

Richard Peck
Jupiter Aluminum Corporation, Jupiter Coilcoating Division
205 East Cary Street
Fairland, Indiana 46126

Re: 145-10579-00013
First Significant Permit Revision to
FESOP 145-5537-00013

Dear Mr. Peck:

Jupiter Aluminum Corporation, Jupiter Coilcoating Division was issued a permit on December 10, 1996 for an aluminum coil coating source. A letter requesting changes to this permit was received on January 28, 1999. Pursuant to the provisions of 326 IAC 2-8-11.1, a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document.

This significant permit revision is for the construction and operation of an additional aluminum coil coating line, equipped with a thermal oxidizer, to their existing plant.

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

Jupiter Aluminum Corporation, Jupiter Coilcoating Division
Fairland, Indiana
Permit Reviewer: MES

Page 2 of 2
Permit Revision No.145-10579
ID 145-00013

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 Paula M. Miano, c/o OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, at 516-691-3395 or in Indiana at 1-800-451-6027 (ext 516-691-3395).

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments
PMM/MES

cc: File - Shelby County
U.S. EPA, Region V
Shelby County Health Department
Air Compliance Section Inspector - D. J. Knotts
Compliance Data Section - Jerri Curless
Administrative and Development - Janet Mobley
Technical Support and Modeling - Nancy Landau

**FEDERALLY ENFORCEABLE STATE
OPERATING PERMIT (FESOP)
OFFICE OF AIR MANAGEMENT**

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
Phone: 1-800-451-6027

**Jupiter Aluminum Corporation, Jupiter Coilcoating Division
205 East Cary Street
Fairland, Indiana 46126**

Jupiter Aluminum Corporation, Jupiter Coilcoating Division is hereby authorized to operate subject to the conditions contained herein, the facilities listed in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 and contains the conditions and provisions specified in 326 IAC 2-8 and 40 CFR Part 70.6 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments) and IC 13-15 and IC 13-17 (prior to July 1, 1996, IC 13-1-1-4 and IC 13-7-10).

Operation Permit No.: F 145-5537-00013	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date: December 10, 1996

First Administrative Amendment 145-8308, issued on April 17, 1997
Second Administrative Amendment 145-8472, issued on April 29, 1997
Third Administrative Amendment 145-9192-00013, issued on December 17, 1997

First Significant Permit Revision 145-10579-00013	Pages Affected: 3, 4, 5a and 5b supercede 5, 15a and 15b supercede 15, 24a Section Added: D.2, pages 22a, 22b, 22c, and 22d
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

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SECTION A SOURCE SUMMARY

A.1 General Information

The Permittee owns and operates an aluminum coil coating source.

Responsible Official: Richard Peck
Source Address: 205 East Carey Street, Fairland, Indiana 46126
Mailing Address: 205 East Carey Street, Fairland, Indiana 46126
SIC Code: 3479
County Location: Shelby
County Status: Attainment for all criteria pollutants
Source Status: Part 70 Permit Program
Minor Source, under PSD;
Major Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Summary

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

- (a) One (1) roller coating line consisting of washing, treating, coating, baking and quenching operations equipped with a direct flame incinerator, capacity: 10,200 linear feet per hour.
- (b) One (1) aluminum coating line consisting of coil coating, backing, quenching, paint thinning and roller cleaning operations, equipped with a thermal oxidizer, capacity: 21,000 linear feet per hour.
- (c) One (1) coil cleaning operation, capacity: 21,000 linear feet per hour.
- (d) One (1) quality control testing operation, capacity: 0.15 gallons per hour.

A.3 Insignificant Activities

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Propane for liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) British thermal units per hour.
- (b) Vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.
- (c) Infrared cure equipment.
- (d) Paved and unpaved roads and parking lots with public access.
- (e) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) for a Federally Enforceable State Operating Permit (FESOP).

SECTION B GENERAL CONDITIONS

- B.1 General Requirements [IC 13-15] [IC 13-17] (Prior to July 1, 1996: IC 13-7 and IC 13-1-1)
The permittee shall comply with the provisions of IC 13-15 (Permits Generally), IC 13-17 (Air Pollution Control) and the rules promulgated thereunder.
- B.2 Definitions [326 IAC 2-8-1]
Terms in this permit shall have the meaning assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11 (prior to July 1, 1996, IC 13-7-2, IC 13-1-1-2), 326 IAC 1-2, and 326 IAC 2-7 shall prevail.
- B.3 Permit Term [326 IAC 2-8-4(2)]
This permit is issued for a fixed term of five (5) years from the effective date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-5-5-3 (prior to July 1, 1996, IC 13-7-10-2.5), of the permit.
- B.4 Enforceability [326 IAC 2-8-6]
(a) All terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM.
(b) Unless otherwise stated, terms and conditions of this permit, including any provisions to limit the source's potential to emit, are enforceable by the United States Environmental Protection Agency (U.S. EPA) and citizens under the Clean Air Act.
- B.5 Termination of Right to Operate [326 IAC 2-8-9]
(a) The expiration of this permit terminates the Permittee's right to operate unless a timely and complete renewal application has been submitted consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-7.
(b) As a result of the First Significant Permit Revision the source shall be required to apply for a Part 70, Title V Operating Permit within twelve (12) months after the source becomes subject to Part 70 (326 IAC 2-7). This twelve 12-month period starts at the postmarked submission date of the Affidavit of Construction.
- B.6 Severability [326 IAC 2-8-4(4)]
(a) The provisions of this permit are severable, and if any provisions of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
(b) Indiana rules from 326 IAC quoted in conditions in this permit are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard.
- B.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]
This permit does not convey any property rights of any sort or any exclusive privilege.
- B.8 Duty to Supplement and Provide Information [326 IAC 2-8-3(f)] [326 IAC 2-8-4(5)(E)]
(a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management,
Permits Branch, Office of Air Management,
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emissions Limitations [326 IAC 2-8-4(1)]

C.1 Overall Source Limit (326 IAC 2-8)

- (a) Pursuant to 326 IAC 2-8, emissions of any regulated pollutant from the equipment listed in Section D.1 shall not exceed 99 tons per 365 day period. Emissions of hazardous air pollutants (HAPs) from the equipment listed in Section D.1 shall not exceed 9 tons of any individual HAP per 365 day period or 24 tons of any combination of HAPs per 365 day period. Emissions shall include those from all equipment listed in Section D.1 including those that are insignificant as defined in 326 IAC 2-7-1(21).
- (b) The equipment listed in Section D.2 shall comply with the conditions of Section D.2

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

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

C.3 Open Burning

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6.

