



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: May 31, 2005
RE: AcraLine Products, Inc. / 159-20950-00012
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



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

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Mr. Stan Kowaleski
AcraLine Products, Inc.
P.O. Box 417
Tipton, Indiana 46072

May 31, 2005

Dear Mr. Kowaleski:

Re: Exempt Operation Status,
159-20950-00012

The application from AcraLine Products, Inc., received on March 16, 2005 has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following gas turbine engine parts manufacturing operation located at 641 Cleveland Street, Tipton, Indiana 46072, is classified as exempt from air pollution permit requirements:

- (a) Metal working operation, with a total throughput of 300 pounds of alloy steel per hour (lbs/hr):
 - (1) Five (5) grinding booths each controlled by a paper cartridge filter and HEPA Filter, exhausting back into the booths; three (3) surface grinders, controlled by Torit dust collector; and two (2) tree Milling Booths;
 - (2) One (1) sander station and two (2) belt sanders each controlled by a Torit dust collector;
 - (3) One (1) shearing station;
 - (4) Two (2) mechanical punching or presses and one (1) brake press;
 - (5) Three drill platforms;
 - (6) Two (2) work bench stations, each controlled by a down draft dust collector;
 - (7) Thirty-eight (38) wet metal processes including CNC lathes, CNC mills, CNC punches, vertical lathes, vertical mills, hydraulic forming machines, hydraulic presses, wet grinder and water jet;
 - (8) Seventeen (17) deburring stations with a maximum total rate of 50 lbs/hr, each controlled with paper cartridge filters;
 - (9) Two (2) laser cutting stations with a maximum cutting rate of 20 inches per minute (in/min) and thickness of 0.375 inches, each controlled by a Torit dust collector.
- (b) Welding Operation, with a maximum rate of 3.15 pounds of weld wire per hour (lb/hr):
 - (1) One (1) robotic MIG welder using stainless steel wire, controlled by a Torit dust collector;

- (2) Twenty-one (21) TIG weld stations (GTAW), fourteen (14) stations are controlled by a Torit dust collector, and seven (7) stations are uncontrolled.
- (c) Natural gas-fired Combustion Units:
 - (1) Six (6) Modine hanging heaters, two heaters are each 0.25 million British thermal units per hour (mmBtu/hr), two heaters are each 0.20 mmBtu/hr , one is 0.15 mmBtu/hr and one at 0.10 mmBtu/hr heat input capacity;
 - (2) Two (2) Enevco IR open heaters with a maximum heat input capacity of 0.06 mmBtu/hr each;
 - (3) Four (4) HVAC units, three with a maximum heat input capacity of 0.074 mmBtu/hr each and one at 0.125 mmBtu/hr.
 - (4) Thirty-one (31) co-ray vac natural gas-fired heaters for building heat, with a total heat input capacity of 1.95 mmBtu/hr.
- (d) One (1) parts washer with a maximum usage rate of 480 gallons per year, used for repair and maintenance purposes.

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:
 - (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) Cold Cleaner Degreaser Operation and Control [326 IAC 8-3-5]
 - (a) Pursuant to 326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control), the Permittee shall meet the following control equipment requirements when operating the parts washer:
 - (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 subsection (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 Permittee shall be required to meet the following operating requirements when operating the cold cleaning facility 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.

The source issued Source Specific Operating Agreement (SSOA) No.:159-6926-00012 is hereby revoked, in lieu of this exemption.

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
Nisha Sizemore, Section Chief
Office of Air Quality

APD

cc: File – Tipton County
Tipton County Health Department
Air Compliance - Marc Goldman
Permit Tracking
Compliance Data Section

**Indiana Department of Environmental Management
Office of Air Quality**

Technical Support Document (TSD) for an Exemption

Source Background and Description

Source Name:	AcraLine Products, Inc.
Source Location:	641 Cleveland Street, Tipton, Indiana 46072
County:	Tipton
SIC Code:	3511
Exemption No.:	159-20950-00012
Permit Reviewer:	Aida De Guzman

The Office of Air Quality (OAQ) has reviewed an application from AcraLine Products, Inc. relating to the operation of a gas turbine engine parts manufacturing plant currently permitted under SSOA No.: 159-6926-00012, issued on January 26, 1998. This plant includes the following.

