



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

TO: Interested Parties / Applicant
DATE: August 1, 2005
RE: Delco Electronics Corp / 067-20862-00061
FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-17-3-4 and 326 IAC 2, this approval is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER-MOD.dot 1/10/05



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

August 1, 2005

Mr. Jeff Blankenberger Delco Electronics Corporation
P.O. Box 9005, MS 8121
Kokomo, Indiana 46904-9005

Re: 067-20862
Fourth Minor Source Modification to:
Part 70 permit No.: **T067-6505-00061**

Dear Mr. Blankenberger:

Delco Electronics Corporation was issued a Part 70 permit T067-6505-00061 on October 21, 2002 for an electronics circuit board production source for the automotive industry. An application to modify the source was received on March 1, 2005. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

One (1) solder machine to be constructed as part of Tech 2000, Dept. 9502.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

This minor source modification authorizes construction of the new emission units. Operating conditions shall be incorporated into the Part 70 operating permit as a significant permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12. Operation is not approved until the significant permit modification has been issued.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter call (800) 451-6027, and ask for Jenny Acker or extension 2-8253, or dial (317) 232-8253.

Sincerely,

Original Signed By:
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

JLA

cc:

File - Howard County

Howard County Health Department

Air Compliance Section Inspector - Marc Goldman

Compliance Data Section

Administrative and Development

Technical Support and Modeling



Mitchell E. Daniels, Jr.
 Governor

Thomas W. Easterly
 Commissioner

100 North Senate Avenue
 Indianapolis, Indiana 46204
 (317) 232-8603
 (800) 451-6027
 www.IN.gov/idem

PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

**Delco Electronic Corporation
 2100 East Lincoln Road
 Kokomo, Indiana 46904-9005**

(herein known as the Permittee) is hereby authorizes to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

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

Operation Permit No.: T067-6505-00061	
Originally signed by: Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: October 21, 2002 Expiration Date: October 21, 2007

Fourth Minor Source Modification No.: 067-20862-00061	Conditions Affected: A.3, C.19, C.20, D.1.1, and Quarterly Report Form
Issued by Original Signed By: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: August 1, 2005

- (4) One (1) wave solder machine, ID #181019, (Plant 9, Dept. 9602), constructed in 1991, with a capacity of 515 boards per hour, and exhausting to stack 9-F8-1;
 - (5) Five (5) solder machines, identified as Tech 2000, Dept. 9502; one (1) constructed in 1999, ID# 208554; one (1) constructed in 2001, ID# 6040058; one (1) constructed in 2003, ID# 6033795; one (1) constructed in 2004, ID# 6044245; and one to be constructed in 2005; with a total capacity (5 solder machines) of 1150 boards per hour, and exhausting to stacks, 9-A21-1, 9-Z21-1, 9-Z23-1, 9-Z22-1, and 9-A21-2 respectively;
 - (6) One (1) wave soldering machine, ID #60000984, (Plant 7, Dept. 7661), constructed in 1996, with a capacity of 450 boards per hour, and exhausting to stack 7-T18-1.
 - (7) Two (2) selective soldering machines, identified as Lines 1 and 2, located at Plant 7, constructed in 2004, each with a maximum capacity of 500 boards per hour and a maximum flux usage of 0.44 pounds per unit.
- (b) One (1) surface coating system, referred to as EU_SC, with conformal coating applied to populated fiberglass circuit boards, paints applied to plastic radio and air control buttons and plastic face plates, comprised of the following emission units:
- (1) Two (2) conformal coating hoods, (Plant 7, Dept. 7086), constructed in 1996, with a maximum capacity of 200 boards per hour, venting to stack 7-S18-1;
 - (2) Four (4) automated select conformal coaters, (Plant 7, Dept. 7130), with a maximum capacity of 222 pounds of circuit board per hour, constructed in 2002, with no control exhausting to stack 7-T22-1;
 - (3) One (1) conformal coater, ID #182386, (Plant 9, Dept. 7641), constructed in 1991, with a capacity of 515 boards per hour with no control, and exhausting to stack 9-C4-1;
 - (4) One (1) paint spray booth 1, ID #153415, (Plant 9, Dept. 962), constructed in 1985, with a maximum coating usage of 1.5 gallons per hour, with waterwalls for control, and exhausting to stack 9-C17-1; and
 - (5) One (1) paint booth to coat automotive plastic parts, ID #165441, (Plant 9, Dept. 964), constructed in 1993, with a maximum coating usage of 0.89 gallons per hour with waterwalls for control, and exhausting to stack 9-C15-1.
- (c) One (1) combustion system, referred to as EU_CO, comprised of the following emission units:
- (1) One (1) natural gas-fired boiler, referred to as Boiler #9, Plt. 6, ID #16554, constructed in 1977, with a capacity of 16.7 MMBtu/hr, and exhausting to stack 6-K12-1;
 - (2) One (1) natural gas-fired boiler, referred to as Boiler #10, Plt. 6, ID #21492, constructed in 1980, with a capacity of 16.7 MMBtu/hr, and exhausting to stack 6-K12-2;
 - (3) One (1) natural gas-fired boiler, referred to as Boiler #1E, Plt. 8, ID #38302, constructed in 1966, with a capacity of 14.6 MMBtu/hr, and exhausting to stack 8-A11-3;

