



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant
DATE: October 11, 2005
RE: Essex Group, Inc. / 083-21551-00008
FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures
FNPER-MOD.dot 1/10/05



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David Cummings
Essex Group - Vincennes Plant
P.O. Box 1601
Forty Wayne, IN 46801-1601

October 11, 2005

Re: 083-21551-00008
PSD Significant Permit Modification to:
Part 70 permit No.: T083-7422-00008

Dear Mr. Cummings:

Essex Group was issued Part 70 operating permit T083-7422-00008 on May 3, 2004 for the operation of a stationary magnet wire manufacturing plant. An application to modify the source was received on May 3, 2005. Pursuant to 326 IAC 2-7-12, a significant permit modification to T083-7422-00008 is hereby approved as described in the attached Technical Support Document.

The significant permit modification allows for the operation of several modified units such that the respective units may operate at a greater capacity and/or with greater operational flexibility. The exact changes to the Part 70 permit are located in the Proposed Changes section of the attached Technical Support Document.

Pursuant to Contract No. A305-5-65, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Bob Sidner, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (703) 633-1701 to speak directly to Mr. Sidner. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original signed by
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

ERG/BS

cc: File - Knox County
Knox County Health Department
Air Compliance Section Inspector – Jennifer Schick
Compliance Data Section
Administrative and Development





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PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

**Essex Group, Inc.
1299 East Essex Rd.
Vincennes, Indiana 47591**

(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.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

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

Operation Permit No.: T083-7422-00008	
Issued by: Paul Dubenetzky, Chief Permits Branch Office of Air Quality	Issuance Date: Expiration Date:
First Significant Permit Modification No.: T043-21551-00024	Affected Pages: 5-7, 18, 27-36, 38, 44
Issued by: Original signed by Paul Dubenetzky, Chief Permits Branch Office of Air Quality	Issuance Date: October 11, 2005

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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 through A.3 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 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary copper rod production and magnet wire manufacturing plant.

Responsible Official(s):	Plant Manager(s) for Concast and Magnet Wire plants
Source Address:	1299 East Essex Road, Vincennes, IN, 47591
Mailing Address:	1299 East Essex Road, Vincennes, IN, 47591
SIC Code:	3351 and 3357
County Location:	Knox
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major under PSD rules Major Source, Section 112 of the Clean Air Act

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

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

Magnet Wire Production - Departments 200 and 300

- (a) Two (2) Department 200 Emission Units, identified as units 201E and 201W, each constructed in 1989 and modified in 1998 and 2005. Each Emission Unit consists of one (1) annealer, one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, and one (1) topical lube applicator. Each unit has a maximum copper wire producing capacity of 900 lb copper per hour. Emissions from enamel curing and lubricant coating are controlled by integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (b) Four (4) Department 200 Emission Units, identified as units 202E, 202W, 203E, and 203W, each constructed in 1993 and modified in 1998 and 2005. Each Emission Unit consists of one (1) annealer, one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, and one (1) topical lube. Each unit has a maximum copper wire producing capacity of 900 lb copper per hour. Emissions from enamel curing and lubricant coating are controlled by integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (c) Six (6) Department 200 Emission Units, identified as units 204E, 204W, 205E, 205W, 206E, and 206W, each constructed in 1995 and modified in 1997 or 1998 and 2005. Each Emission Unit consists of one (1) annealer, one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, and one (1) topical lube applicator. Each unit has a maximum copper wire producing capacity of 900 lb copper per hour. Emissions from enamel curing and lubricant coating are controlled by integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (d) Four (4) Department 200 Emission Units, identified as units 207E, 207W, 208E, and 208W, constructed in 1994 and modified in 1997 and 2005. Each Emission Unit consists of one (1) annealer, one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, and one (1) topical lube applicator. Each unit has a maximum copper wire producing

capacity of 900 lb copper per hour. Emissions from enamel curing and lubricant coating are controlled by integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.

- (e) Eight (8) Department 200 Emission Units, identified as units 209E, 209W, 210E, 210W, 211E, 211W, 212E, and 212W, each constructed in 1998 and modified in 2005. Each Emission Unit consists of one (1) annealer, one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, and one (1) topical lube applicator. Each unit has a maximum copper wire producing capacity of 658 lb copper per hour. Emissions from enamel curing and lubricant coating are controlled by integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (f) Four (4) Department 200 Emission Units, identified as units 213E, 213W, 214E, and 214W, each constructed in 1998. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 527 lb copper per hour. Emissions from enamel curing are controlled by integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (g) Four (4) Department 200 Emission Units, identified as units 215E, 215W, 216E, 216W, each constructed in 1997. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 527 lb copper per hour, using integral thermal oxidizers to control emissions from enamel curing, and exhausting to stacks identified with the same names as their respective emission units.
- (h) Eight (8) Department 300 Emission Units, identified as units 301E, 301W, 302E, 302W, 303E, 303W, 304E, and 304W constructed in 1994. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 284 lb copper per hour, using integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (i) Twelve (12) Department 300 Emission Units, identified as units 305E, 305W, 306E, 306W, 309E, 309W, 310E, 310W, 311E, 311W, 312E, and 312W, each constructed in 1996. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 284 lb copper per hour, using integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (j) Four (4) Department 300 Emission Units, identified as units 307E, 307W, 308E, and 308W constructed in 1995. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 284 lb copper per hour, using integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (k) Eight (8) Department 300 Emission Units, identified as units 313E, 313W, 314E, 314W, 315E, 315W, 316E, and 316W constructed in 1997. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 284 lb copper per hour, using integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.

Copper Rod and Bar Production

- (l) One (1) Copper Rod and Bar Manufacturing Process, identified as P-1, constructed in 1976, a maximum capacity of 20 tons of copper per hour, with emissions uncontrolled, exhausting to stack S-1, and consisting of:
 - (1) One (1) natural gas-fired vertical melt furnace, with a heat input capacity of 24 MMBtu/hr,
 - (2) One (1) holding furnace, with a heat input capacity of 2.0 MMBtu/hr,
 - (3) One (1) tundish, with a heat input capacity of 1.5 MMBtu/hr, and
 - (4) Various ancillary launders, with an aggregate heat input capacity of 2.5 MMBtu/hr.

Alcohol Quench Process

- (m) One (1) mill emulsion system identified as P-2 Mill Emulsion System, constructed in 1976, which pumps a mill emulsion solution containing 0.2% - 2.5% by volume Isopropyl Alcohol (2-propanol) through sprays in an enclosed rolling mill stand area, with emissions uncontrolled, and exhausting to stack/vent V-1;
- (n) One (1) quench system identified as P-2 Quench System, constructed in 1976, which pumps a quench solution containing 0.8% - 3.0% by volume Isopropyl Alcohol (2-propanol) ejectors into tubes, with emissions uncontrolled, and exhausting to stack/vent V-2;

The maximum capacity of the P-2 Alcohol Quench Process (Mill Emulsion System and Alcohol Quench System) is 300 pounds of 2-propanol (IPA) per hour.

Storage Tanks

- (o) One (1) 15,000 gallon mill emulsion storage tank, constructed in 1995;
- (p) One (1) 7,500 gallon quench solution storage tank, constructed in 1978.
- (q) Two (2) 7,000 gallon isopropyl storage tanks, constructed in 1988.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (a) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]
- (b) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment cutting torches, soldering equipment, welding equipment. [326 IAC 6-3-2]
- (c) Activities with emissions equal to or less than the following thresholds: 5 tons per year PM or PM10, 10 tons per year SO₂, NO_x, or VOC, 0.2 tons per year Pb, 1.0 tons per year of a single HAP, or 2.5 tons per year of any combination of HAPs:
 - (1) Six (6) degreaser units, identified as 'P, T1, T2, T3, T4, and T5' using solvent identified as 'Thinner-907' and mechanical agitation. [326 IAC 8-3-2] [326 IAC 8-3-5]

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

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 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5]

This permit is issued for a fixed term of five (5) 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.

B.3 Enforceability [326 IAC 2-7-7]

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.4 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(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 nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.5 Severability [326 IAC 2-7-5(5)]

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 [326 IAC 2-7-5(6)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

- (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. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). 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 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

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

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

- (b) The annual compliance certification report 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) The annual compliance certification report shall include the following:
- (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ, may require to determine the compliance status of the source.

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

**B.10 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)]
[326 IAC 1-6-3]**

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, 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 Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

The PMP extension notification does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall implement the PMPs, including any required record keeping, as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.
- (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 or potential to emit. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (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 the unit.

B.11 Emergency Provisions [326 IAC 2-7-16]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
 - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
 - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, and the Southwest Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967
and

Telephone Number: 812-380-2305 (Southwest Regional Office)
Facsimile Number: 812-380-2307

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

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

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
 - (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
 - (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(9) be revised in response to an emergency.
 - (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
 - (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
 - (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

B.12 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

- (a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed in compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced 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 Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

- (b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.
- (c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.
- (d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
- (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
 - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
 - (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
 - (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
- (f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either

- (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted
- by this permit.

- (b) All previous registrations and permits are superseded by this permit.

B.14 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

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

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination
[326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ, determines any of the following:
- (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, at least thirty (30)

days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.16 Permit Renewal [326 IAC 2-7-4]

- (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 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

- (b) Timely Submittal of Permit Renewal [326 IAC 2-7-4(a)(1)(D)]

(1) A timely renewal application is one that is:

(A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(B) 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.

(2) If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

- (c) Right to Operate After Application for Renewal [326 IAC 2-7-3]

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 2-7 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 in writing by IDEM, OAQ, any additional information identified as being needed to process the application.

- (d) United States Environmental Protection Agency Authority [326 IAC 2-7-8(e)]

If IDEM, OAQ, fails to act in a timely way on a Part 70 permit renewal, the U.S. EPA may invoke its authority under Section 505(e) of the Clean Air Act to terminate or revoke and reissue a Part 70 permit.

B.17 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

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

Indiana Department of Environmental Management

Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]
- (d) No permit amendment or modification is required for the addition, operation or removal of a nonroad engine, as defined in 40 CFR 89.2.

B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)]
[326 IAC 2-7-12 (b)(2)]

- (a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.
- (b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.19 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;
- (3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20(b), (c), or (e) and makes such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-7-20(b)(1), (c)(1), and (e)(2).

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:
- (1) A brief description of the change within the source;
 - (2) The date on which the change will occur;
 - (3) Any change in emissions; and
 - (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

B.20 Source Modification Requirement [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-7-10.5.

B.21 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1][IC 13-17-3-2]

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 Part 70 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 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 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 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.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 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
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ, the applicable fee is due April 1 of each year.
- (b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) 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.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314][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 2-7-5(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [40 CFR 52 Subpart P] [326 IAC 6-3-2(c)]

- (a) Pursuant to [40 CFR 52 Subpart P], particulate matter emissions from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.
- (b) 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. This condition is not federally enforceable.

