

Mr. Jeff Copeland
Delco Remy America
2902 Enterprise Drive
Anderson, Indiana 46011

Re: Registered Construction and Operation Status,
095-12445-00105

Dear Mr. Copeland:

The application from Delco Remy America was received on June 30, 2000 has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that this plant, located at 7825 American Way, Anderson, Indiana, is classified as registered. It consists of the following new and existing permitted equipment, used in the assembly of offsite manufactured armatures, field coils, housing and solenoid to form the heavy and light duty starter motors:

- (a) New Equipment:
 - (1) One (1) air dry varnish dip tank, identified as paint booth E-5 with a maximum production rate of 60 parts per hour.
- (b) Existing Permitted Equipment:
 - (a) One (1) banding dip tank, identified as paint booth E-4 with a maximum production rate of 420 parts per hour; and
 - (b) Three (3) natural gas epoxy trickle ovens with stack ID's E-1 to E-3, and ten (10) natural gas-fired space heaters, with a total heat input rating of 7.4 million British Thermal Units per hour (mmBtu/hr).

The following conditions shall be applicable:

1. Volatile Organic Compound (VOC) [326 IAC 8-2-9]

- (a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volume weighted average volatile organic compound (VOC) content of coating applied to starter motors from paint booth E-4 shall be limited to 3.5 pounds of VOCs per gallon of coating less water, as delivered to the applicator for any calendar day, for extreme performance coatings. This limit shall be determined based on volume weighted average as follows:

$$\frac{\text{Lb VOC}}{\text{Gallon less water}} = \frac{[\sum \text{coatings (D * O * Q)} / (1 - W * Dc/Dw)]}{\sum C}$$

Where:

Dc = density of coating, lb/gal Dw = density of water, lb/gal
O = weight percent organics, % Q = quantity of coating, gal/unit
W = percent volume water, % C = total coatings used, gal/unit

- (b) 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.

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 Management 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 Management
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 Management (OAM) 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 Management

APD

cc: File - Madison County
Madison County Health Department
Air Compliance - Jim Thorpe
Permit Tracking - Janet Mobley
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak
Anderson Office of Air Management

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:	Delco Remy America
Address:	7825 American Way
City:	Anderson
Authorized individual:	Jeff Copeland
Phone #:	(765) 683-3826
Registration #:	095-12445-00105

I hereby certify that **Delco Remy America** is still in operation and is in compliance with the requirements of Registration **095-12445-00105**.

Name (typed):
Title:
Signature:
Date:

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name: Delco Remy America
Source Location: 7825 American Way, Anderson, Indiana 46011
County: Madison
SIC Code: 3714
Registration No.: 095-12445-00105
Permit Reviewer: Aida De Guzman

The Office of Air Management (OAM) has reviewed an application from Delco Remy America relating to the construction and operation of the following new and existing permitted equipment, used in the assembly of offsite manufactured armatures, field coils, housing and solenoid to form the heavy and light duty starter motors:

- (a) New Equipment:
 - (1) One (1) air dry varnish dip tank, identified as paint booth E-5 with a maximum production rate of 60 parts per hour.
- (b) Existing Permitted Equipment:
 - (a) One (1) banding dip tank, identified as paint booth E-4 with a maximum production rate of 420 parts per hour; and
 - (b) Three (3) natural gas epoxy trickle ovens with stack ID's E-1 to E-3, and ten (10) natural gas-fired space heaters, with a total heat input rating of 7.4 million British Thermal Units per hour (mmBtu/hr).

Existing Approvals

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

- (a) Registration - CP 095-R9703-00105, issued on November 20, 1997.

Source Definition

Delco Remy America consists of the following five (5) plants:

- (a) Plant 1 is located at 6512 Production Road. This plant is used for engine testing for prototypes stator motors, with a Standard Industrial Classification (SIC) code 8734. It is located approximately 8 miles from plant 3 (7825 American Way) in this application, 1/4 mile from plant 2, 5 miles from plant 5 and 6 miles from plant 4.
- (b) Plant 2 is located at 6628 Production Road. This plant assembles heavy duty-alternators, with an SIC code 3714. The whole plant's operation is being moved to plant 5 located at

4640 Pendleton Avenue, and be completed over the next 12 months. This moving was permitted under NSR/MSOP095-11199-00109, issued on December 13, 1999, for the new location.

