAC 8-4-4 (Bulk Gasoline Terminal)**

This source is not subject to the requirements of this rule because the source does not load any gasoline and is therefore, not a bulk gasoline terminal.

**326 IAC 8-9 (Volatile Organic Liquid Vessels)**

This rule does not apply as this source is not located in Clark, Floyd, Lake, or Porter Counties.

There are no other 326 IAC 8 rules that apply to this source.

**Conclusion**

The operation of this wastewater storage/transfer and used oil treatment facility shall be subject to the conditions of the attached amended Exemption No. 141-23693-00166.

## Appendix A: Emission Calculations

**Company Name:** SER Indiana, LLC  
**Address City IN Zip:** 1122 Division Street, Mishawaka, IN 46545  
**Permit No.:** 141-23693  
**Plt ID:** 141-00166  
**Reviewer:** Gary Freeman  
**Date:** 10/23/06

Uncontrolled Potential Emissions (tons/year)						
Emissions Generating Activity						
Pollutant	Wastewater Storage/Transfer Facility	Waste Oil Treatment	Mineral Spirits & Diesel Storage	Natural Gas Combustion	Touchup Painting Parts Washers	TOTAL
PM	0.00	0.00	0.00	0.00	0.00	0.00
PM10	0.00	0.00	0.00	0.10	0.00	0.10
SO2	0.00	0.00	0.00	0.00	0.00	0.00
NOx	0.00	0.00	0.00	1.20	0.00	1.20
VOC	3.20	3.90	0.27	0.10	0.31	7.78
CO	0.00	0.00	0.00	1.00	0.00	1.00
total HAPs	3.75	0.96	0.00	negl.	0.00	4.71
worst case single HAP	3.20	0.34	0.00	negl.	0.00	3.54
See attached spreadsheets from source for full calculations.						
Total emissions based on rated capacity at 8,760 hours/year.						
Controlled Potential Emissions (tons/year)						
Emissions Generating Activity						
Pollutant	Wastewater Storage/Transfer Facility	Waste Oil Treatment	Mineral Spirits & Diesel Storage	Natural Gas Combustion	Touchup Painting Parts Washers	TOTAL
PM	0.00	0.00	0.00	0.00	0.00	0.00
PM10	0.00	0.00	0.00	0.10	0.00	0.10
SO2	0.00	0.00	0.00	0.00	0.00	0.00
NOx	0.00	0.00	0.00	1.20	0.00	1.20
VOC	3.20	3.90	0.27	0.10	0.31	7.47
CO	0.00	0.00	0.00	1.00	0.00	1.00
total HAPs	3.75	0.96	0.00	negl.	0.00	4.71
worst case single HAP	3.20	0.34	0.00	negl.	0.00	3.54
See attached spreadsheets from source for full calculations.						
Total emissions based on rated capacity at 8,760 hours/year, after control.						

APPENDIX A: Emission Calculations

**Company Name:** SER Indiana, LLC  
**Address City IN Zip:** 1122 Division Street, Mishawaka, IN 46545  
**Permit No.:** 141-23693-00166  
**Reviewer:** Gary Freeman  
**Date:** 10/23/06

**A. Wastewater Storage Operations**

Description:  
Wastewater is collected and shipped to SER's parent company for treatment. Wastewater collection is limited by Resource Conservation and Recovery Act (RCRA) influent limits and process limits of the parent treatment facility. No more than 100 ppm VOC can be accepted in the wastewater streams based upon the treatment facility's design specifications. Therefore, due to the process design, a limit of total VOC of 100 ppm applies and every different combination of VOC/HAPs can not exceed this 100 ppm limit

Pollutants for the purposes of air emissions considerations are volatile and semi-volatile organic compounds associated with synthetic coolants and incidental materials that contact the spent materials.