C.4 Fugitive Dust Emissions

The Permittee shall be in violation of 326 IAC 6-4 if any of the criteria specified in 326 IAC 6-4-2 (1) through (4) are violated.

C.5 Operation of Equipment [326 IAC 2-8-5(a)(4)]

- (a) All equipment that potentially might emit pollutants into the ambient air shall be properly operated and maintained.
- (b) Unless otherwise stated in this permit, all air pollution control equipment listed in this permit shall be operated at all times that the emission unit(s) vented to the control equipment is in operation.
- (c) The permittee shall perform all necessary maintenance and make all necessary attempts to keep all air pollution control equipment in proper operating condition at all times.

Testing [326 IAC 2-8-4(3)]

C.6 Performance Testing [326 IAC 3-6]

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing methods approved by the IDEM, OAM.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAM, within forty-five (45) days after the completion of the testing. An extension may be granted by the Commissioner, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.2 FACILITY OPERATION CONDITIONS

- (a) One (1) aluminum coating line consisting of coil coating, baking, quenching, paint thinning and roller cleaning operations, equipped with a thermal oxidizer, capacity: 21,000 linear feet per hour.
- (b) One (1) coil cleaning operation, capacity: 21,000 linear feet per hour.
- (c) One (1) quality control testing operation, capacity: 0.15 gallons per hour.

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 Coil Coating Operations [326 IAC 8-2-4]

- (a) The volatile organic compound (VOC) content of coating delivered to the applicator at the aluminum coil coating line shall be limited to 2.6 pounds of VOCs per gallon of coating less water.
- (b) When operating a thermal oxidizer to achieve the limit for 326 IAC 8-2-4 for the aluminum coil coating line of 2.6 pounds of VOC emitted to the atmosphere per gallon of coating less water delivered to the applicator, the thermal oxidizer shall maintain a minimum overall control efficiency of sixty two and eight tenths (62.8%) percent. This efficiency and the use of the thermal oxidizer are required by 326 IAC 8-1-2(a)(2). Based upon 326 IAC 8-1-2(c) and the overall control efficiency of sixty two and eight tenths (62.8%) percent, the VOC content of the coating shall not exceed nine and thirty-six hundredths (9.36) pounds per gallon of coating solids delivered to the applicator.

D.2.2 General Provisions Relating to NSPS [326 IAC 12-1-1] [40 CFR Part 60, Subpart A]

The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 60, Subpart TT.

D.2.3 Metal Coil Surface Coating NSPS [326 IAC 12-1-1] [40 CFR 60, Subpart TT]

This facility is subject to 40 CFR 63, Subpart TT, which is incorporated by reference in 326 IAC 12-1-1. A copy of the rule is attached.

- (a) The thermal oxidizer shall be used continuously, i.e., at all times that the facility is operated, and operated at the most recently demonstrated overall efficiency.
- (b) The Permittee shall not cause to be discharged from the facility into the atmosphere more than:
 - (1) 0.14 kilogram VOC per liter (kg/l) of coating solids applied for each calendar month; or
 - (2) 10 percent of the VOC applied for each calendar month (90 percent emission reduction)

D.2.4 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

The thermal incinerator shall operate at all times that the aluminum coil coating line is operated. When operating, the thermal incinerator shall maintain a minimum operating temperature of 1,400 degrees Fahrenheit or a temperature, fan amperage and duct velocity determined during compliance tests to maintain a minimum 90 percent destruction of the volatile organic compound (VOC) captured. The input of VOC to the thermal incinerator shall not exceed 2,430 tons per twelve (12) consecutive months when operating at 90 percent control efficiency, equivalent to less than 250 tons of VOC per year, in order to make the requirements of 326 IAC 2-2 not applicable. Therefore, this will be a minor source pursuant to 326 IAC 2-2.

Any change or modification to these facilities, such as increasing VOC usage at the facilities controlled by the thermal oxidizer to 2,430 tons per twelve (12) consecutive months when operating at 90 percent control efficiency, which may increase the potential to emit, as defined by 326 IAC 2-1.1-1(16), from the total of one (1) aluminum coating line, one (1) coil cleaning operation and one (1) quality control testing operation to 250 tons per year or more of VOC shall cause the facilities to be a major modification to an existing minor source pursuant to 326 IAC 2-2, and shall require prior IDEM, OAM, approval.

D.2.5 New Source Toxics Control [326 IAC 2-4.1-1]

This facility is subject to 326 2-4.1-1. The requirement of this rule to install maximum achievable control technology is satisfied by Condition D.2.3 requiring use of a thermal oxidizer to comply with 40 CFR 60, Subpart TT.

D.2.6 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from each facility shall not exceed allowable PM emission rate based on the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.2.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B .13 - Preventive Maintenance Plan, of this permit, is required for this facility and any control devices.

Compliance Determination Requirements

D.2.8 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 12, 40 CFR 60.463]

To determine compliance with Condition D.2.3, the Permittee shall complete and/or maintain the following requirements:

- (a) The Permittee shall conduct an initial performance test as required under 40 CFR 60.8(a) and thereafter a performance test for each calendar month for each affected facility according to the procedures in this section.
- (b) 40 CFR 60.8(d) and (f) do not apply to the performance test.
- (c) The Permittee shall use the following procedures for determining monthly volume-weighted average emissions of VOC's in kg/l of coating solids applied.
 - (1) Determine the overall reduction efficiency (R) for the capture system and control device, using procedures specified in 40 CFR 60.463(c)(2)(i).
 - (2) Calculate the volume-weighted average of the total mass of VOC's per unit volume of coating applied (G) during each calendar month for each affected facility using equations in 40 CFR 60.463(c)(1)(i)(A), (B), and (C).
 - (3) Calculate the volume-weight average VOC emissions to the atmosphere (N) for each calendar month by the following equation:
$$N = G \cdot (1 - R)$$
 - (4) If the volume-weighted average mass of VOC's emitted to the atmosphere for each calendar month (N) is less than or equal to 0.14 kg/l of coating solids applied, the affected facility is in compliance. Each monthly calculation is a performance test.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.2.9 Monitoring Requirements [326 IAC 12, 40 CFR 60.464]

The Permittee shall:

- (a) Install, calibrate, operate, and maintain a device that continuously records the combustion temperature of any effluent gases incinerated to achieve compliance with Condition D.2.3. This device shall have an accuracy of ± 2.5 degrees Celsius or ± 0.75 percent of the temperature being measured expressed in degrees Celsius, whichever is greater.
- (b) Record all periods (during actual coating operations) in excess of 3 hours during which the average temperature in any thermal oxidizer used to control emissions from an effected facility remains more than 28 degrees Celsius (50 degrees Fahrenheit) below the temperature at which compliance with 60.462(a)(2) or (3) was demonstrated during the most recent measurement of thermal oxidizer efficiency required by 40 CFR 60.8. The records required by 40 CFR 60.7 shall identify each such occurrence and its duration.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.2.10 Recordkeeping [326 IAC 8-2-4] [326 IAC 12-1-1] [40 CFR 60, Subpart TT]

- (a) To document compliance with Condition D.2.1, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.2.1.
- (1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
 - (2) A log of the dates of use;
 - (3) The volume weighted VOC content of the coatings used for each month;
 - (4) The cleanup solvent usage for each month;
 - (5) The total VOC usage for each month; and
 - (6) The weight of VOCs emitted for each compliance period.
- (b) To document compliance with Condition D.2.3 and Condition D.2.4, the Permittee shall maintain at the source, for a period of at least two years, records of all data and calculations used to determine monthly VOC emissions from each affected facility and to determine the monthly emission limit, where applicable. The Permittee shall maintain at the source daily records of the thermal oxidizer combustion temperature.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.11 Reporting [326 IAC 12, 40 CFR 60.465]

- (a) The Permittee shall include the following data in the initial compliance report required by 40 CFR 60.8:
- (1) The overall VOC destruction rate; and
 - (2) The combustion temperature of the thermal oxidizer used to attain compliance with Condition D.2.3.
- (b) Following the initial performance test, the Permittee shall identify, record, and submit a written report to IDEM, OAM every calendar quarter of each instance in which the volume-weighted average of the local mass of VOC's emitted to the atmosphere per volume of applied coating solids (N) is greater than the limit specified under Condition D.2.3. If no such instances have occurred during a particular quarter, a report stating this shall be submitted to IDEM, OAM semiannually.
- (c) The Permittee shall also submit reports at the frequency specified in 40 CFR 60.7(c) when the thermal oxidizer temperature drops as defined by Condition D.2.9(b). If no such periods occur, the Permittee shall state that in the report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR MANAGEMENT
 COMPLIANCE DATA SECTION**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
 DEVIATION OCCURRENCE REPORTING FORM
 (For Control Equipment Monitoring Only)**

Source Name: Jupiter Aluminum Corporation, Jupiter Coilcoating Division
 Source Address: 205 East Carey, Fairland, Indiana 46126
 FESOP No.: F 145-5537-00013

A separate copy of this report must be submitted for **each** monitoring device on all control equipment listed in this permit. Attach a signed certification to complete this report.

Stack/Vent ID:	
Control Equipment: (ex: thermal oxidizer, scrubber, baghouses)	
Type of Parameter Monitored: (ex: temperature, pressure drop, efficiency)	
<input type="checkbox"/> Continuously	<input type="checkbox"/> Periodically, at a frequency of:
Parameter Operating Restrictions/Range: (ex: 1,400°F, 2-4 pounds per square inch pressure drop)	
Report Covers From: (date: month/day/year)	To:
<input type="checkbox"/> No Deviations from the Parameter Restriction/Range Occurred During the Monitoring Period. Complete Records Maintained at the Facility Verify Compliance with this Condition.	
<input type="checkbox"/> Summary of Deviations from the Parameter Restriction/Range During the Monitoring Period are Identified Below. Complete Records Maintained at the Facility.	

	For Parameter Recorded Continuously	For Parameter Recorded Periodically
Total Unit Operating Time		
Total Time of Deviations (Identify All Deviations)		
Percent of Time Indicating Deviations ($\frac{2}{1} \times 100$)		

Date of Deviation	Start/Stop Time of Deviation (Continuous Monitoring Only)	Actual Value Recorded	Reason for Deviation & Corrective Action Taken

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for the First Significant Permit Revision to a Federally Enforceable State Operating Permit

Source Background and Description

Source Name:	Jupiter Aluminum Corporation, Jupiter Coilcoating Division
Source Location:	205 East Cary Street, Fairland Indiana 46126
County:	Shelby
SIC Code:	3479
Operation Permit No.:	F 145-5537-00013
Operation Permit Issuance Date:	December 10, 1996
Permit revision No.:	145-10579-00013
Permit Reviewer:	Paula M. Miano

The Office of Air Management (OAM) has reviewed a revision application from Jupiter Aluminum Corporation, Jupiter Coilcoating Division relating to the operation of an aluminum coil coating line.

History

On January 28, 1999, Jupiter Aluminum Corporation, Jupiter Coilcoating Division submitted an application to the OAM requesting to add an additional aluminum coil coating line, equipped with a thermal oxidizer to their existing plant. Jupiter Aluminum Corporation, Jupiter Coilcoating Division, previously known as Aluminum Coil Coaters, Inc. was issued a FESOP permit on December 10, 1996.

Existing Approvals

The source was issued a FESOP F 145-5537-00038 on December 10, 1996. The source was issued AAF 145-8308 on April 17, 1997 and AAF 145-8472 on April 29, 1997 which changed the Plant ID from 145-00038 to 145-00013. The source was issued AAF 145-9192-00013 on December 17, 1997 which changed the name from Aluminum Coil Coater's, Inc. to Jupiter Aluminum Corp. All other conditions of the FESOP remained the same.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
S15	incinerator	30.0	3.8	28,900	600
S16	water quench tank	26.0	1.0	4,500	120
S17	wash tank	26.0	1.0	100	120
S18	wash tank	26.0	1.0	100	120

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
S19	hot water rinse tank	26.0	1.0	100	120
S20	water based primer applicator/ pretreatment	26.0	1.0	100	120
S21	wash tank combustion	26.0	1.0	1,000	350
S22	hot water rinse tank combustion	26.0	0.66	750	350
S23	water based primer applicator/ pretreatment combustion	26.0	0.66	750	350

Recommendation

The staff recommends to the Commissioner that the Significant Permit Revision 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 January 28, 1999, Additional information was received on March 26, 1999.

Emission Calculations

See Appendix A pages 1 through 3 of 3 of this document for detailed emissions calculations

Potential To Emit - New Equipment

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source 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.”

