



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: August 12, 2005
RE: TFS Rochester Operations
FROM: Paul Dubenetzky
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 1/10/05



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August 12, 2005

Ms. Jill Wood
 TFS Rochester Operations
 4366 N. Old U.S. Hwy 31
 Rochester, IN 46975

Re: 049-21460-00023
 First Notice Only Change to
 Registration No. 049-18025-00023

Dear Ms. Wood:

TFS Rochester Operations was issued a Revised Registration (049-18025-00023) on July 15, 2005 for a stationary fabricated metal production operation. A letter notifying the Office of Air Quality of typographical errors in the Registration was received on July 18, 2005. The source requested that the stack numbers for the one (1) alkaline parts washing system be corrected and the source contact name be changed to Jill Wood. In addition, IDEM updated the emission calculations in order to clarify the source's potential to emit before and after controls (see attached Emissions Calculations, pages 1 through 4) and updated the county attainment status. Pursuant to the provisions of 326 IAC 2-5.5-6(d), the permit is hereby revised as follows, with deleted language as ~~strikeouts~~ and new language **bolded**:

Emission Units and Pollution Control Equipment

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

- (e) One (1) alkaline parts washing system, with a maximum capacity of 9,000 pounds of low carbon steel per hour and consists of the following equipment:
 - (1) One (1) natural gas-fired parts washer heater, with a maximum heat input capacity of 6.0 mmBtu/hr and exhausts to a stack designated as Stack #4; and
 - (2) One (1) parts washer using an alkaline detergent and exhausts to a stack designated as Stack #2.
 - (3) One (1) rinse bath exhausting to a stack designated as Stack #3.**

Stack Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (°F)
2 and 3	Parts washer and rinse bath	25.0	1.00	435	1000

Emission Calculations

~~Emissions from Cold Header #1: PM = 1.19 tons per year (0.27 pound per hour)~~
~~Emissions from Cold Header #2: PM = 0.35 tons per year (0.08 pound per hour)~~
~~Emissions from Cold Header #3: PM = 2.78 tons per year (0.63 pound per hour)~~
PTE of PM/PM10 (Before Controls) from Cold Header #1: = 1.25 tons/year (0.29 lbs/hour)
PTE of PM/PM10 (Before Controls) from Cold Header #2: = 0.37 tons/year (0.09 lbs/hour)
PTE of PM/PM10 (Before Controls) from Cold Header #3: = 2.92 tons/year (0.67 lbs/hour)

~~VOC emissions from the cleaning stations: 11.36 tons per year~~**1.34 tons/year**

Potential to Emit Before Controls

Pollutant	Potential to Emit (tons/yr)
PM	5.12 4.76
PM10	5.12 5.38
SO2	0.4 0.07
VOC	1.34 1.94
CO	9.2 9.19
NOx	11.0 10.9

County Attainment Status

The source is located in Fulton County.

Pollutant	Status
PM10	Attainment or Unclassifiable
PM2.5	Attainment or Unclassifiable
SO ₂	Attainment
NO ₂	Attainment or Unclassifiable
1-Hour Ozone	Attainment or Unclassifiable
8-Hour Ozone	Attainment or Unclassifiable
CO	Attainment or Unclassifiable
Lead	Attainment or Unclassifiable

- (c) **Fulton County has been classified as attainment or unclassifiable for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM 2.5 emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.**

Source Status

Existing Source PSD Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	0.44
PM-10	1.06
SO₂	0.07
VOC	1.94
CO	9.19
NO_x	10.9
Worst Single HAP	< 10
Combination HAPs	< 25

- (a) **This source is not a major PSD stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.**

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this letter and the following revised permit pages and emissions calculations to the front of the original permit. This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Nathan C. Bell, 100 North Senate Avenue, Indianapolis, Indiana, 46204, at 317-234-3350 or at 1-800-451-6027 (ext 43350).