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.18 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]

(a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that 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 emission statement shall meet the following requirements:

- (1) Indicate estimated actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);
- (2) Indicate estimated actual emissions of other regulated pollutants (as defined by 326 IAC 2-7-1) from the source, for purposes of Part 70 fee assessment.

(b) The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31. The annual emission statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The annual emission statement 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, OAQ, on or before the date it is due.

C.19 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2-2]

(a) Records of all required monitoring data, reports and support information required by this permit 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 physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

(c) If there is a reasonable possibility that a "project" (as defined in 326 IAC 2-2-1(qq)) at an existing emissions unit, other than projects at a Clean Unit (or at a source with Plant-wide Applicability Limitation (PAL)), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(ee)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr)), the Permittee shall comply with the following:

(1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(qq)) at an existing emissions unit, document and maintain the following records:

(A) A description of the project.

- (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.
 - (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:
 - (i) Baseline actual emissions;
 - (ii) Projected actual emissions;
 - (iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii) and
 - (iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.
- (2) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and
- (3) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operation after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.20 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11][326 IAC 2-2]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (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 Quality
100 North Senate Avenue
Indianapolis, Indiana 46204
- (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, OAQ, on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) 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. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

- (f) If the Permittee is required to comply with the recordkeeping provisions of (c) in Section C – General Record Keeping Requirements for any “project” (as defined in 326 IAC 2-2-1(qq)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:
- (1) The annual emissions, in tons per year, from the project identified in (c)(1) Section C – General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C – General Record Keeping Requirements (C)(1)(c)(i), by a significant amount, as defined in 326 IAC 2-2-1(xx), for that regulated NSR pollutant, and
 - (2) The emissions differ from the preconstruction projection as documented and maintained under Section C – General Record Keeping Requirements (c)(1)(C)(ii).
- (g) The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:
- (1) The name, address, and telephone number of the major stationary source.
 - (2) The annual emissions calculated in accordance with (c)(2) and (3) in Section C – General Record Keeping Requirements.
 - (3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3).
 - (4) Any other information that the Permittee deems fit to include in this report,

Reports required in this part shall be submitted to:

Indiana Department of Environmental Management
Air Compliance Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

- (h) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C – General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from IDEM, OAQ under 326 IAC 17.1.

Stratospheric Ozone Protection

C.21 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161..

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

- (a) One (1) wave soldering system, referred to as EU_WS, and comprised of the following emission units:
- (1) One (1) wave solder machine, ID #184842 (Plant 9, Dept. 270E), constructed in 1997, with a capacity of 500 boards per hour, 5.78 pounds of flux per hour, and 0.09 pounds of thinner per hour, and exhausting to stack 9-E98-1;
 - (2) One (1) selective soldering machine, ID #2700001 (Plant 9, Dept. 270S), constructed in 1998, with a capacity of 90 boards per hour, 0.738 pounds of flux per hour, and no thinner use, and exhausting to stack 9-F98-1;
 - (3) One (1) wave solder machine, ID #1015805 (Plant 7, Dept. 286), constructed in 2003, with a capacity of 600 boards per hour, 6.65 pounds of flux per hour, and 1.77 pounds of thinner per hour, and exhausting to stack 7-S22-1;
 - (4) One (1) wave solder machine, ID #181019, (Plant 9, Dept. 9602), constructed in 1991, with a capacity of 515 boards per hour, and exhausting to stack 9-F8-1;
 - (5) Five (5) solder machines, identified as Tech 2000, Dept. 9502; one (1) constructed in 1999, ID# 208554; one (1) constructed in 2001, ID# 6040058; one (1) constructed in 2003, ID# 6033795; one (1) constructed in 2004, ID# 6044245; and one to be constructed in 2005; with a total capacity (5 solder machines) of 1150 boards per hour, and exhausting to stacks, 9-A21-1, 9-Z21-1, 9-Z23-1, 9-Z22-1, and 9-A21-2 respectively;
 - (6) One (1) wave soldering machine, ID #60000984, (Plant 7, Dept. 7661), constructed in 1996, with a capacity of 450 boards per hour, and exhausting to stack 7-T18-1.
 - (7) Two (2) selective soldering machines, identified as Lines 1 and 2, located at Plant 7, constructed in 2004, each with a maximum capacity of 500 boards per hour and a maximum flux usage of 0.44 pounds per unit.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6] [326 IAC 2-2][326 IAC 2-7-10.5(d)(4)(A)]

