

May 19, 2003

Mr. Michael Wertz  
Heritage Environmental Services, LLC  
7901 West Morris Street  
Indianapolis, Indiana 46231

Re: Registered Construction and Operation Status,  
097-15407-00122

Dear Mr. Wertz:

The application from Heritage Environmental Services, LLC, received on December 27, 2001, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following operation of a waste treatment and disposal facility, to be located at 7901 West Morris Street, Indianapolis, Indiana 46231, is classified as registered and may operate according to 326 IAC 2-5.5:

- (a) Aqueous wastewater treatment operations, identified as 001, installed in 1999, with NO<sub>x</sub> emissions controlled by a Packed Bed Scrubber, with a maximum capacity of 12,000 cubic feet per minute (cfm), exhausting to stack 1.
- (b) Silo storage and pneumatic handling of lime, installed in 1989, identified as 002 through 006, controlled by five (5) Pulse Jet Baghouses for PM control, and one (1) back-up pulse jet baghouse, identified as 013, installed in 1993, each with a grain loading of 0.03 grains per standard cubic foot (gr/dscf), and a maximum throughput of 14,000 tons per year, and exhausting to stacks 2 through 6.
- (c) One (1) natural gas boiler, identified as 007, installed in 1978, with a maximum capacity of 8.4 million Btu per hour (MMBtu/hr), and exhausting to stack 7.
- (d) One (1) natural gas boiler, identified as 008, installed in 1994, with a maximum capacity of 8.4 million Btu per hour (MMBtu/hr), and exhausting to stack 8.
- (e) One (1) CDU hot oil heater, identified as 009, installed in 1984, with a maximum capacity of 5.8 million Btu per hour (MMBtu/hr), and exhausting to stack 9.
- (f) One (1) polishing building, identified as 010, installed in 1989, with an air flow rate of 400 cubic feet per minute (cfm), using a packed bed scrubber as control for NO<sub>x</sub>, and exhausting to stack 10.
- (g) One (1) oil processing/secondary oxidation chamber, identified as 011, with a maximum capacity of 2400 gallons per hour (gal/hr)/4.1 million Btu per hour (MMBtu/hr), and exhausting to stack 11.
- (h) One (1) hot water heater, identified as 012, installed in 1984, with a maximum capacity of 2.0 million Btu per hour (MMBtu/hr), and exhausting to stack 12.
- (i) One (1) containment building, identified as 015, installed in 2002, with a grain loading of

- 0.01 grains per standard cubic foot (gr/dscf), using a pulse jet baghouse for PM control, and exhausting to stack 15.
- (j) One (1) frame pilot unit, identified as 016, installed in 2000, including mixer, briquette machine, sizing screens, and natural gas fired furnace, with a maximum capacity of 0.5 MM Btu per hour (MMBtu/hr), for recovery of zinc compounds from electric arc furnace dust, with an air flow rate of 2650 cubic feet per minute (cfm), and exhausting to stack 16.
  - (k) One (1) frame pilot unit, identified as 017, installed in 2000, including mixer, briquette machine, sizing screens, and natural gas fired furnace, with a maximum capacity of 0.5 MM Btu per hour (MMBtu/hr), for recovery of zinc compounds from electric arc furnace dust, with an air flow rate of 2650 cubic feet per minute (cfm), and exhausting to stack 17.
  - (l) One (1) furnace, identified as 018, installed in 2000, with a maximum capacity of 0.5 million Btu per hour (MMBtu/hr).
  - (m) One (1) parts washer, identified as 019, with a maximum capacity of one (1) gallon per day.
  - (n) Supplemental fuel tanks, identified as 020, installed in 1978, with a maximum capacity of 7500 gallons per hour.
  - (o) Supplemental fuel tank loading operations, identified as 021, installed in 1978, with a maximum capacity of 7500 gallons per hour.
  - (p) Oil product tanks, identified as 022, installed in 1978, with a maximum capacity of 5100 gallons per hour.
  - (q) Oil tanker loading operations, identified as 023, installed in 1978, with a maximum capacity of 5100 gallons per hour.
  - (r) One (1) truck boiler, identified as 024, installed in 1984, with a maximum capacity of 2.0 million Btu per hour (MMBtu/hr), and exhausting to stack 24.
  - (s) QC Lab Hoods, identified as 025, installed in 1978, with an air flow rate of 200 cubic feet per minute (cfm), and exhausting to stack 25.
  - (t) One (1) de-pack air handling system, identified as 026, installed in 1978, with an air flow rate of 300 cubic feet per minute (cfm), and exhausting to stack 26.
  - (u) One (1) empty paint-can crusher, identified as 027, installed in 1994, with a maximum capacity of 100 cans per hour.
  - (v) One (1) vial shredder, identified as 028, installed in 1994, with a maximum capacity of 100 vials per hour.
  - (w) One (1) lean water tank, identified as 029, installed in 1978, with a maximum capacity of 3000 gallons per hour.