Following are the allowable limits for each pollutant for the wastewater storage operation:

Pollutant	Note	Limit	Units	Type of Limit
<b>Total VOC and SVOC Concentration</b>		<b>100.000</b>	<b>mg/L</b>	<b>Process treatment limit</b>
Benzene		0.500	mg/L	RCRA TCLP
Carbon Tetrachloride		0.500	mg/L	RCRA TCLP
Chlorobenzene		100.000	mg/L	RCRA TCLP
Chloroform		6.000	mg/L	RCRA TCLP
1,4-Dichlorobenzene		7.500	mg/L	RCRA TCLP
1,2-Dichloroethane		0.500	mg/L	RCRA TCLP
1,1-Dichloroethylene		0.700	mg/L	RCRA TCLP
Ethyl Benzene	#	100.000	mg/L	RCRA TCLP
Methyl Ethyl Ketone	#	100.000	mg/L	Process treatment limit
Tetrachloroethylene		0.700	mg/L	RCRA TCLP
Trichloroethylene		0.500	mg/L	RCRA TCLP
Toluene	#	100.000	mg/L	Process treatment limit
Xylene	#	100.000	mg/L	Process treatment limit
Vinyl Chloride	#-1	0.200	mg/L	RCRA TCLP
o-Cresol	#-1	100.000	mg/L	RCRA TCLP
m-Cresol	#-1	100.000	mg/L	RCRA TCLP
p-Cresol		100.000	mg/L	RCRA TCLP
2,4-Dinitrotoluene		0.130	mg/L	RCRA TCLP
Hexachlorobenzene		0.130	mg/L	RCRA TCLP
Hexachloro-1,3-butadiene		0.500	mg/L	RCRA TCLP
Hexachloroethane		3.000	mg/L	RCRA TCLP
Nitrobenzene		2.000	mg/L	RCRA TCLP
Pentachlorophenol		100.000	mg/L	RCRA TCLP
Pyridine		5.000	mg/L	RCRA TCLP
2,4,5-Trichlorophenol	#-2	100.000	mg/L	RCRA TCLP
2,4,6-Trichlorophenol		2.000	mg/L	RCRA TCLP
Arsenic		5.000	mg/L	RCRA TCLP
Barium		100.000	mg/L	RCRA TCLP
Cadmium		1.000	mg/L	RCRA TCLP
Chromium		5.000	mg/L	RCRA TCLP
Lead		5.000	mg/L	RCRA TCLP
Mercury		0.200	mg/L	RCRA TCLP
Selenium		1.000	mg/L	RCRA TCLP
Silver		5.000	mg/L	RCRA TCLP
Chlordane	#-3	0.000	mg/L	POTW Limit
Endrin	#-3	0.000	mg/L	POTW Limit
Heptachlor	#-3	0.000	mg/L	POTW Limit
Lindane	#-3	0.000	mg/L	POTW Limit
Methoxychlor	#-3	0.000	mg/L	POTW Limit
Toxaphene	#-3	0.000	mg/L	POTW Limit
2,4-D	#-3	0.000	mg/L	POTW Limit
2,4,5-TP	#-3	0.000	mg/L	POTW Limit

Notes:

# - Indicates where the default limit of 100 ppm applies

#-1 Actual TCLP limit = 200.00 mg/L

#-2 Actual TCLP limit = 400.00 mg/L

#-3 These chemicals are prohibited by TSCA are not accepted by SER for treatment.

SER has the capability to store 162,000 gallons of wastewater any one time.  
Transportation requirements limit influent wastewater storage to 21,000 gallons per day.

The annual pounds of wastewater throughput to this facility is calculated as follows:

21,000.0 gal/day                      365 day/yr                      8.34 lb/gal                      63,926,100.0 lb/yr  
7,297.5 lb/hr

