NEW SOURCE CONSTRUCTION PERMIT
and MINOR SOURCE OPERATING PERMIT
OFFICE OF AIR MANAGEMENT
and ANDERSON OFFICE OF AIR MANAGEMENT

Delco Remy America, Inc.
4640 Pendleton Avenue
Anderson, Indiana 46013

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-5.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 095-11199-00109	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) and the Anderson Office of Air Management. The information describing the source contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary engine alternator and other engine component manufacturing operation.

Authorized Individual:	Jeff Copeland
Source Address:	4640 Pendleton Avenue, Anderson, Indiana 46013
Mailing Address:	2902 Enterprise Drive, Anderson, Indiana 46013
Phone Number:	765-683-3826
SIC Code:	3714
County Location:	Madison
County Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Minor Source, under PSD Rules

A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to construct and operate the following emissions units and pollution control devices:

(a) Two (2) electric epoxy trickle ovens, each rated at 72 kilowatts (Kw), capable of coating a total of 100 metal stators per hour, each exhausting through one (1) stack, identified as E-1 and E-2.

(b) Two (2) varnish dip tanks, which are capable of coating a total of 600 metal rotors per hour, each exhausting through one (1) stack, identified as E-3 and E-4. This facility includes two (2) electric ovens, each rated at 65 Kw.

(c) One (1) rust inhibitor dip tank, capable of coating 600 metal rotors per hour, exhausting through one (1) stack, identified as E-5.

(d) One (1) epoxy dip tank, which is capable of coating 300 metal coils per hour. This facility includes one (1) electric oven, rated at 108 Kw, exhausting through one (1) stack, identified as E-6.

(e) Two (2) natural gas-fired space heaters, each rated at 0.115 million (MM) British thermal units (Btu) per hour.

(f) Ten (10) natural gas-fired space heaters, each rated at 0.485 MMBtu per hour.

(g) A welding operation with a maximum welding wire consumption rate of 0.28 pounds per hour.

Note: These previously existing emission units are being relocated from an existing manufacturing plant to a new building at the above listed location.

SECTION B GENERAL CONSTRUCTION CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit 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.

B.2 Definitions

Terms in this permit shall have the definition 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, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit 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.

B.5 Modification to Permit [326 IAC 2]

All requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

B.6 Minor Source Operating Permit [326 IAC 2-6.1]

This document shall also become a minor source operating permit pursuant to 326 IAC 2-6.1 when, prior to start of operation, the following requirements are met:

(a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the emissions units were constructed as proposed in the application. The emissions units covered in the New Source Construction Permit may begin operating on the date the affidavit of construction is postmarked or hand delivered to IDEM.

(b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(c) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.

(d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-1.1-7(Fees).

(e) Pursuant to 326 IAC 2-6.1-7, the Permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date established in the validation letter. If IDEM, OAM, and the Anderson Office of Air Management, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied. The operation permit issued shall contain as a minimum the conditions in Section C and Section D of this permit.

B.7 Local Agency Requirement

That an application for an operation permit must be made ninety (90) days before start up to:

Anderson Office of Air Management
120 East 8th Street
P.O. Box 2100
Anderson, Indiana 46011

The operation permit issued by the Anderson Office of Air Management shall contain as a minimum the conditions in the Operation Conditions section of this permit.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

(a) The total source potential to emit of all regulated pollutants is less than 250 tons per year. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.

(b) Any change or modification which may increase potential to emit to 250 tons per year from this source, shall cause this source to be considered a major source under PSD, 326 IAC 2-2 and 40 CFR 52.21, and shall require approval from IDEM, OAM prior to making the change.

C.2 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after issuance of this permit, including the following information on each emissions unit:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

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

and

Anderson Office of Air Management
120 East 8th Street
P.O. Box 2100
Anderson, Indiana 46011

(b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that lack of proper maintenance does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) PMP's shall be submitted to IDEM, OAM, and the Anderson Office of Air Management upon request and shall be subject to review and approval by IDEM, OAM, and the Anderson Office of Air Management.

