Kevin O'Connor
Eemtech Corporation
3300 West Sample Street, Suite 1100
South Bend, Indiana 46619

Re: Registered Operation Status Renewal,
141-13670-00117

Dear Mr. O'Connor:

The renewal application from Eemtech Corporation, received on December 22, 2000, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following electrical enclosure fabrication and coating source, located at 3300 West Sample Street, Suites 1000 and 1100, South Bend, Indiana, is classified as registered:

(a) One (1) paint booth, identified as EU-3, using high volume, low pressure (HVLP) spray equipment, equipped with dry filters for PM control, exhausting to Stack 3, capacity: 8 units per hour.

(b) One (1) powder coat booth, identified as EU-5, equipped with dry filters for PM control, capacity: 10 units per hour.

(c) One (1) pressure washer, identified as EU-1, firing natural gas and exhausted to Stack 1, rated at 0.55 million British thermal units per hour.

(d) One (1) oven, identified as EU-2, firing natural gas and exhausted to Stack 2, rated at 2.0 million British thermal units per hour.

(e) One (1) grinding process, consisting of two (2) grinders, capacity: 180 pounds of steel per hour, total.

(f) Welding operations, consisting of:

(1) Three (3) MIG welding stations, capacity: 0.35 pounds of weld wire per hour and 400 pounds of steel parts per hour, total.

(2) One (1) TIG welding station, capacity: 0.065 pounds of metal consumed per hour and 100 pounds of steel parts per hour.

(3) Oxyacetylene flame cutting, capacity: 18 inches per minute and 250 pounds of steel parts per hour.

(g) One (1) cold cleaner degreasing unit, installed in 1996, capacity: 1.5 gallons per day.

The following conditions shall be applicable:

(a) 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:

(1) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

(b) Pursuant to CP 141-5271-00117, issued on March 28, 1996, the particulate matter (PM) from the grinding process shall not exceed 0.86 pounds per hour when operating at a process weight rate of 180 pounds per hour (0.09 tons per hour).

This limitation is based on the following equation:

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

(c) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the welding operations shall not exceed 2.13 pounds per hour when operating at a process weight rate of 750 pounds per hour (0.375 tons per hour).

This limitation is based on the following equation:

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

(d) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the paint booth (EU-3) and the powder coat booth (EU-5) 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 dry filters shall be in operation at all times the paint booth (EU-3) and the powder coat booth (EU-5) are in operation, in order to comply with this limit.

Condition (b) from CP 141-5271-00117, issued on March 28, 1996, was not carried through because the process weight rate used to calculate the PM emission limit for the powder coat booth did not account for the weight of the product being coated. The PM limit will be based on 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

(e) Any change or modification which would increase the actual particulate matter emissions from the source to ten (10) tons per year or more will subject the source to the requirements of 326 IAC 6-1, and will require prior approval from IDEM, OAQ.

(f) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicator at the paint booth (EU-3) shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for air dried coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

(g) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility construction of which commenced after July 1, 1990, 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 degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF));

(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 degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), 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 degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9EC) (one hundred twenty degrees Fahrenheit (120EF)):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when the solvent used is insoluble in, and heavier than, water.

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(h) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following 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 a revised registration issued to this source. The source may 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
P.O. Box 6015
Indianapolis, IN 46206-6015

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,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

EAL/MES

cc: File - Saint Joseph County
Saint Joseph County Health Department
Air Compliance - Rick Reynolds
Northern Regional Office
Permit Tracking - Janet Mobley
Air Programs Section - Michele Boner

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:	**Eemtech Corporation**
Address:	**3300 West Sample Street, Suites 1000 and 1100,**
City:	**South Bend, Indiana 46619**
Authorized individual:	**Kevin O'Connor**
Phone #:	
Registration #:	

I hereby certify that Eemtech Corporation is still in operation and is in compliance with the requirements of Registration **141-13670-00117**.

