



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

TO: Interested Parties / Applicant
DATE: November 18, 2013
RE: BAE Systems Controls, Inc. / 003-33359-00246
FROM: Matthew Stuckey, Branch 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 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, 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 and IC 13-15-6-1 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 of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, 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.dot 6/13/13



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Minor Source Operating Permit Renewal OFFICE OF AIR QUALITY

**BAE Systems Controls, Inc.
2000 Taylor Street
Fort Wayne, Indiana 46801-2232**

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

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

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a MSOP under 326 IAC 2-6.1.

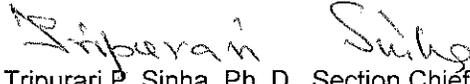
Operation Permit No.: M 003-33359-00246	
Issued by:  Tripurari P. Sinha, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: November 18, 2013 Expiration Date: November 18, 2023

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SECTION A SOURCE SUMMARY

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

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

The Permittee owns and operates a of an existing electronics control manufacturing facilities.

Source Address:	2000 Taylor Street, Fort Wayne, Indiana 46801-2232
General Source Phone Number:	(260) 434-5377
SIC Code:	3829, 3812, 3679
County Location:	Allen
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary

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

- (a) Four (4) PVA Spray Booths for the application of surface coatings to metal circuit boards; one (1) booth, identified as D1126 constructed in 1998, vented indoors, three (3) booths constructed in 2000, identified as D1387; exhausting to stack EF-R2, D1385, and 1386 are venting to stack EF-FF; each with a maximum capacity of less than five (5) gallons per day.
- (b) Two (2) PVA Spray Booths for the application of surface coatings to metal circuit boards, constructed in 2000, identified as D1495 and D1496, utilizing a dry filter for particulate control, venting to stack EF-FF.
- (c) One (1) Manual Spray Booth for the application of surface coatings to metal circuit boards, constructed in 1993, identified as U094, utilizing a dry filter for particulate control, exhausting to stack EF-NN
- (d) Five (5) Build-All Cleaner (BAC) units, constructed in 1994, identified as D1471, D817, D845, D784 and D756
- (e) One (1) Re-Entry Cleaner unit, constructed in 1997, identified as D1064
- (f) Two (2) Microjet Inline Cleaners, constructed in 1994 and cleaner D-AAT1 approved for construction in 2009, identified as D1626 and D-AAT1
- (g) One (1) Crest Ultrasonics Cleaner, constructed in 1994, identified as U118
- (h) Six (6) Jet Cleaners, constructed in 2004, identified as D1469, D945, D1468, D862, D1478.
- (i) One (1) Mega II Cleaner unit, constructed in 2007, identified as E2912

- (j) One (1) Reflow Ovens, constructed in 1995, identified as D1596, both exhausting to stack EF-DD
- (k) One (1) Reflow Oven, constructed in 2001, identified as D1534, exhausting to stack EF-HYB-1
- (l) One (1) WENESCO fountain solder machine, constructed in 1993, identified as E658, exhausting to stack EF-58
- (m) Three (3) Solder Pots, constructed in 1993, identified as F003, F007, and F413 exhausting to stacks EF-Z, EF-Z, and EF-57, respectively.
- (n) Four (4) Emulsonator units, constructed in 1994, identified as D1069, D1066, D1068 and D853, exhausted to stacks EF-R2, EF-FF, EF-Y, and EF-Y, respectively.
- (o) One (1) Dip Sump, constructed in 1994, identified as U088, exhausting to stack FF-HYB-1
- (p) One (1) Potting Ventilation Hood, constructed in 2001, identified as D1202
- (q) One (1) Semi-Aqueous Wash unit, constructed in 1994, identified as D748, exhausting to stack EF-Y
- (r) One (1) Benchtop Reflow Oven, constructed in 2007, identified as U357, exhausting to stack EF-DD
- (s) One (1) Select Solder Machine, constructed in 2003, identified as E2057, exhausting to stack EF-58
- (t) One (1) Wave Solder unit, constructed in 1999, identified as D1072
- (u) One (1) Heller Solder Reflow Oven, approved for construction in 2009
- (v) Five (5) Closed Loop Isopropanol cleaners, identified as E2958, E2912, E 2959, E 3009, E3010, installed in 2008 (2), 2009 (1), 2010 (2) with a maximum capacity of 8272 pound per year each.
- (w) Two (2) Reflow Oven, identified as D1660, D1667, installed in 2008 and 2009 respectively.
- (x) Two (2) Solder Pot, identified as F070 and F071, installed in 2009
- (y) One (1) Specialty soldering machine, identified as E3145, installed in 2012
- (z) One (1) Wave Solder unit, constructed in 2013, identified as D1752

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-1.1-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-1.1-1) shall prevail.

B.2 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

- (a) This permit, M 003-33359-00246, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (c) The notification 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.

B.9 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.
- (b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality

100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The Permittee shall implement the PMPs.

- (c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions.
- (d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.10 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to M 003-33359-00246 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

B.11 Termination of Right to Operate [326 IAC 2-6.1-7(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least one hundred twenty (120) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.12 Permit Renewal [326 IAC 2-6.1-7]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:
 - (1) Submitted at least one hundred twenty (120) days prior to the date of the expiration of this permit; and

- (2) 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) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-6.1 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-6.1-4(b), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.13 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (c) The Permittee shall notify the OAQ no later than thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.14 Source Modification Requirement

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.15 Inspection and Entry
[326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.16 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

B.17 Annual Fee Payment [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees due no later than thirty (30) calendar days of receipt of a bill from IDEM, OAQ,.
- (b) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.18 Credible Evidence [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to 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 this article.

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 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.

C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]

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. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

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

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

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
- (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
- (2) If there is a change in the following:
- (A) Asbestos removal or demolition start date;
- (B) Removal or demolition contractor; or
- (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project.