Sincerely,

Original signed by

Nysa L. James, Section Chief
Permits Branch
Office of Air Quality

ncb

Attachments: updated pages to Registration No. 049-18025-00023, updated emissions calculations

cc: File - Fulton County
Fulton County Health Department
IDEM Northern Regional Office
Air Compliance - David North
Permit Tracking
Compliance Data Section
Administrative and Development



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

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August 12, 2005

Ms. Jill Wood
TFS Rochester Operations
4366 N. Old U.S. Hwy 31
Rochester, IN 46975

Re: 049-21460-00023
First Notice Only Change
Registered Operation Status
049-18025-00023

Dear Ms. Wood:

TFS Rochester Operations was issued a Revised Registration (049-18025-00023) on July 15, 2005 for a stationary fabricated metal production operation. A letter notifying the Office of Air Quality of typographical errors in the Registration was received on July 18, 2005. The source requested that the stack numbers for the one (1) alkaline parts washing system be corrected and the source contact name be changed to Jill Wood. In addition, IDEM updated the emission calculations in order to clarify the source's potential to emit before and after controls (see attached Emissions Calculations, pages 1 through 4) and updated the county attainment status.

Based on the corrected information and the provisions in 326 IAC 2-5.5, it has been determined that the following emission units, located at 4366 North US Highway 31, Rochester, IN 46975, are classified as registered:

- (a) Two (2) nut former machines with a maximum throughput of 1,630 gallons of oil per year per nut former, connecting to one (1) existing Trion electrostatic precipitator which controls oil mist and exhausts to a stack designated as #7.
- (b) One (1) nut former machine with a maximum throughput of 1,630 gallons of oil per year, connecting to one (1) existing Trion electrostatic precipitator which controls oil mist and exhausts to a stack designated as #8.
- (c) Two (2) natural gas-fired air make-up units, designated as AE-1 and AE-2, with a maximum heat input capacity of 5.661 mmBtu/hr each and exhaust to the atmosphere.
- (d) One (1) natural gas-fired air make-up unit, designated as AE-3, with a maximum heat input capacity of 2.733 mmBtu/hr and exhausts to the atmosphere.
- (e) One (1) alkaline parts washing system, with a maximum capacity of 9,000 pounds of low carbon steel per hour and consists of the following equipment:
 - (1) One (1) natural gas-fired parts washer heater, with a maximum heat input capacity of 6.0 mmBtu/hr and exhausts to a stack designated as Stack #4; and
 - (2) One (1) parts washer using an alkaline detergent and exhausts to a stack designated as Stack #2.
 - (3) One (1) rinse bath exhausting to a stack designated as Stack #3.
- (f) One (1) natural gas-fired heated alkaline pan washer, with a maximum heat input capacity of 0.8 mmBtu/hr and exhausts to a stack designated as Stack #48.

- (g) One (1) natural gas-fired wastewater evaporator, with a maximum heat input capacity of 0.75 mmBtu/hr and exhausts to a stack designated as Stack#28.
- (h) Three (3) natural gas-fired thermolyne furnaces, with a maximum heat input capacity of 0.4 mmBtu/hr each and exhausts to stacks designated as Stack #17, Stack #18 and Stack # 19.
- (i) One (1) natural gas-fired roof mounted heating and air condition unit, with a maximum heat input capacity of 0.1216 mmBtu/hr and exhausts to a stack designated as Stack #20.
- (j) Seven (7) natural gas-fed roof mounted heating and air conditioning units, with a maximum heat input capacity of 0.225 mmBtu/hr each and exhaust to stacks designated as Stack #21, Stack #22, Stack #24, Stack #28a, Stack # 29, Stack #30 and Stack #31.
- (k) Two (2) natural gas-fired roof mounted heating and air condition units, with a maximum heat input capacity of 0.08 mmBtu/hr each and exhaust to stacks designated as Stack #23 and Stack #26.
- (l) One (1) natural gas-fired roof mounted heating and air conditioning unit, with a maximum heat input capacity of 0.275 mmBtu/hr and exhausts to a stack designated as Stack # 25.
- (m) One (1) natural gas-fired roof mounted heating and air conditioning unit, with a maximum heat input capacity of 0.05 mmBtu/hr and exhausts to a stack designated as Stack # 27.
- (n) One (1) electric chip separator.
- (o) Fifteen (15) satellite cleaning stations with a maximum solvent usage rate of 4.27 pounds of solvent per hour and exhausts to the atmosphere.
- (p) One (1) cold header operation, with a maximum throughput of 445 pounds of low carbon stainless steel, brass or alloy steel per hour, with a maximum capacity of 6,000 gallons of lubricating oil per year, equipped with one (1) Trion electrostatic precipitator to control oil mist and exhausts to a stack designated as Stack #6.
- (q) Two (2) cold header operations, with a maximum throughput of 445 pounds of low carbon stainless steel, brass or alloy steel per hour per operation, with a maximum capacity of 6,000 gallons of lubricating oil per year per operation, equipped with one (1) Trion electrostatic precipitator to control oil mist and exhaust to stacks designated as Stack #7 and Stack #8.
- (r) One (1) threading operation, with a maximum throughput of 445 pounds of low carbon stainless steel, brass or alloy steel per hour.