C.2 Opacity [326 IAC 5-1]

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

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 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. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable

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

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2. 326 IAC 9-1-2 is not federally enforceable.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

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

C.6 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.7 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
Asbestos Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

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. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (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 14-10-4-1, 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 Accredited 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 Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.8 Performance Testing [326 IAC 3-6]

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (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 source 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.9 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 2-7-5(1)] [326 IAC 2-7-6(1)]

C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

C.11 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

C.12 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

- (a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.
- (b) Whenever a condition in this permit requires the measurement of a temperature or fan amperage, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.
- (c) The Preventive Maintenance Plan for the pH meter shall include calibration using known standards. The frequency of calibration shall be adjusted such that the typical error found at calibration is less than one pH point.
- (d) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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

- (a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on March 2, 1998.
- (b) Upon direct notification by IDEM, OAQ, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level.
[326 IAC 1-5-3]

C.14 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

If a regulated substance as defined in 40 CFR 68 is present at a source in more than a threshold quantity, the source must comply with the applicable requirements of 40 CFR 68.

C.15 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. If a Permittee is required to have an Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction Plan (SSMP) under 40 CFR Part 63, such plans shall be deemed to satisfy the requirements for a CRP for those compliance monitoring conditions. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:

- (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.
- (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction Plan (SSMP) and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction Plan (SSMP) to include such response steps taken.

The SSMP shall be submitted within the time frame specified by the applicable 40 CFR Part 63 requirement.

- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
 - (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction Plan (SSMP); or
 - (2) If none of the reasonable response steps listed in the Compliance Response Plan or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction Plan (SSMP); is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
 - (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, and it will be ten (10) days or more until the unit or device will be shut down, then the permittee shall promptly notify the IDEM, OAQ of the expected date of the shut down. The notification shall also include the status of the applicable compliance monitoring parameter with respect to normal, and the results of the response actions taken up to the time of notification.
 - (4) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
 - (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.
 - (3) An automatic measurement was taken when the process was not operating.
 - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.

- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when, in accordance with Section D, response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) 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.

The response action documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

C.17 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]

- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:
 - (1) Indicate estimated actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);
 - (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) ("Regulated pollutant which is used only for purposes of Section 19 of this rule") from the source, for purposes of Part 70 fee assessment.
- (b) The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31. The annual emission statement must be submitted to:

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

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

- (c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

C.18 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

- (a) Records of all required monitoring data, reports and support information required by this Permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

- (a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

Stratospheric Ozone Protection

C.20 Compliance with 40 CFR 82 and 326 IAC 22-1

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

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

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Magnet Wire Emission Units

Magnet Wire Production - Department 200

- (a) Two (2) Department 200 Emission Units, identified as units 201E and 201W, each constructed in 1989 and modified in 1998 and 2005. Each Emission Unit consists of one (1) annealer, one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, and one (1) topical lube applicator. Each unit has a maximum copper wire producing capacity of 900 lb copper per hour. Emissions from enamel curing and lubricant coating are controlled by integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (b) Four (4) Department 200 Emission Units, identified as units 202E, 202W, 203E, and 203W, each constructed in 1993 and modified in 1998 and 2005. Each Emission Unit consists of one (1) annealer, one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, and one (1) topical lube applicator. Each unit has a maximum copper wire producing capacity of 900 lb copper per hour. Emissions from enamel curing and lubricant coating are controlled by integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (c) Six (6) Department 200 Emission Units, identified as units 204E, 204W, 205E, 205W, 206E, and 206W, each constructed in 1995 and modified in 1997 or 1998 and 2005. Each Emission Unit consists of one (1) annealer, one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, and one (1) topical lube applicator. Each unit has a maximum copper wire producing capacity of 900 lb copper per hour. Emissions from enamel curing and lubricant coating are controlled by integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (d) Four (4) Department 200 Emission Units, identified as units 207E, 207W, 208E, and 208W, constructed in 1994 and modified in 1997 and 2005. Each Emission Unit consists of one (1) annealer, one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, and one (1) topical lube applicator. Each unit has a maximum copper wire producing capacity of 900 lb copper per hour. Emissions from enamel curing and lubricant coating are controlled by integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (e) Eight (8) Department 200 Emission Units, identified as units 209E, 209W, 210E, 210W, 211E, 211W, 212E, and 212W, each constructed in 1998 and modified in 2005. Each Emission Unit consists of one (1) annealer, one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, and one (1) topical lube applicator. Each unit has a maximum copper wire producing capacity of 658 lb copper per hour. Emissions from enamel curing and lubricant coating are controlled by integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (f) Four (4) Department 200 Emission Units, identified as units 213E, 213W, 214E, and 214W, each constructed in 1998. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 527 lb copper per hour. Emissions from enamel curing are controlled by integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (g) Four (4) Department 200 Emission Units, identified as units 215E, 215W, 216E, 216W, each constructed in 1997. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 527 lb copper per hour, using integral thermal oxidizers to control emissions from enamel curing, and

exhausting to stacks identified with the same names as their respective emission units.

- (h) Eight (8) Department 300 Emission Units, identified as units 301E, 301W, 302E, 302W, 303E, 303W, 304E, and 304W constructed in 1994. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 284 lb copper per hour, using integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (i) Twelve (12) Department 300 Emission Units, identified as units 305E, 305W, 306E, 306W, 309E, 309W, 310E, 310W, 311E, 311W, 312E, and 312W, each constructed in 1996. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 284 lb copper per hour, using integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (j) Four (4) Department 300 Emission Units, identified as units 307E, 307W, 308E, and 308W constructed in 1995. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 284 lb copper per hour, using integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (k) Eight (8) Department 300 Emission Units, identified as units 313E, 313W, 314E, 314W, 315E, 315W, 316E, and 316W constructed in 1997. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 284 lb copper per hour, using integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.

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

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

D.1.1 General Provisions Relating to NESHAP [326 IAC 20-1] [40 CFR Part 63, Subpart A] [Table 2 to 40 CFR Part 63, Subpart M]

- (a) The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to the magnet wire emission units except when otherwise specified in 40 CFR Part 63, Subpart M. The Permittee shall comply with these requirements on and after January 2, 2004.
- (b) Since the applicable requirements associated with the compliance options are not included and specifically identified in this permit, the permit shield authorized by the B section of this permit in the condition titled Permit Shield, and set out in 326 IAC 2-7-15 does not apply to paragraph (a) of this condition.

D.1.2 National Emission Standards for Hazardous Air Pollutants: Surface Coating of Miscellaneous Metal Parts and Products [40 CFR Part 63, Subpart M] [40 CFR 63.3882] [40 CFR 63.3883] [40 CFR 63.3890]

- (a) The provisions of 40 CFR Part 63, Subpart M (National Emission Standards for Hazardous Air Pollutants: Surface Coating of Miscellaneous Metal Parts and Products) apply to the affected source (as defined in (c) below). A copy of this rule is available on the US EPA Air Toxics Website at <http://www.epa.gov/ttn/atw/misc/miscpg.html>. Pursuant to 40 CFR 63.3883, the Permittee must comply with these requirements on and after January 2, 2007.

- (b) Since the applicable requirements associated with the compliance options are not included and specifically identified in this permit, the permit shield authorized by the B section of this permit in the condition titled Permit Shield, and set out in 326 IAC 2-7-15 does not apply to paragraph (a) of this condition.
- (c) The affected source is the collection of all of the items listed in 40 CFR 63.3882, paragraphs (b)(1) through (b)(4), that are used for surface coating of miscellaneous metal parts and products within each subcategory as defined in 40 CFR 63.3881(a), paragraphs (2) through (6), which include:
 - (1) All coating operations as defined in 40 CFR 63.3981;
 - (2) All storage containers and mixing vessels in which coatings, thinners and/or other additives, and cleaning materials are stored or mixed;
 - (3) All manual and automated equipment and containers used for conveying coatings thinners and/or other additives, and cleaning materials; and
 - (4) All storage containers and all manual and automated equipment and containers used for conveying waste materials generated by a coating operation.
- (d) Terminology used in this section are defined in the Clean Air Act, in 40 CFR Part 63, Section 63.2, and in 40 CFR 63.3981, which are incorporated by reference.

D.1.3 Prevention of Significant Deterioration - BACT [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 and PSD SSM 083-21221-00008:

- (a) VOC emissions from the enamel curing subsection of magnet wire coating units 201E and 201W through 216E and 216W and 301E and 301W through 316E and 316W shall be controlled by an oxidizer with a minimum one-hundred percent (100%) capture efficiency (as defined by Method 204 of 40 CFR Part 52, Appendix M). The captured VOC emissions shall be routed to the integral thermal oxidizers and destroyed with a minimum ninety-eight and five tenths percent (98.5%) destruction efficiency.
- (b) VOC emissions from the lubricant coating subsection of magnet wire coating units 201E and 201W through 212E and 212W shall be controlled by a device with a minimum one-hundred percent (100%) capture efficiency (as defined by Method 204 of 40 CFR Part 52, Appendix M). The captured VOC emissions shall be routed to the thermal oxidizers and destroyed with a minimum ninety-eight and five tenths percent (98.5%) destruction efficiency.
- (c) The total VOC emissions from magnet wire coating units 201E and 201W through 216E and 216W and 301E and 301W through 316E and 316W shall not exceed 453 tons per twelve consecutive month period with compliance determined at the end of each month.

Compliance with these limits will satisfy the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) with respect to VOC for the affected units.

D.1.4 Volatile Organic Compounds [326 IAC 8-2-8]

- (a) Pursuant to 326 IAC 8-2-8 (Magnet Wire Coating Operations), the owner or operator shall not allow the discharge into the atmosphere of VOC in excess of 1.7 pounds VOC per gallon of coating, excluding water, as delivered to the applicator.
- (b) Pursuant to 326 IAC 8-1-2 (b), the magnet wire emission units' VOC emissions shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon of coating solids, allowed in (a).

This equivalency was determined by the following equation:

$$E = L / (1 - (L/D))$$

where:

- L = Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating
- D = Density of VOC in coating in pounds per gallon of VOC
- E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

Actual solvent density shall be used to determine compliance of the surface coating operation using the compliance methods in 326 IAC 8-1-2 (a).

- (c) The equivalent pounds of VOC per gallon of coating solids as applied (E) shall be limited to less than 2.21, when L is equal to 1.7 and D is equal to 7.36.
- (d) Pursuant to 326 IAC 8-1-2(c):
 - (1) The overall control efficiency of the thermal oxidizers controlling units 201E and 201W through 216E and 216W shall be no less than 96.0%; and
 - (2) The overall control efficiency of the thermal oxidizers controlling units 301E and 301W through 316E and 316W shall be no less than 97.8%.

The overall control efficiency (O) was calculated by the following equation:

$$O = \frac{V - E}{V} \times 100$$

where:

- V = The actual VOC content of the coating or, if multiple coatings are used, the daily weighted average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied.
- E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.
- O = Overall efficiency of the capture system and control device as a percentage.

Compliance with Condition D.1.3 will ensure compliance with the requirements of 326 IAC 8-2-8.