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Licensed Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-6.1-5(a)(2)]

C.9 Performance Testing [326 IAC 3-6]

- (a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date.
- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date.
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]

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

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.12 Instrument Specifications [326 IAC 2-1.1-11]

- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale. The analog instrument shall be capable of measuring values outside of the normal range.
- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps

C.13 Response to Excursions or Exceedances

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

- (a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system);
or
 - (3) any necessary follow-up actions to return operation to normal or usual manner of operation.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.

- (e) The Permittee shall record the reasonable response steps taken.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

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

C.15 Malfunctions Report [326 IAC 1-6-2]

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

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.16 General Record Keeping Requirements [326 IAC 2-6.1-5]

- (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, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of

permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.17 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) Reports required by conditions in Section D of this permit shall be submitted to:
- Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (b) 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.
- (c) 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.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) Two (2) PVA Spray Booths for the application of surface coatings to metal circuit boards, constructed in 2000, identified as D1495 and D1496, utilizing a dry filter for particulate control, venting to stack EF-FF.
- (b) One (1) Manual Spray Booth for the application of surface coatings to metal circuit boards, constructed in 1993, identified as U094, utilizing a dry filter for particulate control, exhausting to stack EF-NN

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

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

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

To render the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) not applicable, the VOC input, including solvents, for Manual Spray Booth U094 and PVA Spray Booth D1496 shall be less than 15.0 pounds per day for each booth.

Compliance with these limits renders the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) not applicable to PVA Spray Booth D1496 and Manual Spray Booth U094.

D.1.2 Particulate [326 IAC 6-3]

- (a) Pursuant to 326 IAC 6-3-2(d), the particulate emissions from the Manual Spray Booth U094, D1495, and D1496 shall be controlled by a dry particulate filter, waterwash, or an equivalent control device. The control device shall be operated in accordance with manufacturer's specifications.

D.1.3 Preventative Maintenance Plan

A Preventive Maintenance Plan (PMP) is required for the Manual Spray Booth U094, D1495, D1496, and the dry filters. Section B-Preventive Maintenance Plan contains the Permittee's obligation with regard to preventive maintenance plans required by this condition.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

D.1.4 Monitoring

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the surface coating stacks. If a condition exists which should result in a response step, the Permittee shall take reasonable response steps.
- (b) Monthly inspections shall be performed of the coating emissions from the stacks and the presence of overspray on the rooftops and the nearby ground. When there is a noticeable change in overspray emissions, or evidence of overspray emissions, the Permittee shall take reasonable response steps.
- (c) Failure to take response steps shall be considered a deviation of this permit. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to response to excursions and exceedances.

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

D.1.5 Record Keeping Requirements

- (a) To document the compliance status with Condition D.1.1 and D.1.3, permittee shall maintain records for the total VOC usage for Manual Spray Booth U094, PVA Spray Booth D1495, and PVA Spray Booth D1496 each day. These records shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC emission limits established in Conditions D.1.1 and D.1.3.
 - (1) The amount and VOC content of each coating material, dilution solvent, and cleanup solvent used for each day. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount of materials used.
 - (2) The total VOC usage for each day.
- (b) Records of all required monitoring data, reports and support information required by this exemption 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 owner or operator of this source, the owner or operator of this source shall furnish the records to the Commissioner within a reasonable time.
- (c) To document compliance with Condition D.1.4, the Permittee shall maintain a record of any actions taken if overspray is visibly detected.
- (c) Section C - General Record Keeping Requirements, of this permit contains the Permittee's obligations with regard to the records required by this condition.

D.1.6 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.1.1 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) Five (5) Build-All Cleaner (BAC) units, constructed in 1994, identified as D1471, D817, D845, D784 and D756
- (b) One (1) Re-Entry Cleaner unit, constructed in 1997, identified as D1064
- (c) Two (2) Microjet Inline Cleaners, constructed in 1994 and cleaner D-AAT1 approved for construction in 2009, identified as D1626 and D-AAT1
- (d) One (1) Crest Ultrasonics Cleaner, constructed in 1994, identified as U118
- (e) Six (6) Jet Cleaners, constructed in 2004, identified as D1469, D945, D1468, D862, D1478.
- (f) One (1) Mega II Cleaner unit, constructed in 2007, identified as E2912
- (g) Five (5) Closed Loop Isopropanol cleaners, identified as E2958, E2912, E 2959, E 3009, E3010, installed in 2008 (2), 2009 (1), 2010 (2) with a maximum capacity of 8272 pound per year each.

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

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.2.1 Volatile Organic Compounds (VOCs) [326 IAC 8-3]

- (a) Pursuant to 326 IAC 8-3-2 and 8-3-4 , for cold cleaning degreasers; identified as six (6) Jet Cleaners, the five (5) Build-All Cleaner (BAC) units, the one (1) Re-Entry Cleaner, the one (1) Mega II Cleaner, and the one (1) Crest Ultrasonics Cleaner constructed after January 1, 1980, the Permittee shall ensure the following control equipment and operating requirements are met:
 - (1) Equip the degreaser with a cover;
 - (2) Equip the degreaser with a device for draining cleaned parts;
 - (3) Close the degreaser cover whenever parts are not being handled in the degreaser;
 - (4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
 - (5) Provide a permanent, conspicuous label that lists the operating requirements in subdivisions (3), (4), (6), and (7).
 - (6) Store waste solvent only in closed containers.
 - (7) Prohibit the disposal or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.
- (b) Pursuant to 326 IAC 8-3-2 (Cold Cleaner Degreaser Control Equipment and Operating Requirements), for cold cleaning degreasers without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure the following additional control equipment and operating requirements are met:
 - (1) Equip the degreaser with one (1) of the following control devices if the solvent is heated to a temperature of greater than forty-eight and nine-tenths (48.9) degrees Celsius (one hundred twenty (120) degrees Fahrenheit):

- (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent used is insoluble in, and heavier than, water.
 - (C) A refrigerated chiller.
 - (D) Carbon adsorption.
 - (E) An alternative system of demonstrated equivalent or better control as those outlined in clauses (A) through (D) that is approved by the department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.
- (2) Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.
 - (3) If used, solvent spray:
 - (A) must be a solid, fluid stream; and
 - (B) shall be applied at a pressure that does not cause excessive splashing.
- (c) Pursuant to 326 IAC 8-3-4, the owner or operator of this facility must comply with the following for the two (2) Microjet Inline Cleaners, identified as D1626 and D-AAT1:
- (1) Minimize carryout emissions by:
 - (A) Racking parts for best drainage;
 - (B) Maintaining the vertical conveyor speed at less than 3.3 meters per minute (eleven (11) feet per minute);
 - (2) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere;
 - (3) Repair solvent leaks immediately, or shut down the degreaser;
 - (4) Not use workplace fans near the degreaser opening;
 - (5) Not allow water in solvent exiting the water separator; and
 - (6) Provide a permanent, conspicuous label summarizing the operating requirements.

