CONSTRUCTION PERMIT
OFFICE OF AIR MANAGEMENT

Delco Electronics Corporation
2033 E. Boulevard
Kokomo, Indiana 46904

is hereby authorized to construct

the equipment listed on Pages 2 and 3 of this permit.

This permit is issued to the above mentioned company (herein known as the Permittee) under the provisions of 326 IAC 2-1 and 40 CFR 52.780, with conditions listed on the attached pages.

Construction Permit No.: CP-067-8909-00061	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

This modification involves the relocation of automotive electronic circuit board assembly modules from Plant 1, located at 700 E. Firmin Street, Kokomo, Indiana, to Plant 9, located at 2033 E. Boulevard, Kokomo, Indiana.

(a) The prototype / developmental circuit board assembly module will be relocated from plant 1, Department 270, to plant 9. This equipment was previously permitted by CP 067-4390. This module includes the following equipment:

(1) one (1) wave solder machine, ID # 184842, with a maximum capacity of 500 boards per hour, a maximum flux usage of 5.78 pounds per hour, and a maximum thinner usage of 0.90 pounds per hour;

(2) one (1) dip conformal coater, ID # 180714, with a maximum capacity of 500 boards per hour, a maximum dip coat usage of 13 pounds per hour, and one (1) spray conformal coater with a maximum spray coat usage of 1.3 pounds per hour;

(3) one (1) conformal coat repair station, with a maximum capacity of 60 boards per hour and 0.0135 pounds of toluene per hour;

(4) epoxy gluing of components to circuit board;

(5) one (1) epoxy cure oven;

(6) solder paste printing; and

(7) one (1) solder paste reflow oven.

(b) One (1) new circuit board assembly line, identified as Tech 2000, will be constructed at plant 9. This new assembly line includes the following equipment:

(1) one (1) selective soldering machine, with a maximum capacity of 90 boards per hour, a maximum flux usage of 0.738 pounds per hour, and no thinner usage;

(2) two (2) Vertrel vapor degreasers for the cleaning of Tech 2000 circuit boards;

(3) epoxy gluing of components and flip chips to circuit board;

(4) three (3) epoxy cure ovens;

(5) solder paste printing;

(6) one (1) solder paste reflow oven;

(7) underfill dispense; and

(8) underfill cure.

(c) The automotive engine control module, referred to as PT3, will be relocated from plant 1,

Department 181 to plant 7. This equipment was previously permitted by CP 067-4390. This module includes the following equipment:

(1) one (1) wave solder machine, ID # 181019, with a maximum capacity of 600 boards per hour, a maximum flux usage of 7.08 pounds per hour, and a maximum thinner usage of 1.07 pounds per hour;

(2) one (1) conformal coater, ID # 192076, with a maximum capacity of 600 boards per hour, and a maximum dip coat usage of 15.52 pounds per hour;

(3) two (2) epoxy glue stations for epoxy gluing of components to circuit board;

(4) two (2) epoxy cure ovens;

(5) two (2) solder paste printers;

(6) two (2) solder paste reflow ovens; and

(7) one (1) die cleaning hood to clean dies from the epoxy gluing process, with a maximum capacity of 1.66 pounds of methanol per hour.

(d) Another automotive engine control module will be relocated from plant 1 to plant 7. This equipment was previously permitted by CP 067-2484. This module includes the following equipment:

(1) one (1) wave solder machine, ID # 184737, with a maximum capacity of 600 boards per hour, a maximum flux usage of 6.65 pounds per hour, and a maximum thinner usage of 1.77 pounds per hour;

(2) one (1) conformal coater, ID # 181092, with a maximum capacity of 600 boards per hour, a maximum dip coat usage of 15.02 pounds per hour;

(3) two (2) epoxy glue stations for epoxy gluing of components to circuit board;

(4) two (2) epoxy cure ovens, ID # 180777 and 180785;

(6) two (2) solder paste printers; and

(7) two (2) solder paste reflow ovens, ID # 180703 and 180704.

Construction Conditions

General Construction Conditions

1. That the data and information supplied with the application shall be considered part of this permit. Prior to any proposed change in construction which may affect allowable emissions, the change must be approved by the Office of Air Management (OAM).

2. That 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.

Effective Date of the Permit

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

4. That pursuant to 326 IAC 2-1-9(b)(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.

5. That notwithstanding Construction Condition No. 6, 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).

First Time Operation Permit

6. That this document shall also become a first-time operation permit pursuant to 326 IAC 2-1-4 (Operating Permits) 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 facilities were constructed as proposed in the application. The facilities covered in the 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) 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 2-7-19 (Fees).