C.3 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

(a) The Permittee must comply with the requirements of [326 IAC 2-6.1-6] whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

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

and

Anderson Office of Air Management
120 East 8th Street
P.O. Box 2100
Anderson, Indiana 46011

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1.

(c) The Permittee shall notify the OAM within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.4 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, the Permittee shall allow IDEM, OAM, the Anderson Office of Air Management, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;

(c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;

(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

(1) The Permittee may assert a claim that, in the opinion of the Permittee, information removed or about to be removed from the source by IDEM, OAM, the Anderson Office of Air Management, or an authorized representative, contains information that is confidential under IC 5-14-3-4(a). The claim shall be made in writing before or at the time the information is removed from the source. In the event that a claim of confidentiality is so asserted, neither IDEM, OAM, the Anderson Office of Air Management, nor an authorized representative, may disclose the information unless and until IDEM, OAM, and the Anderson Office of Air Management makes a determination under 326 IAC 17-1-7 through 326 IAC 17-1-9 that the information is not entitled to confidential treatment and that determination becomes final. [IC 5-14-3-4; IC 13-14-11-3; 326 IAC 17-1-7 through 326 IAC 17-1-9]

(2) The Permittee, IDEM, OAM, and the Anderson Office of Air Management acknowledge that the federal law applies to claims of confidentiality made by the Permittee with regard to information removed or about to be removed from the source by U.S. EPA. [40 CFR Part 2, Subpart B]

C.5 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

(a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAM, Permits Branch, and the Anderson Office of Air Management, within thirty (30) days of the change.

(b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).

(c) IDEM, OAM, and the Anderson Office of Air Management shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.6 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

(a) Violation of any conditions of this permit.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM and the Anderson Office of Air Management, the fact that continuance of this permit is not consistent with purposes of this article.

C.7 Opacity [326 IAC 5-1]

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%) 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.

C.8 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

Testing Requirements

C.9 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 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

and

Anderson Office of Air Management
120 East 8th Street
P.O. Box 2100
Anderson, Indiana 46011

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, and the Anderson Office of Air Management 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.

Compliance Monitoring Requirements

C.10 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment, no more than ninety (90) days after receipt of this permit. If due to circumstances beyond its control, this schedule cannot be met, the Permittee may extend the compliance schedule an additional ninety (90) days provided the Permittee notifies:

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

and

Anderson Office of Air Management
120 East 8th Street
P.O. Box 2100
Anderson, Indiana 46011

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date. The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.11 Monitoring Methods [326 IAC 3]

Any monitoring or testing performed to meet the applicable requirements of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

C.12 Actions Related to Noncompliance Demonstrated by a Stack Test

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected emissions unit while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected emissions unit.

The documents submitted pursuant to this condition do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

Record Keeping and Reporting Requirements

C.13 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

(c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

(d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.14 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.

(b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.

(c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

(d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

(e) At its discretion, IDEM and the Anderson Office of Air Management may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

(f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.15 General Record Keeping Requirements [326 IAC 2-6.1-2]

(a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM, and Anderson Office of Air Management representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or the Anderson Office of Air Management makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or the Anderson Office of Air Management within a reasonable time.

(b) Records of required monitoring information shall include, where applicable:

(1) The date, place, and time of sampling or measurements;

(2) The dates analyses were performed;

(3) The company or entity performing the analyses;

(4) The analytic techniques or methods used;

(5) The results of such analyses; and

(6) The operating conditions existing at the time of sampling or measurement.

(c) Support information shall include, where applicable:

(1) Copies of all reports required by this permit;

(2) All original strip chart recordings for continuous monitoring instrumentation;

(3) All calibration and maintenance records;

(4) Records of preventive maintenance shall be sufficient to demonstrate that improper maintenance did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

(d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.16 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Semi-annual Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The report required in (a) of this condition and reports required by conditions in Section D of 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

and

Anderson Office of Air Management
120 East 8th Street
P.O. Box 2100
Anderson, Indiana 46011

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, and the Anderson Office of Air Management on or before the date it is due.