- (a) Pursuant to CP067-8909-00061, issued November 13, 1997, the input volatile organic compounds (VOC) including flux and thinner delivered to the applicators of the two (2) wave solder machines, ID # 184842 (Plant 9, Dept. 270E), and 2700001 (Plant 9, Dept. 270S), minus the VOC flux/thinner shipped out in the waste stream shall not exceed 35.4 tons as a group per twelve (12) consecutive month period with compliance determined at the end of each month and shall be limited to less than 25 tons as individual units per twelve (12) consecutive month period with compliance determined at the end of each month. This renders the requirements of 326 IAC 2-2 and 326 IAC 8-1-6, respectively, not applicable.
- (b) Pursuant to CP067-1959-00022, the input volatile organic compounds (VOC) including flux and thinner delivered to the applicators of the two (2) wave solder machines, ID #181019 (Plant 9, Dept. 9602) and 186604 (Plant 9, Dept. 9602) (included in the insignificant activity list), along with one (1) conformal coater, ID #182386 (Plant 9, Dept.

7641), listed in Section D.2, minus the VOC flux/thinner shipped out in the waste stream shall not exceed 19.2 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This renders the requirements of 326 IAC 8-1-6 not applicable. This condition is the same as Condition D.2.2(a).

- (c) Pursuant to CP067-6272-00022 and CP067-4218-00022, the input volatile organic compounds (VOC) including flux and thinner delivered to the applicators of one (1) wave solder machine, ID # 60000984 (Dept. 7661), minus the VOC flux/thinner shipped out in the waste stream shall be limited to less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This renders the requirements of 326 8-1-6 not applicable.
- (d) Pursuant to MSM 067-17930-00061, issued on November 19, 2003, the input of volatile organic compounds (VOC), including flux and thinner delivered to the applicators of wave solder machine #1015805 (Plant 7, Dept. 286) minus the VOC flux/thinner shipped out in the waste stream, shall not exceed 25.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month. Therefore, the requirements of 326 IAC 8-1-6 are not applicable.
- (e) The input of volatile organic compounds (VOC), including flux and thinner delivered to the applicators of the five (5) soldering machines, Tech 2000 Dept. 9502 minus the VOC flux/thinner shipped out in the waste stream, shall be limited to less than 25.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (f) The potential to emit of VOC of the five (5) soldering machines, Tech 2000 Dept. 9502, is less than 25 tons per year per individual unit. Therefore, the requirements of 326 IAC 8-1-6 are not applicable.

Any change or modification which may increase the potential emissions of VOC to greater than 25 tons per year must be approved by the Office of Air Quality before any such change may occur.

D.1.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities.

Compliance Determination Requirements

D.1.3 Volatile Organic Compounds (VOC)

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) by using formulation data supplied by the flux manufacturer. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.4 Record Keeping Requirements

- (a) To document compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) 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 throughput and VOC content of the flux;
 - (2) The throughput and VOC content of the thinners used;

- (3) VOC flux/thinner shipped out in the waste stream;
 - (4) VOC input including flux and thinner minus VOC flux/thinner shipped out in waste stream.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.5 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.1(a) through (e) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

OFFICE OF AIR QUALITY COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Delco Electronics Corporation
 Source Address: 2100 East Lincoln Road, Kokomo, Indiana 46904-9005
 Mailing Address: P.O. Box 9005, Kokomo, Indiana 46904-9005
 Part 70 Permit No.: T067-6505-00061
 Facility: Tech 2000, Dept. 9502 - five (5) solder machines (ID #208554, ID #6040058, ID #6033795, ID #6044245, and one to be constructed in 2005)
 Parameter: The VOC input including flux and thinner delivered to the applicators minus the VOC flux/thinner shipped out in the waste stream
 Limit: Less than 25.0 tons as a group per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- ☛ No deviation occurred in this quarter.
- ☛ Deviation/s occurred in this quarter.
 Deviation has been reported on:

Submitted by:
 Title / Position:
 Signature:
 Date:
 Phone:

Attach a signed certification to complete this report

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Part 70 Minor Source Modification and a Significant Permit Modification

Source Background and Description

Source Name:	Delco Electronics Corporation
Source Location:	2100 East Lincoln Road, Kokomo, Indiana 46904
County:	Howard
SIC Code:	3089, 3469, 3471, 3651, 3672, 3674, 3679, 3694
Operation Permit No.:	T067-6505-00031
Operation Permit Issuance Date:	October 21, 2002
Minor Source Modification No.:	067-20862-00061
Significant Permit Modification No.:	067-20987-00061
Permit Reviewer:	Jenny Acker

The Office of Air Quality (OAQ) has reviewed a modification application from Delco Electronics Corporation relating to the operation of an electronics circuit board production source for the automotive industry.