Pollutant	Potential To Emit (tons/year)
PM	0.210
PM ₁₀	0.210
SO ₂	0.042
VOC	1053
CO	1.40
NO _x	9.8

Note: For the purpose of determining Title V applicability for particulates, PM₁₀, not PM, is the regulated pollutant in consideration.

HAPS	Potential To Emit (tons/year)
xylene	greater than 10
formaldehyde	less than 10
nickel compounds	greater then 10
chromium compounds	greater than 10
glycol ethers	greater than 10
naphthalene	greater than 10
ethyl benzene	greater than 10
MEK	less than 10
2-butoxyethanol	greater than 10
Toluene	greater than 10
TOTAL	greater than 25

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of VOC is equal to or greater than 25 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-8-11.1(f)(1)(E) and requires a significant permit revision.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-8-11.1(f)(1)(G) and requires a significant permit revision.
- (c) Fugitive Emissions
Since there are 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 counted toward determination of PSD and Emission Offset applicability.

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.

Process/facility	Limited Potential to Emit (tons/year)						
	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs
roller coating line from existing FESOP	0.0	0.0	0.0	99.9	0.0	0.0	24.9
aluminum coil coating line exhausting to a thermal oxidizer	0.210	0.210	0.042	31.4	1.40	9.81	28.5
coil cleaning operations	0.0	0.0	0.0	1.76	0.0	0.0	1.75
quality control testing	0.0	0.0	0.0	4.29	0.0	0.0	4.29
Total Emissions	0.210	0.210	0.042	137	1.40	9.81	59.4

- (a) This modification to an existing minor stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.
- (b) This modification to a FESOP stationary source will change the status of the stationary source because the emissions increase is not limited to less than the FESOP significant levels.

Part 70 Permit Determination

326 IAC 2-8 (FESOP) and 326 IAC 2-7 (Part 70 Permit Program)

- (a) This existing source was issued a (F 045-5537-00013) on December 10, 1996.
- (b) This significant revision to this FESOP stationary source will change the status of the stationary source because the emissions increase is not limited to less than the FESOP significant levels. The source will become a major Title V source.
- (c) In order to comply with the requirements of 326 IAC 2-7-4(a)(1)(A), this existing source will apply for a Part 70 Operating Permit within twelve (12) months after the source becomes subject to Part 70 (326 IAC 2-7). This 12-month period starts at the postmarked submission date of the Affidavit of Construction.

County Attainment Status

The source is located in Shelby County.

Pollutant	Status
PM ₁₀	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Shelby County has been designated as attainment or unclassifiable for ozone.

Federal Rule Applicability

- (a) The aluminum coil coating line is subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.460, Subpart TT (Standards of Performance for Metal Coil Surface Coating). This rule requires that each owner and operator subject to this subpart shall not cause to be discharged into the atmosphere more than 0.14 kilogram VOC per liter (kg/l) of coating solids applied for each calendar month or 10 percent of the VOC's applied for each calendar month (90 percent emission reduction) for each affected facility that continuously uses an emission control device operated at the most recently demonstrated overall efficiency.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20, 40 CFR Part 63 and 40 CFR Part 61) applicable to this source.

State Rule Applicability - Entire Modification.

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 one hundred (100) tons per year of VOC. 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 July 1 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)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

State Rule Applicability - Individual Facilities

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

The aluminum coil coating line has the potential to emit more than 10 tons per year of a single HAP and 25 tons per year of any combination of HAPs; therefore, 326 IAC 2-1-3.4 is applicable. The requirement of this rule to install maximum achievable control technology is satisfied by the metal coil surface coating NSPS which requires the use of a thermal oxidizer to comply with 40 CFR 60 Subpart TT.

326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) from the aluminum coil coating line shall be limited by the following:

Interpolation and extrapolation 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.

Since the aluminum coil coating line uses rollers to apply the coatings, the transfer efficiency is 100%; therefore, the PM potential from this process is negligible and the aluminum coil coating line will comply with this rule.

326 IAC 8-1-6 (New facilities, general reduction requirements)

The aluminum coil coating line has the potential to emit more than 25 tons per year of VOC; therefore, 326 IAC 8-1-6 could be applicable. Since the requirements of 326 IAC 8-2-4 are applicable to this aluminum coil coating line, the requirements of 326 IAC 8-1-6 are not applicable.

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

The aluminum coil coating line is not subject to the requirements of 326 IAC 8-2-9 because as stated in 326 IAC 8-2-9(b)(1), this rule does not apply to, "Any metal parts or products limited by other sections of this rule." Since the requirements of 326 IAC 8-2-4 are applicable to this aluminum coil coating line, the requirements of 326 IAC 8-2-9 are not applicable.

326 IAC 8-2-4 (Coil Coating Operations)

Pursuant to 326 IAC 8-2-4 (Coil Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicator at the aluminum coil coating line shall be limited to 2.6 pounds of VOCs per gallon of coating less water.

Based on the MSDS submitted by the source and calculations made, with the operation of the thermal oxidizer at all times the aluminum coil coating line is in operation, the VOC content of all coatings used in the aluminum coil coating line will be less than 2.6 pounds per gallon less water; therefore, meeting the requirements of 326 IAC 8-2-4 (see calculation below):

The minimum overall control efficiency of the oxidizer has been calculated as follows as described in 326 IAC 8-1-2(c).

$$E = L/[1-(L/D)], \text{ where}$$

E = emission limit in pounds per gallon of solids
L = 2.6 pounds of VOC per gallon less water
D = density of VOC in coating, 10.25 pounds per gallon

A solvent density of ten and twenty-five hundredth (10.25) pounds of VOC per gallon of coating shall be used to determine equivalent pounds of VOC per gallon of solids for the applicable emission limit contained in this article.

$$E = 2.6/[1-(2.6/10.25)] = 3.48 \text{ pounds per gallon of solid}$$

$$O = [(V-E)/V] \times 100, \text{ where}$$

O = overall control efficiency required for compliance in percent
E = 3.48 pounds per gallons of solids
V = VOC content of organic coating in pounds per gallon solids solids as-applied (9.36 pounds VOC per gallon of solids as shown on page 1 of 3 of Appendix A)

$$O = [(9.36 - 3.48)/9.36] \times 100 = 62.8\%$$

Since the overall control efficiency for the thermal oxidizer is 97.02%, this unit complies with the rule.