(e) The Permittee has submitted their Part 70 permit on September 4, 1996 for the existing source. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

Phase Construction Time Frame

6a. That pursuant to 326 IAC 2-1-9(b)(Revocation of Permits), the IDEM may revoke this permit to construct if the:

(a) Construction of Phase 1 has not begun within eighteen (18) months from the date of the effective date of this permit or if during the construction of Phase 1, work is suspended for a continuous period of one (1) year or more.

(b) Construction of Phase 2 has not begun within eighteen (18) months after the operation of Phase 1 or if during the construction of Phase 2, work is suspended for a continuous period of one (1) year or more.

(c) Construction of Phase 3 has not begun within eighteen (18) months after the operation of Phase 2 or if during the construction of Phase 3, work is suspended for a continuous period of one (1) year or more.

The OAM may extend such time upon satisfactory showing that an extension, formally requested by the Permittee is justified.

7. That when the facility is constructed and placed into operation the following operation conditions shall be met:

Operation Conditions

General Operation Conditions

1. That the data and information supplied in the application shall be considered part of this permit. Prior to any change in the operation which may result in an increase in allowable emissions exceeding those specified in 326 IAC 2-1-1 (Construction and Operating Permit Requirements), the change must be approved by the Office of Air Management (OAM).

2. That the permittee shall 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.

Preventive Maintenance Plan

3. That pursuant to 326 IAC 1-6-3 (Preventive Maintenance Plans), the Permittee shall prepare and maintain a preventive maintenance plan, including the following information:

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

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

(c) Identification of the replacement parts which will be maintained in inventory for quick replacement.

The preventive maintenance plan shall be submitted to IDEM, OAM upon request and shall be subject to review and approval.

Transfer of Permit

4. That pursuant to 326 IAC 2-1-6 (Transfer of Permits):

(a) In the event that ownership of this circuit board manufacturing operation is changed, the Permittee shall notify OAM, Permit Branch, within thirty (30) days of the change. Notification shall include the date or proposed date of said change.

(b) The written notification shall be sufficient to transfer the permit from the current owner to the new owner.

(c) The OAM shall reserve the right to issue a new permit.

Permit Revocation

5. That 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, the fact that continuance of this permit is not consistent with purposes of 326 IAC 2-1 (Permit Review Rules).

Availability of Permit

6. That pursuant to 326 IAC 2-1-3(l), the Permittee shall maintain the applicable permit on the premises of this source and shall make this permit available for inspection by the IDEM or other public official having jurisdiction.

PSD Minor Source Limit

7. That pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration), the following conditions shall apply:

   (a) The input volatile organic compounds (VOC) including flux, and thinner, delivered to the applicators of the wave solder machines minus the VOC flux/thinner shipped out in the waste stream shall be limited to 2.95 tons per month.

   (b) The input volatile organic compounds (VOC) including coatings, dilution solvents, and cleaning solvents delivered to the applicators of the conformal coating process shall be limited to 0.24 tons per month.

   (c) The input volatile organic compounds (VOC) including all cleaning solvents delivered to the applicators of the die cleaning process shall be limited to 0.03 tons per month.

   Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR 52.21, will not apply.

Annual Emission Reporting

8. That pursuant to 326 IAC 2-6 (Emission Reporting), the Permittee must annually submit an emission statement for the source. This statement must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual statement must be submitted to:

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

   The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31.

Opacity Limitations

9. That pursuant to 326 IAC 5-1-2 (Visible Emission Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions shall meet the following:

   (a) visible emissions shall not exceed an average of 40% opacity in 24 consecutive readings.

   (b) visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

Process Operations

10. That pursuant to 326 IAC 6-3 (Process Operations) the conformal coating operations shall comply with 326 IAC 6-3-2(c) using the following equation:

$E = 4.10P^{0.67}$ where: E = rate of particulate emission in pounds per hour,
P = process weight in tons per hour, if
P is equal to or less than 60,000 lbs/hr (30 tons/hr)

BACT Minor Limitation

11. Pursuant to 326 IAC 8-1-6 (BACT) the input volatile organic compounds (VOC) including flux, and thinner, delivered to the applicators of each of the wave solder machines minus the VOC flux/thinner shipped out in the waste stream, shall be limited to 2 tons per month. Therefore, the requirements of 326 IAC 8-1-6 (BACT) will not apply.