Name (typed):
Title:
Signature:
Date:

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Registration Renewal

Source Background and Description

Source Name:	**Eemtech Corporation**
Source Location:	**3300 West Sample Street, Suites 1000 and 1100, South Bend, Indiana 46619**
County:	**Saint Joseph**
SIC Code:	**3613**
Operation Permit No.:	**OP 141-13670-00117**
Permit Reviewer:	**Edward A. Longenberger**

The Office of Air Quality (OAQ) has reviewed a renewal application from Eemtech Corporation relating to the operation of an electrical enclosure fabrication and coating source.

Permitted Emission Units and Pollution Control Equipment

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

(a) One (1) paint booth, identified as EU-3, using high volume, low pressure (HVLP) spray equipment, equipped with dry filters for PM control, exhausting to Stack 3, capacity: 8 units per hour.

(b) One (1) powder coat booth, identified as EU-5, equipped with dry filters for PM control, capacity: 10 units per hour.

(c) One (1) pressure washer, identified as EU-1, firing natural gas and exhausted to Stack 1, rated at 0.55 million British thermal units per hour.

(d) One (1) oven, identified as EU-2, firing natural gas and exhausted to Stack 2, rated at 2.0 million British thermal units per hour.

(e) One (1) grinding process, consisting of two (2) grinders, capacity: 180 pounds of steel per hour, total.

The following emission units were not specifically registered in CP 141-5271-00117, issued on March 28, 1996, however they were constructed and operated at exemption levels, so they have not been classified as unpermitted:

(f) Welding operations, consisting of:

(1) Three (3) MIG welding stations, capacity: 0.35 pounds of weld wire per hour and 400 pounds of steel parts per hour, total.

(2) One (1) TIG welding station, capacity: 0.065 pounds of metal consumed per hour and 100 pounds of steel parts per hour.

(3) Oxyacetylene flame cutting, capacity: 18 inches per minute and 250 pounds of steel parts per hour.

(g) One (1) cold cleaner degreasing unit, installed in 1996, capacity: 1.5 gallons per day.

Unpermitted Emission Units and Pollution Control Equipment

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

New Emission Units and Pollution Control Equipment

There are no new facilities/units requiring approval during this review.

Existing Approvals

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

CP 141-5271-00117, issued on March 28, 1996

All conditions from previous approvals were incorporated into this permit except the following:

CP 141-5271-00117, issued on March 28, 1996

Condition (b): Pursuant to 326 IAC 6-3-2, the dry filters shall be in operation at all times when the powder coating process is in operation, and the PM emissions from the powder coat booth shall not exceed 0.7 pounds per hour.

Reason not incorporated: The above limitation was based on a process weight rate of 0.002 tons per hour. This process weight rate corresponds to the weight of the powder paint used at the booth, and did not include the weight of the part being coated. The PM emissions from the powder coat booth 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 dry filters are still required to be in operation when the powder coating process is in operation.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
1	pressure washer	32	1.0	N/A	180
2	oven	32	2.0	N/A	450
3	paint booth 3	32	2.5	10,000	ambient

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.

An application for the purposes of this review was received on December 22, 2000, with additional information received on February 21, 2001.

Emission Calculations

See pages 1 through 5 of 5 of Appendix A 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	11.7
PM_{10}	11.8
SO_2	0.007
VOC	7.22
CO	0.938
NO_X	1.12

HAPs	Potential To Emit (tons/year)
Glycol Ethers	3.84
2-butoxyethanol	2.88
TOTAL	6.71

The potential to emit (as defined in 326 IAC 2-5.1-2) of PM and PM_{10} are less than twenty-five (25) tons per year and greater than five (5) tons per year. Furthermore, the potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination HAPs is less than or equal to twenty-five (25) tons per year. Therefore, the source is still at registration level, and subject to the provisions of 326 IAC 2-5.1-2.

Actual Emissions

No previous emission data has been received from the source.