The following conditions shall be applicable:

- (a) Pursuant to 326 IAC 2-6 (Emission Reporting), the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in

326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

- (b) 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 thirty percent (30%) 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.
- (c) Pursuant to 326 IAC 6-2-2 (Particulate Emissions Limitations for Sources of Indirect Heating), particulate emissions from indirect heating facility, 007, shall be limited by the following equation:

$$Pt = 0.87/Q^{0.16} = 0.87/8.4^{0.16} = 0.619$$

where Pt = Pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input.

Q = Maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input of B3.

For Q less than 10 million Btu per hour (MMBtu/hr), Pt shall not exceed 0.60. Maximum operating capacity for 007 is less than 10 million Btu per hour (MMBtu/hr). Therefore, particulate matter emissions from the boiler, 007, shall not exceed 0.6 pounds per million Btu (lbs/MMBtu).

- (d) Pursuant to 326 IAC 6-2-1(d) (Particulate Emissions Limitations for Sources of Indirect Heating), particulate emissions from boilers 008 and 024 shall be limited by the following equation:

$$Pt = 1.09/Q^{0.26}$$

where Pt = Pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input.

Q = Total maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input.

The limitation for boiler 008 is 0.51 pounds per million Btu (lbs/MMBtu). The limitation for boiler 024 is 0.59 pounds per million Btu (lbs/MMBtu).

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

**Compliance Data Section  
Office of Air Quality  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, IN 46206-6015  
and  
Office of Environmental Services  
Air Quality Management Section, Compliance Data Group  
2700 South Belmont Avenue  
Indianapolis, Indiana 46221-2097**

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) the Office of Environmental Services (OES) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Original Signed by John B. Chavez  
John B. Chavez, Administrator

aco

cc: File, Marion County  
Air Compliance  
IDEM, Mindy Hahn  
Permits, Angelique Oliger

Heritage Environmental Services, LLC  
Indianapolis, Indiana  
Permit Reviewer: Angelique Oliger

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## Registration Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3).

<b>Company Name:</b>	<b>Heritage Environmental Services, LLC</b>
<b>Address:</b>	<b>7901 West Morris Street</b>
<b>City:</b>	<b>Indianapolis, Indiana 46231</b>
<b>Authorized individual:</b>	<b>Michael Wertz</b>
<b>Phone #:</b>	<b>(317) 486-2778</b>
<b>Registration #:</b>	<b>097-15407-00122</b>

I hereby certify that Heritage Environmental Services, LLC is still in operation and is in compliance with the requirements of Registration 097-15407-00122

<b>Name (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

**Indiana Department of Environmental Management  
Office of Air Quality  
and  
City of Indianapolis  
Office of Environmental Services**

**Technical Support Document (TSD) for a Registration**

**Source Background and Description**

**Source Name:** Heritage Environmental Services, LLC  
**Source Location:** 7901 West Morris Street, Indianapolis, Indiana 46231  
**County:** Marion  
**SIC Code:** 4953  
**Operation Permit No.:** 097-15407-00122  
**Permit Reviewer:** Angelique Oligier

The Office of Environmental Services (OES) has reviewed an application from Heritage Environmental Services, LLC, relating to the operation of a waste treatment and disposal facility.