D.2.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-8]

Pursuant to 326 IAC 8-3-8 (Material Requirements for Cold Cleaner Degreasers), on and after January 1, 2015, the Permittee shall not operate a cold cleaner degreaser with a solvent that has a VOC composite partial vapor pressure that exceeds one (1) millimeter of mercury (nineteenthousandths(0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

**Indiana Department of Environmental Management
Office of Air Quality
Compliance and Enforcement Branch**

**MSOP Monthly Report
(submit one form per booth for each month in the quarter)**

Source Name: BAE Systems Controls, Inc.
Source Address: 2000 Taylor Street, Fort Wayne, Indiana 46801-2232
MSOP Permit No.: M 003-33359-00246
Source/Facility: Manual Spray Booth U094
Pollutant: VOC Input
Limit: VOC input to Manual Spray Booth U094 shall be less than (15) pounds per day per booth.*.

Booth: _____ Month: _____

Day	VOC Input	Day	VOC Input
1		17	
2		18	
3		19	
4		20	
5		21	
6		22	
7		23	
8		24	
9		25	
10		26	
11		27	
12		28	
13		29	
14		30	
15		31	
16			

*A notation must be made to indicate days on which the spray booth was not in operation.

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

**Indiana Department of Environmental Management
Office of Air Quality
Compliance and Enforcement Branch**

**MSOP Monthly Report
(submit one form per booth for each month in the quarter)**

Source Name: BAE Systems Controls, Inc.
Source Address: 2000 Taylor Street, Fort Wayne, Indiana 46801-2232
MSOP Permit No.: M 003-33359-00246
Source/Facility: PVA Spray Booth D1496
Pollutant: VOC Input
Limit: VOC input to PVA Spray Booth D1496 shall be less than (15) pounds per day per booth.*.

Booth: _____ Month: _____

Day	VOC Input	Day	VOC Input
1		17	
2		18	
3		19	
4		20	
5		21	
6		22	
7		23	
8		24	
9		25	
10		26	
11		27	
12		28	
13		29	
14		30	
15		31	
16			

*A notation must be made to indicate days on which the spray booth was not in operation.

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

**Indiana Department of Environmental Management
Office of Air Quality
Compliance and Enforcement Branch**

**MSOP Monthly Report
(submit one form per booth for each month in the quarter)**

Source Name: BAE Systems Controls, Inc.
Source Address: 2000 Taylor Street, Fort Wayne, Indiana 46801-2232
MSOP Permit No.: M 003-33359-00246
Source/Facility: PVA Spray Booth D1495
Pollutant: VOC Input
Limit: VOC input to PVA Spray Booth D1495 shall be less than (15) pounds per day per booth.*.

Booth: _____ Month: _____

Day	VOC Input	Day	VOC Input
1		17	
2		18	
3		19	
4		20	
5		21	
6		22	
7		23	
8		24	
9		25	
10		26	
11		27	
12		28	
13		29	
14		30	
15		31	
16			

*A notation must be made to indicate days on which the spray booth was not in operation.

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH**

**MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	BAE Systems Controls, Inc.
Address:	2000 Taylor Street
City:	Fort Wayne, Indiana 46801-2232
Phone #:	(260) 434-5377
MSOP #:	M 003-33359-00246

I hereby certify that BAE Systems Controls, Inc. is :

still in operation.

no longer in operation.

I hereby certify that BAE Systems Controls, Inc. is :

in compliance with the requirements of MSOP M 003-33359-00246.

not in compliance with the requirements of MSOP M 003-33359-00246.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY COMPLIANCE AND ENFORCEMENT BRANCH FAX NUMBER: (317) 233-6865

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100 TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF "MALFUNCTION" AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: _____ PHONE NO. () _____

LOCATION: (CITY AND COUNTY) _____

PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP: _____

CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: ____/____/20____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE ____/____/20____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: _____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____

INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

MALFUNCTION REPORTED BY: _____ TITLE: _____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a
Minor Source Operating Permit Renewal

Source Background and Description
--

Source Name:	BAE Systems Controls, Inc.
Source Location:	2000 Taylor Street, Fort Wayne, IN 46801-2232
County:	Allen
SIC Code:	3829, 3812, 3679
Operation Permit No.:	M 003-33359-00246
Permit Reviewer:	Anh Nguyen

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from BAE Systems Controls, Inc. relating to the operation of an existing electronics control manufacturing facility. On June 27, 2013 BAE Systems Controls, Inc. submitted an application to the OAQ requesting to renew its operating permit. BAE Systems Controls, Inc. was issued its first MSOP construction permit M 003-26374-00246 on October 29, 2008.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