D.1.5 Clean Unit [326 IAC 2-2.2]

- (a) Pursuant to 326 IAC 2-2.2, the following units are designated as Clean Units for VOC:
 - (1) The enamel coating subsections of magnet wire coating units 213E and 213W through 216E and 216W;
 - (2) The enamel coating subsections of magnet wire coating units 301E and 301W through 316E and 316W; and
 - (3) The enamel and lubricant coating subsections of magnet wire coating units 201E and 201W through 212E and 212W.
- (b) Pursuant to 326 IAC 2-2.2-1(d), the effective date of each unit's Clean Unit designation is the date the emissions unit's air pollution control technology is placed into service or three (3) years after the issuance of the respective major NSR permit, whichever is earlier.
- (c) In order to maintain the clean unit designations for the units identified in (a) above:

- (1) The Permittee shall comply with all applicable requirements per 326 IAC 2-7 contained in this permit; and
 - (2) No physical change or change in the method of operation shall be undertaken at these emissions units that would allow them to operate in a manner inconsistent with the physical or operational characteristics of the emission units.
- (d) The clean units designated in (a) above are subject to the following requirements:
- (1) Any project at these emissions units for which actual construction/modification begins after the effective date of the clean unit designations and before the expiration date shall be considered to have occurred while the emissions units were clean units.
 - (2) If a project at these emission units does not cause the need for a change in the emission limitations or work practice requirements in this permit for these units that were adopted in conjunction with BACT and the project would not alter any physical or operational characteristics that formed the basis for the BACT determination, the clean unit designations remain unchanged.
 - (3) If a project causes the need for a change in the emission limitations or work practice requirements in this permit for these units that were adopted in conjunction with BACT or the project would alter any physical or operational characteristics that formed the basis for the BACT determination, then the clean unit designations shall expire upon issuance of the necessary permit modifications, unless the units requalify as clean units. If the Permittee begins actual construction on the project without first applying to modify the emissions unit's permit, the clean unit designations shall expire immediately prior to the time when actual construction of this project begins.
 - (4) A project that causes emissions units to lose their clean unit designations shall be subject to the applicability requirements of 326 IAC 2-2-2(d)(1) through 326 IAC 2-2-2(d)(4) and 326 IAC 2-2-2(d)(6).

D.1.6 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

Compliance Determination Requirements

D.1.7 Volatile Organic Compounds (VOC) [326 IAC 8-1-2][326 IAC 2-2]

- (a) Pursuant to 326 IAC 8-1-2(a), the Permittee shall operate the integral thermal oxidizers at all times the respective facilities are in operation to achieve compliance with Conditions D.1.3 and D.1.4.
- (b) Compliance with Condition D.1.3 shall be determined using the following equation:

$$VOC_t = [(VOC_{iem} + VOC_{ilm}) \times (1 - DE_2/100)] + [(VOC_{ie2}) \times (1 - DE_2/100)] + VOC_{il2} + [VOC_{ie3} \times (1 - DE_3/100)] + VOC_{il3} + VOC_c$$

Where:

VOC_t = Total VOC emissions (ton/month) from magnet wire coating units 201E and 201W through 216E and 216W and 301E and 301W through 316E and 316W for a given calendar month.

VOC_{iem} = Total VOC input (ton/month) to the enamel coating/curing subsection of units 201E and 201W through 212E and 212W for a given calendar month

- VOC_{i1m} = Total VOC input (ton/month) to the lubricant coating subsection of units 201E and 201W through 212E and 212W for a given calendar month
- DE_2 = The destruction efficiency (%) of the Department 200 integral thermal oxidizers as determined by the most recent compliance test.
- VOC_{ie2} = Total VOC input (ton/month) to the enamel coating/curing subsection of units 213E and 213W through 216E and 216W for a given calendar month (ton/mo.)
- VOC_{i12} = Total VOC input (ton/month) to the lubricant coating subsection of units 213E and 213W through 216E and 216W for a given calendar month.
- VOC_{ie3} = Total VOC input (ton/month) to the enamel coating/curing subsection of units 301E and 301W through 316E and 316W for a given calendar month.
- DE_3 = The destruction efficiency (%) of the Department 300 integral thermal oxidizers as determined by the most recent compliance test.
- VOC_{i13} = Total VOC input (ton/month) to the lubricant coating subsection of units 301E and 301W through 316E and 316W for a given calendar month.
- VOC_c = Total VOC from cleanup solvent used in conjunction with units 201E and 201W through 216E and 216W and 301E and 301W through 316E for a given calendar month.

D.1.8 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

- (a) The Permittee shall conduct performance tests (as described in (b), (c) and (d) below) to verify the VOC capture and destruction efficiency requirements in Conditions D.1.3 and D.1.4.
- (b) No later than January 11, 2010, the Permittee shall test one (1) integral thermal oxidizer from magnet wire coating units 213E/W through 216E/W that has not been tested in the past ten (10) years. This test shall be repeated at least once every two and one-half (2.5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted using Method 25A or methods approved by the Commissioner and in accordance with 326 IAC 3-6-3 and Section C - Performance Testing.
- (c) No later than September 22, 2009, the Permittee shall test three (3) integral thermal oxidizers from magnet wire coating units 301E/W through 316E/W that have not been tested in the past ten (10) years. These tests shall be repeated at least once every-two and one-half (2.5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted using Method 25A or methods approved by the Commissioner and in accordance with 326 IAC 3-6-3 and Section C - Performance Testing.
- (d) No later than 180 days after the issuance of SSM 083-21221-00008, the Permittee shall test two (2) integral thermal oxidizers and two (2) lubricant coating subsection capture devices from magnet wire coating units 201E/W through 212E/W that have not been tested in the past ten (10) years. These tests shall be repeated at least once every two and one-half (2.5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted using Method 25A or methods approved by the Commissioner and in accordance with 326 IAC 3-6-3 and Section C - Performance Testing.

D.1.9 Thermal Oxidizer Temperature

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature of the integral thermal oxidizer. For the purposes of this condition, continuous monitoring shall mean no less often than once per minute. The output of this system shall be recorded as an hourly average.

- (b) If the continuous monitoring system is not in operation, the temperature will be recorded manually once in a 15-minute period or in any other IDEM-approved manner. Nothing in this permit shall excuse the Permittee from complying with the requirement to continuously monitor the temperature of the integral thermal oxidizer.
- (c) From the date of issuance of this permit until the results from the approved stack tests, required by Condition D.1.8, are available, the Permittee shall operate the thermal oxidizer at or above the minimum hourly average temperature of 1350°F.
- (d) Once the results from the approved stack tests are available, the Permittee shall determine the minimum hourly average temperature that demonstrates compliance with the limits in Conditions D.1.3 and D.1.4, as approved by IDEM. The Permittee shall then operate the thermal oxidizer at or above the minimum hourly average temperature determined from the most recent compliant stack test following approval of that temperature.
- (e) The oxidizer shall operate with a five (5) degree buffer such that if an eight-hour average temperature falls within five degrees Fahrenheit (5 °F) of the minimum required temperature, corrective action shall be performed and one-hour average temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature. If a one-hour average temperature is less than the established minimum temperature, the Permittee shall take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. An hourly average temperature that is below the minimum hourly average temperature is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

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

D.1.10 National Emission Standards for Hazardous Air Pollutants: Surface Coating of Miscellaneous Metal Parts and Products - Notifications [40 CFR 63.3910]

-
- (a) The Permittee must submit the applicable notifications in 40 CFR 63.7(b) and (c), 63.8(f)(4), and 63.9(b) through (e) and (h) by the dates specified in those sections, except as provided in paragraphs (b) and (c) below.
 - (b) The Permittee must submit the Initial Notification required by 40 CFR 63.9(b) and 40 CFR 63.3910(b) no later than January 2, 2005.
 - (c) The Permittee must submit the Notification Of Compliance Status required by 40 CFR 63.9(h) and 40 CFR 63.3910(c) no later than March 1, 2008. The notification of compliance status must contain the information specified in 40 CFR 63.3910(c) paragraphs (1) through (11) and any additional information specified in 40 CFR 63.9(h).
 - (d) All notifications, required by (a) through (c) above, must be submitted to:

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

and

United States Environmental Protection Agency, Region V
Director, Air and Radiation Division
77 Jackson Boulevard
Chicago, Illinois 60604-3590

D.1.11 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.3 and D.1.4, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC usage and content limits established in Conditions D.1.3 and D.1.4. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
- (1) The VOC content of each coating material and solvent used less water.
 - (2) The amount of coating material and solvent used on a monthly basis.
 - (A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
 - (B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
 - (C) If MSDS sheets are used to determine the VOC content of the coating, the Permittee shall verify that the VOC content stated on the MSDS is based on EPA Method 24 or other Method, as determined by the Commissioner.
 - (3) The total VOC usage for each month.
 - (4) The oxidizer temperature (reduced to 1-hour block averages), as read by the continuous monitor or IDEM-approved manner, and the hourly average temperature used to demonstrate compliance during the most recent compliant stack test.
- (b) To document compliance with Condition D.1.6, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (c) To document compliance with Condition D.1.8, the Permittee shall maintain records of the test results.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.12 Requirement to Submit a Permit Modification Application [326 IAC 2-7-12] [326 IAC 2-7-5]

- (a) The Permittee shall submit an application for a significant permit modification to IDEM, OAQ to include information from the Notification Of Compliance Status (NOCS) in the Title V permit.
- (1) The significant permit modification application shall be consistent with 326 IAC 2-7-12, including information sufficient for IDEM, OAQ to incorporate into the Title V permit the applicable requirements of 40 CFR 63, Subpart Mmmm a description of the affected source and activities subject to the standard, and a description of how the Permittee will meet the applicable requirements of the standard.
 - (2) The significant permit modification application shall be submitted no later than April 2, 2006 and shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

- (b) The Permittee shall submit an application for a Part 70 permit modification to the IDEM, OAQ to include the effective and expiration dates for all the Clean Units into the Title V permit.
- (1) The permit modification application shall be consistent with 326 IAC 2-7-12.
- (2) The permit modification application shall be submitted no later than sixty (60) days following the issuance of this permit and shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

D.1.13 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.3(c) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the responsible official as defined by 326 IAC 2-7-1(34).

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Copper Rod and Bar Manufacturing Process

- (l) One (1) Copper Rod and Bar Manufacturing Process, identified as P-1, constructed in 1976, a maximum capacity of 20 tons of copper per hour, with emissions uncontrolled, exhausting to stack S-1, and consisting of:
- (1) One (1) natural gas-fired vertical melt furnace, with a heat input capacity of 24 MMBtu/hr,
 - (2) One (1) holding furnace, with a heat input capacity of 2.0 MMBtu/hr,
 - (3) One (1) tundish, with a heat input capacity of 1.5 MMBtu/hr, and
 - (4) Various ancillary launders, with an aggregate heat input capacity of 2.5 MMBtu/hr.

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

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

D.2.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the allowable particulate emission rate from the copper rod and bar manufacturing process (identified as P-1) shall not exceed 30.51 pounds per hour when operating at a process weight rate of 20 tons per hour.

The pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

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

D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

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

D.2.3 Visible Emissions Notations

- (a) Visible emission notations of the exhaust from the copper rod and bar manufacturing process (exhausting to stack S-1) shall be performed once per shift during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

- (e) The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

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

D.2.4 Record Keeping Requirements

- (a) To document compliance with Condition D.2.3, the Permittee shall maintain once per shift records of the visible emission notations.
- (b) To document compliance with Condition D.2.2, the Permittee shall maintain of records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Alcohol Quench Process and Storage Tanks

- (m) One (1) mill emulsion system identified as P-2 Mill Emulsion System, constructed in 1976, which pumps a mill emulsion solution containing 0.2% - 2.5% by volume Isopropyl Alcohol (2-propanol) through sprays in an enclosed rolling mill stand area, with emissions uncontrolled, and exhausting to stack/vent V-1;
- (n) One (1) quench system identified as P-2 Quench System, constructed in 1976, which pumps a quench solution containing 0.8% - 3.0% by volume Isopropyl Alcohol (2-propanol) ejectors into tubes, with emissions uncontrolled, and exhausting to stack/vent V-2;

The maximum capacity of the P-2 Alcohol Quench Process (Mill Emulsion System and Alcohol Quench System) is 300 pounds of 2-propanol (IPA) per hour.
- (o) One (1) 15,000 gallon mill emulsion storage tank, constructed in 1995;
- (p) One (1) 7,500 gallon quench solution storage tank, constructed in 1978.
- (q) Two (2) 7,000 gallon isopropyl storage tanks, constructed in 1988.