**Permitted Emission Units and Pollution Control Equipment**

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

- (a) Aqueous wastewater treatment operations, identified as 001, installed in 1999, with NO<sub>x</sub> emissions controlled by a Packed Bed Scrubber, with a maximum capacity of 12,000 cubic feet per minute (cfm), exhausting to stack 1.
- (b) Silo storage and pneumatic handling of lime, installed in 1989, identified as 002 through 006, controlled by five (5) Pulse Jet Baghouses for PM control, and one (1) back-up pulse jet baghouse, identified as 013, installed in 1993, each with a grain loading of 0.03 grains per standard cubic foot (gr/dscf), and a maximum throughput of 14,000 tons per year, and exhausting to stacks 2 through 6.
- (c) One (1) natural gas boiler, identified as 007, installed in 1978, with a maximum capacity of 8.4 million Btu per hour (MMBtu/hr), and exhausting to stack 7.
- (d) One (1) natural gas boiler, identified as 008, installed in 1994, with a maximum capacity of 8.4 million Btu per hour (MMBtu/hr), and exhausting to stack 8.
- (e) One (1) CDU hot oil heater, identified as 009, installed in 1984, with a maximum capacity of 5.8 million Btu per hour (MMBtu/hr), and exhausting to stack 9.
- (f) One (1) polishing building, identified as 010, installed in 1989, with an air flow rate of 400 cubic feet per minute (cfm), using a packed bed scrubber as control for NO<sub>x</sub>, and exhausting to stack 10.
- (g) One (1) oil processing/secondary oxidation chamber, identified as 011, with a maximum capacity of 2400 gallons per hour (gal/hr)/4.1 million Btu per hour (MMBtu/hr), and exhausting to stack 11.

- (h) One (1) hot water heater, identified as 012, installed in 1984, with a maximum capacity of 2.0 million Btu per hour (MMBtu/hr), and exhausting to stack 12.
- (i) One (1) containment building, identified as 015, installed in 2002, with a grain loading of 0.01 grains per standard cubic foot (gr/dscf), using a pulse jet baghouse for PM control, and exhausting to stack 15.
- (j) One (1) frame pilot unit, identified as 016, installed in 2000, including mixer, briquette machine, sizing screens, and natural gas fired furnace, with a maximum capacity of 0.5 MM Btu per hour (MMBtu/hr), for recovery of zinc compounds from electric arc furnace dust, with an air flow rate of 2650 cubic feet per minute (cfm), and exhausting to stack 16.
- (k) One (1) frame pilot unit, identified as 017, installed in 2000, including mixer, briquette machine, sizing screens, and natural gas fired furnace, with a maximum capacity of 0.5 MM Btu per hour (MMBtu/hr), for recovery of zinc compounds from electric arc furnace dust, with an air flow rate of 2650 cubic feet per minute (cfm), and exhausting to stack 17.
- (l) One (1) furnace, identified as 018, installed in 2000, with a maximum capacity of 0.5 million Btu per hour (MMBtu/hr).
- (m) One (1) parts washer, identified as 019, with a maximum capacity of one (1) gallon per day.
- (n) Supplemental fuel tanks, identified as 020, installed in 1978, with a maximum capacity of 7500 gallons per hour.
- (o) Supplemental fuel tank loading operations, identified as 021, installed in 1978, with a maximum capacity of 7500 gallons per hour.
- (p) Oil product tanks, identified as 022, installed in 1978, with a maximum capacity of 5100 gallons per hour.
- (q) Oil tanker loading operations, identified as 023, installed in 1978, with a maximum capacity of 5100 gallons per hour.
- (r) One (1) truck boiler, identified as 024, installed in 1984, with a maximum capacity of 2.0 million Btu per hour (MMBtu/hr), and exhausting to stack 24.
- (s) QC Lab Hoods, identified as 025, installed in 1978, with an air flow rate of 200 cubic feet per minute (cfm), and exhausting to stack 25.
- (t) One (1) de-pack air handling system, identified as 026, installed in 1978, with an air flow rate of 300 cubic feet per minute (cfm), and exhausting to stack 26.
- (u) One (1) empty paint-can crusher, identified as 027, installed in 1994, with a maximum capacity of 100 cans per hour.
- (v) One (1) vial shredder, identified as 028, installed in 1994, with a maximum capacity of 100 vials per hour.
- (w) One (1) lean water tank, identified as 029, installed in 1978, with a maximum capacity of 3000 gallons per hour.

#### **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 approvals including, but not limited to, the following:

- (a) OP 0122, issued on October 18, 1993; and
- (b) Exemption E097-11935-00122, issued on May 2, 2000.

All conditions from previous approvals were incorporated into this permit.

### Stack Summary

Stack ID	Operation	Height (feet)	Diameter or Dimensions (feet)	Flow Rate (acfm)	Temperature (°F)
1	001	45	3 x 4	12000	77
2	002	42	0.5	1000	77
3	003	42	0.5	1000	77
4	004	58	0.5	1000	77
5	005	58	0.5	1000	77
6	006	58	0.5	1000	77
7	007	29	1.25	1500	150
8	008	29	1.25	1500	150
9	009	29	1.25	1500	150
10	010	30.5	0.75	400	77
11	011	34.5	2.5	2400	150
12	012	42	0.5	900	77
13	013	58	0.5	900	77
15	015	42	2.0	40000	77
16	016	20	1.0	4650	100
17	017	20	1.0	1200	100
25	025	20	0.5	200	77
26	026	20	0.5	300	77

### Enforcement Issue

There are no enforcement actions pending.