- (a) Metal working operation, with a total throughput of 300 pounds of alloy steel per hour (lbs/hr):
 - (1) Five (5) grinding booths each controlled by a paper cartridge filter and HEPA Filter, exhausting back into the booths; three (3) surface grinders, controlled by Torit dust collector; and two (2) tree Milling Booths;
 - (2) One (1) sander station and two (2) belt sanders each controlled by a Torit dust collector;
 - (3) One (1) shearing station;
 - (4) Two (2) mechanical punching or presses and one (1) brake press;
 - (5) Three drill platforms;
 - (6) Two (2) work bench stations, each controlled by a down draft dust collector;
 - (7) Thirty-eight (38) wet metal processes including CNC lathes, CNC mills, CNC punches, vertical lathes, vertical mills, hydraulic forming machines, hydraulic presses, wet grinder and water jet;
 - (8) Seventeen (17) deburring stations with a maximum total rate of 50 lbs/hr, each controlled with paper cartridge filters;
 - (9) Two (2) laser cutting stations with a maximum cutting rate of 20 inches per minute (in/min) and thickness of 0.375 inches, each controlled by a Torit dust collector.

- (b) Welding Operation, with a maximum rate of 3.15 pounds of weld wire per hour (lb/hr):
 - (1) One (1) robotic MIG welder using stainless steel wire, controlled by a Torit dust collector;
 - (2) Twenty-one (21) TIG weld stations (GTAW), fourteen (14) stations are controlled by a Torit dust collector, and seven (7) stations are uncontrolled.

- (c) Natural gas-fired Combustion Units:
 - (1) Six (6) Modine hanging heaters, two heaters are each 0.25 million British thermal units per hour (mmBtu/hr), two heaters are each 0.20 mmBtu/hr , one is 0.15 mmBtu/hr and one at 0.10 mmBtu/hr heat input capacity;
 - (2) Two (2) Enevco IR open heaters with a maximum heat input capacity of 0.06 mmBtu/hr each;
 - (3) Four (4) HVAC units, three with a maximum heat input capacity of 0.074 mmBtu/hr each and one at 0.125 mmBtu/hr.
 - (4) Thirty-one (31) co-ray vac natural gas-fired heaters for building heat, with a total heat input capacity of 1.95 mmBtu/hr.
- (d) One (1) parts washer with a maximum usage rate of 480 gallons per year, used for repair and maintenance purposes.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner 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 March 16, 2005. Additional information was received on May 4, 2005.

Emission Calculations

See Pages 1 through 5 TSD Appendix for detailed emission calculations.

Potential to Emit of the 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/yr)
PM	0.26
PM-10	0.38
SO ₂	0.01
VOC	0.70
CO	1.31
NO _x	1.56

HAPs	Potential to Emit (tons/yr)
Chromium	0.03
Manganese	0.02
Nickel	0.011
Single HAP	0.03
Total	0.06

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of each regulated pollutants are less than the levels listed in 326 IAC 2-1.1-3(e)(1). Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3. An exemption will be issued.

County Attainment Status

The source is located in Tipton County.

Pollutant	Status
PM2.5	attainment
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Tipton County has been designated as attainment or unclassifiable for the ozone standards. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) Tipton County has been classified as unclassifiable or attainment 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.
- (c) Tipton 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.

Federal Rule Applicability

- (a) New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60):
- (1) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this exemption.
- (b) National Emission Standards for Hazardous Air Pollutants (NESHAP) for Halogenated Solvent Cleaning (40 CFR 63, Subpart T):
- (1) 40 CFR 63, Subpart T - National Emission Standards for Hazardous Air Pollutants (NESHAP) for Halogenated Solvent Cleaning. This rule is not applicable to this source since the source does not use any halogenated solvents for the degreasing operation.