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

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

D.3.1 Standards for Vessels [326 IAC 12]

Pursuant to 326 IAC 12 and 326 IAC 1-1-3, the Permittee shall maintain readily available records showing the dimensions of the 15,000 gallon mill emulsion storage tank and an analysis showing its capacity. This requirement will remain in effect until 326 IAC 12 and 326 IAC 1-1-3 are revised to incorporate the October 15, 2003, or later, version of 40 CFR Part 60, Subpart Kb.

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

D.3.2 Record Keeping Requirements

To document compliance with Condition D.3.1, the Permittee shall keep readily accessible records showing the dimension of the storage tanks and an analysis showing the capacity of the storage tanks.

SECTION D.4

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Specifically Regulated Insignificant Activities

- (a) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]
- (b) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment cutting torches, soldering equipment, welding equipment. [326 IAC 6-3-2]
- (c) Activities with emissions equal to or less than the following thresholds: 5 tons per year PM or PM10, 10 tons per year SO₂, NO_x, or VOC, 0.2 tons per year Pb, 1.0 tons per year of a single HAP, or 2.5 tons per year of any combination of HAPs:
 - (1) Six (6) degreaser units, identified as 'P, T1, T2, T3, T4, and T5' using solvent identified as 'Thinner-907' and mechanical agitation. [326 IAC 8-3-2] [326 IAC 8-3-5]

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

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

D.4.1 Volatile Organic Compounds (VOC)

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations) for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) 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.

D.4.2 Volatile Organic Compounds (VOC)

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the Permittee of a cold cleaner degreaser facility, construction of which commenced after July 1, 1990, shall ensure that the following requirements are met:

- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C)(one hundred degrees Fahrenheit (100°F));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.

- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
 - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9EC) (one hundred twenty degrees Fahrenheit (120EF)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when the solvent used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

D.4.3 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the allowable particulate emission rate from the insignificant brazing equipment, cutting torches, soldering equipment, and welding equipment operations shall be limited as follows:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

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

SECTION E FACILITY OPERATION CONDITIONS

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

Units designated as Clean Units pursuant to 326 IAC 2-2.2:
Magnet wire coating units 201E and 201W through 212E and 212W – See Section D.1 for a full description of these facilities

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

E.1 Clean Unit [326 IAC 2-2.2]

- (a) Pursuant to 326 IAC 2-2.2, magnet wire coating units 201E and 210W through 212E and 212W are designated as Clean Units for VOC.
- (b) Pursuant to 326 IAC 2-2.2-1(d), the effective date of each unit's Clean Unit designation is the date the emissions unit's air pollution control technology is placed into service or three (3) years after the issuance of the respective major NSR permit, whichever is earlier.
- (c) In order to maintain the clean unit designations for the units identified in (a) above:
 - (1) The Permittee shall comply with all applicable requirements per 326 IAC 2-7 contained in this permit; and
 - (2) No physical change or change in the method of operation shall be undertaken at these emissions units that would allow them to operate in a manner inconsistent with the physical or operational characteristics of the emission units.
- (d) The clean units designated in (a) above are subject to the following requirements:
 - (1) Any project at these emissions units for which actual construction/modification begins after the effective date of the clean unit designations and before the expiration date shall be considered to have occurred while the emissions units were clean units.
 - (2) If a project at these emission units does not cause the need for a change in the emission limitations or work practice requirements in this permit for these units that were adopted in conjunction with BACT and the project would not alter any physical or operational characteristics that formed the basis for the BACT determination, the clean unit designations remain unchanged.
 - (3) If a project causes the need for a change in the emission limitations or work practice requirements in this permit for these units that were adopted in conjunction with BACT or the project would alter any physical or operational characteristics that formed the basis for the BACT determination, then the clean unit designations shall expire upon issuance of the necessary permit modifications, unless the units requalify as clean units. If the Permittee begins actual construction on the project without first applying to modify the emissions unit's permit, the clean unit designations shall expire immediately prior to the time when actual construction of this project begins.
 - (4) A project that causes emissions units to lose their clean unit designations shall be subject to the applicability requirements of 326 IAC 2-2-2(d)(1) through 326 IAC 2-2-2(d)(4) and 326 IAC 2-2-2(d)(6).

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

E.2 Requirement to Submit a Permit Modification Application [326 IAC 2-7-12][326 IAC 2-7-5]

The Permittee shall submit an application for a Part 70 permit modification to the IDEM, OAQ to include the effective and expiration dates for all the Clean Units into the Title V permit.

- (a) The permit modification application shall be consistent with 326 IAC 2-7-12.
- (b) The permit modification application shall be submitted no later than sixty (60) days following the issuance of this permit and shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

PART 70 OPERATING PERMIT CERTIFICATION

Source Name: Essex Group, Inc., Vincennes plant
Source Address: 1299 East Essex Road, Vincennes, IN, 47591
Mailing Address: 1299 East Essex Road, Vincennes, IN, 47591
Part 70 Permit No.: T083-7422-00008

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify)
- Report (specify)
- Notification (specify)
- Affidavit (specify)
- Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Phone:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY Compliance Branch

Part 70 Quarterly Report

Source Name: Essex Group, Inc., Vincennes plant
 Source Address: 1299 East Essex Road, Vincennes, IN, 47591
 Mailing Address: 1299 East Essex Road, Vincennes, IN, 47591
 Part 70 Permit No.: T083-7422-00008
 Facilities: 201E and 201W through 216E and 216W and 301E and 301W through 316E and 316W
 Parameter: Total VOC emissions
 Limit: 453 tons of VOC per twelve consecutive month period with compliance determined at the end of each month.

Monthly VOC emissions shall be determined with the following equation (see Condition D.1.7 of the permit for a description of the variables):

$$VOC_t = [(VOC_{iem} + VOC_{ilm}) \times (1 - DE_2/100)] + [(VOC_{ie2}) \times (1 - DE_2/100)] + VOC_{il2} + [VOC_{ie3} \times (1 - DE_3/100)] + VOC_{il3} + VOC_c$$

YEAR:

Month	Total VOC Emissions This Month	Total VOC Emissions from Past 11 Months	Total VOC Emissions (12 Month Total)
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.
 Deviation has been reported on:

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

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
100 North Senate Avenue
Indianapolis, Indiana 46204
Phone: 317-233-5674
Fax: 317-233-5967**

**PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT**

Source Name: Essex Group, Inc., Vincennes plant
Source Address: 1299 East Essex Road, Vincennes, IN, 47591
Mailing Address: 1299 East Essex Road, Vincennes, IN, 47591
Part 70 Permit No.: T083-7422-00008

This form consists of 2 pages

Page 1 of 2

- This is an emergency as defined in 326 IAC 2-7-1(12)
- C The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
 - C The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N
Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by:

Title / Position:

Date:

Phone:

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section**

**PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Essex Group, Inc., Vincennes plant
Source Address: 1299 East Essex Road, Vincennes, IN, 47591
Mailing Address: 1299 East Essex Road, Vincennes, IN, 47591
Part 70 Permit No.: T083-7422-00008

Months: _____ to _____ Year: _____ Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed By:

Title/Position:

Date:

Phone:

Attach a signed certification to complete this report.

**Indiana Department of Environmental Management
Office of Air Quality**

**Technical Support Document (TSD) for a
Prevention of Significant Deterioration (PSD) and Part 70
Significant Source Modification and Significant Permit Modification**

Source Background and Description

Source Name:	Essex Group, Inc.- Vincennes plant
Source Location:	1299 East Essex Road, Vincennes, IN, 47591
County:	Knox
SIC Code:	3351 and 3357
Operation Permit No.:	T083-7422-00008
Operation Permit Issuance Date:	May 3, 2004
Significant Source Modification No.:	083-21221-00008
Significant Permit Modification No.:	083-21551-00008
Permit Reviewer:	ERG/BS

The Office of Air Quality (OAQ) has reviewed an application for a PSD Significant Source Modification and Significant Permit Modification to a Part 70 permit from Essex Group, Inc. ("Essex") relating to:

- (a) An increase in the production capacity of sixteen (16) existing magnet wire coating units: 201E and 201W through 208E and 208W. The existing capacity is 658 pounds of copper wire per hour, per unit. The new capacity is 900 pounds of copper wire per hour, per unit.
- (b) An increase in the production capacity of eight (8) existing magnet wire coating units: 209E and 209W through 212E and 212W. The existing capacity is 527 pounds of copper wire per hour, per unit. The new capacity is 658 pounds of copper wire per hour, per unit.
- (c) The addition of ten (10) wire annealers to magnet wire coating units 201E and 201W through 203E and 203W, 206E and 206W through 208E and 208W and 209E and 209W through 212E and 212W. Currently, each E/W pair shares a common annealer. After the modification, each unit will have its own annealer. The annealer additions allow Essex greater flexibility in oven scheduling, reduced downtime, reduced scrap generation and greater energy use efficiency.
- (d) The addition of emission capture devices on the lubricant coating subsections of units 201E and 201W through 212E and 212W. Emissions captured by the devices will be routed to, and destroyed by, integral thermal oxidizers.

Note that the source has requested that two (2) existing 7,000 gallon isopropyl storage tanks be included in the permit for completeness. These tanks are insignificant and not regulated so they are not addressed further.

Enforcement Issue

Pursuant to Condition D.1.3 of T083-7422-00008, issued May 3, 2004, the integral thermal oxidizers must operate with a destruction efficiency of at least 98.5%. On September 22, 2004, Essex completed stack testing in order to determine the VOC destruction efficiency of the oxidizers. Upon review of the stack test results by IDEM, OAQ personnel, the OAQ determined that unit 209W had an average measured destruction efficiency of ninety-six and seven tenths

percent (96.7%). Results from retesting completed on January 11, 2005 indicated compliance with the 98.5 destruction efficiency requirement. The IDEM, OAQ is reviewing this matter and will take appropriate action.

Recommendation

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

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

An application for the purposes of this review was received on May 3, 2005.

Emission Calculations

See Appendix A of this document for detailed emissions calculations.

Air Pollution Control Justification as an Integral Part of the Process

Pursuant to T083-7422-00008, issued May 3, 2004, the thermal oxidizers (that control VOC emissions from the magnet wire coating units) are integral; i.e. considered part of the process.

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

This table reflects the net emissions increase of the modification after integral controls – See Appendix A for the respective emission calculations. Control equipment is considered federally enforceable because it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	less than 25
PM-10	less than 15
SO ₂	less than 40
VOC	less than 40
CO	less than 100
NO _x	less than 40

NOTE: As the above table indicates, the net emissions increase of the modification is less than the relevant PSD major modification thresholds. Therefore, the modification would not be subject to 326 IAC 2-2 as a result of the level of emissions increase. However, in order to accommodate the capacity increase of the magnet wire coating units, the VOC PSD BACT limits originally established in T083-7422-00008, issued May 3, 2004, must be revised. As a result, this modification is subject to the requirements of 326 IAC 2-2. See the *State Rule Applicability – 326 IAC 2-2* section of this document for more information.