Open Top Vapor Degreaser Operations

12. Pursuant to 326 IAC 8-3-3 (Open Top Vapor Degreaser Operations), the owner or operator of the open top degreaser shall:

(a) equip the vapor degreaser with a cover that can be opened and closed easily without disturbing the vapor zone;

(b) keep the cover closed at all times except when processing work loads through the degreaser;

(c) minimize solvent carry out by:
(1) racking parts to allow complete drainage;

(2) moving parts in and out of the degreaser at less than three and three-tenths (3.3) meters per minute (eleven (11) feet per minute);

(3) degreasing the workload in the vapor zone at least thirty (30) seconds or until condensation ceases;

(4) tipping out any pools of solvent on the cleaned parts before removal; and

(5) allowing parts to dry within the degreaser for at least fifteen (15) seconds or until visually dry;

(d) not degrease porous or absorbent materials, such as cloth leather, wood, or rope;

(e) not occupy more than half of the degreaser's open top area with the workload;

(f) not load the degreaser such that the vapor level drops more than fifty percent (50%) of the vapor depth when the workload is removed;

(g) never spray above the vapor level;

(h) repair solvent leaks immediately, or shut down the degreaser;

(i) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a matter that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere;

(j) not use workplace fans near the degreaser opening;

(k) not allow visually detectable water in the solvent exiting the water separator; and

(l) provide a permanent, conspicuous label summarizing the operating requirements.

Reporting Requirements

13. That a log of information necessary to document compliance with operation permit condition no/s. 7 and 11 shall be maintained. These records shall be kept for at least the past 36 month period and made available upon request to the Office of Air Management (OAM).

(a) A quarterly summary 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

within thirty (30) calendar days after the end of the quarter being reported in the format attached. These reports shall include the VOC usage from each solder machine, the conformal coating operations, and the die cleaning operations. These reports shall also include the VOC in the waste flux/thinner stream. These records shall include the coating, flux, thinner and clean up solvent usage, material safety data sheet (MSDS) and the date of use.

(b) Unless otherwise specified in this permit, any notice, report, or other submissions required by this permit shall be timely if:

(i) Postmarked on or before the date it is due; or

(ii) Delivered by any other method if it is received and stamped by IDEM, OAM on or before the date it is due.

(c) All instances of deviations from any requirements of this permit must be clearly identified in such reports.

(d) Any corrective actions taken as a result of an exeedance of a limit, an excursion from the parametric values, or a malfunction that may have caused excess emissions must be clearly identified in such reports.

(e) The first report shall cover the period commencing the postmarked submission date of the Affidavit of Construction.

Open Burning

14. That 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.

Emergency Reduction Plans

15. Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on February 6, 1980.

(b) If the ERP is disapproved by IDEM, OAM the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP. If after this time, the Permittee does not submit an approvable ERP, IDEM, OAM shall supply such a plan.

(c) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(d) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(e) Upon direct notification by IDEM, OAM that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate level. [326 IAC 1-5-3]

Indiana Department of Environmental Management
Office of Air Management
Compliance Data Section

Quarterly Report

Company Name: Delco Electronics Corporation
Location: 2033 E. Boulevard, Kokomo, Indiana 46904
Permit No.: CP 067-8909-00061
Source: soldering operations including one selective soldering machine and three (3) wave soldering machines, ID numbers 184842, 181019, and 184737
Pollutant: VOC
Limits: 2.95 tons/month from all soldering machines total (includes all VOC usage from thinner and flux minus the VOC contained in the waste flux/thinner stream) and 2 tons/month from each soldering machine individually

Year: _____

Month	VOC Usage (tons/month)
selective soldering machine	
wave soldering machine, ID # 184842	
wave soldering machine, ID # 181019	
wave soldering machine, ID # 184737	
waste stream	
total from all soldering machines (VOC usage from all four soldering machines minus VOC in waste stream)	

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Indiana Department of Environmental Management
Office of Air Management
Compliance Data Section

Quarterly Report

Company Name:	Delco Electronics Corporation
Location:	2033 E. Boulevard, Kokomo, Indiana 46904
Permit No.:	CP 067-8909-00061
Source:	conformal coating operations including one conformal coat repair station and three conformal coaters, ID numbers 180714, 192076, and 181092
Pollutant:	VOC
Limit:	0.24 tons/month (includes all VOC usage from coatings, dilution solvents, and cleaning solvents)