Pollutant			Potential Emissions (lb/yr)	tons/yr
<b>Total VOC and SVOC Concentration</b>			<b>6,393</b>	<b>3.196</b>
Benzene		HAP	32	0.016
Carbon Tetrachloride		HAP	32	0.016
Chlorobenzene		HAP	6,393	3.196
Chloroform		HAP	384	0.192
1,4-Dichlorobenzene		HAP	479	0.240
1,2-Dichloroethane		HAP	32	0.016
1,1-Dichloroethylene		HAP	45	0.022
Ethyl Benzene		HAP	6,393	3.196
Methyl Ethyl Ketone		HAP	6,393	3.196
Tetrachloroethylene		HAP	45	0.022
Trichloroethylene		HAP	32	0.016
Toluene		HAP	6,393	3.196
Xylene		HAP	6,393	3.196
Vinyl Chloride		HAP	13	0.006
o-Cresol		HAP	6,393	3.196
m-Cresol		HAP	6,393	3.196
p-Cresol		HAP	6,393	3.196
2,4-Dinitrotoluene		HAP	8	0.004
Hexachlorobenzene		HAP	8	0.004
Hexachloro-1,3-butadiene		HAP	32	0.016
Hexachloroethane		HAP	192	0.096
Nitrobenzene		HAP	128	0.064
Pentachlorophenol		HAP	6,393	3.196
Pyridine			320	0.160
2,4,5-Trichlorophenol		HAP	6,393	3.196
2,4,6-Trichlorophenol		HAP	128	0.064
Arsenic		HAP	320	0.160
Barium			6,393	3.196
Cadmium		HAP	64	0.032
Chromium		HAP	320	0.160
Lead		HAP	320	0.160
Mercury		HAP	13	0.006
Selenium		HAP	64	0.032
Silver			320	0.160
Chlordane		HAP	N/A	N/A
Endrin		HAP	N/A	N/A
Heptachlor		HAP	N/A	N/A
Lindane		HAP	N/A	N/A
Methoxychlor		HAP	N/A	N/A
Toxaphene		HAP	N/A	N/A
2,4-D		HAP	N/A	N/A
2,4,5-TP		HAP	N/A	N/A

Total VOC PTE (@ max. possible concentration of 100 ppm): **3.196**  
 Single Largest HAP (@ max. possible concentration of 100 ppm): **3.196**  
 Total PTE of VOC/HAPs + Metal HAPs: **3.746**

Notes:

- HAPs labeled as "HAP"
- For the purpose of calculating PTE, 100% of the VOC content is assumed lost during handling. Therefore no breathing or evaporative losses are calculated.
- As the maximum allowable VOC concentration is 100 ppm, no single HAP as a VOC or SVOC can be emitted in excess of this limit. For HAPs that exceed the total limit, the total limit upper threshold applies. All other HAPs are limited to their respective influent limits. The aggregate limit for VOCs and SVOCs cannot exceed the influent upper limit.
- Metals are also limited to a concentration of 100.00 based upon the limitations of the treatment process.
- SEROS does not accept wastestreams that contain pesticides or herbicides.



**3. Working Losses**

The sum of the working losses for all waste oil processing tanks is as follows:

Tank	Constant	Mv	P	V	N	Kn	Kc	Percent VOC	Result Lb/Yr	Percent Single HAP	Result Lb/Yr	Percent Combined HAPs	Result Lb/Yr
A	0.000024	1250	0.5	7,500	16.76	0.44	1	14.4%	119.47	1.0%	8.30	4.00%	33.18
B	0.000024	1250	0.5	10,000	16.76	0.44	1	14.4%	159.29	1.0%	11.06	4.00%	44.25
C	0.000024	1250	0.5	2,800	16.76	0.44	1	14.4%	44.60	1.0%	3.10	4.00%	12.39
D	0.000024	1250	0.5	2,800	16.76	0.44	1	14.4%	44.60	1.0%	3.10	4.00%	12.39
E	0.000024	1250	0.5	4,000	16.76	0.44	1	14.4%	63.71	1.0%	4.42	4.00%	17.70
F	0.000024	1250	0.5	3,800	16.76	0.44	1	14.4%	60.53	1.0%	4.20	4.00%	16.81
I	0.000024	1250	0.5	11,500	16.76	0.44	1	14.4%	183.18	1.0%	12.72	4.00%	50.88
J	0.000024	1250	0.5	11,500	16.76	0.44	1	14.4%	183.18	1.0%	12.72	4.00%	50.88
K	0.000024	1250	0.5	12,500	16.76	0.44	1	14.4%	199.11	1.0%	13.83	4.00%	55.31
O	0.000024	1250	0.5	18,200	16.76	0.44	1	14.4%	289.90	1.0%	20.13	4.00%	80.53
P	0.000024	1250	0.5	18,200	16.76	0.44	1	14.4%	289.90	1.0%	20.13	4.00%	80.53
1	0.000024	1250	0.5	15,000	16.76	0.44	1	14.4%	238.93	1.0%	16.59	4.00%	66.37
2	0.000024	1250	0.5	6,750	16.76	0.44	1	14.4%	107.52	1.0%	7.47	4.00%	29.87
3	0.000024	1250	0.5	20,100	16.76	0.44	1	14.4%	320.17	1.0%	22.23	4.00%	88.94
9	0.000024	1250	0.5	20,100	16.76	0.44	1	14.4%	320.17	1.0%	22.23	4.00%	88.94
10	0.000024	1250	0.5	20,100	16.76	0.44	1	14.4%	320.17	1.0%	22.23	4.00%	88.94
11	0.000024	1250	0.5	20,100	16.76	0.44	1	14.4%	320.17	1.0%	22.23	4.00%	88.94
12	0.000024	1250	0.5	20,100	16.76	0.44	1	14.4%	320.17	1.0%	22.23	4.00%	88.94