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Significant Source Modification, pursuant to 326 IAC 2-7-10.5(f)(1) and (f)(4), because the modification is subject to 326 IAC 2-2 and it's potential to emit VOC is greater than 25 tons per year. The Part 70 Operating permit is being modified through a Part 70 Significant Permit Modification, pursuant to 326 IAC 2-7-

12(d)(1), because the modification involves a significant change to an existing Part 70 term or condition.

County Attainment Status

The source is located in Knox County.

Pollutant	Status
PM10	Attainment
PM2.5	Attainment
SO ₂	Attainment
NO _x	Attainment
1-hr and 8-hr Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) 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 emissions and NO_x are considered when evaluating the rule applicability relating to ozone. Knox County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)). See the *State Rule Applicability – 326 IAC 2-2* section of this document for more information.
- (b) Knox County has been classified as attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD) for PM 2.5 emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.
- (c) Knox County has been classified as attainment or unclassifiable for PM10, SO₂, NO_x, CO and lead. Therefore, these emissions were reviewed pursuant to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)).
- (d) Fugitive Emissions
 Since this type of operation is not in one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD applicability.

Source Status

Existing Source PSD Definition (pursuant to the Technical Support Document of T083-7422-00008, issued May 3, 2004; emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	less than 100
PM10 / PM2.5	less than 100
SO ₂	less than 100
VOC	greater than 250
CO	less than 100
NO _x	less than 100

This existing source is a major PSD stationary source because the potential to emit of at least one attainment regulated pollutant is greater than 250 tons per year.

Potential to Emit of Modification After Issuance

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

Process/facility	Potential to Emit (tons/year)						
	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Magnet Wire Coating Units 201E/W – 208E/W (modified)	2.98 ^(a)	2.98 ^(a)	0.24 ^(a)	453 ^(b)	33 ^(a)	39 ^(a)	Greater than 25
Magnet Wire Coating Units 209E/W – 212E/W (modified)							
Magnet Wire Coating Units 213E/W – 216E/W ^(b)							
Magnet Wire Coating Units 301E/W – 316E/W ^(b)							
TOTAL	2.98	2.98	0.24	453	33	39	Greater than 25
PSD Significance Level ^(c)	25	15	40	40	100	40	NA

(a) Represents emissions from natural gas combustion in the magnet wire coating units' integral thermal oxidizers. The modification does not affect the operating temperature or destruction efficiency of the oxidizers so there is no change in PM/PM10, SO₂, NO_x and CO emissions with respect to this modification.

(b) Magnet wire coating units 213E/W through 216E/W and 301E/W through 316E/W are not involved in this source modification. The emissions from these units are presented for completeness because the PSD BACT emission limit of 453 tons of VOC per year from T083-7422-00008, issued May 3, 2004, has not been changed and addresses all of the magnet wire coating units at the source. As a result, the allowable VOC emission increase of this modification is zero (0) tons per year. See the *State Rule Applicability – 326 IAC 2-2* section of this document for more information.

(c) See Appendix A and the *Potential to Emit of the Modification* section of this document regarding the modification's PTE with respect to triggering PSD applicability. The PTE totals presented in the table above are not the net change in emissions for those pollutants and should not be compared to the PSD Significance Levels presented.

Federal Rule Applicability

- (a) The requirements of 326 IAC 20 and 40 CFR Part 63, Subpart SSSS (National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Coil) are not included in the permit. Pursuant to 40 CFR 63.5110, metal coil is defined as “a continuous metal strip” (with a thickness) and the magnet wire coated at this source is not a strip, but a cylindrical piece (with a diameter).
- (b) The requirements of 326 IAC 12 and 40 CFR Part 60, Subpart TT (New Source Performance Standards: Surface Coating of Metal Coil) are not included in the permit. Pursuant to 40 CFR 60.461, metal coil is defined as “a continuous metal strip” (with a thickness) and the magnet wire coated at this source is not a strip, but a cylindrical piece (with a diameter).
- (c) The magnet wire coating units are subject to the requirements of 40 CFR Part 63, Subpart MMMM (National Emission Standards for Hazardous Air Pollutants: Surface Coating of Miscellaneous Metal Parts and Products) because they are located at a source which is a major source of HAPs and are used for the surface coating of magnet wire. A copy of the MACT is available on the U.S. EPA website, <http://www.epa.gov/ttn/atw/misc/miscpg.html>. Pursuant to 40 CFR 63.3883, the Permittee must comply with these requirements on and after January 2, 2007.

The Part 70 permit contains conditions addressing the requirements of 40 CFR Part 63, Subpart MMMM. These conditions have not changed as a result of the modification.

- (d) The magnet wire coating units are not subject to the provisions of 40 CFR Part 64, Compliance Assurance Monitoring (CAM). In order for this rule to apply, a pollutant-specific-emissions-unit at a source that requires a Part 70 or Part 71 permit must meet three criteria for a given pollutant: 1) the unit is subject to an applicable emission limitation or standard for the applicable regulated air pollutant, 2) the unit uses a control device to achieve compliance with any such emission limitation or standard, and 3) the unit has the potential to emit, of the applicable regulated air pollutant, equal or greater than 100 percent of the amount required for a source to be classified as a major source. The magnet wire coating units do not meet these criteria and therefore, are not subject to 40 CFR Part 64 (CAM).

State Rule Applicability - Entire Modification

326 IAC 2-2 (Prevention of Significant Deterioration)

This source consists of two divisions, a Concast division, constructed in 1976, which produces copper rod and bars, and a Magnet Wire division, originally constructed in 1967, which processes the copper products from the Concast division into coated copper wire. The Magnet Wire Division is divided into two departments, Department 200 and 300. Each department contains 32 magnet wire coating units. This modification only affects units 201E and 201W through 212E and 212W.

This source is located in Knox County which is designated as attainment or unclassifiable for all criteria pollutants. The net emissions increase of the modification is less than the relevant PSD major modification thresholds. Therefore, the modification would not trigger PSD based on the level of emissions increase. However, in order to accommodate the capacity increase of the magnet wire coating units, the VOC PSD BACT limits originally established in T083-7422-00008, issued May 3, 2004, must be revised. As a result, this modification is subject to the requirements of 326 IAC 2-2.

The PSD provisions require that this modification be reviewed to ensure compliance with the National Ambient Air Quality Standards and to apply the requirements of 326 IAC 2-2. Specifically, 326 IAC 2-2-3 requires the determination and implementation of BACT, 326 IAC 2-2-4 and 326 IAC 2-2-5 require the evaluation of the modification's impact on air quality, 326 IAC 2-2-6 requires an assessment of increment consumption and 326 IAC 2-2-7 requires an evaluation of additional impacts.

326 IAC 2-2-3 (PSD: Best Available Control Technology)

For the purpose of evaluating VOC emissions, each magnet wire coating unit consists of two subsections, an enamel curing subsection (using integral thermal oxidization for VOC control) and a lubricant coating subsection (no controls). Pursuant to 326 IAC 2-2-3, BACT for VOC has been evaluated and determined for each of these subsections; see Appendix B for more information. Note that an economic analysis of the various control options was not completed since BACT has been determined to be the control option with the greatest emission reduction potential.

With respect to this modification, the requirement to comply with the provisions of 326 IAC 2-2 does not include 326 IAC 2-2-4 (Air Quality Analysis), 326 IAC 2-2-5 (Air Quality Impact), 326 IAC 2-2-6 (Increment Consumption) and 326 IAC 2-2-7 (Additional Analyses) because: 1) the existing allowable post-BACT VOC emission rate of 453 tpy has not changed, and 2) no ozone increment exists.

As Appendix B indicates, BACT for VOC for the respective magnet wire coating units is the capture and destruction of VOC emissions from the enamel curing and lubricant coating subsections. In order to clarify the existing and new BACT requirements, accommodate the modification, allow for optimal operational flexibility, and maintain the existing 453 tpy VOC emission limit, the existing BACT requirements (pursuant to T083-7422-00008, issued May 3, 2004) have been changed from:

"Pursuant to 326 IAC 2-2-3, BACT for magnet wire emission units 201E and 201W through 216E and 216W has been determined to be the following:

- (a) The integral thermal oxidizers shall control VOC emissions from the magnet wire emission units and achieve a minimum one-hundred percent (100%) capture

efficiency (as defined by Method 204 of 40 CFR Part 52, Appendix M) and ninety-eight and five tenths percent (98.5%) destruction efficiency.

- (b) The total VOC delivered by the coating applicators prior to drying/curing with integral thermal oxidization shall not exceed 9228 tons per twelve consecutive month period with compliance determined at the end of each month.
- (c) The total VOC input used after the drying/curing with integral thermal oxidization shall not exceed 314 tons per twelve consecutive month period with compliance determined at the end of each month.
- (d) The total VOC emissions shall not exceed 453 tons per year. Compliance with (a) through (c) above will ensure compliance with this limit.

Compliance with these limitations will satisfy the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration)."

To:

"Pursuant to 326 IAC 2-2-3 and PSD SSM 083-21221-00008:

- (a) VOC emissions from the enamel curing subsection of magnet wire coating units 201E and 201W through 216E and 216W and 301E and 301W through 316E and 316W shall be controlled by a device with a minimum one-hundred percent (100%) capture efficiency (as defined by Method 204 of 40 CFR Part 52, Appendix M). The captured VOC emissions shall be routed to the integral thermal oxidizers and destroyed with a minimum ninety-eight and five tenths percent (98.5%) destruction efficiency.
- (b) VOC emissions from the lubricant coating subsection of magnet wire coating units 201E and 201W through 212E and 212W shall be controlled by a device with a minimum one-hundred percent (100%) capture efficiency (as defined by Method 204 of 40 CFR Part 52, Appendix M). The captured VOC emissions shall be routed to the thermal oxidizers and destroyed with a minimum ninety-eight and five tenths percent (98.5%) destruction efficiency.
- (c) The total VOC emissions from magnet wire coating units 201E and 201W through 216E and 216W and 301E and 301W through 316E and 316W shall not exceed 453 tons per year.

Compliance with these limits will satisfy the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) with respect to VOC for the affected units."

Note that the BACT limitation included in T083-7422-00008, issued May 3, 2004 erroneously omitted a reference to units 301E and 301W through 316E and 316W. It is clear from the TSD and ATSD for that permit that units 301E and 301W through 316E and 316W are covered by the BACT limitation and were meant to be included. This modification corrects that omission.