Year: _____

Month	VOC Usage (tons/month)
conformal coating process	

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Indiana Department of Environmental Management
Office of Air Management
Compliance Data Section

Quarterly Report

Company Name:	Delco Electronics Corporation
Location:	2033 E. Boulevard, Kokomo, Indiana 46904
Permit No.:	CP 067-8909-00061
Source:	die cleaning process
Pollutant:	VOC
Limit:	0.03 tons/month (includes all VOC usage from cleaning solvents)

Year: _____

Month	VOC Usage (tons/month)
die cleaning process	

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for New Construction and Operation

Source Background and Description

Source Name:	Delco Electronics Corporation
Source Location:	2033 E. Boulevard, Kokomo, Indiana 46904
County:	Howard
Construction Permit No.:	CP-067-8909-00061
SIC Code:	3679
Permit Reviewer:	Nisha Sizemore

The Office of Air Management (OAM) has reviewed an application from Delco Electronics Corporation relating to the relocation of automotive electronic circuit board assembly modules from Plant 1, located at 700 E. Firmin Street, Kokomo, Indiana, to Plant 9, located at 2033 E. Boulevard, Kokomo, Indiana.

(a) The prototype / developmental circuit board assembly module will be relocated from plant 1, Department 270, to plant 9. This equipment was previously permitted by CP 067-4390. This module includes the following equipment:

(1) one (1) wave solder machine, ID # 184842, with a maximum capacity of 500 boards per hour, a maximum flux usage of 5.78 pounds per hour, and a maximum thinner usage of 0.90 pounds per hour;

(2) one (1) conformal coater, ID # 180714, with a maximum capacity of 500 boards per hour, a maximum dip coat usage of 13 pounds per hour, and a maximum spray coat usage of 1.3 pounds per hour;

(3) one (1) conformal coat repair station, with a maximum capacity of 60 boards per hour and 0.0135 pounds of toluene per hour;

(4) epoxy gluing of components to circuit board;

(5) one (1) epoxy cure oven;

(6) solder paste printing; and

(7) one (1) solder paste reflow oven.

(b) One (1) new circuit board assembly line, identified as Tech 2000, will be constructed at plant 9. This new assembly line includes the following equipment:

(1) one (1) selective soldering machine, with a maximum capacity of 90 boards per hour, a maximum flux usage of 0.738 pounds per hour, and no thinner usage;

(2) two (2) Vertrel vapor degreasers for the cleaning of Tech 2000 circuit boards;

(3) epoxy gluing of components and flip chips to circuit board;

(4) three (3) epoxy cure ovens;

(5) solder paste printing;

(6) one (1) solder paste reflow oven;

(7) underfill dispense; and

(8) underfill cure.

(c) The automotive engine control module, referred to as PT3, will be relocated from plant 1, Department 181 to plant 9. This equipment was previously permitted by CP 067-4390. This module includes the following equipment:

(1) one (1) wave solder machine, ID # 169958, with a maximum capacity of 600 boards per hour, a maximum flux usage of 7.08 pounds per hour, and a maximum thinner usage of 1.07 pounds per hour;

(2) one (1) conformal coater, ID # 192076, with a maximum capacity of 600 boards per hour, and a maximum dip coat usage of 15.52 pounds per hour;

(3) epoxy gluing of components to circuit board;

(4) one (1) epoxy cure oven;

(5) solder paste printing;

(6) one (1) solder paste reflow oven; and

(7) one (1) die cleaning hood to clean dies from the epoxy gluing process, with a maximum capacity of 1.66 pounds of methanol per hour.

(d) Another automotive engine control module will be relocated from plant 1 to plant 9. This equipment was previously permitted by CP 067-2484. This module includes the following equipment:

(1) one (1) wave solder machine, ID # 184737, with a maximum capacity of 600 boards per hour, a maximum flux usage of 6.65 pounds per hour, and a maximum thinner usage of 1.77 pounds per hour;

(2) one (1) conformal coater, ID # 181092, with a maximum capacity of 600 boards per hour, a maximum dip coat usage of 15.02 pounds per hour;

(3) epoxy gluing of components to circuit board;

(4) one (1) epoxy cure oven, ID # 180777;

(5) solder paste printing; and

(6) one (1) solder paste reflow oven, ID # 180703.