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Limited Potential to Emit (tons/year)						
Process/facility	**PM**	**PM_{10}**	**SO_2**	**VOC**	**CO**	**NO_X**	**HAPS**
Paint booth 3	0.035	0.035	0.00	4.51	0.00	0.00	2.88 / 6.71
Powder coating booth	0.048	0.048	0.00	0.00	0.00	0.00	0.00
Natural gas combustion	0.021	0.085	0.007	0.061	0.938	1.12	0.020 / 0.021
Grinding process	3.07 (3.77)	3.07 (3.77)	0.00	0.00	0.00	0.00	0.00
Welding operations	0.304 (9.33)	0.304 (9.33)	0.00	0.00	0.00	0.00	0.0007 / 0.001
Degreasing	0.00	0.00	0.00	2.65	0.00	0.00	0.00
Total Emissions	3.48 (13.1)	3.54 (13.1)	0.007	7.22	0.938	1.12	6.73

The values in parenthesis represent the allowable PM emissions pursuant to 326 IAC 6-3-2, and assuming that all PM is PM_{10}.

County Attainment Status

The source is located in Saint Joseph County.

Pollutant	Status
PM_{10}	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_X) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Saint Joseph County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_X emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Saint Joseph County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21, 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	13.1
PM_{10}	13.1
SO_2	0.007
VOC	7.22
CO	0.938
NO_X	1.12

(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 calculations shown on pages 1 through 5 of 5 of Appendix A of this document.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

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

(a) each criteria pollutant is less than one hundred (100) tons per year,

(b) a single hazardous air pollutant (HAP) is less than ten (10) tons per year, and

(c) any combination of HAPS is less than twenty-five (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.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) The one (1) cold cleaner degreasing unit is not subject to the National Emission Standards for Hazardous Air Pollutants, 326 IAC 14, (40 CFR 60.460, Subpart T), National Emissions Standards for Halogenated Solvent Cleaning, because no halogenated solvents are used in the process.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Saint Joseph County and the potential to emit of VOC and NO_X is less than ten (10) tons per year, therefore, 326 IAC 2-6 does not apply.

326 IAC 2-4.1-1 (New Source Toxics Control)

This source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments. Therefore, 326 IAC 2-4.1-1 is not applicable.

326 IAC 5-1 (Opacity Limitations)

This source is located in Saint Joseph County, within the area north of Kern Road and east of Pine Road. Therefore, 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%) 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 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 6-1 (Nonattainment Area Particulate Limitations)

Although this source is located in Saint Joseph County, this source has actual particulate matter emissions less than ten (10) tons per year, and is not specifically listed in 326 IAC 6-1-18 (Nonattainment Area Particulate Limitations: Saint Joseph County). Therefore, 326 IAC 6-1 is not applicable.

Any change or modification which would increase the actual particulate matter emissions from the source to ten (10) tons per year or more will subject the source to the requirements of 326 IAC 6-1, and will require prior approval from IDEM, OAQ.

326 IAC 6-3-2 (Process Operations)

(a) Pursuant to CP 141-5271-00117, issued on March 28, 1996, the particulate matter (PM) from the grinding process shall not exceed 0.86 pounds per hour when operating at a process weight rate of 180 pounds per hour (0.09 tons per hour).

This limitation is based on the following equation:

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 PM emissions from the grinding process are 0.70 pounds per hour which is less than the allowable PM emission rate of 0.86 pounds per hour. Therefore, the grinding process is in compliance with this rule.

(b) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the welding operations shall not exceed 2.13 pounds per hour when operating at a process weight rate of 750 pounds per hour (0.375 tons per hour).

This limitation is based on the following equation:

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 PM emissions from the welding operations are 0.304 pounds per hour which is less than the allowable PM emission rate of 2.13 pounds per hour. Therefore, the welding operations are in compliance with this rule.

(c) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the paint booth (EU-3) and the

powder coat booth (EU-5) 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 dry filters shall be in operation at all times the paint booth (EU-3) and the powder coat booth (EU-5) are in operation, in order to comply with this limit.

326 IAC 8-2-9 (Miscellaneous Metal Coating)

The paint booth (EU-3) was constructed after July 1, 1990, and has actual VOC emissions greater than fifteen (15) pounds per day before add-on controls. Therefore, the paint booth (EU-3) is subject to the requirements of 326 IAC 8-2-9.

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicator at the paint booth (EU-3) shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for forced warm air dried coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

Based on the MSDS submitted by the source and calculations made, the spray booth is in compliance with this requirement.