- (2) 40 CFR 63, Subpart DDDDD - Industrial, Commercial, and Institutional Boilers and Process Heaters. The process heaters at this source are not subject to the requirements of this NESHAP, because the source is not a major source of HAPs.
- (3) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 20 and 40 CFR Part 61, 63) included in this exemption.

State Rule Applicability – Entire Source

- (a) 326 IAC 5-1 (Visible Emissions 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 the permit:
 - (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability – Individual Facilities

- (a) 326 IAC 6-3-2 (Process Operations) and 40 CFR 52 Subpart P
 - (1) The potential to emit of PM from the metal working operations, including welding, deburring and laser cutting is less than 0.551 pounds per hour. Therefore, the machining operations are exempt from the requirements of 326 IAC 6-3.
- (b) 326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)
 - (1) The parts washer was installed after July 1, 1990, and is a cold cleaner degreaser without remote solvent reservoir. Therefore, this cleaning operation is subject to 326 IAC 8-3-5.

Pursuant to 326 IAC 8-3-5:

- (a) the Permittee shall ensure that the following control equipment requirements are met when operating the degreaser:
 - (A) equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (i) 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));
 - (ii) the solvent is agitated; or
 - (iii) the solvent is heated.
 - (B) 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.
 - (C) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

- (D) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (E) 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):
 - (i) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (ii) A water cover when solvent used is insoluble in, and heavier than, water.
 - (iii) 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:
- (A) close the cover whenever articles are not being handled in the degreaser.
 - (B) drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (C) 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.
- (c) 326 IAC 6-2 (Particulate Emission Limitation for Sources of Indirect Heating)
The various natural gas-fired heaters are not subject to 326 IAC 6-2 as they are not sources of indirect heating.

Conclusion

The operation of this gas turbine engine parts manufacturing facility shall be subject to the conditions of the **Exemption No.: 159-20950-00012.**

SUMMARY OF EMISSIONS

Operation/Facility	PM	PM10	SO2	VOC	NOx	CO	Single HAP	Combined HAPs
Metal Working	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00
Welding	0.03	0.03	0.00	0.00	0.00	0.00	0.03	0.06
Parts Washer	0.00	0.00	0.00	0.61	0.00	0.00	0.00	0.00
Natural Gas Fired Combustion Units	0.00	0.12	0.01	0.09	1.56	1.31	0.00	0.00
TOTAL	0.26	0.38	0.01	0.70	1.56	1.31	0.03	0.06

Metal Working Emissions

Description of Metal Working Equipment

- a) Deburring Process - Seven (7) Deburring Stations, each controlled with cartridge filter
- b) Surface Grinding / Milling Process - Five (5) Grinding Booths, each controlled with a paper cartridge filter and HEPA filter, exhaust back into booths; Three (3) Surface Grinders, controlled with a Torit Dust Collector; Two (2) Tree Mills
- c) Laser Cutting Process - Two (2) Laser Cutting Operations, each controlled with a Torit Dust Collector
- d) Sanding/Dry Milling Process - One (1) Sander Station, controlled with a Torit Dust Collector; One (1) Belt Sander, controlled by a dust collector
- e) Shearing Process - Two (2) Shearing Stations, controlled with a dust collector
- f) Form Punching Process - Two (2) Mechanical Presses; One (1) Brake Press
- g) Drilling Process - Three (3) Drill Platforms

Additional Process Information

- * There are two (2) work bench stations at the facility, each controlled with down draft dust collectors. The above processes occur at bench stations.
- * There are thirty-eight (38) wet metal processes including CNC Lathes, CNC Mills, CNC Punches, Vertical Lathes, Vertical Mills, Hydraulic Forming Machines, Hydraulic Presses, Wet Grinder, and Water Jet. These processes have negligible to no emissions.