(d) Unless otherwise specified in this permit, any semi-annual report shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) All instances of deviations must be clearly identified in such reports. A reportable deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:

(1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or

(2) A malfunction as described in 326 IAC 1-6-2; or

(3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.

(4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred or failure to monitor or record the required compliance monitoring is a deviation.

(f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.

(g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions unit Description

(a) Two (2) electric epoxy trickle ovens, each rated at 72 kilowatts (Kw), capable of coating a total of 100 metal stators per hour, each exhausting through one (1) stack, identified as E-1 and E-2.
(b) Two (2) varnish dip tanks, which are capable of coating a total of 600 metal rotors per hour, each exhausting through one (1) stack, identified as E-3 and E-4. This facility includes two (2) electric ovens, each rated at 65 Kw.
(c) One (1) rust inhibitor dip tank, capable of coating 600 metal rotors per hour, exhausting through one (1) stack, identified as E-5.
(d) One (1) epoxy dip tank, which is capable of coating 300 metal coils per hour. This facility includes one (1) electric oven, rated at 108 Kw, exhausting through one (1) stack, identified as E-6.

Emission Limitations and Standards

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

(a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coatings applied to metal stators, metal rotors, and metal coils used to manufacture engine alternators shall be limited to:

Coatings	Limit (pounds of VOC/gallon of coating less water delivered to the applicator)
Extreme Performance Coat	3.5

(b) Solvent sprayed from the application equipment during clean up 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.

Compliance Determination Requirements

D.1.2 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test these emissions units by this permit. However, IDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM or the Anderson Office of Air Management, compliance with the VOC limit specified in Condition D.1.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.1.3 Volatile Organic Compounds (VOC)

(a) Compliance with the VOC content and usage limitations contained in Condition D.1.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAM, and the Anderson Office of Air Management reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) Compliance with condition D.1.1 will be based on the volume weighted average VOC content of all coatings applied to the metal rotors, stators, and coils. The volume weighted average of the coatings shall be determined using the following equation:

lb VOC/gal coating less water =

$$\frac{3\,[(\text{coating density (lb/gal)} * \text{wt. \% organics} * \text{gal. coating/unit}) / ((1-\text{vol. \% water}) * (\text{coating density} / \text{water density}))]}{3\ (\text{gal. coating/unit})}$$

D.1.4 VOC Emissions

Compliance with Condition D.1.1 shall be demonstrated within 30 days of the end of each month based on the total volatile organic compound usage for the most recent twelve (12) month period.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.5 Record Keeping Requirements

(a) To document compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) through (3) below. Records maintained for (1) through (3) 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.1.1.

(1) The amount and VOC content as supplied by the manufacturer of each coating, thinner, 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) Monthly emissions in pounds of VOC; and

(3) The calculated monthly volume weighted average VOC content of the coatings as applied.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions unit Description
(g) A welding operation with a maximum welding wire consumption rate of 0.28 pounds per hour.

Emission Limitations and Standards

D.2.1 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations) and CP 095-5813-00073, issued on October 9, 1996, the allowable PM emission rate from the Metal Inert Gas (MIG) welding operation shall not exceed 0.011 pound per hour when operating at a process weight rate of 0.28 pound per hour.

The pounds per hour limitation was calculated with 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:

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

Compliance Determination Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.2.2 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM or the Anderson Office of Air Management, compliance with the PM limit specified in Condition D.2.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Indiana Department of Environmental Management
Office of Air Management
and Anderson Office of Air Management

Technical Support Document (TSD) for a New Source Construction and Minor Source Operating Permit

Source Background and Description

Source Name:	**Delco Remy America, Inc.**
Source Location:	**4640 Pendleton Avenue, Anderson, Indiana 46013**
County:	**Madison**
SIC Code:	**3714**
Operation Permit No.:	**095-11199-00109**
Permit Reviewer:	**Trish Earls/EVP**

The Office of Air Management (OAM) has reviewed an application from Delco Remy America, Inc. relating to the construction and operation of an engine alternator and other engine component manufacturing operation.