Total (lb/yr): **3584.75**      **248.94**      **995.77**  
 Total (tons/yr): **1.79**      **0.12**      **0.50**

Methodology:

The working losses are calculated as follows:

Emissions (lb/yr) = 2.4E-5 x Mv x P x V x N x Kn x Kc

- Where:
- Mv Molecular Weight of Vapor in the storage tank (lb/lb mole)
  - P Pressure drop in psi
  - V Tank Volume in gallons
  - N Turnovers per year
  - Kn Adjustment factor for small diameter tanks
  - Kc Product factor

**4. Chemical Treatment**

In addition to the working and breathing losses, SER adds treatment chemicals in Oil processing. Some polymers contain VOCs that are potentially lost during processing. The emissions summary is as follows:

Annual Oil Throughput lb/yr	Percent Chemical (100 ppm)	Chemical Usage (lb/yr)	Percent VOC	VOC lbs/yr	Percent HAP	HAP lbs/yr
26,422,788.00	0.01%	2,642.28	70%	1849.60	10%	264.23
Total (ton/yr):				0.92	0.13	

Total VOC emissions from the Oil storage and treatment are: **7799.72 lb/yr**  
**3.90 ton/yr**

Total single HAP emissions from the Oil storage and treatment are: **677.43 lb/yr**  
**0.34 ton/yr**

Total combined HAP emissions from the Oil storage and treatment are: **1917.04 lb/yr**  
**0.96 ton/yr**

C. Mineral Spirits and Diesel Storage

1. Breathing Losses

The sum of the breathing losses is as follows:

Tank	Constant	Mv	[P/(Pa-P)] <sup>0.68</sup>	D <sup>1.73</sup>	H <sup>0.51</sup>	dT <sup>0.50</sup>	Fp	C	Kc	Percent VOC	Result Lb/Yr	Percent Single HAP	Result Lb/Yr	Percent Combined HAPs	Result Lb/Yr
M1	0.0226	125	0.1	19.09	2.24	4.47	1	0.25	1	100.0%	13.50	0.0%	0.00	0.00%	0.00
M2	0.0226	125	0.1	19.09	2.24	4.47	1	0.25	1	100.0%	13.50	0.0%	0.00	0.00%	0.00
M3	0.0226	125	0.1	19.09	2.24	4.47	1	0.25	1	100.0%	13.50	0.0%	0.00	0.00%	0.00
M4	0.0226	125	0.1	19.09	2.24	4.47	1	0.25	1	100.0%	13.50	0.0%	0.00	0.00%	0.00
M5	0.0226	125	0.1	22.19	2.6	4.47	1	0.25	1	100.0%	18.21	0.0%	0.00	0.00%	0.00
T1	0.0226	75	0.28	53.7	4.4	3.16	1	0.25	1	100.0%	88.59	0.0%	0.00	0.00%	0.00

Total (lb/yr): **160.80**  
Total (tons/yr): **0.08**

Methodology:

The breathing losses are calculated as follows:

$$\text{Emissions (lb/yr)} = 2.26E-2 \times Mv \times [P/(Pa-P)]^{0.68} \times D^{1.73} \times H^{0.51} \times dT^{0.50} \times Fp \times C \times Kc$$

- Where:
- Mv Molecular Weight of Vapor in the storage tank (lb/lb mole)
  - P Pressure drop in psi
  - D Tank diameter in feet
  - H 1/2 Tank height in feet
  - dT Temperature difference F
  - C Adjustment factor for small diameter tanks