### Recommendation

The staff recommends to the Administrator that the operation 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.

A complete application for the purposes of this review was received on December 27, 2001.

### Emission Calculations

See Appendix A (pages one through five) of this document for detailed emissions calculations.

**Potential To Emit**

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	23.593
PM-10	23.593
SO <sub>2</sub>	0.294
VOC	12.737
CO	2.962
NO <sub>x</sub>	14.104

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of particulate is equal to or greater than five (5) tons per year and less than twenty-five (25) tons per year. The potential to emit (as defined in 326 IAC 2-7-1(29)) of both VOC and NO<sub>x</sub> are equal to or greater than ten (10) tons per year and less than twenty-five (25) tons per year. The potential to emit (as defined in 326 IAC 2-7-1(29)) of all other criteria pollutants is less than twenty-five (25) tons per year. Therefore, the source is registered and subject to the provisions of 326 IAC 2-5.5.
- (b) Fugitive Emissions  
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

**Actual Emissions**

No previous emission data has been received from the source.

**County Attainment Status**

The source is located in Marion County.

Pollutant	Status
PM-10	attainment
SO <sub>2</sub>	maintenance attainment
NO <sub>2</sub>	attainment
Ozone	maintenance attainment
CO	attainment
Lead	unclassifiable

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

- (b) Marion County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) Fugitive Emissions  
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

### Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	23.593
PM10	23.593
SO <sub>2</sub>	0.294
VOC	12.737
CO	2.962
NO <sub>x</sub>	14.104
Single HAP	0.031
Combination HAPs	0.113

- (a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.
- (b) These emissions were based on information provided in the permit application.

### Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit 097-15407-00122, 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 OES inspector assigned to the source.

### Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
  - (1) Steam generating units that have a maximum design heat input capacity of less than ten (10) million Btu per hour (10 mm Btu/hr) are not subject to 40 CFR Part 60 Subpart Dc. This source has no steam generating units with a maximum design heat input capacity of greater than ten (10) million Btu per hour (Btu/hr). Therefore, this source is not subject to 40 CRF Part 60 Subpart Dc.

- (2) This source is not subject to the New Source Performance Standard, 326 IAC 12, 40 CFR 60, Subpart Kb, because the storage vessels were constructed prior to July 23, 1984.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source. This source is not subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP), 326 IAC 14, 40 CFR Part 63, Subpart T, because the degreasing operations are wipe cleaning only, and because the solvent used does not contain any of the halogenated HAP solvents, listed in §63.460(a).

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

#### **326 IAC 1-6-3 (Preventive Maintenance Plan)**

The source has submitted a Preventive Maintenance Plan (PMP) on December 27, 2001. This PMP has been verified to fulfill the requirements of 326 IAC 1-6-3 (Preventive Maintenance Plan).

#### **326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Requirements)**

This source is not a major source. This source is not one (1) of the twenty-eight (28) listed source categories. The potential to emit each criteria pollutant from the entire source is less than 250 tons per year. Therefore, this source is a minor source and the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Requirements) are not applicable.

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

This source will emit less than ten (10) tons per year of a single HAP or twenty-five (25) tons per year of a combination of HAPs, and construction occurred before July 27, 1997. Therefore, 326 IAC 2-4.1 does not apply.

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

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than ten (10) tons per twelve (12) consecutive months of NO<sub>x</sub>. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

#### **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 thirty percent (30%) 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 (Particulate Emissions Limitations for Sources of Indirect Heating)**

- (a) The boiler, identified as 007, is subject to the provisions of 326 IAC 6-2-2 because it is a source of indirect heat and is located in Marion County and was constructed prior to

September 21, 1983. Particulate emissions from indirect heating facility, 007, shall be limited by the following equation:

$$Pt = 0.87/Q^{0.16} = 0.87/8.4^{0.16} = 0.619$$

where Pt = Pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input.

Q = Maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input of B3.

For Q less than 10 million Btu per hour (MMBtu/hr), Pt shall not exceed 0.60. Maximum operating capacity for 007 is less than 10 million Btu per hour (MMBtu/hr). Therefore, particulate matter emissions from the boiler, 007, shall not exceed 0.6 pounds per million Btu (lbs/MMBtu).