Permitted Emission Units and Pollution Control Equipment

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

(a) Two (2) electric epoxy trickle ovens, each rated at 72 kilowatts (Kw), capable of coating a total of 100 metal stators per hour, each exhausting through one (1) stack, identified as E-1 and E-2.

(b) Two (2) varnish dip tanks, which are capable of coating a total of 600 metal rotors per hour, each exhausting through one (1) stack, identified as E-3 and E-4. This facility includes two (2) electric ovens, each rated at 65 Kw.

(c) One (1) rust inhibitor dip tank, capable of coating 600 metal rotors per hour, exhausting through one (1) stack, identified as E-5.

(d) One (1) epoxy dip tank, which is capable of coating 300 metal coils per hour. This facility includes one (1) electric oven, rated at 108 Kw, exhausting through one (1) stack, identified as E-6.

(e) Two (2) natural gas-fired space heaters, each rated at 0.115 million (MM) British thermal units (Btu) per hour.

(f) Ten (10) natural gas-fired space heaters, each rated at 0.485 MMBtu per hour.

(g) A welding operation with a maximum welding wire consumption rate of 0.28 pounds per hour.

Note: These previously existing emission units are being relocated from an existing manufacturing plant to a new building at the above listed location.

Unpermitted Emission Units and Pollution Control Equipment

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

Existing Approvals

The existing emission units have been operating under previous approvals including, but not limited to, the following:

(a) CP 095-5813-00073 issued on October 9, 1996; and

(b) A 095-7076, issued November 19, 1996.

All conditions from previous approvals were incorporated into this permit.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
E-1	Epoxy Trickle Oven	34	1.25	3,500	ambient
E-2	Epoxy Trickle Oven	34	1.25	3,500	ambient
E-3	Varnish Dip Tank	34	1.5	3,500	ambient
E-4	Varnish Dip Tank	34	2.0	3,500	ambient
E-5	Rust Inhibitor	34	1.0	3,500	ambient
E-6	Epoxy Dip Tank	34	2.0	3,500	400

Enforcement Issue

There are no enforcement actions pending.

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.

A complete application for the purposes of this review was received on July 27, 1999.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (6 pages).

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	0.07
PM-10	0.20
SO_2	0.01
VOC	34.95
CO	1.87
NO_x	2.23

HAP's	Potential To Emit (tons/year)
Glycol Ethers	4.80
Hexane	0.04
TOTAL	4.84

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of VOC are equal to or greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.

(b) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 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.

Actual Emissions

No previous emission data has been received from the source.

County Attainment Status

The source is located in Madison 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 (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 other regulated 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

New Source PSD 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	0.07
PM10	0.20
SO_2	0.01
VOC	34.95
CO	1.87
NO_x	2.23
Single HAP	4.80
Combination HAPs	4.84

(a) This new 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 new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:
(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

This is the first air approval issued to this 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) 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

326 IAC 2-6 (Emission Reporting)
This source is located in Madison County and the potential to emit all regulated pollutants is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity Limitations)

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 8-2-4 (Coil Coating Operations)

This rule establishes emission limitations for coating of any flat metal sheets or strips that come in rolls or coils. This rule does not apply to the metal coil surface coating operation at this source because the coils are already in the finished product stage when coated and are not in the form of flat metal sheets or strips.

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

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicator at each of the two (2) epoxy trickle ovens, the two (2) varnish dip tanks, the rust inhibitor dip tank, and the epoxy dip tank, shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for extreme performance 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.

Pursuant to 326 IAC 8-2-1 (Compliance Methods), compliance with this rule will be based on the volume weighted average VOC content of all coatings applied to the metal rotors, stators, and coils. The volume weighted average of the coatings shall be determined using the following equation:

lb VOC/gal coating less water =

$$\frac{3\,[(\text{coating density (lb/gal)} * \text{wt. \% organics} * \text{gal. coating/unit}) / ((1-\text{vol. \% water}) * (\text{coating density} / \text{water density}))]}{3\ (\text{gal. coating/unit})}$$

Based on the MSDS submitted by the source and calculations made (see Appendix A, page 2 of 6), the two (2) epoxy trickle ovens, the two (2) varnish dip tanks, the rust inhibitor dip tank, and the epoxy dip tank are in compliance with this requirement.