Source Definition

This electronic circuit board manufacturing company consists of the following plants:

(a) Plants 6, 7, and 9 (collectively referred to as the Bypass plant) are located at 2033 E. Boulevard, Kokomo, Indiana;

(b) Plant 8 is located at 2100 E. Lincoln Road, Kokomo, Indiana; and

(c) Plant 10 is located at 1800 E. Lincoln Road, Kokomo, Indiana.

Since these plants are located on contiguous properties, have the same SIC codes and owned by one company, they will be considered as one (1) source.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
7-X24-2	VCMX Solder	35.5	1.5	3000	90
7-X20-2	W99 Solder	31.5	1.67	3000	90
9-F98-1	Proto Solder	24	1 x 1.42	3000	90
9-D98-1	Tech 2000 Selective Solder	35.5	1.33 x 1.5	3000	90
7-X24-1	VCMX Coater	35.5	1.5	3000	80
7-X21-2	W99 Coater	36	1.5	3000	80
9-D98-1	Proto Dip Coater	24	1.33 x 1.5	3000	80
9-D98-1	Proto Dip Spray	24	1.33 x 1.5	3000	80
7-U23-1	VCMX Die Cleaning Hood	28	1.33 x 1	3000	72

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Information, unless otherwise stated, 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 August 27, 1997, with additional information received on September 9, 1997, and September 15, 1997.

Emissions Calculations

See Appendix A (Emissions Calculation Spreadsheets) for detailed calculations (1 page).

Total Potential and Allowable Emissions

Indiana Permit Allowable Emissions Definition (after compliance with applicable rules, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Potential Emissions (tons/year)
Particulate Matter (PM)	1.24
Particulate Matter (PM10)	1.24
Sulfur Dioxide (SO_2)	0.00
Volatile Organic Compounds (VOC)	113
Carbon Monoxide (CO)	0.00
Nitrogen Oxides (NO_x)	0.00
Single Hazardous Air Pollutant (HAP)	7.27
Combination of HAPs	8.35

Allowable emissions (as defined in the Indiana Rule) of VOC are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.

County Attainment Status

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

(c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	20.8
PM10	3.45
SO_2	0.12
VOC	456
CO	7.37
NO_x	0.00

(a) This existing source is a major stationary source because at least one attainment regulated pollutant is emitted at a rate of 250 tons per year.

(b) These emissions were based on the Facility Quick Look Report, dated July 24, 1997.

Proposed Modification

PTE from the proposed modification (based on 8,760 hours of operation per year at rated capacity including enforceable emission control and production limit, where applicable):

Pollutant	PM (ton/yr)	PM10 (ton/yr)	SO_2 (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO_x (ton/yr)
Proposed Modification	1.24	1.24	0.00	39	0.00	0.00
PSD or Offset Significant Level	25	15	40	40	100	40

(a) This modification to an existing major stationary source is not major because the emissions 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) The VOC usage is limited to 39 tons per year, which will limit the potential to emit VOC to 39 tons per year. This usage limit is necessary in order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source has submitted their Part 70 (T-067-6505-00061) application on September 4, 1996. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

Federal Rule Applicability

There are no New Source Performance Standards (326 IAC 12) and 40 CFR Part 63 applicable to this facility.

There are no National Emissions Standards for Hazardous Air Pollutants (NESHAPs) applicable to this facility.

The vapor degreasers currently utilize cleaning products which do not contain hazardous air pollutants, therefore, 40 CFR Part 63 Subpart T - National Emission Standards for Halogenated Solvent Cleaning is not applicable. However, if the source converts to the use of cleaners which do contain hazardous air pollutants, this NESHAP may apply.

State Rule Applicability

326 IAC 2-2 (Prevention of Significant Deterioration)

Pursuant to this rule, the following conditions shall apply:

(a) The input volatile organic compounds (VOC) including flux, and thinner, delivered to the applicators of the wave solder machines minus the VOC flux/thinner shipped out in the waste stream, shall be limited 2.95 tons per month.

(b) The input volatile organic compounds (VOC) including coatings, dilution solvents, and cleaning solvents delivered to the applicators of the conformal coating process shall be limited to 0.24 tons per month.

(c) The input volatile organic compounds (VOC) including all cleaning solvents delivered to the applicators of the die cleaning process shall be limited to 0.03 tons per month.

These usage limits are necessary to limit the potential to emit VOC to 39 tons per year.

Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR 52.21, will not apply.