- (b) The boilers 008 and 024 are subject to the provisions of 326 IAC 6-2-4 because they are sources of indirect heat and are located in Marion County and were constructed after September 21, 1983. Particulate emissions from indirect heating facilities shall be limited by the following equation:

$$Pt = 1.09/Q^{0.26}$$

where Pt = Pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input.

Q = Total maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input.

The limitation for boiler 008 is 0.51 pounds per million Btu (lbs/MMBtu). The limitation for boiler 024 is 0.59 pounds per million Btu (lbs/MMBtu).

## Conclusion

The operation of this waste treatment and disposal facility shall be subject to the conditions of the attached proposed Registration 097-15407-00122.

### **Emissions Calculation for Oil Processing, Emissions Unit 011**

\*The maximum rate of used oil processed is 2,400 gallons per hour.

\*The emission factor is  $2 \times 10^{-5}$  pounds per gallon for SO<sub>2</sub>.

\*The emission factor is  $1 \times 10^{-3}$  pounds per gallon for VOC.

#### **Potential Emissions Calculations**

$$2,400 \text{ gal / hr} * 2 \times 10^{-5} \text{ lbs / gal} * 1 \text{ ton} / 2000 \text{ lbs} * 8760 \text{ hr / yr} \\ = \mathbf{0.21 \text{ tons SO}_2 \text{ emitted per year}}$$

$$2,400 \text{ gal / hr} * 1 \times 10^{-3} \text{ lbs / gal} * 1 \text{ ton} / 2000 \text{ lbs} * 8760 \text{ hr / yr} \\ = \mathbf{10.5 \text{ tons VOC emitted per year}}$$

### **Emissions Calculation for Degreasing, Emissions Unit 019**

\*The cold cleaner used is Crystal Clean, CC100 + Parts Washing Solvent.

\*The density of the cleaner is 6.54 pounds per gallon (lbs/gal).

\*The maximum consumption is one (1) gallon per day.

#### **Potential Emissions Calculations**

$$1 \text{ gal / day} * 6.54 \text{ lbs / gal} * 1 \text{ ton} / 2000 \text{ lbs} * 365 \text{ days / yr} \\ = \mathbf{1.199 \text{ tons / year VOC emitted}}$$

### **Emissions Calculation for Tank Truck Loading, Emissions Unit 021**

\*The annual throughput is 2.734 million gallons supplemental fuel (sf).

\*The total emission factor is .2243 pound per 1,000 gallons.

\*The percent VOC of supplemental fuel is 49.

#### **Potential Emissions Calculations**

$$2.734\text{e}6 \text{ gallons} * 0.2243 \text{ lbs sf} / 1000 \text{ gallons} * 0.49 \text{ lb VOC} / 1 \text{ lb sf} \\ * 1 \text{ ton} / 2000 \text{ lbs} = \mathbf{0.15 \text{ tons / year VOC emitted}}$$

**Appendix A: PM Emission Calculations  
Storage and Handling of Bulk Material**

**Company Name:** Heritage Environmental Services, LLC  
**Address City IN Zip:** 7901 West Morris Street, Indianapolis, Indiana 46231  
**CP:** 097-15407-00122  
**Reviewer:** Angelique Oliger  
**Date:** 22-Apr-03

Material handled/stored: Lime  
 Method of handling: Pneumatic  
 Type of Storage: Silo

Emissions Unit	Maximum Rate (ft <sup>3</sup> /hr)	Emission Factor (gr/ft <sup>3</sup> )	Emission Rate (lb/hr)	Maximum Uncontrolled Emissions (tons/yr)	Pollution Control Efficiency	Maximum Controlled Emissions (tons/yr)
002	60,000	0.03	0.257	1.126	0.98	0.023
003	60,000	0.03	0.257	1.126	0.98	0.023
004	60,000	0.03	0.257	1.126	0.98	0.023
005	60,000	0.03	0.257	1.126	0.98	0.023
006	60,000	0.03	0.257	1.126	0.98	0.023
013	54,000	0.03	0.231	1.014	0.98	0.020
015	2,400,000	0.01	3.429	15.017	0.98	0.300