326 IAC 6-3-2 (Process Operations)

Pursuant to CP 095-5813-00073, issued on October 9, 1996, the particulate matter (PM) emissions from the Metal Inert Gas (MIG) welding operation shall not exceed 0.011 pound per hour, based on a process weight rate of 0.28 pound per hour. This limitation was based on 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

Potential PM emissions from the MIG welding operation are 0.007 pound per hour, therefore, this facility is in compliance with this limit. There are no emissions from the Tungsten Inert Gas (TIG) welding operation because no filler metal is used to fuse/weld two metals together.

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) Construction Permit Application Form Y.

(a) 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.

(b) See attached calculations for detailed air toxic calculations. (Appendix A, pages 3 and 5 of 6)

Conclusion

The construction and operation of this engine alternator and other engine component manufacturing operation shall be subject to the conditions of the attached proposed **New Source Construction and Minor Source Operating Permit 095-11199-00109.**

Indiana Department of Environmental Management
Office of Air Management
and Anderson Office of Air Management

Addendum to the
Technical Support Document for New Source Construction and
Minor Source Operating Permit

Source Name:	Delco Remy America, Inc.
Source Location:	4640 Pendleton Avenue, Anderson, Indiana 46013
County:	Madison
Operation Permit No.:	095-11199-00109
SIC Code:	3714
Permit Reviewer:	Trish Earls/EVP

On October 9, 1999, the Office of Air Management (OAM) had a notice published in the Herald Bulletin, Anderson, Indiana, stating that Delco Remy America, Inc. had applied for a permit to construct and operate an engine alternator and other engine component manufacturing operation. The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit 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 permit should be issued as proposed.

On November 1, 1999, Jeff Copeland of Delco Remy America, Inc. (DRA) submitted comments on the proposed construction and operating permit. The summary of the comments and corresponding responses is as follows:

Comment #1

DRA requests that the requirements for an emission unit Preventive Maintenance Plan in condition D.1.2 be dropped. DRA has a preventive maintenance system used from a central computer system. All machinery and processes are captured in this system. On specified intervals, all equipment is serviced throughout the Anderson facilities.

Response #1

The two (2) trickle ovens and the four (4) dip tanks at this source perform surface coating with 100% transfer efficiency, therefore, there are no PM emissions from these emission units. There are also no control devices associated with these emission units. The actual VOC emissions are estimated to be 9.6 tons per year. Therefore, a Preventive Maintenance Plan is not required. Condition D.1.2 has been deleted from the permit. Although it is no longer applicable in this case, condition C.2 remains in the permit since it is a mandatory condition which contains information about a Preventive Maintenance Plan "if required by specific conditions in Section D of this permit".

Comment #2

DRA requests that the requirements for Daily Emission Record Keeping in condition D.1.6 be changed from daily to monthly. The epoxy used in this facility is contained in 300 gallon, opaque totes. Daily usage would be very difficult to accurately measure.

Response #2

The epoxy trickle ovens are flow coaters and the other coating facilities are dip tanks, and they are subject to 326 IAC 8-2-9 (Miscellaneous Metal Coating). Pursuant to 326 IAC 8-1-2(a)(10), compliance with 326 IAC 8-2-9 may be determined using a monthly volume-weighted average of all coatings applied in a coating tank, flow coater, or flow coating line. 326 IAC 8-1-2(a)(10)(A) specifies the records that are required to be kept to demonstrate compliance. These record keeping requirements will be added to condition D.1.6 (now re-numbered D.1.5) and will replace the daily record keeping requirements that were originally listed. The revised condition D.1.6 (now re-numbered D.1.5) reads as follows (additions in bold, deletions in strikeout):

D.1.~~6~~**5** Record Keeping Requirements

(a) To document compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) through ~~(6)~~ **(3)** below. Records maintained for (1) through ~~(6)~~ **(3)** shall be taken ~~daily~~ **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.1.1.