All of the magnet wire coating units located at this source are covered by the 453 ton per year VOC emission limit. VOC emissions from each unit are the product of VOC input to each subsection (enamel curing and lubricant coating subsections) and the overall control efficiency of that subsection. Note that all of the units are not subject to the same requirements. For example, the VOC emissions from the lubricant subsections of units 213E and 213W through 216E and 216W are not subject to any control efficiency requirements; whereas the rest of the Department 200 units are subject to control requirements. As a result, IDEM has developed the following equation by which the Permittee can precisely determine compliance with the 453 ton per year limit:

$$VOC_t = [(VOC_{iem} + VOC_{ilm}) \times (1 - DE_2/100)] + [(VOC_{ie2}) \times (1 - DE_2/100)] + VOC_{il2} + [VOC_{ie3} \times (1 - DE_3/100)] + VOC_{il3} + VOC_c$$

Where:

- VOC_t = Total VOC emissions (ton/month) from magnet wire coating units 201E and 201W through 216E and 216W and 301E and 301W through 316E and 316W for a given calendar month.
- VOC_{iem} = Total VOC input (ton/month) to the enamel coating/curing subsection of units 201E and 201W through 212E and 212W for a given calendar month
- VOC_{ilm} = Total VOC input (ton/month) to the lubricant coating subsection of units 201E and 201W through 212E and 212W for a given calendar month
- DE_2 = The destruction efficiency (%) of the Department 200 integral thermal oxidizers as determined by the most recent compliance test.
- VOC_{ie2} = Total VOC input (ton/month) to the enamel coating/curing subsection of units 213E and 213W through 216E and 216W for a given calendar month (ton/mo.)
- VOC_{il2} = Total VOC input (ton/month) to the lubricant coating subsection of units 213E and 213W through 216E and 216W for a given calendar month.
- VOC_{ie3} = Total VOC input (ton/month) to the enamel coating/curing subsection of units 301E and 301W through 316E and 316W for a given calendar month.
- DE_3 = The destruction efficiency (%) of the Department 300 integral thermal oxidizers as determined by the most recent compliance test.
- VOC_{il3} = Total VOC input (ton/month) to the lubricant coating subsection of units 301E and 301W through 316E and 316W for a given calendar month.
- VOC_c = Total VOC from cleanup solvent used in conjunction with units 201E and 201W through 216E and 216W and 301E and 301W through 316E for a given calendar month.

326 IAC 2-2.2 (Emission Units Designated as Clean Units)

Pursuant to 326 IAC 2-2.2, the following units are designated as Clean Units for VOC:

- (a) The enamel coating subsections of magnet wire coating units 213E and 213W through 216E and 216W;
- (b) The enamel coating subsections of magnet wire coating units 301E and 301W through 316E and 316W; and
- (c) The enamel and lubricant coating subsections of magnet wire coating units 201E and 201W through 212E and 212W.

These units have been designated as Clean Units under 326 IAC 2-2 because:

- (a) They have been reviewed under the PSD program (326 IAC 2-2) for VOC; and
- (b) They achieved reductions in emissions by using add-on control or implementing work practices (with respect to VOC); and
- (c) The owner/operator made an investment to install the control technology, research the application of pollution prevention technique to the emission unit, or apply pollution prevention to the emission unit with respect to VOC.

Pursuant to 326 IAC 2-2.2-1(d), the effective date of each unit's Clean Unit designation is the date the emissions unit's air pollution control technology is placed into service or three (3) years after

the issuance of the major NSR permit, whichever is earlier. Pursuant to 326 IAC 2-2.2-1(e), each unit's Clean Unit designation will expire 10 years after the issuance date of the respective major NSR permit or at any time the owner or operator fails to comply with the provisions for maintaining the clean unit designation in 326 IAC 2-2.2-1(g).

Pursuant to 326 IAC 2-2.2-1(f), after the effective date of the Clean Unit designation, but no later than when the Part 70 permit is renewed, the Part 70 permit must include the effective and expiration Clean Unit dates for each designated unit. IDEM can not specify all the effective and expiration dates as the capture devices on the lubricant coating subsections of the respective units have not yet been installed. The Part 70 permit (T083-7422-00008) expires on May 3, 2009. As a result, the Permittee shall submit an application for a Part 70 permit modification to the IDEM, OAQ to include the effective and expiration dates for all the Clean Units into the Title V permit.

- (a) The permit modification application shall be consistent with 326 IAC 2-7-12.
- (b) The permit modification application shall be submitted no later than sixty (60) days following the issuance of this permit and shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

326 IAC 2-3 (Emission Offset)

Knox County is designated as attainment or unclassifiable for all criteria pollutants. Therefore, the requirements of 326 IAC 2-3 do not apply to this modification.

326 IAC 2-4.1 (Hazardous Air Pollutants)

This modification does not involve the construction or reconstruction of a major source of hazardous air pollutants. Therefore, pursuant to 326 IAC 2-4.1-1, this modification is not subject to the requirements of 326 IAC 2-4.1.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary 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.

326 IAC 6-3-2 (Particulate Emission Limitations from Manufacturing Processes)

Particulate emissions from the magnet wire coating operation result from the combustion of natural gas in the thermal oxidizers. The magnet wire coating operations are not subject to the requirements of 326 IAC 6-3-2 because, pursuant to 326 IAC 6-3-1(b)(14), each magnet wire emission unit emits significantly less than 0.551 pounds of particulate per hour.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

None of the facilities associated with this modification have the potential to emit greater than or equal to 25 tons of SO₂ per year. Therefore, the requirements of 326 IAC 7-1.1 do not apply to any of the facilities associated with this modification.

326 IAC 8-2-8 (Magnet Wire Coating Operations)

The magnet wire coating units are located in Knox county and have actual pre-control VOC emissions greater than 15 pounds per day. As a result, the magnet wire emission units are subject to the requirements of 326 IAC 8-2-8.

The volatile organic compound (VOC) content of electrically insulating varnishes or enamel applied to aluminum or copper wire for use in electrical machinery shall be limited to 1.7 pounds VOC per gallon of coating less water delivered to the applicator.

This limit includes the evaporation of thinners being added to coatings to adjust viscosity, therefore, it is necessary to keep coating and solvent containers covered at all times to prevent solvent evaporation.

The integral thermal oxidizers associated with facilities 201E and 201W through 212E and 212W shall operate with an overall efficiency of at least 96.0%.

The overall efficiency is necessary to ensure compliance with 326 IAC 8-2-8.

326 IAC 8-1-6 (Volatile Organic Compounds - BACT)

All sixty-four (64) magnet wire emission units are subject to 326 IAC 8-2-8. Therefore, 326 IAC 8-1-6 is not applicable to these facilities.

Testing Requirements

In order to comply with the established requirements, the thermal oxidizers and capture devices for the respective magnet wire coating units must operate at or above the specified minimum efficiencies. Therefore, VOC performance testing is required to verify these efficiencies. Note that the magnet wire emission units in Department 200 vary slightly from those Department 300 units. All oxidizers in both departments must maintain a minimum control efficiency of at least 98.5% to satisfy the requirements of 326 IAC 2-2. As a result, the testing listed in the permit requires testing of a representative number of Department 200 and Department 300 units.

Compliance Requirements

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

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

Proposed Changes

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

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

Magnet Wire Production - Departments 200 and 300

(ea) Two (2) Department 200 Emission Units, identified as units 201E and 201W, each

- constructed in 1989 and modified in 1998 **and 2005**. Each Emission Unit consists of **one (1) annealer**, one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, **and one (1) topical lube applicator and each pair sharing one (1) annealing system**. Each unit has a maximum copper wire producing capacity of ~~658~~ **900** lb copper per hour. ~~using~~ **Emissions from enamel curing and lubricant coating are controlled by** integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (fb) Four (4) Department 200 Emission Units, identified as units 202E, 202W, 203E, and 203W, each constructed in 1993 and modified in 1998 **and 2005**. Each Emission Unit consists of **one (1) annealer**, one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, **and one (1) topical lube applicator and each pair sharing one (1) annealing system**. Each unit has a maximum copper wire producing capacity of ~~658~~ **900** lb copper per hour. ~~using~~ **Emissions from enamel curing and lubricant coating are controlled by** integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (hc) Six (6) Department 200 Emission Units, identified as units 204E, 204W, 205E, 205W, 206E, and 206W, each constructed in 1995 and modified in 1997 or 1998 **and 2005**. Each Emission Unit consists of **one (1) annealer**, one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, **and one (1) topical lube applicator**. ~~204E, 204W, 205W, and 205W each use an separate annealer, whereas 206E and 206W share an annealer.~~ Each unit has a maximum copper wire producing capacity of ~~658~~ **900** lb copper per hour. ~~using~~ **Emissions from enamel curing and lubricant coating are controlled by** integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (gd) Four (4) Department 200 Emission Units, identified as units 207E, 207W, 208E, **and** 208W, constructed in 1994 and modified in 1997 **and 2005**. Each Emission Unit consists of **one (1) annealer**, one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, **and one (1) topical lube applicator and each pair sharing one (1) annealing system**. Each unit has a maximum copper wire producing capacity of ~~658~~ **900** lb copper per hour. ~~using~~ **Emissions from enamel curing and lubricant coating are controlled by** integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (be) ~~Twelve (12)~~ **Eight (8)** Department 200 Emission Units, identified as units 209E, 209W, 210E, 210W, 211E, 211W, 212E, **and** 212W, ~~213E, 213W, 214E, 214W,~~ each constructed in 1998 **and modified in 2005**. Each Emission Unit consists of **one (1) annealer**, one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, **and one (1) topical lube applicator and each pair sharing one (1) annealing system**. Each unit has a maximum copper wire producing capacity of ~~527~~ **658** lb copper per hour. ~~using~~ **Emissions from enamel curing and lubricant coating are controlled by** integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (f) **Four (4) Department 200 Emission Units, identified as units 213E, 213W, 214E, and 214W, each constructed in 1998. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 527 lb copper per hour. Emissions from enamel curing are controlled by integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.**
- (ag) Four (4) Department 200 Emission Units, identified as units 215E, 215W, 216E, 216W, each constructed in 1997. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 527 lb copper per hour, using integral thermal oxidizers **to control emissions from**

enamel curing, and exhausting to stacks identified with the same names as their respective emission units.

- (ih) Eight (8) Department 300 Emission Units, identified as units 301E, 301W, 302E, 302W, 303E, 303W, 304E, and 304W constructed in 1994. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 284 lb copper per hour, using integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (ei) Twelve (12) Department 300 Emission Units, identified as units 305E, 305W, 306E, 306W, 309E, 309W, 310E, 310W, 311E, 311W, 312E, and 312W, each constructed in 1996. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 284 lb copper per hour, using integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (j) Four (4) Department 300 Emission Units, identified as units 307E, 307W, 308E, and 308W constructed in 1995. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 284 lb copper per hour, using integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (dk) Eight (8) Department 300 Emission Units, identified as units 313E, 313W, 314E, 314W, 315E, 315W, 316E, and 316W constructed in 1997. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 284 lb copper per hour, using integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.

Copper Rod and Bar Production

- (kl) One (1) Copper Rod and Bar Manufacturing Process, identified as P-1, constructed in 1976, a maximum capacity of 20 tons of copper per hour, with emissions uncontrolled, exhausting to stack S-1, and consisting of:
 - (1) One (1) natural gas-fired vertical melt furnace, with a heat input capacity of 24 MMBtu/hr,
 - (2) One (1) holding furnace, with a heat input capacity of 2.0 MMBtu/hr,
 - (3) One (1) tundish, with a heat input capacity of 1.5 MMBtu/hr, and
 - (4) Various ancillary launders, with an aggregate heat input capacity of 2.5 MMBtu/hr.