2. Working Losses

The sum of the working losses is as follows:

Tank	Constant	Mv	P	V	N	Kn	Kc	Percent VOC	Result Lb/Yr	Percent Single HAP	Result Lb/Yr	Percent Combined HAPs	Result Lb/Yr
M1	0.000024	125	0.5	1,750	26	0.44	1	100.0%	30.03	0.0%	0.00	0.00%	0.00
M2	0.000024	125	0.5	1,750	26	0.44	1	100.0%	30.03	0.0%	0.00	0.00%	0.00
M3	0.000024	125	0.5	1,750	26	0.44	1	100.0%	30.03	0.0%	0.00	0.00%	0.00
M4	0.000024	125	0.5	1,750	26	0.44	1	100.0%	30.03	0.0%	0.00	0.00%	0.00
M5	0.000024	125	0.5	2,750	26	0.44	1	100.0%	47.19	0.0%	0.00	0.00%	0.00
T1	0.000024	75	2	10,500	13	0.44	1	100.0%	216.22				

Total (lb/yr): **383.53**  
Total (tons/yr): **0.19**

Methodology:

The working losses are calculated as follows:

$$\text{Emissions (lb/yr)} = 2.4E-5 \times Mv \times P \times V \times N \times Kn \times Kc$$

- Where:
- Mv Molecular Weight of Vapor in the storage tank (lb/lb mole)
  - P Pressure drop in psi
  - V Tank Volume in gallons
  - N Turnovers per year
  - Kn Adjustment factor for small diameter tanks
  - Kc Product factor

Total VOC emissions from the Oil storage and treatment are: **544.33 lb/yr**  
**0.27 ton/yr**

**Appendix A: Emission Calculations  
VOC  
From Degreasing Operation**

**Company Name:** SER Indiana, LLC  
**Address City IN Zip:** 1122 Division Street, Mishawaka, IN 46545  
**Permit No.:** 141-23693  
**PIt ID:** 141-00166  
**Reviewer:** Gary Freeman  
**Date:** 10/23/06

Process	Density (Lb VOC /Gal)	Gal of Mat (gal/unit)	Units (units/hour)	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year
Part washer (2 degreasers)	6.59	90.00	gal/yr	0.07	1.62	0.30
Touchup Painting	3.00	0.25	0.0055	0.0041	0.10	0.02
<b>Total Potential Emissions:</b>				<b>0.0718</b>	<b>1.72</b>	<b>0.31</b>

Methodology:

Potential VOC Pounds per Hour = Density (lb/gal) \* Gal of Material (gal/day) / 24 hrs/day

Potential VOC Pounds per Day = Density (lb/gal) \* Gal of Material (gal/day)

Potential VOC Tons per Year = Density (lb/gal) \* Gal of Material (gal/day) \* (365 days/yr) \* (1 ton/2000 lbs)

**Appendix A: Emissions Calculations  
Natural Gas Combustion Only  
MM BTU/HR <100**

**Company Name:** SER Indiana, LLC  
**Address City IN Zip:** 1122 Division Street, Mishawaka, IN 46545  
**Permit No.:** 141-23693-00166  
**Reviewer:** Gary Freeman  
**Date:** 10/23/06

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

2.7

23.7

One (1) Boiler @ 2.0 MMBtu/hr and two (2) parts washers each @ 0.35 MMBtu/hr

Pollutant

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.0	0.1	0.0	1.2	0.1	1.0

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 2 for HAPs emissions calculations.

**Appendix A: Emissions Calculations**

**Natural Gas Combustion Only**

**MM BTU/HR <100**

**Small Industrial Boiler**

**HAPs Emissions**

**Company Name:** SER Indiana, LLC  
**Address City IN Zip:** 1122 Division Street, Mishawaka, IN 46545  
**Permit No.:** 141-23693-00166  
**Reviewer:** Gary Freeman  
**Date:** 10/23/06

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	2.483E-05	1.419E-05	8.870E-04	2.129E-02	4.021E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	5.913E-06	1.301E-05	1.656E-05	4.494E-06	2.483E-05

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.  
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.