(1) The amount and VOC content **as supplied by the manufacturer** of each coating**,** ~~material~~ **thinner,** 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;~~ **Monthly emissions in pounds of VOC; and**

(3) The **calculated monthly** volume weighted **average** VOC content of the coatings ~~used for each day~~ **as applied**;

~~(4) The cleanup solvent usage for each day;~~

~~(5) The total VOC usage for each day; and~~

~~(6) The weight of VOCs emitted for each compliance period.~~

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Comment #3

Please clarify whether DBA is required to measure opacity in accordance with 40 CFR, Appendix A, Method 9 in order to document compliance with the opacity limitations provided in section C.7 of the draft permit.

Response #3

Section C.7 requires EPA Method 9, and a certified reader. During a compliance inspection of the source, the OAM inspector will do Method 9 to determine if the source is in compliance with the limit in 326 IAC 5-1-2. However, there is no need to demonstrate this opacity limit through a daily Visible Emissions Notation, since the proposed facilities do not emit emissions in a significant amount.

Appendix A: Emission Calculations Summary

Company Name: Delco Remy America, Inc.
Address City IN Zip: 4640 Pendleton Avenue, Anderson, Indiana 46013
CP: 095-11199
Plt ID: 095-00109
Reviewer: Trish Earls/EVP
Date: July 27, 1999

Potential Emissions (tons/year)

	Emissions Generating Activity			
Pollutant	Surface Coating	Natural Gas Combustion	Welding	**TOTAL****
PM	0.00	0.04	0.03	0.07
PM10	0.00	0.17	0.03	0.20
SO2	0.00	0.01	0.00	0.01
NOx	0.00	2.23	0.00	2.23
VOC	34.83	0.12	0.00	34.95
CO	0.00	1.87	0.00	1.87
total HAPs	4.80	0.04	negl.	4.84
worst case single HAP	4.80	0.04	negl.	4.80

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

Controlled Emissions (tons/year)

	Emissions Generating Activity			
Pollutant	Surface Coating	Natural Gas Combustion	Welding	**TOTAL****
PM	0.00	0.04	0.03	0.07
PM10	0.00	0.17	0.03	0.20
SO2	0.00	0.01	0.00	0.01
NOx	0.00	2.23	0.00	2.23
VOC	34.83	0.12	0.00	34.95
CO	0.00	1.87	0.00	1.87
total HAPs	4.80	0.04	negl.	4.84
worst case single HAP	4.80	0.04	negl.	4.80

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

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

Company Nai Delco Remy America, Inc.
Address City 4640 Pendleton Avenue, Anderson, Indiana 46013
CP: 095-11199
Plt ID: 095-00109
Reviewer: Trish Earls/EVP
Date: July 27, 1999

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Maximum Usage (gal/unit)	Maximum No. of Units (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 (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Epoxy Trickle Ovens																
Epoxy Mixture (metal stat	9.89	15.40%	0.0%	15.4%	0.0%	84.60%	0.0176	100.0	1.52	1.52	2.69	64.48	11.77	0.00	1.80	100%
Varnish Dip Tanks																
Varnish	8.30	61.00%	0.0%	61.0%	0.0%	39.00%	0.0006	600.0	5.06	5.06	1.67	40.10	7.32	0.00	12.98	100%
Varnish Thinner	8.00	100.00%	0.0%	100.0%	0.0%	0.00%	0.0006	600.0	8.00	8.00	2.64	63.36	11.56	0.00	N/A	100%
Rust Inhibitor Dip Tank																
Rust Inhibitor	6.80	80.00%	0.0%	80.0%	0.0%	20.00%	0.0001	600.0	5.44	5.44	0.39	9.40	1.72	0.00	27.20	100%
Epoxy Dip Tank																
Epoxy Mixture (metal coils	9.89	15.40%	0.0%	15.4%	0.0%	84.60%	0.0012	300.0	1.52	1.52	0.56	13.49	2.46	0.00	1.80	100%
										Total State Potential Emissi	**7.95**	**190.83**	**34.83**	**0.00**		

Federal Potential Emissions (controlled):