- (a) Four (4) PVA Spray Booths for the application of surface coatings to metal circuit boards; one (1) booth, identified as D1126 constructed in 1998, vented indoors, three (3) booths constructed in 2000, identified as D1387; exhausting to stack EF-R2, D1385, and 1386 are venting to stack EF-FF; each with a maximum capacity of less than five (5) gallons per day.
- (b) Two (2) PVA Spray Booths for the application of surface coatings to metal circuit boards, constructed in 2000, identified as D1495 and D1496, utilizing a dry filter for particulate control, venting to stack EF-FF.
- (c) One (1) Manual Spray Booth for the application of surface coatings to metal circuit boards, constructed in 1993, identified as U094, utilizing a dry filter for particulate control, exhausting to stack EF-NN
- (d) Five (5) Build-All Cleaner (BAC) units, constructed in 1994, identified as D1471, D817, D845, D784 and D756
- (e) One (1) Re-Entry Cleaner unit, constructed in 1997, identified as D1064
- (f) Two (2) Microjet Inline Cleaners, constructed in 1994 and cleaner D-AAT1 approved for construction in 2009, identified as D1626 and D-AAT1
- (g) One (1) Crest Ultrasonics Cleaner, constructed in 1994, identified as U118
- (h) Six (6) Jet Cleaners, constructed in 2004, identified as D1469, D945, D1468, D862, D1478.
- (i) One (1) Mega II Cleaner unit, constructed in 2007, identified as E2912

- (j) One (1) Reflow Ovens, constructed in 1995, identified as D1596, both exhausting to stack EF-DD
- (k) One (1) Reflow Oven, constructed in 2001, identified as D1534, exhausting to stack EF-HYB-1
- (l) One (1) WENESCO fountain solder machine, constructed in 1993, identified as E658, exhausting to stack EF-58
- (m) Three (3) Solder Pots, constructed in 1993, identified as F003, F007, and F413 exhausting to stacks EF-Z, EF-Z, and EF-57, respectively.
- (n) Four (4) Emulsonator units, constructed in 1994, identified as D1069, D1066, D1068 and D853, exhausted to stacks EF-R2, EF-FF, EF-Y, and EF-Y, respectively.
- (o) One (1) Dip Sump, constructed in 1994, identified as U088, exhausting to stack FF-HYB-1
- (p) One (1) Potting Ventilation Hood, constructed in 2001, identified as D1202
- (q) One (1) Semi-Aqueous Wash unit, constructed in 1994, identified as D748, exhausting to stack EF-Y
- (r) One (1) Benchtop Reflow Oven, constructed in 2007, identified as U357, exhausting to stack EF-DD
- (s) One (1) Select Solder Machine, constructed in 2003, identified as E2057, exhausting to stack EF-58
- (t) One (1) Wave Solder unit, constructed in 1999, identified as D1072
- (u) One (1) Heller Solder Reflow Oven, approved for construction in 2009
- (v) Five (5) Closed Loop Isopropanol cleaners, identified as E2958, E2912, E 2959, E 3009, E3010, installed in 2008 (2), 2009 (1), 2010 (2) with a maximum capacity of 8272 pound per year each.
- (w) Two (2) Reflow Oven, identified as D1660, D1667, installed in 2008 and 2009 respectively.
- (x) Two (2) Solder Pot, identified as F070 and F071, installed in 2009
- (y) One (1) Specialty soldering machine, identified as E3145, installed in 2012
- (z) One (1) Wave Solder unit, constructed in 2013, identified as D1752

Emission Units and Pollution Control Equipment Removed From the Source

The source has removed the following emission units:

- (a) One (1) PVA Spray Booths for the application of surface coatings to metal circuit boards, constructed in 1998, identified as D1070, with a maximum capacity of less than five (5) gallons per day, each, vented indoors.
- (b) One (1) PVA Spray Booths for the application of surface coatings to metal circuit boards, identified as D-PVA1 approved for construction in 2009 is venting to stack EF-FF; a maximum capacity of less than five (5) gallons per day.
- (c) One (1) Large Spray Booth for the application of surface coatings to metal circuit boards, constructed in 2005, identified as D1601, utilizing a dry filter for particulate control, with a maximum capacity of less than five (5) gallons per day, exhausting to stack EF-RR
- (d) Fifteen (15) Jet Cleaners, constructed in 2004, identified as D946, D768, D809, D1097, D947, D789, D787, D861, D1465, D1115, D1577, D763, D816, D818, and D797.
- (e) One (1) Reflow Ovens, constructed in 1995, identified as E2640 exhausting to stack EF-DD.
- (f) One (1) Semi-Aqueous Rinse unit, constructed in 1994, identified as D1481
- (g) Three Solder Pots, constructed in 1993, identified as E1181, K309, F413 and D1493, exhausting to stacks EF-Z, EF-Z, and EF-58, respectively

Existing Approvals

Since the issuance of the Part 70 Operating Permit MSOP M003-26374-00246 on October 29, 2008., the source has constructed or has been operating under the following additional approvals:

- (a) Notice-Only Change No. 003-27655-00246 issued on April 7, 2009 and
- (b) Notice-Only Change No. 003-27324-00246 issued on January 28, 2009.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the State Implementation Plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Allen County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Attainment effective February 12, 2007, for the Fort Wayne area, including Allen County, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.

¹Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.
Unclassifiable or attainment effective April 5, 2005, for PM_{2.5}.

- (a) **Ozone Standards**
Volatile organic compounds (VOC) and Nitrogen Oxides (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 and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Allen County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) Allen County has been classified as attainment for PM_{2.5}. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM_{2.5} emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct PM_{2.5} significant level at ten (10) tons per year. This rule became effective, June 28, 2011.. Therefore, direct PM_{2.5}, SO₂, and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.
- (d) **Other Criteria Pollutants**
Allen County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-6.1 (Minor Source Operating Permits) applicability.

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Unrestricted Potential Emissions	
Pollutant	Tons/year
PM	5.19
PM ₁₀	5.19
PM _{2.5}	5.19
SO ₂	0.00
VOC	62.11
CO	0.00
NO _x	0.00
GHGs as CO ₂ e	0.00
Single HAP (Xylene)	8.19
Total HAP	14.58

Appendix A of this TSD reflects the unrestricted potential emissions of the source.

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all criteria pollutants is less than 100 tons per year. This source is not subject to the provision of 326 IAC 2-7. Therefore, the source will be issued an MSOP.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.
- (c) The CO₂e emissions are less than 100,000 tons per year (as defined in 40 CFR 98).