Alcohol Quench Process

- (lm) One (1) mill emulsion system identified as P-2 Mill Emulsion System, constructed in 1976, which pumps a mill emulsion solution containing 0.2% - 2.5% by volume Isopropyl Alcohol (2-propanol) through sprays in an enclosed rolling mill stand area, with emissions uncontrolled, and exhausting to stack/vent V-1;
- (nn) One (1) quench system identified as P-2 Quench System, constructed in 1976, which pumps a quench solution containing 0.8% - 3.0% by volume Isopropyl Alcohol (2-propanol) ejectors into tubes, with emissions uncontrolled, and exhausting to stack/vent V-2;

The maximum capacity of the P-2 Alcohol Quench Process (Mill Emulsion System and Alcohol Quench System) is 300 pounds of 2-propanol (IPA) per hour.

Storage Tanks

- (ao) One (1) 15,000 gallon mill emulsion storage tank, constructed in 1995;
- (ep) One (1) 7,500 gallon quench solution storage tank, constructed in 1978.
- (q) Two (2) 7,000 gallon isopropyl storage tanks, constructed in 1988.

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Magnet Wire Emission Units

Magnet Wire Production - Department 200

- (ea) Two (2) Department 200 Emission Units, identified as units 201E and 201W, each constructed in 1989 and modified in 1998 **and 2005**. Each Emission Unit consists of **one (1) annealer**, one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, **and** one (1) topical lube applicator ~~and each pair sharing one (1) annealing system~~. Each unit has a maximum copper wire producing capacity of ~~658~~ **900** lb copper per hour. **using Emissions from enamel curing and lubricant coating are controlled by** integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (fb) Four (4) Department 200 Emission Units, identified as units 202E, 202W, 203E, and 203W, each constructed in 1993 and modified in 1998 **and 2005**. Each Emission Unit consists of **one (1) annealer**, one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, **and** one (1) topical lube applicator ~~and each pair sharing one (1) annealing system~~. Each unit has a maximum copper wire producing capacity of ~~658~~ **900** lb copper per hour. **using Emissions from enamel curing and lubricant coating are controlled by** integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (hc) Six (6) Department 200 Emission Units, identified as units 204E, 204W, 205E, 205W, 206E, and 206W, each constructed in 1995 and modified in 1997 or 1998 **and 2005**. Each Emission Unit consists of **one (1) annealer**, one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, **and** one (1) topical lube applicator. ~~204E, 204W, 205W, and 205W each use an separate annealer, whereas 206E and 206W share an annealer.~~ Each unit has a maximum copper wire producing capacity of ~~658~~ **900** lb copper per hour. **using Emissions from enamel curing and lubricant coating are controlled by** integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (gd) Four (4) Department 200 Emission Units, identified as units 207E, 207W, 208E, **and** 208W, constructed in 1994 and modified in 1997 **and 2005**. Each Emission Unit consists of **one (1) annealer**, one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, **and** one (1) topical lube applicator ~~and each pair sharing one (1) annealing system~~. Each unit has a maximum copper wire producing capacity of ~~658~~ **900** lb copper per hour. **using Emissions from enamel curing and lubricant coating are controlled by** integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (be) ~~Twelve (12)~~ **Eight (8)** Department 200 Emission Units, identified as units 209E, 209W, 210E, 210W, 211E, 211W, 212E, **and** 212W, ~~213E, 213W, 214E, 214W,~~ each constructed in 1998 **and modified in 2005**. Each Emission Unit consists of **one (1) annealer**, one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, **and** one (1) topical lube applicator ~~and each pair sharing one (1) annealing system~~. Each unit has a maximum copper wire producing capacity of ~~527~~ **658** lb copper per hour. **using Emissions from enamel curing and lubricant coating are controlled by** integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.

- (f) **Four (4) Department 200 Emission Units, identified as units 213E, 213W, 214E, and 214W, each constructed in 1998. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 527 lb copper per hour. Emissions from enamel curing are controlled by integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.**
- (ag) Four (4) Department 200 Emission Units, identified as units 215E, 215W, 216E, 216W, each constructed in 1997. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 527 lb copper per hour, using integral thermal oxidizers **to control emissions from enamel curing, and** exhausting to stacks identified with the same names as their respective emission units.
- (ih) Eight (8) Department 300 Emission Units, identified as units 301E, 301W, 302E, 302W, 303E, 303W, 304E, and 304W constructed in 1994. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 284 lb copper per hour, using integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (ei) Twelve (12) Department 300 Emission Units, identified as units 305E, 305W, 306E, 306W, 309E, 309W, 310E, 310W, 311E, 311W, 312E, and 312W, each constructed in 1996. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 284 lb copper per hour, using integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (j) Four (4) Department 300 Emission Units, identified as units 307E, 307W, 308E, and 308W constructed in 1995. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 284 lb copper per hour, using integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.
- (ek) Eight (8) Department 300 Emission Units, identified as units 313E, 313W, 314E, 314W, 315E, 315W, 316E, and 316W constructed in 1997. Each Emission Unit consists of one (1) enamel applicator, one (1) curing oven, one (1) wire cooler, one (1) topical lube applicator and each pair sharing one (1) annealing system. Each unit has a maximum copper wire producing capacity of 284 lb copper per hour, using integral thermal oxidizers, exhausting to stacks identified with the same names as their respective emission units.

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

...

D.1.3 Prevention of Significant Deterioration - BACT [326 IAC 2-2-3]

~~Pursuant to 326 IAC 2-2-3, BACT for magnet wire emission units 201E and 201W through 216E and 216W has been determined to be the following:~~

- ~~(a) The integral thermal oxidizers shall control VOC emissions from the magnet wire emission units and achieve a minimum one hundred percent (100%) capture efficiency (as defined by Method 204 of 40 CFR Part 52, Appendix M) and ninety-eight and five tenths percent (98.5%) destruction efficiency.~~

- ~~(b) The total VOC delivered by the coating applicators prior to drying/curing with integral thermal oxidization shall not exceed 9228 tons per twelve consecutive month period with compliance determined at the end of each month.~~
- ~~(c) The total VOC input used after the drying/curing with integral thermal oxidization shall not exceed 314 tons per twelve consecutive month period with compliance determined at the end of each month.~~
- ~~(d) The total VOC emissions shall not exceed 453 tons per year. Compliance with (a) through (c) above will ensure compliance with this limit.~~

~~Compliance with these limitations will satisfy the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration).~~

Pursuant to 326 IAC 2-2-3 and PSD SSM 083-21221-00008:

- (a) VOC emissions from the enamel curing subsection of magnet wire coating units 201E and 201W through 216E and 216W and 301E and 301W through 316E and 316W shall be controlled by an oxidizer with a minimum one-hundred percent (100%) capture efficiency (as defined by Method 204 of 40 CFR Part 52, Appendix M). The captured VOC emissions shall be routed to the integral thermal oxidizers and destroyed with a minimum ninety-eight and five tenths percent (98.5%) destruction efficiency.**
- (b) VOC emissions from the lubricant coating subsection of magnet wire coating units 201E and 201W through 212E and 212W shall be controlled by a device with a minimum one-hundred percent (100%) capture efficiency (as defined by Method 204 of 40 CFR Part 52, Appendix M). The captured VOC emissions shall be routed to the thermal oxidizers and destroyed with a minimum ninety-eight and five tenths percent (98.5%) destruction efficiency.**
- (c) The total VOC emissions from magnet wire coating units 201E and 201W through 216E and 216W and 301E and 301W through 316E and 316W shall not exceed 453 tons per year.**

Compliance with these limits will satisfy the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) with respect to VOC for the affected units.

D.1.5 Clean Unit [326 IAC 2-2.2]

- (a) Pursuant to 326 IAC 2-2.2, the following units are designated as Clean Units for VOC:**
 - (1) The enamel coating subsections of magnet wire coating units 213E and 213W through 216E and 216W;**
 - (2) The enamel coating subsections of magnet wire coating units 301E and 301W through 316E and 316W; and**
 - (3) The enamel and lubricant coating subsections of magnet wire coating units 201E and 201W through 212E and 212W.**
- (b) Pursuant to 326 IAC 2-2.2-1(d), the effective date of each unit's Clean Unit designation is the date the emissions unit's air pollution control technology is placed into service or three (3) years after the issuance of the respective major NSR permit, whichever is earlier.**
- (c) In order to maintain the clean unit designations for the units identified in (a) above:**

- (1) The Permittee shall comply with all applicable requirements per 326 IAC 2-7 contained in this permit; and
 - (2) No physical change or change in the method of operation shall be undertaken at these emissions units that would allow them to operate in a manner inconsistent with the physical or operational characteristics of the emission units.
- (d) The clean units designated in (a) above are subject to the following requirements:
- (1) Any project at these emissions units for which actual construction/modification begins after the effective date of the clean unit designations and before the expiration date shall be considered to have occurred while the emissions units were clean units.
 - (2) If a project at these emission units does not cause the need for a change in the emission limitations or work practice requirements in this permit for these units that were adopted in conjunction with BACT and the project would not alter any physical or operational characteristics that formed the basis for the BACT determination, the clean unit designations remain unchanged.
 - (3) If a project causes the need for a change in the emission limitations or work practice requirements in this permit for these units that were adopted in conjunction with BACT or the project would alter any physical or operational characteristics that formed the basis for the BACT determination, then the clean unit designations shall expire upon issuance of the necessary permit modifications, unless the units requalify as clean units. If the Permittee begins actual construction on the project without first applying to modify the emissions unit's permit, the clean unit designations shall expire immediately prior to the time when actual construction of this project begins.
 - (4) A project that causes emissions units to lose their clean unit designations shall be subject to the applicability requirements of 326 IAC 2-2-2(d)(1) through 326 IAC 2-2-2(d)(4) and 326 IAC 2-2-2(d)(6).

D.1.56 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

...

D.1.67 Volatile Organic Compounds (VOC) [326 IAC 8-1-2][326 IAC 2-2]

- (a) Pursuant to 326 IAC 8-1-2(a), the Permittee shall operate the integral thermal oxidizers at all times the respective facilities are in operation to achieve compliance with Conditions D.1.3 and D.1.4.
- (b) Compliance with Condition D.1.3 shall be determined using the following equation:

$$VOC_t = [(VOC_{iem} + VOC_{ilm}) \times (1 - DE_2/100)] + [(VOC_{ie2}) \times (1 - DE_2/100)] + VOC_{il2} + [VOC_{ie3} \times (1 - DE_3/100)] + VOC_{il3} + VOC_c$$

Where:

VOC_t = Total VOC emissions (ton/month) from magnet wire coating units 201E and 201W through 216E and 216W and 301E and 301W through 316E and 316W for a given calendar month.

VOC_{iem} = Total VOC input (ton/month) to the enamel coating/curing subsection of units 201E and 201W through 212E and 212W for a given calendar month

- VOC_{ilm} = Total VOC input (ton/month) to the lubricant coating subsection of units 201E and 201W through 212E and 212W for a given calendar month
- DE_2 = The destruction efficiency (%) of the Department 200 integral thermal oxidizers as determined by the most recent compliance test.
- VOC_{ie2} = Total VOC input (ton/month) to the enamel coating/curing subsection of units 213E and 213W through 216E and 216W for a given calendar month (ton/mo.)
- VOC_{il2} = Total VOC input (ton/month) to the lubricant coating subsection of units 213E and 213W through 216E and 216W for a given calendar month.
- VOC_{ie3} = Total VOC input (ton/month) to the enamel coating/curing subsection of units 301E and 301W through 316E and 316W for a given calendar month.
- DE_3 = The destruction efficiency (%) of the Department 300 integral thermal oxidizers as determined by the most recent compliance test.
- VOC_{il3} = Total VOC input (ton/month) to the lubricant coating subsection of units 301E and 301W through 316E and 316W for a given calendar month.
- VOC_c = Total VOC from cleanup solvent used in conjunction with units 201E and 201W through 216E and 216W and 301E and 301W through 316E for a given calendar month.