- (c) Plant 3 in this application is located at 7825 American Way. This plant assembles light and heavy duty stator motors, with an SIC code of 3714. It is located approximately 7½ miles from plants 4 and 5, and 8 miles from plants 1 and 2.
- (d) Plant 4 is located at Independence Park, 1819 West 38th Street. This plant coats armatures, with SC code 3714. It is located approximately 1½ mile from plant 5, 6 miles from plants 1 and 2, and 7½ miles from plant 3.
- (e) Plant 5 is located at 4640 Pendleton Avenue. This plant assembles engine alternator and other engine components, with SIC code 3714. It is located approximately 1½ mile from plant 4.

These five (5) plants are all owned by one (1) company. All plants have the same SIC Code, except for Plant 1. There are no parts or product being transferred from one plant to another plant for further processing, and therefore, there is no support relationship between the plants. Based on all the permits issued to these plants their combined emissions will be less than the Part 70 threshold level. For these reasons, Plant 3- 7825 American Way, Anderson, Indiana 46011 will be considered a separate source.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
E-5	Air dry varnish dip	31	1	4,600	ambient
E-6	Drying rack ventilation	31	1	4,600	ambient

Recommendation

The staff recommends to the Commissioner that the construction and 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 June 30 2000, with additional information received on July 27, 2000.

Emission Calculations

- (a) New equipment:
 - (1) Air dry varnish dip tank - See page 1 of 3 TSD Appendix A for detailed calculations.
- (b) Existing Equipment:
 - (1) banding dip tank - See page 2 of 3 TSD Appendix A for detailed calculations.
 - (2) Three (3) natural gas epoxy trickle ovens - See page 3 of 3 TSD Appendix A for detailed 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 for New Equipment (tons/year)	Potential To Emit For Existing Equipment (tons/year)	Total Potential To Emit (tons/year)
PM	0.0	0.1	0.1
PM-10	0.0	0.2	0.2
SO ₂	0.0	0.0	0.0
VOC	0.40	20.68	21.08
CO	0.0	2.7	2.7
NO _x	0.0	3.2	3.2

HAP's	Potential To Emit for New Equipment (tons/year)	Potential To Emit For Existing Equipment (tons/year)	Total Potential To Emit (tons/year)
Styrene	0.0	9.4	9.4
Xylene	2.5	0.0	2.5
Ethyl Benzene	0.1	0.0	0.1
TOTAL Single HAP			9.4
TOTAL Combined HAPs			12.00

Justification For Level of Approval

The potential to emit (as defined in 326 IAC 2-7-1(29)) of volatile organic compounds (VOC) are less than 25 tons per year.

and

The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less 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 less than twenty-five (25) tons per year.

Therefore, the source is subject to the provisions of 326 2-5.5-6, revision to existing registration.

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	Single HAP	Combined HAPs
New Equipment: Air dry varnish dip tank, E-5	0.0	0.0	0.0	0.40	0.0	0.0	2.5	2.6
Existing Equipment: Three (3) natural gas epoxy trickle ovens	0.1	0.2	0.0	0.2	2.7	3.2	0.0	0.0
banding dip tank, E-4	0.0	0.0	0.0	20.48	0.0	0.0	9.4	9.4
Total Emissions	0.1	0.2	0.0	21.08	2.7	3.2	9.4 *	12.0

* worst HAP

County Attainment Status

The source is located in Madison County.

Pollutant	Status (attainment, maintenance attainment, or unclassifiable; severe, moderate, or marginal nonattainment)
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	not determined

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

Source Status

The whole source is **re-permitted** based on the new permitting rule, 326 IAC 2, approved on December 25, 1998. The source PSD Definition determined in this permit (emissions after controls):

Pollutant	Emissions (ton/yr)
PM	0.1
PM10	0.2
SO ₂	0.0
VOC	21.08
CO	2.7
NO _x	3.2
Single HAP	9.4
Combination HAPs	12.0

- (a) This re-permitted source is **not** a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This **re-permitted** source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (1) each criteria pollutant is less than 100 tons per year,
- (2) no single hazardous air pollutant (HAP) is emitted nor combined HAPs is emitted.

Federal Rule Applicability

- (a) New Source Performance Standards
There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) National Emission Standards for Hazardous Air Pollutants
There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

- (a) 326 IAC 2-6 (Emission Reporting)
This source, which is located in a county that is not listed in the rule, is not subject to 326 IAC 2-6 (Emission Reporting), because its VOC potential to emit is less than one hundred (100) tons per year.

State Rule Applicability - Individual Facilities

- (a) 326 IAC 8-2-9 (Miscellaneous Metal Coating)
- (1) The new paint booth, E-5 is not subject to 326 IAC 8-2-9, because its actual VOC emissions are less than fifteen pounds per day.
 - (2) The existing paint booth, E-4 has a VOC actual emissions at levels greater than 15 pounds per day. Therefore, it is subject to 326 IAC 8-2-9.