History

Delco Electronics Corporation is an existing automotive industry electronic components manufacturing plant, issued a Part 70 permit (T067-6505-00061) on October 21, 2002. On February 28, 2005, Delco Electronics Corporation submitted an application to the OAQ, requesting changes to the Tech 2000, Dept. 9502.

Delco Electronics Corporation received approval (CP 067-10500-00061) to construct and operate nine (9) soldering machines at a maximum capacity of 90 boards per hour per machine (Tech 2000 Dept. 9502) and has requested the following modifications:

- (a) Incorporate, one (1) solder machine, to be constructed in 2005, exhausting to stack 9-A21-2.
- (b) Remove reference to four (4) machines which were not constructed, and reference to one (1) machine which was constructed and subsequently disassembled and removed from service.
- (c) Revise the Tech 2000 Dept. 9502 throughput to reflect a total board capacity of 1150 boards per hour for the entire Tech 2000 Dept. 9502 unit.
- (d) Update the potential to emit for Tech 2000 Dept. 9502, based on revised engineering calculations of required pound of flux per board and increased board per hour capacity.

Source Definition

This source, which produces electronic components principally for the automotive industry, consists of the following plants:

- (a) Plants 6, 7, and 9 (Plant ID 067-00022), located at 1800 – 2100 East Lincoln Road, Kokomo, Indiana;
- (b) Plants 8 and 10 (Plant ID 067-00023), located at 2150 East Lincoln Road, Kokomo, Indiana; and
- (c) Fab III (Plant ID 067-00051), located at 2033 East Boulevard Avenue, Kokomo, Indiana.

Since these plants are located on contiguous or adjacent properties, belong to the same industrial grouping, and are under common control of the same entity, IDEM, OAQ has determined that these plants are considered one (1) single source. This determination was made during the review of the source's Part 70 Permit (T067-6505-00061, issued on October 21, 2002) and will apply to this modification as well.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
9-A21-2	Selective Soldering Machine	30	1.5	2200	90

Recommendation

The staff recommends to the Commissioner that the Part 70 Minor Source Modification and Significant Permit Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on March 1, 2005.

Emission Calculations

The calculations for the selective solder machine submitted by the applicant have been verified and found to be accurate and correct. Calculations for additional emissions units associated with the solder machine lines which are affected by this modification are provided in Appendix A of this document (Pages 1 through 3).

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical

or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential to Emit
PM	--
PM-10	--
SO ₂	--
VOC	Greater than 25
CO	--
NO _x	--

HAP	Potential to Emit
Methanol	Less than 10

Justification for Modification

This Part 70 Operating Permit is being modified through a Part 70 Minor Source Modification and a Part 70 Significant Permit Modification. This source modification is being performed pursuant to 326 IAC 2-7-10.5(d)(4)(A) modifications for which the potential to emit is limited to less than twenty-five (25) tons per year of any regulated pollutant other than hazardous air pollutants or ten (10) tons per year of any single hazardous air pollutant as defined under Section 112(b) of the CAA by complying with the following constraints: limiting the total annual solvent usage or maximum volatile organic compound content or both. This permit modification is being performed pursuant to 326 IAC 2-7-12(d)(1) modification that do not qualify as minor permit modifications or as administrative amendments.

County Attainment Status

The source is located in Howard County.

Pollutant	Status
PM-2.5	Attainment
PM-10	Attainment
SO ₂	Attainment
NO ₂	Attainment
8-Hour Ozone	Attainment
1-Hour Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC emissions and NO_x are considered when evaluating the rule applicability relating the ozone. Howard County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions and NO_x were reviewed pursuant to the requirements for the Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

- (b) Howard County has been classified as attainment or unclassifiable for all other pollutants. Therefore, these emissions were reviewed pursuant to the requirements for the Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) Howard County has been classified as attainment or unclassifiable for PM2.5. U.S. EPA has not yet established the requirements for the Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM2.5 emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed the states to regulate PM10 emissions as a surrogate for PM2.5 emissions.
- (d) 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 or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	Less than 100
PM-10	Less than 100
SO ₂	Greater than 100, but less than 250
VOC	Greater than 250
CO	Less than 100
NOx	Greater than 250

- (a) This existing source is a major stationary source because at least one of the attainment regulated pollutants (VOC and NOx) is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.
- (b) These emissions are based upon the Technical Support Documentation (TSD) for the source's Part 70 Permit (T067-6505-00061), issued October 21, 2002.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 Source Modification.