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 (Opacity Limitations), opacity shall meet the following:
 - (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period 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 6-3-2 (Particulate Emission Limitations)
Particulate matter (PM) from the Cold Header #3 shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The Electrostatic Precipitator shall be in operation at all times the Cold Header #3 is in operation, and the permittee shall operate the control device in accordance with the manufacturer's specifications.

(3) Pursuant to 326 IAC 8-3-5:

- (a) the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:
- (1) equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) the solvent volatility is greater than two (2) kilopascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) the solvent is agitated; or
 - (C) the solvent is heated.
 - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kilopascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight (38°C) (one hundred degrees Fahrenheit (100°F)) then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
 - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in 326 IAC 8-3-5(b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kilopascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight (38°C) (one hundred degrees Fahrenheit (100°F)) or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celcius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U. S. EPA as a SIP revision.
- (b) the owner or operator of a cold cleaner degreaser facility shall ensure that the operating requirements are met:
- (1) close the cover whenever articles are not being handled in the degreaser.
 - (2) drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

- (3) store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

This registration is the third air approval issued to this source. The source may continue to operate according to 326 IAC 2-5.5.

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
Indianapolis, IN 46204**

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) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Original signed by

Nysa L. James, Section Chief
Permits Branch
Office of Air Quality

ncb

cc: File - Fulton County
Fulton County Health Department
IDEM Northern Regional Office
Air Compliance - David North
Permit Tracking
Compliance Data Section
Administrative and Development

Registration Annual Notification

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

Company Name:	TFS Rochester Operations
Address:	4366 N. Old U.S. Hwy 31
City:	Rochester, IN 46975
Authorized individual:	Mike Englert
Phone #:	574-223-9320
Registration #:	049-18025-00023

I hereby certify that TFS Rochester Operations is still in operation and is in compliance with the requirements of Registration 049-18025-00023.

Name (typed):
Title:
Signature:
Date:

**Emissions Calculations
Emission Summary**

Company Name: TFS Rochester Operations
Address City IN Zip: 4366 N. Old U.S. Hwy 31, Rochester, IN 46975
Registration No.: 049-18025-00023
Notice-Only-Change No.: 049-21460-00023
Reviewer: Nathan C. Bell
Date: July 20, 2005