326 IAC 2-6 (Emission Reporting)

This facility is subject to 326 IAC 2-6 (Emission Reporting), because the source emits more than 100 tons per year of VOC. Pursuant to this rule, the owner/operator of this facility must annually submit an emission statement of the facility. The annual statement must be received by July 1 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

326 IAC 5-1-2 (Visible Emission Limitations)

Pursuant to this rule, except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions shall meet the following:

(a) visible emissions shall not exceed an average of 40% opacity in 24 consecutive readings.

(b) visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

326 IAC 6-3 (Process Operations)

Pursuant to this rule, the conformal coating operations shall comply with 326 IAC 6-3-2(c) using the following equation:

$E = 4.10P^{0.67}$ where: E = rate of emission in pounds per hour,
P = process weight in tons per hour, if
P is equal to or less than 60,000 lbs/hr (30 tons/hr)

326 IAC 8-1-6 (BACT)

Pursuant to this rule, the input volatile organic compounds (VOC) including flux, and thinner, delivered to the applicators of each of the wave solder machines minus the VOC flux/thinner shipped out in the waste stream shall be limited to 2 tons per month. Therefore, the requirements of 326 IAC 8-1-6 (BACT) will not apply.

326 IAC 8-3-3 (Open Top Vapor Degreaser Operations)

Pursuant to this rule, the owner or operator of the open top degreaser shall:

(a) equip the vapor degreaser with a cover that can be opened and closed easily without disturbing the vapor zone;

(b) keep the cover closed at all times except when processing work loads through the degreaser;

(c) minimize solvent carry out by:

(1) racking parts to allow complete drainage;

(2) moving parts in and out of the degreaser at less than three and three-tenths

(3.3) meters per minute (eleven (11) feet per minute);

(3) degreasing the workload in the vapor zone at least thirty (30) seconds or until condensation ceases;

(4) tipping out any pools of solvent on the cleaned parts before removal; and

(5) allowing parts to dry within the degreaser for at least fifteen (15) seconds or until visually dry;

(d) not degrease porous or absorbent materials, such as cloth leather, wood, or rope;

(e) not occupy more than half of the degreaser's open top area with the workload;

(f) not load the degreaser such that the vapor level drops more than fifty percent (50%) of the vapor depth when the workload is removed;

(g) never spray above the vapor level;

(h) repair solvent leaks immediately, or shut down the degreaser;

(i) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a matter that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere;

(j) not use workplace fans near the degreaser opening;

(k) not allow visually detectable water in the solvent exiting the water separator; and

(l) provide a permanent, conspicuous label summarizing the operating requirements.

326 IAC 4-1 (Open Burning)

Pursuant to this rule, 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.

326 IAC 1-5-2 (Emergency Reduction Plans; Submission)

Pursuant to this rule, the following conditions shall apply:

(a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) These ERPs shall be submitted for approval to:

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

within 180 calendar days from the issuance date of this permit.

(c) If the ERP is disapproved by IDEM, OAM, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP. If after this time, the Permittee does not submit an approvable ERP, IDEM, OAM shall supply such a plan.

(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(f) Upon direct notification by IDEM, OAM that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate level. [326 IAC 1-5-3]

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants 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 modification will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Amendments to Clean Air Act.

(b) See attached spreadsheet for detailed air toxic calculations.

Conclusion

The construction of this equipment will be subject to the conditions of the attached proposed Construction Permit No. CP-067-8909-00061.

Indiana Department of Environmental Management
Office of Air Management

Addendum to the
Technical Support Document for New Construction and Operation

Source Name:	Delco Electronics Corporation
Source Location:	2033 E. Boulevard, Kokomo, Indiana 46904
County:	Howard
Construction Permit No.:	CP-067-8909-00061
SIC Code:	3679
Permit Reviewer:	Nisha Sizemore

On October 7, 1997, the Office of Air Management (OAM) had a notice published in the Kokomo Tribune, Kokomo, Indiana, stating that Delco Electronics Corporation had applied for a construction permit to construct and operate prototype / developmental and production automotive electronic circuit board assembly modules. 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 October 16, 1997, Delco Electronics Corporation submitted comments on the proposed construction permit. The summary of the comments and corresponding responses is as follows:

Comment #1

IDEM identifies Plants 7 and 9 under plant ID 067-00061. Delco Electronics Corporation has operated Plants 7 and 9 under ID 067-00022. All previous IDEM construction permits and inspection reports for Plants 7 and 9 have utilized this plant ID. The IDEM Title V Notice of Administrative Completeness, dated October 29, 1996, also identifies the plant site as plant ID 067-00022. Delco Electronics has not been notified of any change of this Plant ID to 067-00061. Prior to using 067-00061 to identify Plants 7 and 9, IDEM may have to undertake a re-issue of all previous permits currently referencing the 067-00022 identifier.