Process/Facility	Pollutant						
	PM	PM10	SO ₂	VOC	CO	NO _x	HAP
PTE of Tech 2000, Dept. 9502	--	---	--	< 25.0	--	--	0.93
PSD Significant Thresholds	25	15	40	40	100	40	--

This modification to an existing major stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Federal Rule Applicability

NSPS

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

NESHAP

- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 20)(40 CFR Part 61 and 63) applicable to this proposed modification.

State Rule Applicability – Entire Source

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it is required to have an operators permit under 326 IAC 2-7 and it has the potential to emit more than two hundred and fifty (250) tons per year of volatile organic compounds (VOC). Pursuant to this rule, the owner /operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirements as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-3 (Compliance Schedule).

326 IAC 5-1 (Opacity)

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

- (a) Opacity shall not exceed an average of 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.

State Rule Applicability - Individual Facilities

326 IAC 2-7-10.5(d)(4)(A) (Volatile Organic Compound (VOC) Minor Source Modification Limit)

The increase in VOC emissions shall be limited to less than 25 tons per year. Due to the VOC tracking methodology utilized at Tech 2000, Dept. 9502, it is not possible to separate the VOC usage associated with this modification from the currently permitted (T067-6505-00061) VOC usage. Therefore, the source has agreed to limit the Tech 2000, Dept. 9502 VOC usage to less than 25.0 tons per year.

326 IAC 8-1-6 (Best Available Control Technology (BACT))

Each solder machine line operates independent of the other four (4) solder machine lines and each solder machine line qualifies as a facility as defined by 326 IAC 1-2-27. Therefore, VOC emissions of the five (5) solder machines shall be considered individually for purposes of 326 IAC 8-1-6 (BACT). The potential to emit of any one (1) of the solder machines is less than twenty-five (25) tons per year. Therefore, 326 IAC 8-1-6 is not applicable.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state

and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

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

There are no applicable compliance monitoring requirements.

Proposed Changes

1. The description of Tech 2000, Dept. 9502 has been changed in Condition A.3(a)(5) and Section D.1 as follows:

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]
[326 IAC 2-7-5(15)]

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

- (a) One (1) wave soldering system, referred to as EU_WS, and comprised of the following emission units:
 - (5) ~~Nine (9) soldering machines, (Tech 2000 - Dept. 9502); two (2) constructed in 1999, ID#169964 and 208554; one (1) constructed in 2001; one (1) to be constructed in 2002; two (2) to be constructed in 2003; and three (3) to be constructed in 2004; all received approval in 067-10500-00061, with a capacity of 90 boards per hour each, and exhausting to stack 9-Z21-1 and 9-Z21-2; and~~
Five (5) solder machines, identified as Tech 2000, Dept. 9502; one (1) constructed in 1999, ID# 208554; one (1) constructed in 2001, ID# 6040058; one (1) constructed in 2003, ID# 6033795; one (1) constructed in 2004, ID# 6044245; and one to be constructed in 2005; with a total capacity (5 solder machines) of 1150 boards per hour, and exhausting to stacks, 9-A21-1, 9-Z21-1, 9-Z23-1, 9-Z22-1, and 9-A21-2 respectively;

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

- (a) One (1) wave soldering system, referred to as EU_WS, and comprised of the following emission units:
 - (5) ~~Nine (9) soldering machines, (Tech 2000 - Dept. 9502); two (2) constructed in 1999, ID#169964 and 208554; one (1) constructed in 2001; one (1) to be constructed in 2002; two (2) to be constructed in 2003; and three (3) to be constructed in 2004; all~~

received approval in 067-10500-00061, with a capacity of 90 boards per hour each, and exhausting to stack 9-Z21-1 and 9-Z21-2; and

Five (5) solder machines, identified as Tech 2000, Dept. 9502; one (1) constructed in 1999, ID# 208554; one (1) constructed in 2001, ID# 6040058; one (1) constructed in 2003, ID# 6033795; one (1) constructed in 2004, ID# 6044245; and one to be constructed in 2005; with a total capacity (5 solder machines) of 1150 boards per hour, and exhausting to stacks, 9-A21-1, 9-Z21-1, 9-Z23-1, 9-Z22-1, and 9-A21-2 respectively;