Category	Uncontrolled Potential Emissions (tons/year)				
	Emissions Generating Activity				
	Pollutant	Natural Gas Combustion	Cold Headers	Cleaning Stations	TOTAL
Criteria Pollutants	PM	0.21	4.55		4.76
	PM10	0.83	4.55		5.38
	SO2	0.07			0.07
	NOx	10.9			10.9
	VOC	0.60		1.34	1.94
	CO	9.19			9.19
Hazardous Air Pollutants	Benzene	2.3E-04			2.3E-04
	Dichlorobenzene	1.3E-04			1.3E-04
	Formaldehyde	8.2E-03			8.2E-03
	n-Hexane	0.20			0.20
	Toluene	3.7E-04			3.7E-04
	Lead	5.5E-05			5.5E-05
	Cadmium	1.2E-04			1.2E-04
	Chromium	1.5E-04			1.5E-04
	Manganese	4.2E-05			4.2E-05
	Nickel	2.3E-04			2.3E-04
	Totals	0.21	0	0	0.21
Worse Case HAP				0.20	

Total emissions based on rated capacity at 8,760 hours/year.

Category	Controlled Potential Emissions (tons/year)				
	Emissions Generating Activity				
	Pollutant	Natural Gas Combustion	Cold Headers	Cleaning Stations	TOTAL
Criteria Pollutants	PM	0.21	0.23		0.44
	PM10	0.83	0.23		1.06
	SO2	0.07			0.07
	NOx	10.9			10.9
	VOC	0.60		1.34	1.94
	CO	9.19			9.19
Hazardous Air Pollutants	Benzene	2.3E-04			2.3E-04
	Dichlorobenzene	1.3E-04			1.3E-04
	Formaldehyde	8.2E-03			8.2E-03
	n-Hexane	0.20			0.20
	Toluene	3.7E-04			3.7E-04
	Lead	5.5E-05			5.5E-05
	Cadmium	1.2E-04			1.2E-04
	Chromium	1.5E-04			1.5E-04
	Manganese	4.2E-05			4.2E-05
	Nickel	2.3E-04			2.3E-04
	Totals	0.21	0	0	0.21
Worse Case HAP				0.20	

Total emissions based on rated capacity at 8,760 hours/year.

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

Company Name: TFS Rochester Operations
Address City IN Zip: 4366 N. Old U.S. Hwy 31, Rochester, IN 46975
Registration No.: 049-18025-00023
Notice-Only-Change No.: 049-21460-00023
Reviewer: Nathan C. Bell
Date: July 20, 2005

Emission Unit	Number of Units	Pollutant			PM*	PM10*	SO2	NOx**	VOC	CO
		Emission Factor (lb/MMCF)			1.9	7.6	0.6	100	5.5	84.0
		Unit Heat Input Capacity MMBtu/hr	Combined Total Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Potential Emission tons/yr					
				PM*	PM10*	SO2	NOx**	VOC	CO	
Air make-up units (AE-1 and AE-2)	2	5.661	11.3	99.18	0.094	0.377	0.030	4.959	0.273	4.166
Air make-up unit (AE-3)	1	2.733	2.7	23.94	0.023	0.091	0.007	1.197	0.066	1.006
Parts washer heater	1	6.000	6.0	52.56	0.050	0.200	0.016	2.628	0.145	2.208
Pan washer	1	0.800	0.8	7.01	0.007	0.027	0.002	0.350	0.019	0.294
Wastewater evaporator	1	0.750	0.8	6.57	0.006	0.025	0.002	0.329	0.018	0.276
Thermolyne Furnaces	3	0.400	1.20	10.51	0.010	0.040	0.003	0.526	0.029	0.442
Roof mounted heating and air conditioning units	1	0.1216	0.12	1.07	0.001	0.004	0.000	0.053	0.003	0.045
Roof mounted heating and air conditioning units	7	0.225	1.58	13.80	0.013	0.052	0.004	0.690	0.038	0.579
Roof mounted heating and air conditioning units	2	0.080	0.16	1.40	0.001	0.005	0.000	0.070	0.004	0.059
Roof mounted heating and air conditioning units	1	0.275	0.28	2.41	0.002	0.009	0.001	0.120	0.007	0.101
Roof mounted heating and air conditioning units	1	0.050	0.05	0.44	4.2E-04	0.002	0.000	0.022	0.001	0.018
Totals	21		25.0		0.21	0.83	0.07	10.9	0.60	9.19