Response #1
When Delco Electronics submitted a single Title V application combining plants 7 and 9 with plants 8 and 10, the OAM assigned a new plant ID number of 067-00061 for the combined source. It is not necessary to re-issue all of the previous permits referencing the old plant ID numbers.

Comment #2

The following changes should be made to the equipment listing:

(a) Item (a)(2) should state that the prototype / developmental circuit board assembly module will include one dip conformal coater with a maximum dip coat usage of thirteen (13) pounds per hour, and a spray coater with a maximum spray coat usage of 1.3 pounds per hour.

(b) Idem (c) should state that PT3 will be located in the plant 7 portion of the plants 6, 7, 9 complex, not in plant 9.

(c) Item (c)(1) should state the ID number for the wave solder machine as 181019.

(d) Items (c) (3 through 6) should state that the production line will contain two each of the

following equipment instead of one:

epoxy glue stations
epoxy cure ovens
solder paste printers
solder paste reflow ovens

(e) Item (d) should state that the second automotive engine control module known as PT19 will be located in the plant 7 portion of the plants 6, 7, 9 complex, not plant 9.

(f) Items (d) (3 through 7) should state that the production line will contain two each of the following equipment instead of one:

epoxy glue stations
epoxy cure ovens, ID 180777 and 180785
solder paste printers
solder paste reflow ovens, ID numbers 180703 and 180704.

Response #2

These changes have been made in the final permit.

Comment #3

Operation condition number 3 requires a Preventive Maintenance Plan (PMP). A PMP is required for control devices on processes emitting above the permit trigger levels. This condition should be deleted because none of the facilities approved under this construction permit will have control devices and therefore do not meet the criteria for a PMP.

Response #3

Pursuant to 326 IAC 1-6-3, a PMP is required for any facility required to obtain a permit under 326 IAC 2-1-2 and 326 IAC 2-1-4.

Comment #4

Operation condition number 8 requires annual emission reporting pursuant to 326 IAC 2-6. Delco Electronics Plant 9 is already a major source subject to the requirements of this rule. This construction permit approval should only address new requirements for the facilities being approved. This condition should be removed from the permit.

Response #4

This condition remains in the permit to clarify that the emission reporting should include emissions from this new equipment, as well as emissions from existing equipment. In that respect, the condition does apply to the new equipment and should therefore be a condition in this permit.

Comment #5

Operation condition number 10 lists the requirements of 326 IAC 6-3 (Process Operations). For clarity, the definition of “E” should be modified to specify that the emissions are particulate emissions.

Response #5

The OAM has made the requested change to the final permit.

Comment #6

Since the die cleaning hood by itself would meet the definition of an insignificant activity under 326 IAC 2-7-1(21), it should be omitted from the reporting requirements. Delco Electronics will track solvent usage in-house, but it feels the die cleaning hood will be of such low utilization that a reporting effort would not be constructive. Delco also requests that the conformal coating repair station be exempted from the reporting requirements due to sporadic operation and low coating and solvent usage.

Response #6

Delco Electronics proposes to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable by accepting federally enforceable limits on the VOC usage from the die cleaning process and the conformal coating process. Since these limited usages are necessary to render PSD not applicable, the OAM must require record keeping and reporting of these usages.

Comment #7

Operation condition number 15 requires an Emergency Reduction Plan. Delco believes that this should not be a condition of this construction permit for the circuit board assembly modules. Emergency Reduction Plans apply to the overall site of which Plant 9 is a part. Since Delco is already subject to this requirement, the condition should be deleted.

Response #7

Since Delco was already subject to this rule prior to the submission of this permit application and has already submitted an ERP, the condition has been changed to the following:

Emergency Reduction Plans

15. Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on February 6, 1980.

(b) If the ERP is disapproved by IDEM, OAM the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP. If after this time, the Permittee does not submit an approvable ERP, IDEM, OAM shall supply such a plan.