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6] [326 IAC 2-2]

- (e) Pursuant to GP067-10500-00061, the potential to emit VOC of the nine (9) soldering machines, Tech 2000 - Dept. 9502 is less than 25 tons per year. Therefore the requirements of 326 8-1-6 are not applicable.
- (e) **The input of volatile organic compounds (VOC), including flux and thinner delivered to the applicators of the five (5) soldering machines, Tech 2000 Dept. 9502 minus the VOC flux/thinner shipped out in the waste stream, shall be limited to less than 25.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month.**
- (f) **The potential to emit of VOC of the five (5) soldering machines, Tech 2000 Dept. 9502, is less than 25 tons per year per individual unit. Therefore, the requirements of 326 IAC 8-1-6 are not applicable.**

D.1.5 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.1(a) through (d e) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

2. The following reporting form was added:

OFFICE OF AIR QUALITY COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Delco Electronics Corporation
 Source Address: 2100 East Lincoln Road, Kokomo, Indiana 46904-9005
 Mailing Address: P.O. Box 9005, Kokomo, Indiana 46904-9005
 Part 70 Permit No.: T067-6505-00061
 Facility: Tech 2000, Dept. 9502 - five (5) solder machines (ID #208554, ID #6040058, ID #6033795, ID #6044245, and one to be constructed in 2005)
 Parameter: The VOC input including flux and thinner delivered to the applicators minus the VOC flux/thinner shipped out in the waste stream
 Limit: Less than 25.0 tons as a group per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- ☉ No deviation occurred in this quarter.
- ☉ Deviation/s occurred in this quarter.
 Deviation has been reported on:

Submitted by:
 Title / Position:
 Signature:
 Date:
 Phone:

Attach a signed certification to complete this report

3. The following changes have been made to Condition C.19 and Condition C.20 General Record Keeping and Reporting Requirements to reflect NSR reform provision at major sources:

C.19 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2-2]

- (a) Records of all required **monitoring** data, reports and support information **required by this permit** 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 physically present or electronically accessible** ~~at the kept~~ at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.
- (c) **If there is a reasonable possibility that a “project” (as defined in 326 IAC 2-2-1(qq)) at an existing emissions unit, other than projects at a Clean Unit (or at a source with Plant-wide Applicability Limitation (PAL)), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(ee)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(rr)), the Permittee shall comply with the following:**
- (1) **Before beginning actual construction of the “project” (as defined in 326 IAC 2-2-1(qq)) at an existing emissions unit, document and maintain the following records:**
- (A) A description of the project.
- (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.
- (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:
- (i) Baseline actual emissions;
- (ii) Projected actual emissions;
- (iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii); and
- (iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.
- (2) **Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and**
- (3) **Calculate and maintain a record of the annual emissions, in toms per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operation after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.**

C.20 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11][**326 IAC 2-2**]

- (a) The ~~source~~ **Permittee** shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (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 Quality
100 North Senate Avenue
Indianapolis, Indiana 46204
- (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, OAQ, on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (e) 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. Reporting periods are based on calendar years, **unless otherwise specified in this permit. For the purpose of this permit “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.**
- (f) **If the Permittee is required to comply with the recordkeeping provisions of (c) in Section C – General Record Keeping Requirements for any “project” (as defined in 326 IAC 2-2-1(qq)) at an existing emissions unit , and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:**
- (1) **The annual emissions, in tons per year, from the project identified in (c)(1) Section C – General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C – General Record Keeping Requirements (C)(1)(c)(i), by a significant amount, as defined in 326 IAC 2-2-1(xx), for that regulated NSR pollutant, and**
- (2) **The emissions differ from the preconstruction projection as documented and maintained under Section C – General Record Keeping Requirements (c)(1)(C)(ii).**
- (g) **The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:**
- (1) **The name, address, and telephone number of the major stationary source.**
- (2) **The annual emissions calculated in accordance with (c)(2) and (3) in Section C – General Record Keeping Requirements.**
- (3) **The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3).**

(4) Any other information that the Permittee deems fit to include in this report,

Reports required in this part shall be submitted to:

**Indiana Department of Environmental Management
Air Compliance Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204**

(h) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C – General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from IDEM, OAQ under 326 IAC 17.1.

Conclusion

The construction and operation the one (1) new solder machine and the associated modifications shall be subject to the conditions of the attached proposed Part 70 Minor Source Modification No. 067-20862-00061 and Part 70 Significant Permit Modification No. 067-20987-00061.