326 IAC 8-3 (Organic Solvent Degreasing Operations)

(a) The degreasing unit is a cold cleaner, and was constructed in 1996. Therefore, the degreaser is subject to the requirements of 326 IAC 8-3-5(a).

Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility construction of which commenced after July 1, 1990, 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 degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF));

(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 degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), 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 degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9EC) (one hundred twenty degrees Fahrenheit (120EF)):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when the solvent used is insoluble in, and heavier than, water.

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(b) The degreasing unit is a cold cleaner, and was constructed in 1996. Therefore, the degreaser is subject to the requirements of 326 IAC 8-3-5(b).

Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following 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.

Conclusion

The operation of this electrical enclosure fabrication and coating source shall be subject to the conditions of the attached proposed **Registration 141-13670-00117**.

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Company Name: Eemtech Corporation
Address City IN Zip: 3300 West Sample Street, Suites 1000 and 1100, South Bend, Indiana 46619
OP: 141-13670
Plt ID: 141-00117
Reviewer: Edward A. Longenberger
Date: December 22, 2000

Material	Density (lbs/gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (units/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC (pounds per hour)	Potential VOC (pounds per day)	Potential VOC (tons per year)	Particulate Potential (tons/yr)	lbs VOC/gal solids	Transfer Efficiency
Paint Booth (3)																
Kem Aqua 280	9.76	56.00%	41.90%	14.10%	49.20%	30.40%	0.09350	8.000	2.71	1.38	1.03	24.70	4.51	3.52	4.53	75%
Water	8.34	100.00%	100.00%	0.00%	100.00%	0.00%	0.01650	8.000	ERR	0.00	0.00	0.00	0.00	0.00	ERR	75%
R-T-S	9.55	61.77%	49.51%	12.25%	56.82%	25.84%	0.11000	8.000	2.71	1.17	1.03	24.70	4.51	3.52	4.53	75%
Powder Coat Booth (5)																
Corvel Polyester Powder	10.00	0.00%	0.00%	0.00%	0.00%	100.00%	0.04400	10.000	0.00	0.00	0.00	0.00	0.00	4.82	0.00	75%
								PM	Control Efficiency	99.00%					
State Potential Emissions			**Add worst case coating to all solvents**						**Uncontrolled**		**1.03**	**24.70**	**4.51**	**8.34**		
									Controlled		**1.03**	**24.70**	**4.51**	**0.083**		

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lbs/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lbs/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lbs/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lbs/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lbs/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

HAP Emission Calculations

Material	Density (lbs/gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Toluene	Weight % MEK	Weight % Ethylene Glycol	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % 2-Butoxyethanol	Xylene Emissions (tons/yr)	Toluene Emissions (tons/yr)	Formaldehyde Emissions (tons/yr)	Benzene Emissions (tons/yr)	Hexane Emissions (tons/yr)	Glycol Ethers Emissions (tons/yr)	2-Butoxyethanol Emissions (tons/yr)
Kem Aqua 280	9.76	0.09350	8.000	0.00%	0.00%	0.00%	0.00%	0.00%	12.00%	9.00%	0.00	0.00	0.00	0.00	0.00	3.84	2.88
										Individual Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.84**	**2.88**
METHODOLOGY										**Overall Total**	**6.71**						

HAPS emission rate (tons/yr) = Density (lbs/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Appendix A: Welding and Thermal Cutting

Company Name: Eemtech Corporation
Address City IN Zip: 3300 West Sample Street, Suites 1000 and 1100, South Bend, Indiana 46619
OP: 141-13670
Plt ID: 141-00117
Reviewer: Edward A. Longenberger
Date: December 22, 2000

PROCESS	Number of Stations	Max. electrode consumption per station		EMISSION FACTORS * (lb pollutant / lb electrode)				EMISSIONS (lb/hr)				TOTAL HAPS (lb/hr)
WELDING		(lbs/hr)		PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
Submerged Arc	0	0		0.036				0.000	0	0.000	0	0.000
Metal Inert Gas (MIG)(ER5154)	3	0.35		0.0241	0.00003		0.00001	0.025	0.0000357	0.000	0.0000105	0.000
Stick (E7018 electrode)	0	0		0.0211				0.000	0	0.000	0	0.000
Tungsten Inert Gas (TIG)(carbon steel)	1	0.065		0.0055				0.000	0	0.000	0	0.000
Oxyacetylene(carbon steel)	0	0		0.0055				0.000	0	0.000	0	0.000