Emission Unit	Potential Emission tons/yr									
	Benzene	DCB	Formaldehyde	Hexane	Toluene	Pb	Cd	Cr	Mn	Ni
Air make-up units (AE-1 and AE-2)	1.0E-04	6.0E-05	3.7E-03	0.089	1.7E-04	2.5E-05	5.5E-05	6.9E-05	1.9E-05	1.0E-04
Air make-up unit (AE-3)	2.5E-05	1.4E-05	9.0E-04	0.022	4.1E-05	6.0E-06	1.3E-05	1.7E-05	4.5E-06	2.5E-05
Parts washer heater	5.5E-05	3.2E-05	2.0E-03	0.047	8.9E-05	1.3E-05	2.9E-05	3.7E-05	1.0E-05	5.5E-05
Pan washer	7.4E-06	4.2E-06	2.6E-04	0.006	1.2E-05	1.8E-06	3.9E-06	4.9E-06	1.3E-06	7.4E-06
Wastewater evaporator	6.9E-06	3.9E-06	2.5E-04	0.006	1.1E-05	1.6E-06	3.6E-06	4.6E-06	1.2E-06	6.9E-06
Thermolyne Furnaces	1.1E-05	6.3E-06	3.9E-04	0.009	1.8E-05	2.6E-06	5.8E-06	7.4E-06	2.0E-06	1.1E-05
Roof mounted heating and air conditioning units	1.1E-06	6.4E-07	4.0E-05	0.001	1.8E-06	2.7E-07	5.9E-07	7.5E-07	2.0E-07	1.1E-06
Roof mounted heating and air conditioning units	1.4E-05	8.3E-06	5.2E-04	0.012	2.3E-05	3.4E-06	7.6E-06	9.7E-06	2.6E-06	1.4E-05
Roof mounted heating and air conditioning units	1.5E-06	8.4E-07	5.3E-05	0.001	2.4E-06	3.5E-07	7.7E-07	9.8E-07	2.7E-07	1.5E-06
Roof mounted heating and air conditioning units	2.5E-06	1.4E-06	9.0E-05	0.002	4.1E-06	6.0E-07	1.3E-06	1.7E-06	4.6E-07	2.5E-06
Roof mounted heating and air conditioning units	4.6E-07	2.6E-07	1.6E-05	0.000	7.4E-07	1.1E-07	2.4E-07	3.1E-07	8.3E-08	4.6E-07
Totals	2.3E-04	1.3E-04	8.2E-03	0.197	3.7E-04	5.5E-05	1.2E-04	1.5E-04	4.2E-05	2.3E-04

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

Methodology

Potential Throughput (MMCF) = Combined Total Heat Input Capacity (MMBtu/hr) * 8,760 hrs/yr * 1 MMCF/1,000 MMBtu
 Emission (tons/yr) = Throughput (MMCF/yr) * Emission Factor (lb/MMCF) / 2,000 lb/ton
 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)
 All emission factors are based on normal firing.
 MMBtu = 1,000,000 Btu, MMCF = 1,000,000 Cubic Feet of Gas

Abbreviations

PM = Particulate Matter	NOx = Nitrous Oxides	DCB = Dichlorobenzene	Cr = Chromium
PM10 = Particulate Matter (<10 um)	VOC = Volatile Organic Compounds	Pb = Lead	Mn = Manganese
SO2 = Sulfur Dioxide	CO = Carbon Monoxide	Cd = Cadmium	Ni = Nickel

**Emissions Calculations
PM Calculations for Cold Heading Operations**

**Company Name: TFS Rochester Operations
Address City IN Zip: 4366 N. Old U.S. Hwy 31, Rochester, IN 46975
Registration No.: 049-18025-00023
Notice-Only-Change No.: 049-21460-00023
Reviewer: Nathan C. Bell
Date: July 20, 2005**