**Appendix A: Emission Calculations
Tech 2000, Dept. 9502**

Company Name: Delco Electronics Corporation
Address City IN Zip: 2100 East Lincoln Road, Kokomo, Indiana 46904
Permit No. MSM 067-20862
 SPM 067-20987
Plt ID: 067-00061
Reviewer: Jenny Acker
Date: April 20, 2005

Volatile Organic Compounds (VOC)							
Line #	Permitted Emissions (T067-6505-00061)		⁽¹⁾ Boards per hour after modification or construction	PTE of Tech 2000, Dept. 9502 after modification (tpy)		PTE of Modification (increased throughput per existing unit, new emission calculations, new unit) (tpy)	
	Solder Machine	⁽²⁾ Associated EUs		⁽³⁾ Solder Machine	⁽²⁾ Associated EUs	Solder Machine	⁽²⁾ Associated EUs
1	0.16	0.60	225	4.30	1.28	4.14	0.68
2	0.16	0.60	100	1.91	0.57	1.76	-0.03
3	0.16	0.60	275	5.25	1.56	5.10	0.97
4	0.16	0.60	275	5.25	1.56	5.10	0.97
5	N/A new line	N/A new line	275	5.25	1.56	5.25	1.56
Totals	0.63	2.38	1150	21.97	6.52	21.35	4.14

Hazardous Air Pollutants (HAP) - Methanol							
Line #	Permitted Emissions (CP067-10500-00061) based on 90 boards per hour (tpy)		⁽¹⁾ Boards per hour after modification or construction	PTE of Tech 2000, Dept. 9502 after modification (tpy)		PTE of Modification (increased throughput, new emission calculations) (tpy)	
	Solder Machine	⁽²⁾ Associated EUs		Solder Machine	⁽²⁾ Associated EUs	Solder Machine	⁽²⁾ Associated EUs
1	--	--	225	--	0.18	--	0.18
2	--	--	100	--	0.08	--	0.08
3	--	--	275	--	0.22	--	0.22
4	--	--	275	--	0.22	--	0.22
5	N/A new line	N/A new line	275	--	0.22	--	0.22
Totals	--	--		--	0.93	--	0.93

PTE of Tech 2000, Dept. 9502 - Summary			
	As Permitted	After Modification	Of Modification
VOCs (tpy)	3.01	28.50	25.49
HAPs (tons Methanol/yr)	--	0.93	0.93

⁽¹⁾ The existing lines (#1 through #4) are currently permitted at 90 boards per line per hour

⁽²⁾ EUs are additional emission units associated with the solder machines lines. Any specifically regulated emission units are listed in Section D.7. Insignificant Activities (T067-6505-00061).

⁽³⁾ Calculations provided by Delco Electronics, verified and found to be correct

History of Tech 2000, Dept. 9502

Pursuant to CP067-10500-0061, each of the Solder Machines within Tech 2000, Dept. 9502 is permitted as a line consisting of the following emissions units (EUs):

1. Solder reflow oven
2. Vapor degreaser
3. Under-fill cure oven
4. Solder machine
5. Glue cure oven

**Appendix A: Emission Calculations
Tech 2000, Dept. 9502**

Company Name: Delco Electronics Corporation
Address City IN Zip: 2100 East Lincoln Road, Kokomo, Indiana 46904
Permit No. MSM 067-20862
SPM 067-20987
Plt ID: 067-00061
Reviewer: Jenny Acker
Date: April 20, 2005

Methodology of PTE of Tech 2000, Dept. 9502 after modification

The following methodology is from CP 067-10500-00061

Information has been reviewed by Delco Electronics and is consistent with current operations

Solder Reflow Oven (PTE) - Volatile Organic Compounds (VOC)				
Line #	Boards per hour	Solder Paste/board (grams)	PTE (lbs/hr)	PTE (typ)
1	225	1.84	0.05	0.24
2	100	1.84	0.02	0.11
3	275	1.84	0.07	0.29
4	275	1.84	0.07	0.29
5	275	1.84	0.07	0.29

DOW F365 solder paste is 6% VOC.
1 lb = 453.59 grams

Solder Reflow Oven PTE (lbs VOC/hr) = Board per hour * Solder Paste per board (grams) /453.59 * 6% VOC content
Solder Reflow Oven PTE (ton VOC/yr) = PTE (lbs VOC/hr) * (8760 hrs/yr) / (2000 lbs/ton)

Vapor Degreaser (PTE)						
Line #	Boards per hour	Solvent loss per board (lb/hr/sq.ft)	PTE (VOC) (lbs/hr)	PTE (VOC) (typ)	PTE (Methanol) (lbs/hr)	PTE (Methanol) (typ)
1	225	1.44E-04	0.19	0.82	0.02	0.07
2	100	1.44E-04	0.08	0.36	0.01	0.03
3	275	1.44E-04	0.23	1.00	0.02	0.09
4	275	1.44E-04	0.23	1.00	0.02	0.09
5	275	1.44E-04	0.23	1.00	0.02	0.09

Per CP-067-10500, the manufacture has provided an estimate for solvent loss of 0.013 lb/hr/sq.ft per cleaner based on 90 boards per hour per line. Opening size of 12.76 square feet per cleaner. Cleaner is 45% by weight VOCs and 4% by weight Methanol (HAP).