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

The thermal oxidizer has applicable compliance monitoring conditions as specified below:

- (a) Install, calibrate, operate, and maintain a device that continuously records the combustion temperature of any effluent gases incinerated to achieve compliance with Condition D.2.3. This device shall have an accuracy of ± 2.5 degrees Celsius or ± 0.75 percent of the temperature being measured expressed in degrees Celsius, whichever is greater.
- (b) Record all periods (during actual coating operations) in excess of 3 hours during which the average temperature in any thermal oxidizer used to control emissions from an effected facility remains more than 28 degrees Celsius (50 degrees Fahrenheit) below the temperature at which compliance with 60.462(a)(2) or (3) was demonstrated during the most recent measurement of thermal oxidizer efficiency required by 40 CFR 60.8. The records required by 40 CFR 60.7 shall identify each such occurrence and its duration.

These monitoring conditions are necessary to satisfy the requirements of 40 CFR 60.464.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Part 70 Application Form GSD-08.

- (a) This source will emit levels of air toxics greater than those that constitute major source applicability according to Section 112 of the 1990 Clean Air Act Amendments.
- (b) See attached calculations, page 3 of 3 for detailed air toxic calculations.

Proposed Changes

A.1 General Information

The Permittee owns and operates an aluminum coil coating source.

Responsible Official: ~~Tim Martin~~
Richard Peck
Source Address: 205 East Carey **Street**, Fairland, Indiana 46126
Mailing Address: 205 East Carey **Street**, Fairland, Indiana 46126
SIC Code: 3479
County Location: Shelby
County Status: Attainment for all criteria pollutants
Source Status: ~~Synthetic Minor Source, FESOP Program~~
Part 70 Permit Program
Minor Source, under PSD;
Major Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Summary

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

- (a) One (1) roller coating line consisting of washing, treating, coating, baking and quenching operations equipped with a direct flame incinerator, capacity: 10,200 linear feet per hour.
- (b) **One (1) aluminum coating line consisting of coil coating, baking, quenching, paint thinning and roller cleaning operations, equipped with a thermal oxidizer, capacity: 21,000 linear feet per hour.**

(c) **One (1) coil cleaning operation, capacity: 21,000 linear feet per hour.**

(d) **One (1) quality control testing operation, capacity: 0.15 gallons per hour.**

A.3 Insignificant Activities

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(20)(21):

(a) Propane for liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) British thermal units per hour.

(b) Vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.

(c) Infrared cure equipment.

(d) Paved and unpaved roads and parking lots with public access.

(e) **Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.**

B.5 Termination of Right to Operate [326 IAC 2-8-9]

(a) The expiration of this permit terminates the Permittee's right to operate unless a timely and complete renewal application has been submitted consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-7.

(b) **As a result of the First Significant Permit Revision the source shall be required to apply for a Part 70, Title V Operating Permit within twelve (12) months after the source becomes subject to Part 70 (326 IAC 2-7). This twelve 12-month period starts at the postmarked submission date of the Affidavit of Construction.**

C.1 Overall Source Limit (326 IAC 2-8)

(a) Pursuant to 326 IAC 2-8, emissions of any regulated pollutant from the **equipment listed in Section D.1** ~~entire source~~ shall not exceed 99 tons per 365 day period. Emissions of hazardous air pollutants (HAPs) from the **equipment listed in Section D.1** ~~entire source~~ shall not exceed 9 tons of any individual HAP per 365 day period or 24 tons of any combination of HAPs per 365 day period. Emissions shall include those from all **equipment listed in Section D.1** ~~emission points at the source~~ including those that are insignificant as defined in 326 IAC 2-7-1(21)(20). ~~The source shall be allowed to add insignificant activities not already listed in this permit, as long as the total emissions from the source do not exceed the above specified limits. In the event that any condition or combination of conditions in Section D of this permit differs from the above, the most restrictive limit will prevail.~~

(b) **The equipment listed in Section D.2 shall comply with the conditions of Section D.2**

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (~~Visible Emissions~~ **Opacity** Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), ~~visible emissions~~ **opacity** shall meet the following, **unless otherwise stated in this permit:**

(a) ~~Visible emissions~~ **Opacity** shall not exceed an average of **forty percent (40%)** ~~opacity in twenty-four (24) consecutive readings, any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.~~

- (b) ~~Visible emissions~~ **Opacity** shall not exceed **sixty percent (60%) opacity** 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.

~~G.6 Performance Testing~~

~~Compliance testing shall be conducted on the direct flame incinerator in Section D.1 for the volatile organic compounds within 24 months to 36 months of FESOP issuance. All testing shall be performed according to the provisions of 326 IAC 3-2.1 (Source Sampling Procedures) and by methods in the approved test protocol. The test protocol shall be submitted to:~~

~~Indiana Department of Environmental Management,
Compliance Data Section, Office of Air Management,
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015~~

~~at least thirty-five (35) days before the intended test date.~~

C.6 Performance Testing [326 IAC 3-6]

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing methods approved by the IDEM, OAM.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAM, within forty-five (45) days after the completion of the testing. An extension may be granted by the Commissioner, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.2 FACILITY OPERATION CONDITIONS

- | |
|---|
| <p>(a) One (1) aluminum coating line consisting of coil coating, baking, quenching, paint thinning and roller cleaning operations, equipped with a thermal oxidizer, capacity: 21,000 linear feet per hour.</p> <p>(b) One (1) coil cleaning operation, capacity: 21,000 linear feet per hour.</p> <p>(c) One (1) quality control testing operation, capacity: 0.15 gallons per hour.</p> |
|---|

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 Coil Coating Operations [326 IAC 8-2-4]

- (a) The volatile organic compound (VOC) content of coating delivered to the applicator at the aluminum coil coating line shall be limited to 2.6 pounds of VOCs per gallon of coating less water.
- (b) When operating a thermal oxidizer to achieve the limit for 326 IAC 8-2-4 for the aluminum coil coating line of 2.6 pounds of VOC emitted to the atmosphere per gallon of coating less water delivered to the applicator, the thermal oxidizer shall maintain a minimum overall control efficiency of sixty two and eight tenths (62.8%) percent. This efficiency and the use of the thermal oxidizer are required by 326 IAC 8-1-2(a)(2). Based upon 326 IAC 8-1-2(c) and the overall control efficiency of sixty two and eight tenths (62.8%) percent, the VOC content of the coating shall not exceed nine and thirty-six hundredths (9.36) pounds per gallon of coating solids delivered to the applicator.