Control Efficiency:		Controlled VOC lbs per Hour	Controlled VOC lbs per Day	Controlled VOC tons per Year	Controlled PM tons/yr
VOC	PM				
0.00%	0.00%	**7.95**	**190.83**	**34.83**	**0.00**

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

326 IAC 8-2-9 Compliance Calculation

Limit: 3.5 lb VOC/gal coating less water
Compliance will be based on the volume weighted average of all coatings used as follows:

$$\text{lb VOC/ gal} = \frac{\sum \{[\text{coating density (lb/gal)} * \text{wt. \% organics} * \text{gal. coating/unit}] / [(1\text{-vol. \% water}) * (\text{coating density (lb/gal)} / \text{water density (lb/gal)})]\}}{\sum [\text{coating usage (gal./unit)}]}$$

lb VOC/ 1.61 **(will comply)**

Company Nan **Delco Remy America, Inc.**
Address City **4640 Pendleton Avenue, Anderson, Indiana 46013**
CP: **095-11199**
Plt ID: **095-00109**
Reviewer: **Trish Earls/EVP**
Date: **July 27, 1999**

Material	Density (Lb/Gal)	Maximum Usage (gal/unit)	Maximum No. of Units (units/hr)	Weight % Glycol Ethers	Glycol Ether Emissions (ton/yr)
Epoxy Trickle Ovens					
Epoxy Mixture (metal stators)	9.89	0.0176	100.0	0.00%	0.00
Varnish Dip Tanks					
Varnish	8.30	0.0006	600.0	40.00%	4.80
Varnish Thinner	8.00	0.0006	600.0	0.00%	0.00
Rust Inhibitor Dip Tank					
Rust Inhibitor	6.80	0.0001	600.0	0.00%	0.00
Epoxy Dip Tank					
Epoxy Mixture (metal coils)	9.89	0.0012	300.0	0.00%	0.00
				Total State Po	**4.80**

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

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

Company Nai Delco Remy America, Inc.
Address City 4640 Pendleton Avenue, Anderson, Indiana 46013
CP: 095-11199
Plt ID: 095-00109
Reviewer: Trish Earls/EVP
Date: July 27, 1999

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
5.1	44.5

Heat Input Capacity includes: two (2) space heaters, each rated at 0.115 MMBtu/hr and ten (10) space heaters, each rated at 0.485 MMBtu/hr.

	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	0.04	0.17	0.01	2.23	0.12	1.87

*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
See page 2 for HAPs emissions calculations.

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

Company Nai **Delco Remy America, Inc.**
Address City **4640 Pendleton Avenue, Anderson, Indiana 46013**
CP: **095-11199**
Plt ID: **095-00109**
Reviewer: **Trish Earls/EVP**
Date: **July 27, 1999**

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	4.673E-05	2.670E-05	1.669E-03	4.005E-02	7.565E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel	**Total HAPs**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	1.113E-05	2.448E-05	3.115E-05	8.455E-06	4.673E-05	**4.199E-02**

Methodology is the same as page 1.

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

Appendix A: Welding and Thermal Cutting

Company N Delco Remy America, Inc.
Address Cit 4640 Pendleton Avenue, Anderson, Indiana 46013
CP: 095-11199
Plt ID: 095-00109
Reviewer: Trish Earls/EVP
Date: July 27, 1999

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
Metal Inert Gas (MIG)(ER5	1	0.28		0.0241	3.4E-05		1E-05	0.007	9.52E-06	0.000	2.8E-06	0.000
Stick (E7018 electrode)	0	0		0.0211								0.000
Tungsten Inert Gas (TIG)(carbon steel)	9	0		0.0055								0.000
Oxyacetylene(carbon steel)	0	0		0.0055								0.000
EMISSION TOTALS								PM = PM10	Mn	Ni	Cr	Total HAPs
Potential Emissions lbs/hr								0.01	0.00	0.00	0.00	0.00
Potential Emissions lbs/day								0.16	0.00	0.00	0.00	0.00
Potential Emissions tons/ye								**0.03**	0.00	0.00	0.00	0.00

METHODOLGY

*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.