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered enforceable only after issuance of this MSOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Emissions Unit	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)									
	PM	PM2.5*	PM10	SO ₂	NOx	VOC	CO	GHGs	Single HAP (Xylene)	Total HAPs
Surface Coating	5.18	5.18	5.18	0.00	0.00	20.86	0.00		8.18	14.57
Cleaners	0.00	0.00	0.00	0.00	0.00	39.35	0.00		0.00	0.00
Emulsonators	0.00	0.00	0.00	0.00	0.00	1.90	0.00		0.00	0.00
Soldering	0.01	0.01	0.01	0.00	0.00	0.01	0.00		0.01	0.01
Total PTE Entire Source	5.19	5.19	5.19	0.00	0.00	62.11	0.00	0.00	8.19	14.58
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000 CO ₂ e	<10	<25

negl. = negligible
 *Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
 **PM_{2.5} listed is direct PM_{2.5}.

- (a) This existing stationary source is not major for PSD because the emissions of each regulated pollutant, excluding GHGs, are less than two hundred fifty (<250) tons per year, emissions of GHGs are less than one hundred thousand (<100,000) tons of CO₂ equivalent emissions (CO₂e) per year, and it is not in one of the twenty-eight (28) listed source categories.

Federal Rule Applicability

CAM [40 CFR 64]

- (a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

NSPS [326 IAC 12 and 40 CFR Part 60]

- (b) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.

NESHAPs [326 IAC 14, 326 IAC 20 and 40 CFR Part 63]

- (c) The requirements of the 40 CFR 63, Subpart GG, NESHAP for Aerospace Manufacturing and Rework Facilities (40 CFR Part 63.741 - 63.759), are not included in the permit, since this source is not a major source of HAPs as defined in 40 CFR 63.2 and manufactures electronic components, which are exempt from 40 CFR 63, Subpart GG.

- (d) The requirements of the 40 CFR 63, Subpart MMMM, NESHAP for Surface Coating of Miscellaneous Metal Parts and Products (40 CFR Part 63.3880 - 63.3981), are not included in the permit, since this source is not a major source of HAPs as defined in 40 CFR 63.2.
- (e) The requirements of 40 CFR 63, Subpart HHHHHH, NESHAP for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources (40 CFR Part 63.11169 - 63.11180), are not included in this permit, since this area source does not perform paint stripping using chemical strippers that contain methylene chloride for the removal of dried paint, does not perform spray application of coatings to motor vehicles or mobile equipment, and does not perform spray application of coatings that contain chromium, lead, manganese, nickel, or cadmium to a plastic and/or metal substrates.
- (f) The requirements of 40 CFR 63, Subpart T, NESHAP for Halogenated Solvent Cleaning, (63.460 through 63.470) (326 IAC 20-6), are not included in the permit, since this operation does not use a degreasing solvent that contains any of the halogenated compounds listed in 40 CFR 63.460(a).
- (g) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

State Rule Applicability - Entire Source

- (a) 326 IAC 2-6 (Emission Reporting)
This source is not subject to 326 IAC 2-6 (Emission Reporting) because it is not required to have an operating permit pursuant to 326 IAC 2-7 (Part 70); it is not located in Lake, Porter, or LaPorte County, and its potential to emit lead is less than 5 tons per year. Therefore, this rule does not apply.
- (b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
This source is not a major stationary source, under PSD (326 IAC 2-2), because the potential to emit of all PSD regulated pollutants are less than 250 tons per year, and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1). Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.
- (c) 326 IAC 5-1 (Opacity Limitations)
This source is subject to the opacity limitations specified in 326 IAC 5-1-2(1)
- (d) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

State Rule Applicability – Individual Facilities

- (a) 326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
326 IAC 8-1-6 is applicable to facilities that were constructed on or after January 1, 1980, and have potential VOC emissions of twenty-five (25) or more tons per year. Each of the spray booths, identified as PVA Spray Booths; D1126, D1387, D1495, D1385, D1386, D1496, and Manual Spray Booth U094, have potential VOC emissions of less than twenty-five (25) tons per year. Therefore, 326 IAC 8-1-6 is not applicable to the spray booths.
- (b) 326 IAC 8-2-9 (Miscellaneous metal coating operations)
Pursuant to 326 IAC 8-2-1, the provisions of 326 IAC 8-2-9 apply to miscellaneous metal coating operations, constructed after July 1, 1990, located in any county, and which have actual emissions of greater than fifteen (15) pounds per day before add-on controls. The potential to

emit of Manual Spray Booth U094, PVA Spray Booth D1495, and of PVA Spray Booth D1496 is greater than fifteen (15) pounds per day, but the source has opted to limit the VOC input to less than fifteen (15) pounds per day in order to render the requirements of 326 IAC 8-2-9 not applicable.

- (1) The VOC input for Manual Spray Booth U094, PVA Spray Booth D1495, and for PVA Spray Booth D1496 shall be limited to less than 15.0 pounds per day for each booth.

Compliance with this limit renders the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) not applicable.

(c) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

- (1) Pursuant to 326 IAC 6-3-2(d), the dry filters for particulate control shall be operation in accordance with manufacturer's specifications and control emissions from the one (1) Manual Spray Booth U094, PVA Spray Booth D1495, and PVA Spray Booth D1496, at all times when the paint booth is in operation.

- (2) If overspray is visibly detected at the exhaust or accumulates on the ground, the source shall inspect the control device and do either of the following no later than four (4) hours after such observation:

- (A) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground;
- (B) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

If overspray is visibly detected, the source shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

- (3) Pursuant to 326 IAC 6-3-1(b)(15), surface coating manufacturing processes that use less than five (5) gallons per day are exempt from 326 IAC 6-3. Each of the spray booths, identified as PVA Spray Booths; D1126, D1387, D1385, and D1386, have the potential to use less than five (5) gallons per day. Therefore, the spray booths are exempt from 326 IAC 6-3.