D.2.2 General Provisions Relating to NSPS [326 IAC 12-1-1] [40 CFR Part 60, Subpart A]

The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 60, Subpart TT.

D.2.3 Metal Coil Surface Coating NSPS [326 IAC 12-1-1] [40 CFR 60, Subpart TT]

This facility is subject to 40 CFR 63, Subpart TT, which is incorporated by reference in 326 IAC 12-1-1. A copy of the rule is attached.

- (a) The thermal oxidizer shall be used continuously, i.e., at all times that the facility is operated, and operated at the most recently demonstrated overall efficiency.
- (b) The Permittee shall not cause to be discharged from the facility into the atmosphere more than:
- (1) 0.14 kilogram VOC per liter (kg/l) of coating solids applied for each calendar month; or
 - (2) 10 percent of the VOC applied for each calendar month (90 percent emission reduction)

D.2.4 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

The thermal incinerator shall operate at all times that the aluminum coil coating line is operated. When operating, the thermal incinerator shall maintain a minimum operating temperature of 1,400 degrees Fahrenheit or a temperature, fan amperage and duct velocity determined during compliance tests to maintain a minimum 90 percent destruction of the volatile organic compound (VOC) captured. Since the thermal oxidizer is required to be operated continuously, the potential to emit VOC will be less than 250 tons per year. Therefore, this will be a minor source pursuant to 326 IAC 2-2.

Any change or modification to these facilities, such as increasing VOC usage at the facilities controlled by the thermal oxidizer to 2,430 tons per twelve (12) consecutive months when operating at 90 percent control efficiency, which may increase the potential to emit, as defined by 326 IAC 2-1.1-1(16), from the total of one (1) aluminum coating line, one (1) coil cleaning operation and one (1) quality control testing operation to 250 tons per year or more of VOC shall cause the facilities to be a major modification to an existing minor source pursuant to 326 IAC 2-2, and shall require prior IDEM, OAM, approval.

D.2.5 New Source Toxics Control [326 IAC 2-4.1-1]

This facility is subject to 326 2-4.1-1. The requirement of this rule to install maximum achievable control technology is satisfied by Condition D.2.3 requiring use of a thermal oxidizer to comply with 40 CFR 60, Subpart TT.

D.2.6 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from each facility shall not exceed allowable PM emission rate based on the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.2.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B .13 - Preventive Maintenance Plan, of this permit, is required for this facility and any control devices.

Compliance Determination Requirements

D.2.8 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 12, 40 CFR 60.463]

To determine compliance with Condition D.2.3, the Permittee shall complete and/or maintain the following requirements:

- (a) The Permittee shall conduct an initial performance test as required under 40 CFR 60.8(a) and thereafter a performance test for each calendar month for each affected facility according to the procedures in this section.
- (b) 40 CFR 60.8(d) and (f) do not apply to the performance test.
- (c) The Permittee shall use the following procedures for determining monthly volume-weighted average emissions of VOC's in kg/l of coating solids applied.

- (1) Determine the overall reduction efficiency (R) for the capture system and control device, using procedures specified in 40 CFR 60.463(c)(2)(i).
- (2) Calculate the volume-weighted average of the total mass of VOC's per unit volume of coating applied (G) during each calendar month for each affected facility using equations in 40 CFR 60.463(c)(1)(i)(A), (B), and (C).
- (3) Calculate the volume-weight average VOC emissions to the atmosphere (N) for each calendar month by the following equation:
$$N = G \cdot (1 - R)$$
- (4) If the volume-weighted average mass of VOC's emitted to the atmosphere for each calendar month (N) is less than or equal to 0.14 kg/l of coating solids applied, the affected facility is in compliance. Each monthly calculation is a performance test.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.2.9 Monitoring Requirements [326 IAC 12, 40 CFR 60.464]

The Permittee shall:

- (a) Install, calibrate, operate, and maintain a device that continuously records the combustion temperature of any effluent gases incinerated to achieve compliance with Condition D.2.3. This device shall have an accuracy of ± 2.5 degrees Celsius or ± 0.75 percent of the temperature being measured expressed in degrees Celsius, whichever is greater.
- (b) Record all periods (during actual coating operations) in excess of 3 hours during which the average temperature in any thermal oxidizer used to control emissions from an effected facility remains more than 28 degrees Celsius (50 degrees Fahrenheit) below the temperature at which compliance with 60.462(a)(2) or (3) was demonstrated during the most recent measurement of thermal oxidizer efficiency required by 40 CFR 60.8. The records required by 40 CFR 60.7 shall identify each such occurrence and its duration.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.2.10 Record keeping [326 IAC 8-2-4] [326 IAC 12-1-1] [40 CFR 60, Subpart TT]

- (a) To document compliance with Condition D.2.1, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.2.1.
 - (1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
 - (2) A log of the dates of use;

- (3) The volume weighted VOC content of the coatings used for each month;
 - (4) The cleanup solvent usage for each month;
 - (5) The total VOC usage for each month; and
 - (6) The weight of VOCs emitted for each compliance period.
- (b) To document compliance with Condition D.2.3 and Condition D.2.4, the Permittee shall maintain at the source, for a period of at least two years, records of all data and calculations used to determine monthly VOC emissions from each affected facility and to determine the monthly emission limit, where applicable. The Permittee shall maintain at the source daily records of the thermal oxidizer combustion temperature.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.11 Reporting [326 IAC 12, 40 CFR 60.465]

- (a) The Permittee shall include the following data in the initial compliance report required by 40 CFR 60.8:
- (1) The overall VOC destruction rate and
 - (2) The combustion temperature of the thermal oxidizer
used to attain compliance with Condition D.2.3.
- (b) Following the initial performance test, the Permittee shall identify, record, and submit a written report to IDEM OAM every calendar quarter of each instance in which the volume-weighted average of the local mass of VOC's emitted to the atmosphere per volume of applied coating solids (N) is greater than the limit specified under Condition D.2.3. If no such instances have occurred during a particular quarter, a report stating this shall be submitted to IDEM OAM semiannually.
- (c) The Permittee shall also submit reports at the frequency specified in 40 CFR 60.7(c) when the thermal oxidizer temperature drops as defined by Condition D.2.9(b). If no such periods occur, the Permittee shall state that in the report.

Conclusion

The operation of this aluminum coil coating line shall be subject to the conditions of the attached proposed Significant Permit Revision to a FESOP No. 145-10579-00013.