Solvent loss per board = (0.013 lb/hr/sq.ft)/90 boards

Vapor Degreaser PTE (lbs VOC/hr) = boards per hour * solvent loss (lb/hr/sq.ft) * 12.76 sq.ft * 45% VOC

Vapor Degreaser PTE (ton VOC/yr) = PTE (lbs VOC/hr) * (8760 hrs/yr) / (2000 lbs/ton)

Vapor Degreaser PTE (lbs Methanol/hr) = boards per hour * solvent loss (lb/hr/sq.ft) * 12.76 sq.ft * 4% Methanol

Vapor Degreaser PTE (ton Methanol/yr) = PTE (lbs HAP/hr) * (8760 hrs/yr) / (2000 lbs/ton)

Under-fill Cure Oven (PTE)				
Line #	Boards per hour	Fill Dispensed per board (cu.ft)	PTE (VOC) (lbs/hr)	PTE (VOC) (typ)
1	225	7.52E-06	2.53E-02	1.11E-01
2	100	7.52E-06	1.13E-02	4.93E-02
3	275	7.52E-06	3.10E-02	1.36E-01
4	275	7.52E-06	3.10E-02	1.36E-01
5	275	7.52E-06	3.10E-02	1.36E-01

Per CP-067-10500, the Under-fill Cure Oven – the NAMICS 8461 material (density of 1.6 gm/cu.cm, or 99.8 lb/cu.ft.) will dispense to fill 4-mil (0.004 inch) voids beneath 13 microchips on each board. Each chip is approximately one-half inch square. The fill is 15% VOC content by weight. 0.013 cubic inch of fill per board, or 7.52 x 10⁻⁶ cubic feet of fill per board

Under-fill Cure Oven PTE (lbs VOC/hr) = Boards per hour * Fill Dispensed per board (cu.ft) * Fill density (lbs/cu.ft) * 15% VOC

Under-Fill Cure Oven PTE (ton VOC/yr) = PTE (lbs VOC/hr) * (8760 hrs/yr) / (2000 lbs/ton)

**Appendix A: Emission Calculations
Tech 2000, Dept. 9502**

Company Name: Delco Electronics Corporation
Address City IN Zip: 2100 East Lincoln Road, Kokomo, Indiana 46904
Permit No. MSM 067-20862
 SPM 067-20987
Plt ID: 067-00061
Reviewer: Jenny Acker
Date: April 20, 2005

Glue Cure Oven (PTE)						
Line #	Boards per hour	Glue per board (lbs)	PTE (VOC) (lbs/hr)	PTE (VOC) (typ)	PTE (Methanol) (lbs/hr)	PTE (Methanol) (typ)
1	225	4.40E-03	0.02	0.11	0.02	0.11
2	100	4.40E-03	0.01	0.05	0.01	0.05
3	275	4.40E-03	0.03	0.13	0.03	0.13
4	275	4.40E-03	0.03	0.13	0.03	0.13
5	275	4.40E-03	0.03	0.13	0.03	0.13

Per CP-067-10500, the Glue Cure Oven – DOW 1598 glue is applied to seal the top of the housing. The glue density is 10.925 pounds per gallon with an as-received VOC content of zero. However, some methanol is evolved from the polysiloxane component upon cure; one-half of that component, or 2.5%, is assumed as methanol. 0.0044 pounds of glue are used per board.

Glue Cure Oven PTE (lbs VOC/hr) = Boards per hour * Glue per board (lbs) * 2.5% VOC
 Glue Cure Oven PTE (ton VOC/yr) = PTE (lbs VOC/hr) * (8760 hrs/yr) / (2000 lbs/ton)
 Glue Cure Oven PTE (lbs Methanol/hr) = Boards per hour * Glue per board (lbs) * 2.5% Methanol
 Glue Cure Oven PTE (tonMethanol/yr) = PTE (lbs Methanol/hr) * (8760 hrs/yr) / (2000 lbs/ton)

Methodology of Solder Machines associated with Tech 2000, Dept 9502:
 Calculations provided by Delco Electronics, verified and found to be correct