(d) Cleaners and Emulsonators

- (1) 326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
326 IAC 8-1-6 is applicable to facilities that were constructed on or after January 1, 1980, and have potential VOC emissions of twenty-five (25) or more tons per year. Each of the cleaning units and emulsonators have potential VOC emissions of less than twenty-five (25) tons per year. Therefore, 326 IAC 8-1-6 is not applicable to the cleaning units and emulsonators.

- (2) 326 IAC 8-3-2 (Cold Cleaner Operations)
The cold cleaning operations are subject to 326 IAC 8-3-2 (Cold Cleaner Operations). This rule applies to cold cleaner type degreasing facilities constructed after January 1, 1980. The cold cleaning operations at this source were constructed after 1980: therefore, the requirements of 326 IAC 8-3-2 shall apply to these facilities.

- (3) 326 IAC 8-3-8 (Material requirements for cold cleaner degreasers)
The cold cleaning operations are subject to 326 IAC 8-3-8 (Material requirements for cold cleaner degreasers). Pursuant to 326 IAC 8-3-8 (Material Requirements for Cold Cleaner Degreasers), on and after January 1, 2015, the Permittee shall not operate a cold cleaner degreaser with a solvent that has a VOC composite partial vapor pressure that exceeds one (1) millimeter of mercury (nineteenthousandths(0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).
- (4) 326 IAC 8-3-4 (Conveyorized degreaser operation)
The one (1) Microjet Inline Cleaner, identified as D1626, is subject to 326 IAC 8-3-4 (Conveyorized degreaser operation). This rule applies to cold cleaner type degreasing facilities constructed after January 1, 1980. The cold cleaning operations at this source were constructed after 1980: therefore, the requirements of 326 IAC 8-3-4 shall apply to these facilities.
- (e) Soldering Operations
- (1) 326 IAC 8-1-6 (General Reduction Requirements for VOC Emissions)
The wave solder machines at this source were constructed after January 1, 1980 and each of them has potential VOC emissions less than 25 tons per year. Therefore, the requirements of 326 IAC 8-1-6 are not applicable to the solder machines at this source.
- (2) 326 IAC 6-3-2 (Particulate Emission Limitations, Work Practices, and Control Technologies) Pursuant to 326 IAC 6-3-1(b)(14), each soldering unit is exempt from the requirements of 326 IAC 6-3-2, since the potential particulate emissions are each less than 0.551 pounds per hour.
- (f) 326 IAC 15-1 (Lead Emission Limitations)
326 IAC 15 is not applicable to the soldering operations because this source is not specifically named in section 2 of this rule.
- (g) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-4.1.
- (h) 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating) the reflow ovens are not subject to 326 IAC 6-2 (Particulate Emission Limitations for Sources of indirect Heating), because, pursuant to 326 IAC 1-2-19, these emission units do not meet the definition of an indirect heating unit.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-6.1 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 2-6.1. 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 in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

There is no testing condition.

The compliance monitoring and/or compliance determination requirements applicable to this source are as follows:

Control	Parameter	Frequency	Range	Excursions and Exceedances
Manual Spray Booth U094, D1495 and D1496 Filters	Inspections shall be performed to verify placement, integrity and particle loading of the dry filters.	Daily	Normal-Abnormal	Response Steps
	Observations of the overspray from the surface coating booth stacks, while one or more booths are in operation.	Weekly	Normal-Abnormal	Response Steps
	Observations of the coating emission from the stacks, and presence of overspray on rooftops and nearby ground.	Monthly	Normal-Abnormal	Response Steps

Recommendation

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

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

An application for the purposes of this review was received on June 27, 2013.

Conclusion

The operation of this operation of an existing electronics control manufacturing facility shall be subject to the conditions of the attached MSOP Renewal No. 003-33359-00246.

IDEM Contact

- a) Questions regarding this proposed permit can be directed to Anh Nguyen at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-5334 or toll free at 1-800-451-6027 extension 3-5334.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>

- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

**Appendix A: Emissions Calculations
Summary**

Company Name: BAE Systems Controls
Address City IN Zip: 2000 Taylor Street, Fort Wayne, IN 46801-
Permit Number: M003-33359-00246
Reviewer: Anh Nguyen
Date: June 27, 2013

Uncontrolled Potential Emissions (tons/year)

Emissions Unit	PM	PM2.5*	PM10	SO₂	NO_x	VOC	CO	Single HAP	Total HAPs
Surface Coating	5.18	5.18	5.18	0.00	0.00	20.86	0.00	8.18	14.57
Cleaners	0.00	0.00	0.00	0.00	0.00	39.35	0.00	0.00	0.00
Emulsonators	0.00	0.00	0.00	0.00	0.00	1.90	0.00	0.00	0.00
Soldering	0.01	0.01	0.01	0.00	0.00	0.01	0.00	0.01	0.01
Total	5.19	5.19	5.19	0.00	0.00	62.11	0.00	8.19	14.58

*PM2.5 emissions are assumed to be equal to PM10 emissions.

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

**Company Name: BAE Systems Controls
Address City IN Zip: 2000 Taylor Street, Fort Wayne, IN 46801-2232
Permit Number: M003-33359-00246
Reviewer: Anh Nguyen
Date: June 27, 2013**