Indiana Department of Environmental Management Office of Air Management

Addendum to the Technical Support Document for Federally Enforceable State Operating Permit (FESOP)

Source Name:	Jupiter Aluminum Corporation, Jupiter Coilcoating Division
Source Location:	205 East Cary Street, Fairland Indiana 46126
County:	Shelby
FESOP:	F 145-5537-00013
SIC Code:	3479
Permit Reviewer:	Paula M. Miano

On May 24, 1999, the Office of Air Management (OAM) had a notice published in the Shelbyville News, Shelbyville, Indiana, stating that Jupiter Aluminum Corporation, Jupiter Coilcoating Division had applied for a Federally Enforceable State Operating Permit (FESOP) to operate an aluminum coil coating line with a thermal oxidizer. The notice also stated that OAM proposed to issue a FESOP for this operation and provided information on how the public could review the proposed FESOP and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this FESOP should be issued as proposed.

Upon further review, the OAM has decided to make the following changes to the FESOP: The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language is **bolded**):

1. Condition D.2.4 has been revised to show the input of the VOC to the incinerator shall be limited to avoid the applicability of 326 IAC 2-2 as follows:

D.2.4 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

The thermal incinerator shall operate at all times that the aluminum coil coating line is operated. When operating, the thermal incinerator shall maintain a minimum operating temperature of 1,400 degrees Fahrenheit or a temperature, fan amperage and duct velocity determined during compliance tests to maintain a minimum 90 percent destruction of the volatile organic compound (VOC) captured. ~~Since the thermal oxidizer is required to be operated continuously, the potential to emit VOC will be less than 250 tons per year.~~ **The input of VOC to the thermal incinerator shall not exceed 2,430 tons per twelve (12) consecutive months when operating at 90 percent control efficiency, equivalent to less than 250 tons of VOC per year, in order to make the requirements of 326 IAC 2-2 not applicable.** Therefore, this will be a minor source pursuant to 326 IAC 2-2.

Any change or modification to these facilities, ~~which may increase the potential to emit, as defined by 326 IAC 2-1.1-1(16)~~, such as increasing VOC usage at the facilities controlled by the thermal oxidizer to 2,430 tons per twelve (12) consecutive months when operating at 90 percent control efficiency, which may increase the potential to emit, as defined by 326 IAC 2-1.1-1(16), from the total of one (1) aluminum coating line, one (1) coil cleaning operation and one (1) quality control testing operation to 250 tons per year or more of VOC shall cause the facilities to be a major modification to an existing minor source pursuant to 326 IAC 2-2, and shall require prior IDEM, OAM, approval.

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

Company Name: Jupiter Aluminum Corporation, Jupiter Coilcoating Division
Address City IN Zip: 205 East Cary Street, Fairland, Indiana 46126
FESOP: 145-10579
Pit ID: 145-00013
Reviewer: Paula M. Miano
Date: January 28, 1999

Material	Density (lb/gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Vol (solids)	Gal of Mat (gal/unit)	Maximum (unit/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 per year	lb VOC /gal solids	Transfer Efficiency
Coil Coating, Baking and Quenching Operations																
Green Backer 2578G20003	10.25	40.16%	0.0%	40.2%	0.0%	44.00%	1.00	50.82	4.12	4.12	209.20	5020.69	916.28	0.00	9.36	100%
West Coast Sandstone 256D30028	10.26	37.30%	0.0%	37.3%	0.0%	47.00%	1.00	50.82	3.83	3.83	194.49	4667.69	851.85	0.00	8.14	100%
West Coast Tan 2568D60013	10.61	35.18%	0.0%	35.2%	0.0%	49.00%	1.00	50.82	3.73	3.73	189.69	4552.58	830.84	0.00	7.62	100%
R-547 Brass 2563T80021	8.60	40.86%	0.0%	40.9%	0.0%	50.00%	1.00	50.82	3.51	3.51	178.58	4285.91	782.18	0.00	7.03	100%
Fabwel Birch White 2569W10032	11.70	31.39%	0.0%	31.4%	0.0%	50.00%	1.00	50.82	3.67	3.67	186.64	4479.43	817.50	0.00	7.35	100%
TOTAL											209	5021	916	0.00		

Material	Density (lb/gal)	1998 Usage (gal/yr)	Scaling Factor*	Potential VOC pounds per hour	Potential VOC tons per day	Potential VOC tons per year
Paint Thinning Operation						
2 - butoxyethanol	7.50	4200.00	4.26	15.32	0.18	67.10
Roller Cleaning Operation						
toluene	7.25	4121.00	4.26	14.53	0.17	63.64
TOTAL				29.85	0.36	130.73

State Potential Emissions		Add worst case coating to all solvents													
Control Technology Emissions (Combustion)															
Type	Number	Capacity MMBtu/hr	Gas usage MMCF/yr	PM lb/MMCF	PM10 lb/MMCF	Emission Factors				Emissions				CO tons/yr	
						SO2 lb/MMCF	NOx lb/MMCF	VOC lb/MMCF	CO lb/MMCF	PM tons/yr	PM10 tons/yr	SO2 tons/yr	NOx tons/yr	VOC tons/yr	CO tons/yr
Catalytic			0.0	3.0	3.0	0.6	100.0	5.3	35.0	0.0	0.0	0.0	0.0	0.0	0.0
Thermal	1	16	140.2	3.0	3.0	0.6	140.0	2.8	20.0	0.2	0.2	0.0	9.8	0.2	1.4
Total			140.2							0.210	0.210	0.042	9.81	0.196	1.40
										Control Efficiency VOC	Controlled VOC pounds per hour	Controlled VOC pounds per day	Controlled VOC tons/yr	Controlled Particulate tons/yr	
										0.9702					

Controlled Emissions due to Surface Coating Operations and Controls

7.17 151 31.4 0.210

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)

Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)

Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)

Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)

Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/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

Scaling Factor= The new line is has a capacity 3.25 times greater than the old line. The ratio of 1998 potential hours to actual hours is 1.31. Therefore, a scaling factor of 4.26 (3.25*1.31) was used to calculate the PTE.