Product: CF-6207 Oil Density: 7.76 lbs/gal

Potential to Emit (PTE) Calculations for Cold Heading Operations

(1) Cold Header #1 (Trion ESP #1)	
Oil Collected During 1 year =	168 gallons
Collection Time during 1 year =	4800 hours
Oil Collection Rate =	0.035 gal/hr
Oil Collection Efficiency =	95.0%
Potential PM/PM10 Collected, E_{coll} =	$(0.035 \text{ gal/hr}) \cdot (7.76 \text{ lbs/gal}) \cdot (8760 \text{ hr/yr}) \cdot (1 \text{ ton}/2000 \text{ lbs})$
	= 1.19 tons/yr
PTE of PM/PM10 (Before Controls), E_{IN} =	$E_{coll} \cdot (1 / \% \text{ Collection Efficiency})$
	= 1.25 tons/yr = 0.29 lbs/hr
PTE of PM/PM10 (After Controls), E_{OUT} =	$E_{IN} \cdot (1 - \% \text{ Collection Efficiency})$
	= 0.06 tons/yr
(2) Cold Header #2 (Trion ESP #3)	
Oil Collected During 1 year =	50 gallons
Collection Time during 1 year =	4800 hours
Oil Collection Rate =	0.0104 gal/hr
Oil Collection Efficiency =	95.0%
Potential PM/PM10 Collected, E_{coll} =	$(0.035 \text{ gal/hr}) \cdot (7.76 \text{ lbs/gal}) \cdot (8760 \text{ hr/yr}) \cdot (1 \text{ ton}/2000 \text{ lbs})$
	= 0.35 tons/yr
PTE of PM/PM10 (Before Controls), E_{IN} =	$E_{coll} \cdot (1 / \% \text{ Collection Efficiency})$
	= 0.37 tons/yr = 0.09 lbs/hr
PTE of PM/PM10 (After Controls), E_{OUT} =	$E_{IN} \cdot (1 - \% \text{ Collection Efficiency})$
	= 0.02 tons/yr
(3) Cold Header #3 (Trion ESP #4)	
Oil Collected During 1 year =	392.4 gallons
Collection Time during 1 year =	4800 hours
Oil Collection Rate =	0.0818 gal/hr
Oil Collection Efficiency =	95.0%
Potential PM/PM10 Collected, E_{coll} =	$(0.035 \text{ gal/hr}) \cdot (7.76 \text{ lbs/gal}) \cdot (8760 \text{ hr/yr}) \cdot (1 \text{ ton}/2000 \text{ lbs})$
	= 2.78 tons/yr
PTE of PM/PM10 (Before Controls), E_{IN} =	$E_{coll} \cdot (1 / \% \text{ Collection Efficiency})$
	= 2.92 tons/yr = 0.67 lbs/hr
PTE of PM/PM10 (After Controls), E_{OUT} =	$E_{IN} \cdot (1 - \% \text{ Collection Efficiency})$
	= 0.15 tons/yr
Total PTE of PM/PM10 Before Controls for 3 Cold Headers = 4.55 tons/yr	
Total PTE of PM/PM10 After Controls for 3 Cold Headers = 0.23 tons/yr	

Emissions Calculations
VOC Calculations for Satellite Cleaning Stations

Company Name: TFS Rochester Operations
Address City IN Zip: 4366 N. Old U.S. Hwy 31, Rochester, IN 46975
Registration No.: 049-18025-00023
Notice-Only-Change No.: 049-21460-00023
Reviewer: Nathan C. Bell
Date: July 20, 2005

Product: Safety-Kleen Solvent (Mineral Spirits)
Density: 6.6 lbs/gal

Potential Emissions From Satellite Cleaning Stations (Based Upon 2000 Data)
Virgin Solvent Brought Into Facility During 1 year = 1710 gallons
Spent Solvent Removed From Facility During 1 year = 1304 gallons
Solvent Potentially Evaporated During 1 year = (Virgin Solvent In - Spent Solvent Out)
= 406 gallons
Potential VOC Emissions = (406 gallons/yr)*(6.6 lbs/gal)*(1 ton/2000 lbs)
= 1.34 tons/yr