Emissions Unit	Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
PVA Spray Booth D1126	Dymax 984-LVUF	8.8	4.00%	0.0%	4.0%	0.0%	96.00%	0.01200	6.000	0.35	0.35	0.03	0.61	0.11	0.13	0.37	95%
PVA Spray Booth D1385	Dymax 984-LVUF	8.8	4.00%	0.0%	4.0%	0.0%	96.00%	0.01200	6.000	0.35	0.35	0.03	0.61	0.11	0.13	0.37	95%
PVA Spray Booth D1386	Dow 3-1753	8.1	3.00%	0.0%	3.0%	0.0%	97.00%	0.02500	6.000	0.24	0.24	0.04	0.87	0.16	0.26	0.25	95%
PVA Spray Booth D1387	Dymax 984-LVUF	8.8	4.00%	0.0%	4.0%	0.0%	96.00%	0.01200	6.000	0.35	0.35	0.03	0.61	0.11	0.13	0.37	95%
PVA Spray Booth D1495	Humiseal 1B31	7.3	35.00%	0.0%	35.0%	0.0%	35.00%	0.01400	6.000	2.56	2.56	0.21	5.15	0.94	0.09	7.30	95%
	Thinner 521	7.3	100.00%	0.0%	100.0%	0.0%	0.00%	0.01400	6.000	7.30	7.30	0.61	14.72	2.69	0.00	0.00	95%
PVA Spray Booth D1496	Humiseal 1B31	7.3	35.00%	0.0%	35.0%	0.0%	35.00%	0.01400	6.000	2.56	2.56	0.21	5.15	0.94	0.09	7.30	95%
	Thinner 521	7.3	100.00%	0.0%	100.0%	0.0%	0.00%	0.01400	6.000	7.30	7.30	0.61	14.72	2.69	0.00	0.00	95%
Manual Spray Booth U094	Conap 115 A	9.4	49.00%	0.0%	49.0%	0.0%	60.00%	0.04000	5.000	4.61	4.61	0.92	22.11	4.03	2.10	7.68	50%
	Conap 115 B	7.9	35.00%	0.0%	35.0%	0.0%	65.00%	0.04000	5.000	2.77	2.77	0.55	13.27	2.42	2.25	4.25	50%
	S-8 thinner	7.6	100.00%	0.0%	100.0%	0.0%	0.00%	0.04000	5.000	7.60	7.60	1.52	36.48	6.66	0.00	0.00	50%

State Potential Emissions

4.76 114.30 20.86 5.18

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

**Appendix A: Emission Calculations
HAP Emission Calculations**

Company Name: BAE Systems Controls
Address City IN Zip: 2000 Taylor Street, Fort Wayne, IN 46801-2232
Permit Number: M003-33359-00246
Reviewer: Anh Nguyen
Date: June 27, 2013

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Toluene	Weight % Ethyl Benzene	Weight % Benzene	Weight % Hexane	Weight % Glycol Ethers	Weight % Methanol	Xylene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Ethyl Benzene Emissions (ton/yr)	Benzene Emissions (ton/yr)	Hexane Emissions (ton/yr)	Glycol Ethers Emissions (ton/yr)	Methanol Emissions (ton/yr)
Dymax 984-LVUF	8.8	0.012000	6.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dymax 984-LVUF	8.8	0.012000	6.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dow 3-1753	8.1	0.025000	6.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.05
Dymax 984-LVUF	8.8	0.012000	6.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Humiseal 1B31	7.3	0.014000	6.00	0.00%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	1.34	0.00	0.00	0.00	0.00	0.00
Thinner 521	7.3	0.014000	6.00	80.00%	5.00%	15.00%	0.00%	0.00%	0.00%	0.00%	2.15	0.13	0.40	0.00	0.00	0.00	0.00
Humiseal 1B31	7.3	0.014000	6.00	0.00%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	1.34	0.00	0.00	0.00	0.00	0.00
Thinner 521	7.3	0.014000	6.00	80.00%	5.00%	15.00%	0.00%	0.00%	0.00%	0.00%	2.15	0.13	0.40	0.00	0.00	0.00	0.00
Conap 115 A	9.4	0.040000	5.00	15.00%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	1.24	0.06	0.00	0.00	0.00	0.00	0.00
Conap 115 B	7.9	0.040000	5.00	0.00%	17.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	1.18	0.00	0.00	0.00	0.00	0.00
S-8 thinner	7.6	0.040000	5.00	0.00%	60.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	3.99	0.00	0.00	0.00	0.00	0.00

Total State Potential Emissions

5.53 8.18 0.81 0.00 0.00 0.00 0.05

METHODOLOGY

Total HAPs: 14.57

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

Appendix A: Emissions Calculations

VOC

From Cleaners and Emulsonators

Company Name: BAE Systems Controls
Address City IN Zip: 2000 Taylor Street, Fort Wayne, IN 46801-2232
Permit Number: M003-33359-00246
Reviewer: Anh Nguyen
Date: June 27, 2013

Emissions Unit	ID	Cleaning Material used	% VOC	Max usage per year, lbs.	Maximum VOC usage, lbs/hr	Potential to Emit VOC (tons/yr)
Re-Entry Cleaner	D1064	Isopropyl Alcohol	100	8272	0.94	4.136
Closed Loop Cleaners	E2958	Isopropyl Alcohol	100	8272	0.94	4.136
Closed Loop Cleaners	E2912	Isopropyl Alcohol	100	8272	0.94	4.136
Closed Loop Cleaners	E2959	Isopropyl Alcohol	100	8272	0.94	4.136
Closed Loop Cleaners	E3009	Isopropyl Alcohol	100	8272	0.94	4.136
Closed Loop Cleaners	E2010	Isopropyl Alcohol	100	8272	0.94	4.136
Build-All Cleaner	D1471	IPA	100	1773	0.20	0.8865
Build-All Cleaner	D817	IPA	100	1773	0.20	0.8865
Build-All Cleaner	D845	IPA	100	1773	0.20	0.8865
Build-All Cleaner	D784	IPA	100	1773	0.20	0.8865
Build-All Cleaner	D756	IPA	100	1773	0.20	0.8865
Jet Cleaner	D1469	IPA	100	2197	0.25	1.0985
Jet Cleaner	D1468	IPA	100	2197	0.25	1.0985
Jet Cleaner	D862	IPA	100	2197	0.25	1.0985
Jet Cleaner	D1478	IPA	100	2197	0.25	1.0985
Jet Cleaner	D945	IPA	100	469	0.05	0.2345
Mega II Cleaner, AAT	E2912	IPA	100	446	0.05	0.223
Emulsonator	D1069	5% BioAct EC-7R , 95% Water	100	943	0.11	0.4715
Emulsonator	D1066	5% BioAct EC-7R , 95% Water	100	943	0.11	0.4715
Emulsonator	D1068	5% BioAct EC-7R , 95% Water	100	943	0.11	0.4715
Emulsonator	D853	5% BioAct EC-7R , 95% Water	100	943	0.11	0.4715
Semi-Aqueous Cleaner	D748	95% BioAct EC-7R, 5% Water	100	1288	0.15	0.644
Microjet Inline Cleaner	D1626	Aquanox A 4520	100	796	0.09	0.398
Dip Sump	U088	Ensolv	100	3430.7	0.39	1.71535
Crest Ultrasonics	U118	Ensolv	100	440.5	0.05	0.22025
Jet Clean	D945	Axarel 2200	100	772	0.09	0.386