Potential Emissions - Deburring Process			
Maximum Deburring Rate [lb/hr]	Maximum Deburring Rate [tpy]	Emission Factor [lb/ton] **	PTE PM [tpy]
50	219	1.7	0.19

Potential Emissions - All Other Metal Working Processes			
Maximum Rate [lb/hr]	Maximum Rate [tpy]	Emission Factor [lb/ton] **	PTE PM [tpy]
300	1314	4.5E-03	0.003

Potential Emissions - Laser Cutting Process				
No. of Stations	"Metal Thickness Cut (in)	"Metal Cutting" (in/min)	Emission Factor lb/1000 inches cut	PM/PM10 (tpy)
2	0.375	20	0.004	0.042

** Emission factors are from FIRE Version 6.24 for Grey Iron Foundries SCC 3-04-003-40 for Deburring and SCC 3-04-003-60 for all other processes. These are the same factors used for the initial construction permit.

*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column.

**Emission Factor for plasma cutting from American Welding Society (AWS). Trials reported for wet cutting of 8 mm thick mild steel with 3.5 m/min cutting speed (at 0.2 g/min emitted).

Using AWS average values: (0.25 g/min)/(3.6 m/min) x (0.0022 lb/g)/(39.37 in./m) x (1,000 in.) = 0.0039 lb/1,000 in. cut, 8 mm thick

Plasma cutting emissions, lb/hr: (# of stations)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 8 mm thick)

Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" thick)

Welding Emissions

Description of Welding Process

a) One (1) Robotic MIG Welder, Stainless Steel Wire, controlled with a Torit Dust Collector

Additional Process Information

* There are twenty-one (21) TIG weld stations (GTAW), which are controlled with Torit Dust Collectors. This type of welding produces negligible emissions.

Potential Emissions - MIG Welding

Max. Amount of Wire Consumed (E308L) [lb/yr] =	11,500
Max. Amount of Wire Consumed (E308L) [lb/hr] =	3.15

Air Pollutant	Emission Factor [lb/10 ³ lb] **	Emission Rate [lb/yr]	Potential Emissions [tpy]
PM ₁₀	5.4	62	0.031
Cr	5.24	60	0.030
Co	0.01	0.1	0.0001
Mn	3.46	40	0.020
Ni	1.84	21	0.011
Combined HAP	N/A	121	0.061

** Emission factors are from AP-42, Tables 12.19-1 and 12.19-2.

Parts Washing Emissions

Description of Parts Washer

a) One (1) Solvent Parts Washer, 110 Gallon Capacity, Solvent Name - Safety-Kleen Premium Solvent/Safety-Kleen Premium Gold Solvent

Potential Emissions

Maximum Annual Solvent Usage [gal/yr] **	Max. Annual Solvent Reclaim (gal/yr)	VOC Content of Solvent [lb/gal]	PTE VOC [lb/yr]	PTE VOC [tpy]
480	300	6.8	1,224.0	0.612

Natural Gas Fired Combustion Unit Emissions

Description of Natural Gas Fired Combustion Units

- a) Six (6) Modine Hanging Heaters, Maximum Heat Input Btu Ratings: 2 - 0.25 MMBtu/hr, 2 - 0.20 MMBtu/hr, 1 - 0.15 MMBtu/hr, 1 - 0.10 MMBtu/hr
- b) Two (2) Enevco IR Open Heaters, Maximum Heat Input Btu Ratings: 2 - 0.06 MMBtu/hr
- c) Four (4) HVAC Units, Maximum Heat Input Btu Ratings: 3 - 0.074 MMBtu/hr, 1 - 0.125 MMBtu/hr

Potential Emissions

Combined Max. Heat Input Btu Rating of All Natural Gas Fired Combustion Units [MMBtu/hr] = 3.567
 Max. Annual Gas Usage [MMscf/yr] * = 31.2

Air Pollutant	Emission Factor [lb/MMscf] **	Emission Rate [lb/yr]	Potential Emissions [tpy]
CO	84	2,625	1.31
NO _x	100	3,125	1.56
VOC	5.5	172	0.09
PM10	7.6	237	0.12
SO ₂	0.6	19	0.009

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

**Emission Factors for NO_x: Uncontrolled = 100, Low NO_x Burner = 50, Low NO_x 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)