	Number of Stations	Max. Metal Thickness Cut	Max. Metal Cutting Rate	EMISSION FACTORS (lb pollutant/1,000 inches cut, 1" thick)				EMISSIONS (lbs/hr)				TOTAL HAPS (lb/hr)
FLAME CUTTING		(in.)	(in./minute)	PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
Oxyacetylene	1	0.25	18	0.1622	0.0005	0.0001	0.0003	0.044	0.000	0.000	0.000	0.000
Oxymethane	0	0	0	0.0815	0.0002		0.0002	0.000	0.000	0.000	0.000	0.000
Plasma	0	0	0					0.000	0.000	0.000	0.000	0.000

EMISSION TOTALS	PM = PM10	Mn	Ni	Cr	Total HAPs
Potential Emissions lbs/hr	0.069	0.0002	0.00003	0.0001	0.0003
Potential Emissions lbs/day	1.67	0.004	0.0006	0.002	0.007
Potential Emissions tons/year	**0.304**	0.0007	0.0001	0.0004	0.001

METHODOLOGY

*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column. Consult AP-42 or other reference for different electrode types.
Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)
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)
Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day
Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/day x 1 ton/2,000 lbs.
Plasma cutting emission factors are from the American Welding Society study published in Sweden (March 1994).
Welding and other flame cutting emission factors are from an internal training session document.
See AP-42, Chapter 12.19 for additional emission factors for welding.

Appendix A: State Potential Emissions Calculations
Degreasing and Oil Quenching

Company Name: Eemtech Corporation
Address City IN Zip: 3300 West Sample Street, Suites 1000 and 1100, South Bend, Indiana 46619
OP: 141-13670
Plt ID: 141-00117
Reviewer: Edward A. Longenberger
Date: December 22, 2000

Degreasing

Material	Density (lb/gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Gal of Mat (gal/day)	Potential VOC (lb/day)	Potential VOC (ton/yr)
Fremont 626-TP	9.67	100.00%	0.0%	100.0%	1.5	14.511	2.648
State Potential Emissions						**14.5**	**2.65**

METHODOLOGY
Potential VOC Pounds per Day = Solvent Density (lbs/gallon) * weight % volatiles * solvent consumption (gallons/day)
Potential VOC Tons per Year = Potential VOC Pounds per Day * (365 days/yr) * (1 ton/2000 lbs)

Grinding Operations

Emission Unit	PM / PM10 Potential (lb/hr)	PM / PM10 Potential (ton/yr)
Grinder 1	0.35	1.53
Grinder 2	0.35	1.53
Total	**0.70**	**3.07**

METHODOLOGY
Potential PM / PM10 (lb/hr) based on a time study performed 12/19/95 which showed that 0.007 cubic feet of weld wire could be ground in one hour. Density of mild, low carbon steel is 500 lb/ft^3, so (0.007 ft^3 / hr) x (500 lb / ft^3) = 0.35 lb / hr.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler

Company Name: **Eemtech Corporation**
Address City IN Zip: **3300 West Sample Street, Suites 1000 and 1100, South Bend, Indiana 46619**
OP: **141-13670**
Plt ID: **141-00117**
Reviewer: **Edward A. Longenberger**
Date: **December 22, 2000**

Unit ID	Capacity
1	0.55
2	2.0
Total	**2.55**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
2.55	22.34

	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	0.021	0.085	0.007	1.12	0.061	0.938

*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
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 5 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler
HAPs Emissions

Company Name: **Eemtech Corporation**
Address City IN Zip: **3300 West Sample Street, Suites 1000 and 1100, South Bend, Indiana 46619**
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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	2.345E-05	1.340E-05	8.377E-04	2.010E-02	3.797E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel	Total
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	HAPs
Potential Emission in tons/yr	5.585E-06	1.229E-05	1.564E-05	4.244E-06	2.345E-05	0.021

Methodology is the same as page 4.

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