- (a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicator at paint booth, E-4 shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for extreme performance coatings. This limit shall be determined based on volume weighted average as follows:

$$\frac{\text{Lb VOC}}{\text{Gallon less water}} = \frac{[3\text{coatings (D * O * Q)} / (1-W * Dc/Dw)]}{3C}$$

Where:

Dc = density of coating, lb/gal Dw = density of water, lb/gal
O = weight percent organics, % Q = quantity of coating, gal/unit
W = percent volume water, % C = total coatings used, gal/unit

The source is in compliance with the 3.5 lb/gal less water limit, since the coatings being used have a volume weighted average of 1.67 lb/gal less water. See page 3 of 3 TSD Appendix A for detailed calculations.

- (b) 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.
- (b) 326 IAC 2-4.1-1 (New Source Toxic control)
326 IAC 2-4.1-1 applies to major source of hazardous air pollutant. This rule does not apply to Delco Remy of America, Plant 3 because it is not major for HAPs.
- (c) 326 IAC 6-2 (PM Emissions Limit for Indirect Heating Facilities)
The natural gas-fired epoxy trickle ovens are not subject to this rule, because they are not sources of indirect heating.

Conclusion

The construction of the new paint booth E-5, and operation of the existing equipment used in the assembly of offsite manufactured armatures, field coils, housing and solenoid to form the heavy and light duty starter motors shall be subject to the conditions of the attached proposed **Registration 095-12445-00105.**

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

Company Name: Delco Remy America
Address City: 7825 American Way, Anderson, Indiana
Plt ID: 095-12445-00105
Reviewer: Aida De Guzman
Application R: June 30, 2000

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (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 (ton/yr)	lb VOC/gal solids	Transfer Efficiency
E-5 booth																
494 air dry varnis	7.8	44.70%	0.0%	44.7%	0.0%	48.00%	0.00040	60.000	3.49	3.49	0.08	2.01	0.37	0.00	7.27	100%

State Potential Emissions

Add worst case coating to all solvents

0.08	2.01	0.37	0.00
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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)

HAP	Emission Rate (lb/hr)	Emission Rate (ton/yr)
Ethylbenzene	0.02	0.10
Xylene	0.58	2.50
Cobalt Cmpd	0.0016	0.00

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

Company Name: Delco Remy America
Address City IN Zip: 7825 American Way, Anderson, Indiana
Plt ID: 095-12445-00105
Reviewer: Aida De Guzman
Received Date: June 30, 2000

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

7.4

64.8

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	0.1	0.2	0.0	3.2	0.2	2.7

*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
above
emission

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

Company Name: Delco Remy America
Address City: 7825 American Way, Anderson, Indiana
Registration ID: 095-12445-00105
Reviewer: Aida De Guzman
Date: June 30, 2000

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (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 (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Banding Dip Tank, E-4																
Epoxy Mixture #34-1	9.9	15.50%	0.0%	15.5%	0.0%	82.50%	0.00260	300.000	1.53	1.53	1.20	28.64	5.23	0.00	1.86	100%
Epoxy Resin #34-18	9.7	16.70%	0.0%	16.7%	0.0%	83.00%	0.00240	300.000	1.61	1.61	1.16	27.91	5.09	0.00	1.95	100%
Epoxy Hardener #44	8.2	0.00%	0.0%	0.0%	0.0%	100.00%	0.00060	300.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%
Polyester Resin #18	9.0	50.70%	31.6%	19.1%	35.0%	49.30%	0.00300	420.000	2.63	1.71	2.16	51.75	9.44	0.00	3.47	100%
O.P. Accelerator#10	8.7	100.00%	0.0%	100.0%	0.0%	0.00%	0.00003	420.000	8.67	8.67	0.11	2.62	0.48	0.00	ERR	100%
Polyester Resin R18	9.2	33.00%	23.2%	9.8%	25.0%	59.30%	0.00020	300.000	1.21	0.90	0.05	1.30	0.24	0.00	1.53	100%

State Potential Emissions

Add worst case coating to all solvents

4.68	112.22	20.48	0.00
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METHODOLOGY

Volume weighted average 1.67

HAP	Emission Rate (lb/hr)	Emission Rate (tons/yr)
Styrene	2.15	9.40

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)

Volume weighted av lb VOC/gal less water = summation of coats [density, lb/gal * wt. % organics * gal of mat'l., gal/unit / [1-% vol water * density coat, lb/gal] / summation of coatings used, gal/unit