Total **21.662** 0.433

**Appendix A: Emission Calculations**  
**Natural Gas Combustion Only**  
**MM Btu/hr 0.3 - < 10**

**Company Name: Heritage Environmental Services, LLC**  
**Address City IN Zip: 7901 West Morris Street, Indianapolis, Indiana 46231**  
**CP: 097-15407-00122**  
**Reviewer: Angelique Olinger**  
**Date: 22-Apr-03**

Emissions Unit	Heat Input Capacity MMBtu/hr
007	8.4
008	8.4
009	5.8
011	2
012	0.5
016	0.5
017	0.5
018	2
024	4.1
	<b>32.2</b>

Potential Throughput  
MMCF/yr  
282.1

Emission Factor in lb/MMCF	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	13.7	13.7	0.6	100.0	5.3	21.0
Potential Emission in tons/yr	1.932	1.932	0.085	14.104	0.747	2.962

**Methodology**

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: uncontrolled = 100, Low Nox Burner = 17, Flue gas recirculation = 36

Emission Factors for CO: uncontrolled = 21, Low NOx Burner = 27, Flue gas recirculation = ND

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

Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-03-006-03

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



**Appendix A: VOC Emission Calculations  
Supplemental Fuel Tanks, 020  
From TANKS 4.0**

**Company Name:** Heritage Environmental Services, LLC  
**Address City IN Zip:** 7901 West Morris Street, Indianapolis, Indiana 46231  
**CP:** 097-15407-00122  
**Reviewer:** Angelique Oligier  
**Date:** 22-Apr-03

Components supplemental fuel	Losses per tank (lbs/yr)			4 tanks	
	Working Loss	Breathing Loss	Total Loss	Total VOC Emissions (tons/yr)	Total HAP Emissions (tons/yr)
* Acetone	38.82	0.16	38.98		
Distillate fuel oil no. 2	7.51	0.03	7.54	0.01508	
** Ethylbenzene	1.21	0	1.21	0.00242	0.00242
** Methyl ethyl ketone	13.11	0.05	13.16	0.02632	0.02632
** Methyl isobutyl ketone	1.41	0.01	1.42	0.00284	0.00284
*** Methylene chloride	15.29	0.06	15.35		0.0307
** Styrene	2.92	0.01	2.93	0.00586	0.00586
** Tetrachloroethylene	0.19	0	0.19	0.00038	0.00038
** Toluene	11.51	0.05	11.56	0.02312	0.02312
*** Trichloroethane (1,1,1)	3.61	0.01	3.62		0.00724
Trichloroethylene	3.9	0.02	3.92	0.00784	
Unidentified Components	15.786	0.066	15.852	0.031704	
** Xylene (-m)	6.93	0.03	6.96	0.01392	0.01392
<b>Total</b>	<b>122.196</b>	<b>0.496</b>	<b>122.692</b>	<b>0.129484</b>	<b>0.1128</b>

Total Emissions (tons/yr) = Total Loss (lbs/yr) \* 1 ton / 2000 lbs \* 4 tanks

\*non-VOC

\*\*HAP

\*\*\*non-VOC, HAP

**Company Name:** Heritage Environmental Services, LLC  
**Address City IN Zip:** 7901 West Morris Street, Indianapolis, Indiana 46231  
**CP:** 097-15407-00122  
**Reviewer:** Angelique Oliger  
**Date:** May 16, 2003

**SUMMARY OF CALCULATED POTENTIAL EMISSION RATES - BEFORE CONROLS**

Emission Unit	PM	SO2	NOx	VOC	CO	HAPs
1						
2	1.126					
3	1.126					
4	1.126					
5	1.126					
6	1.126					
7	0.504	0.022	3.679	0.195	0.773	
8	0.504	0.022	3.679	0.195	0.773	
9	0.348	0.015	2.540	0.135	0.533	
10						
11	0.120	0.215	0.876	10.558	0.184	
12	0.030	0.001	0.219	0.012	0.046	
13	1.014					
15	15.017					
16	0.030	0.001	0.219	0.012	0.046	
17	0.030	0.001	0.219	0.012	0.046	
18	0.120	0.005	0.876	0.046	0.184	
19				1.199		
20				0.129		0.113
21				0.150		
22						
23						
24	0.246	0.011	1.796	0.095	0.377	
25						
26						
27						
28						
29						
<b>Total</b>	<b>23.593</b>	<b>0.294</b>	<b>14.104</b>	<b>12.737</b>	<b>2.962</b>	<b>0.113</b>
	<b>PM</b>	<b>SO2</b>	<b>NOx</b>	<b>VOC</b>	<b>CO</b>	<b>HAPs</b>