(c) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(d) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(e) Upon direct notification by IDEM, OAM that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate level. [326 IAC 1-5-3]

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

Company Name: Delco Electronics Corporation
Address City IN Zip: 2033 E. Boulevard, Kokomo, IN 46904
CP: 067-8909
Plt ID: 067-00061
Reviewer: Nisha Sizemore

Material	Density (Lb/Gal)	Weight % Volatile (H20& 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 ton/yr	lb VOC /gal solids	Transfer Efficiency
phase 1																
dip conformal coat - Dow 4097	8.09	4.10%	0.0%	4.1%	0.0%	95.00%	0.003214	500.000	0.33	0.33	0.53	12.79	2.33	0.00	0.35	100%
spray conformal coat - PD George 5026	7.70	71.00%	0.0%	71.0%	0.0%	29.00%	0.000338	500.000	5.47	5.47	0.92	22.15	4.04	0.41	18.85	75%
coating repair - toluene	7.23	100.00%	0.0%	100.0%	0.0%	0.00%	0.000149	60.000	7.23	7.23	0.06	1.56	0.28	0.00		75%
total for coating											1.52	36.50	6.66	0.41		
thinner - isopropyl alcohol	6.59	100.00%	0.0%	100.0%	0.0%	0.00%	0.000273	500.000	6.59	6.59	0.90	21.60	3.94	0.00		100%
flux - RF800	6.59	97.00%	0.0%	97.0%	0.0%	0.00%	0.001760	500.000	6.39	6.39	5.63	135.02	24.64	0.00		100%
waste stream											0.30	7.22	1.32	0.00		100%
total for soldering											6.23	149.41	27.27	0.00		
Tech 2000																
flux - RF800	6.59	97.00%	0.0%	97.0%	0.0%	0.00%	0.001244	90.000	6.39	6.39	0.72	17.18	3.14	0.00		100%
vapor degreasers											0.01	0.29	0.05			
paste printer, epoxy glue, underfill app, etc.											0.04	0.84	0.15			
total for Tech 2000											0.76	18.31	3.34			
Totals from phase 1											**8.51**	**204.22**	**37.27**	**0.41**		
phase 2																
dip conformal coat - Dow 4097	8.09	4.10%	0.0%	4.1%	0.0%	95.00%	0.003214	600.000	0.33	0.33	0.64	15.35	2.80	0.00	0.35	100%
thinner - isopropyl alcohol	6.59	100.00%	0.0%	100.0%	0.0%	0.00%	0.000273	600.000	6.59	6.59	1.08	25.92	4.73	0.00		100%
flux - Kester 958	6.72	91.16%	0.0%	91.2%	0.0%	0.00%	0.001760	600.000	6.13	6.13	6.47	155.28	28.34	0.00		100%
waste stream											0.37	8.95	1.63	0.00		100%
total for soldering											7.18	172.25	31.43	0.00		
Die clean hood use - methanol											1.66	39.84	7.27			
Totals from phase 2											**9.48**	**227.44**	**41.51**			
phase 3																
dip conformal coat - Dow 4097	8.09	4.10%	0.0%	4.1%	0.0%	95.00%	0.003090	600.000	0.33	0.33	0.62	14.76	2.69	0.00	0.35	100%
thinner - isopropyl alcohol	6.59	100.00%	0.0%	100.0%	0.0%	0.00%	0.000440	600.000	6.59	6.59	1.74	41.76	7.62	0.00		100%
flux - Kester 958	6.72	91.16%	0.0%	91.2%	0.0%	0.00%	0.001683	600.000	6.13	6.13	6.19	148.45	27.09	0.00		100%
waste stream											0.79	18.86	3.44	0.00		100%
total for soldering											7.14	171.35	31.27	0.00		
Totals from phase 3											**7.75**	**186.11**	**33.96**			
State Potential Emissions			**Add worst case coating to all solvents**								**25.74**	**617.76**	**112.74**	**0.41**		

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

Material	Density (Lb/Gal)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Toluene	Weight % Formaldehyde	Weight % Ethanol	Weight % MEK	Weight % Methanol	Xylene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Ethanol Emissions (ton/yr)	MEK Emissions (ton/yr)	Methanol Emissions (ton/yr)
spray conformal coat - PD George 5026	7.70	0.000338	500.000	0.00%	0.00%	0.00%	14.00%	0.00%	0.00%	0.00	0.00	0.00	0.80	0.00	0.00
coating repair - toluene	7.23	0.000149	60.000	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.28	0.00	0.00	0.00	0.00
methanol	0.0	0.0	0.0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	7.27
Total State Potential Emissions										0.00	0.28	0.00	0.80	0.00	7.27
Totals HAPs	8.35														