Total VOC: 8.98 39.35

Appendix A: Emissions Calculations
PM and Pb
From Soldering Operations
Company Name: BAE Systems Controls
Address City IN Zip: 2000 Taylor Street, Fort Wayne, IN 46801-2232
Permit Number: M003-33359-00246
Reviewer: Anh Nguyen
Date: June 27, 2013

Machine	ID#	Stack	Material Used	Total B20C4EIII consumed in 2007, lbs.	% of total solder used per unit	% lead in B20C4EIII	Emission s Factor = 1% For lead	Actual Pb Emissions (lb/yr)	Actual PM Emissions (lb/yr)	Est. Machine Usage %	Potential Pb (lb/yr)	Potential PM (lb/yr)	Potential Pb (tons/yr)	Potential PM (tons/yr)
				95.063										
Reflow Oven -HV	D1660	EF-HYB-1	B20C4E2III		10%	37%	1%	0.035	0.10	15%	0.23	0.63	0.000	0.000
Reflow Oven -HV	D1667	EF-HYB-1	B20C4E2III		10%	37%	1%	0.035	0.10	15%	0.23	0.63	0.000	0.000
Reflow Oven-LV	U357	EF-DD	B20C4E2III		30%	37%	1%	0.106	0.29	10%	1.06	2.85	0.001	0.001
Reflow Oven -Dev	D1534	EF-HYB-1	B20C4E2III		10%	37%	1%	0.035	0.10	15%	0.23	0.63	0.000	0.000
				Total 63:37 bar solder consumed in 1396										
Wave solder	D1072	EF-WS-1	10 lb bar		85%	37%	1%	4.390	11.87	70%	6.27	16.95	0.003	0.008
Wave solder wenesco	D1752 E658	EF-58	10 lb bar		10%	37%	1%	0.517	1.40	90%	0.57	1.55	0.000	0.001
Specialty Sodering machin select solder	E3145 E2057	EF-58	10 lb bar		5%	37%	1%	0.258	0.70	20%	1.29	3.49	0.001	0.002
				Solder consumed per pot in 2007, lbs.										
Machine solder pot Sn 63:Pb:37 solder pot	F007 F003	EF-Z EF-Z	Sn63:Pb37 Sn63:Pb37	10 10	100% 100%	37% 37%	1% 1%	0.037 0.037	0.10 0.10	90% 90%	0.04 0.04	0.11 0.11	0.000 0.000	0.000 0.000
solder pot	F070			10	100%	37%	1%	0.037	0.10	90%	0.04	0.11	0.000	0.000
solder pot	F071			10	100%	37%	1%	0.037	0.10	90%	0.04	0.11	0.000	0.000

METHODOLOGY

Soldering calculations were submitted by the source and approved by IDEM

Emission Factors: For Lead, 1% of lead used was assumed to be emitted.
 For PM, 1% of the total lbs. of solder per maching was assumed to be emitted

Actual Emissions Lead emitted per machine= total solder used x percentage of total consumed by machine x percent of lead in alloy x emission factor (.01)
 PM emitted per machine= total solder used x percentage of tatl consumed by machine x emission factor (.01)

Potential Emissions Lead = Calculated Pb emissions x (100% full time usage / est. machine usage%)
 PM = Calculated PM emissions x (100% full time usage / est. machine usage%)

NOTE: All PM emissions are assumed to be equal to PM10 and PM2.5 emissions



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Paul A Oberley
ABE Systems Controls, Inc.
2000 Taylor St
Fort Wayne, IN 46801

DATE: November 18, 2013

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Minor Source Operating Permit Renewal
003-33359-00246

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Robert Hoffman – Operations Director
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 6/13/2013



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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

November 18, 2013

TO: Allen County Public Library

From: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: BAE Systems Controls, Inc.
Permit Number: 003-33359-00246

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 6/13/2013

Mail Code 61-53

IDEM Staff	GHOTOPP 11/18/2013 BAE Systems Controls, Inc. 003-33359-00246 Final		Type of Mail: CERTIFICATE OF MAILING ONLY	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

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1		Paul A Oberley BAE Systems Controls, Inc. 2000 Taylor St Ft Wayne IN 46801-2232 (Source CAATS) via confirmed delivery										
2		Robert Hoffman Operations Director BAE Systems Controls, Inc. 2000 Taylor St Ft Wayne IN 46801-2232 (RO CAATS)										
3		Daniel & Sandy Trimmer 15021 Yellow River Road Columbia City IN 46725 (Affected Party)										
4		Duane & Deborah Clark Clark Farms 6973 E. 500 S. Columbia City IN 46725 (Affected Party)										
5		Allen County Public Library 900 Library Plaza, P.O. Box 2270 Fort Wayne IN 46802 (Library)										
6		Fort Wayne City Council and Mayors Office 200 E Berry Street Ste 120 Fort Wayne IN 46802 (Local Official)										
7		Mr. Jeff Coburn Plumbers & Steamfitters, Local 166 2930 W Ludwig Rd Fort Wayne IN 46818-1328 (Affected Party)										
8		Allen Co. Board of Commissioners 200 E Berry Street Ste 410 Fort Wayne IN 46802 (Local Official)										
9		Fort Wayne-Allen County Health Department 200 E Berry St Suite 360 Fort Wayne IN 46802 (Health Department)										
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