**Appendix A: State Potential Emissions Calculations
VOC and Particulate**

Company Name: Jupiter Aluminum Corporation, Jupiter Coilcoating Division
Address City IN Zip: 205 East Cary Street, Fairland, Indiana 46126
CP, FESOP or Part 70: 145-10579
Pit ID: 145-00013
Reviewer: Paula M. Miano
Date: January 28, 1999

Material	Density (lb/gal)	VOC Content (lb/gal)	1998 Usage (gal/yr)	Scaling Factor*	Potential VOC pounds per hour	Potential VOC tons per day	Potential VOC tons per year
Coil Cleaning Operations							
Alkaline Cleaner	10.59	0.32	2580.00	4.26	0.40	0.00	1.76
Quality Control Testing							
MEK	6.72	6.72	300.00	4.26	0.98	0.01	4.29
TOTAL					1.38	0.02	6.05

State Potential Emissions

METHODOLOGY

Scaling Factor= The new line is has a capacity 3.25 times greater than the old line. The ratio of 1998 potential hours to actual hours is 1.31. Therefore, a scaling factor of 4.26 (3.25*1.31) was used to calculate the PTE.
 Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal)*Gal of Material (gal/yr) *4.26*(1/8760)
 Potential VOC Pounds per Day = (Pounds of VOC per hour*24 hours)/2000 lbs
 Potential VOC Tons per Year = tons of VOC per day*365 days

HAP Emission Calculations

Company Name: Jupiter Aluminum Corporation, Jupiter Coilcoating Division
 Plant Location: 205 East Cary Street, Fairland, Indiana 46126
 County: Shelby
 Permit Reviewer: Paula M. Miano
 Date: January 28, 1999

Material	Density (lb/gal)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Formaldehyde	Weight % Nickel Compounds	Weight % Chromium Compound	Weight % Glycol Ethers	Weight % Naphthalene	Weight % Ethyl-benzene	Xylene Emissions (tons/yr)	Formaldehyde Emissions (tons/yr)	Nickel Compounds Emissions (tons/yr)	Chromium Compound Emissions (tons/yr)	Glycol Ethers Emissions (tons/yr)	Naphthalene Emissions (tons/yr)	Ethyl-benzene (tons/yr)	
Coil Coating, Baking and Quenching Operations																		
Green Backer 2578G20003	10.25	1.00	50.82	7.00%	0.03%	2.82%	0.00%	11.00%	2.00%	2.00%	159.71	0.71	64.23	0.00	250.97	45.63	45.63	
West Coast Sandstone 256D30028	10.26	1.00	50.82	14.00%	0.02%	0.00%	0.00%	7.00%	0.00%	3.00%	319.73	0.34	0.00	0.00	159.87	0.00	68.51	
West Coast Tan 2568D60013	10.61	1.00	50.82	13.00%	0.01%	0.00%	3.00%	7.00%	0.00%	3.00%	307.02	0.31	0.00	70.85	165.32	0.00	70.85	
R-547 Brass 2563T80021	8.60	1.00	50.82	12.00%	0.02%	0.00%	0.00%	2.00%	2.00%	2.00%	229.71	0.44	0.00	0.00	38.29	38.29	38.29	
Fabwel Birch White 2569W10032	11.70	1.00	50.82	0.00%	0.01%	0.00%	0.00%	6.00%	0.00%	2.00%	0.00	0.26	0.00	0.00	156.26	0.00	52.09	
Uncontrolled											(tons/yr):	320	0.707	64.226	70.851	251	45.631	70.851
Totals											(lb/hr):	73.0	0.161	14.7	16.2	57.3	10.4	16.2
											(g/sec):	9.20	0.020	1.85	2.04	7.22	1.31	2.04
Controlled											(tons/yr):	9.53	0.021	1.91	2.11	7.48	1.36	2.11
Totals											(lb/hr):	2.18	0.005	0.437	0.482	1.708	0.310	0.482
											(g/sec):	0.274	0.001	0.055	0.061	0.215	0.039	0.061

Material	Density (lb/gal)	HAP Percent	1998 Usage (gal/yr)	Scaling Factor*	Uncontrolled Potential HAP pounds per hour	Uncontrolled Potential HAP tons per day	Uncontrolled Potential HAP tons per year	Control Efficiency	Controlled Potential HAP tons per year	Controlled Potential HAP lb/hr	Controlled Potential HAP g/sec
Paint Thinning Operation											
2 - butoxyethanol	7.50	100%	4200	4.26	15.32	0.18	67.10	97.02%	2.00	0.46	0.06
Roller Cleaning Operation											
toluene	7.25	100%	4121	4.26	14.53	0.17	63.64	97.02%	1.90	0.43	0.05
TOTAL					29.8	0.358	131		3.90	0.889	0.112

Material	Density (lb/gal)	1998 Usage (gal/yr)	Scaling Factor*	Weight % MEK	Weight % 2-butoxy-ethanol	Control Efficiency	MEK Emissions (tons/yr)	2-butoxy-ethanol (tons/yr)
Coil Cleaning Operations								
Alkaline Cleaner	10.59	2580	4.26	0.00%	3.00%	0.00%	0.00	1.75
Quality Control Testing								
MEK	6.72	300	4.26	100.00%	0.00%	0.00%	4.29	0.00

Grand Totals Uncontrolled Emissions

Xylene Emissions (tons/yr)	Formaldehyde Emissions (tons/yr)	Nickel Compounds Emissions (tons/yr)	Chromium Compound Emissions (tons/yr)	Glycol Ethers Emissions (tons/yr)	Naphthalene Emissions (tons/yr)	Ethyl-benzene (tons/yr)	MEK Emissions (tons/yr)	2-butoxy-ethanol (tons/yr)	Toluene (tons/yr)
320	0.707	64.2	70.9	251	45.6	70.9	4.29	68.8	63.6

Grand Totals Controlled Emissions

Xylene Emissions (tons/yr)	Formaldehyde Emissions (tons/yr)	Nickel Compounds Emissions (tons/yr)	Chromium Compound Emissions (tons/yr)	Glycol Ethers Emissions (tons/yr)	Naphthalene Emissions (tons/yr)	Ethyl-benzene (tons/yr)	MEK Emissions (tons/yr)	2-butoxy-ethanol (tons/yr)	Toluene (tons/yr)
9.53	0.021	1.91	2.11	7.48	1.36	2.11	4.29	3.75	1.90

Grand Total Uncontrolled	(tons/yr):	960
Controlled	(tons/yr):	34.5

Total State Potential Emissions

METHODOLOGY

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

Scaling Factor= The new line is has a capacity 3.25 times greater than the old line. The ratio of 1998 potential hours to actual hours is 1.31. Therefore, a scaling factor of 4.26 (3.25*1.31) was used to calculate the PTE.