D.1.78 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

- (a) ~~Within 180 days after issuance of this permit, the Permittee shall conduct performance tests (as described in (b), (c) and (d) below) to verify the VOC control efficiency requirements in Conditions D.1.3 and D.1.4. pursuant to Conditions D.1.3 and D.1.4 for the integral thermal oxidizers~~
- (b) **No later than January 11, 2010, the Permittee shall test ~~three (3)~~ one (1) integral thermal oxidizer from any Department 200 magnet wire emission units and ~~three (3)~~ integral thermal oxidizers from any Department 300 magnet wire emission coating units 213E/W through 216E/W that has not been tested in the past ten (10) years. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted using methods approved by the Commissioner and in accordance with 326 IAC 3-6-3 and Section C - Performance Testing.**
- (c) **No later than September 22, 2009, the Permittee shall test three (3) integral thermal oxidizers from magnet wire coating units 301E/W through 316E/W that have not been tested in the past ten (10) years. These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted using methods approved by the Commissioner and in accordance with 326 IAC 3-6-3 and Section C - Performance Testing.**
- (d) **No later than 180 days after the issuance of SSM 083-21221-00038, the Permittee shall test two (2) integral thermal oxidizers and two (2) lubricant coating subsection capture devices from magnet wire coating units 201E/W through 212E/W that have not been tested in the past ten (10) years. These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted using methods approved by the Commissioner and in accordance with 326 IAC 3-6-3 and Section C - Performance Testing.**

D.1.89 Thermal Oxidizer Temperature

...

- (c) From the date of issuance of this permit until the results from the approved stack tests, required by Condition D.1.78, are available, the Permittee shall operate the thermal oxidizer at or above the minimum hourly average temperature of ~~1360~~ **1350**°F.

...

D.1.910 National Emission Standards for Hazardous Air Pollutants: Surface Coating of Miscellaneous Metal Parts and Products - Notifications [40 CFR 63.3910]

D.1.110 Record Keeping Requirements

...

- (b) To document compliance with Condition D.1.56, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (c) To document compliance with Condition D.1.78, the Permittee shall maintain records of the test results.

...

D.1.12 Requirement to Submit a Significant Permit Modification Application [326 IAC 2-7-12] [326 IAC 2-7-5]

- (a)** The Permittee shall submit an application for a significant permit modification to IDEM, OAQ to include information from the Notification Of Compliance Status (NOCS) in the Title V permit.
- (1a)** The significant permit modification application shall be consistent with 326 IAC 2-7-12, including information sufficient for IDEM, OAQ to incorporate into the Title V permit the applicable requirements of 40 CFR 63, Subpart Mmmm a description of the affected source and activities subject to the standard, and a description of how the Permittee will meet the applicable requirements of the standard.
- (2b)** The significant permit modification application shall be submitted no later than April 2, 2006 and shall be submitted to:
- Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204
- (b)** The Permittee shall submit an application for a Part 70 permit modification to the IDEM, OAQ to include the effective and expiration dates for all the Clean Units into the Title V permit.
- (1)** The permit modification application shall be consistent with 326 IAC 2-7-12.
- (2)** The permit modification application shall be submitted no later than sixty (60) days following the installation of the new control devices and shall be submitted to:
- Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

Facility Description [326 IAC 2-7-5(15)]: Copper Rod and Bar Manufacturing Process

(kl) One (1) Copper Rod and Bar Manufacturing Process, identified as P-1, constructed in 1976, a maximum capacity of 20 tons of copper per hour, with emissions uncontrolled, exhausting to stack S-1, and consisting of:

- (1) One (1) natural gas-fired vertical melt furnace, with a heat input capacity of 24 MMBtu/hr,
- (2) One (1) holding furnace, with a heat input capacity of 2.0 MMBtu/hr,
- (3) One (1) tundish, with a heat input capacity of 1.5 MMBtu/hr, and
- (4) Various ancillary launders, with an aggregate heat input capacity of 2.5 MMBtu/hr.

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

D.2.4 Record Keeping Requirements

- (a) To document compliance with Condition D.32.3, the Permittee shall maintain once per shift records of the visible emission notations.
- (b) To document compliance with Condition D.32.2, the Permittee shall maintain of records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Alcohol Quench Process and Storage Tanks

(lm) One (1) mill emulsion system identified as P-2 Mill Emulsion System, constructed in 1976, which pumps a mill emulsion solution containing 0.2% - 2.5% by volume Isopropyl Alcohol (2-propanol) through sprays in an enclosed rolling mill stand area, with emissions uncontrolled, and exhausting to stack/vent V-1;

(mn) One (1) quench system identified as P-2 Quench System, constructed in 1976, which pumps a quench solution containing 0.8% - 3.0% by volume Isopropyl Alcohol (2-propanol) ejectors into tubes, with emissions uncontrolled, and exhausting to stack/vent V-2;

The maximum capacity of the P-2 Alcohol Quench Process (Mill Emulsion System and Alcohol Quench System) is 300 pounds of 2-propanol (IPA) per hour.

(no) One (1) 15,000 gallon mill emulsion storage tank, constructed in 1995;

(ep) One (1) 7,500 gallon quench solution storage tank, constructed in 1978.

(q) Two (2) 7,000 gallon isopropyl storage tanks, constructed in 1988.

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

D.3.2 Record Keeping Requirements

To document compliance with Condition D.43.1, the Permittee shall keep readily accessible records showing the dimension of the storage tanks and an analysis showing the capacity of the storage tanks.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY Compliance Branch

Part 70 Quarterly Report

Source Name: Essex Group, Inc., Vincennes plant
Source Address: 1299 East Essex Road, Vincennes, IN, 47591
Mailing Address: 1299 East Essex Road, Vincennes, IN, 47591
Part 70 Permit No.: T083-7422-00008
Facilities: 201E and 201W through 216E and 216W and 301E and 301W through 316E and 316W
Parameter: ~~The t~~**Total VOC emissions delivered by the coating applicators prior to drying/curing with integral thermal oxidization**
Limit: **453 tons of VOC per year. Monthly VOC emissions shall be determined with the following equation (see Condition D.1.7 of the permit for a description of the variables):** ~~Less than 9228 tons of VOC per twelve consecutive month period with compliance determined at the end of each month.~~

$$VOC_t = [(VOC_{iem} + VOC_{ilm}) \times (1 - DE_2/100)] + [(VOC_{ie2}) \times (1 - DE_2/100)] + VOC_{il2} + [VOC_{ie3} \times (1 - DE_3/100)] + VOC_{il3} + VOC_c$$

YEAR:

Month	Total VOC Usage Emissions This Month	Total VOC Usage Emissions from Past 11 Months	Total VOC Usage Emissions (12 Month Total)
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
 Deviation has been reported on:

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

Attach a signed certification to complete this report.

~~INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT~~
~~OFFICE OF AIR QUALITY~~
~~Compliance Branch~~

~~Part 70 Quarterly Report~~

Source Name: ~~Essex Group, Inc., Vincennes plant~~
 Source Address: ~~1299 East Essex Road, Vincennes, IN, 47591~~
 Mailing Address: ~~1299 East Essex Road, Vincennes, IN, 47591~~
 Part 70 Permit No.: ~~T083-7422-00008~~
 Facilities: ~~201E and 201W through 216E and 216W and 301E and 301W through 316E and 316W~~
 Parameter: ~~The total VOC used after the drying/curing with integral thermal oxidization~~
 Limit: ~~Less than 314 tons of VOC per twelve consecutive month period with compliance determined at the end of each month.~~

YEAR:

Month	Total VOC Usage This Month	Total VOC Usage from Past 11 Months	Total VOC Usage (12 Month Total)
Month 1			
Month 2			
Month 3			

~~9~~ No deviation occurred in this quarter.

~~9~~ Deviation/s occurred in this quarter.

Deviation has been reported on:

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Upon further review, IDEM, OAQ has made the following changes:

- The mailing address for IDEM, OAQ has been changed as follows:

100 North Senate Avenue, P.O. Box 6015
 Indianapolis, Indiana 46204-6015

This change has been made throughout the whole permit.

- In accordance with the credible evidence rule (62 Fed. Reg. 8314, Feb 24, 1997); Section 113(a) of the Clean Air Act, 42 U.S. C. § 7413 (a); and a letter from the United States Environmental Protection Agency (U.S. EPA) to IDEM, OAQ dated May, 18 2004, all permits must address the use of credible evidence. IDEM, OAQ is required to incorporate credible evidence provisions into state rules consistent with the SIP call published by U.S. EPA in 1997 (62 FR 8314). Therefore, IDEM, OAQ has incorporated the credible evidence provision in 326 IAC 1-1-6. This rule became effective March 16, 2005 and was incorporated into your permit as follows:

B.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314][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.

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached Part 70 PSD Significant Source Modification No. 083-21221-00008. The operation of this proposed modification shall be subject to the conditions of the attached Part 70 Significant Permit Modification No. 083-21551-00008.

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document for a Prevention of Significant Deterioration (PSD) Significant Source Modification and Significant Permit Modification to a Part 70 Operating Permit

Source Background and Description

Source Name:	Essex Group, Inc. – Vincennes Plant
Source Location:	1299 East Essex Road, Vincennes, IN, 47591
County:	Knox
SIC Code:	3351 and 3357
Part 70 permit No.:	083-7422-00008
Part 70 permit Issuance Date:	May 3, 2004
Significant Source Modification No.:	083-21221-00008
Significant Permit Modification No.:	083-21551-00008
Permit Reviewer:	ERG/BS

On August 19, 2005, the Office of Air Quality (OAQ) had a notice published at the Knox County Public Library stating Essex Group, Inc. ("Essex") had applied for a Part 70 PSD Significant Source Modification and Significant Permit Modification relating to an increase in the production capacity of several magnet wire coating lines. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On August 29, 2005, Ethan Chatfield of the U.S. EPA submitted comments on the proposed permit documents. The following is a summary of the comments and responses to those comments. The Table of Contents has been modified, if applicable, to reflect any changes. New language is in bold and language that has been deleted is shown in strikethrough.

Comment 1:

Regarding Conditions D.1.5 and D.1.12(b): On June 24, 2005, the DC Circuit Court of Appeals vacated the clean unit provision contained in the 2002 NSR Reform rules. The Agency is strongly advising State agencies to discourage permit applicants from using these provisions in State rules.

Response to Comment 1:

The IDEM, OAQ recognizes the June 24 Appellate Court ruling. However, the OAQ has incorporated the New Source Review Reform Clean Unit provisions pursuant to 326 IAC 2-2.2. No changes were made to the permit as a result of this comment.

Comment 2:

Regarding Condition D.1.3(c): The facility-wide tons per year VOC emission limitation should be rolled monthly so that the limit is enforceable as a practical matter.

Response to Comment 2:

In order to ensure that the VOC emission limitation in Condition D.1.3(c) is practically enforceable, the following changes were made:

D.1.3 Prevention of Significant Deterioration - BACT [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 and PSD SSM 083-21221-00008:

...

- (c) The total VOC emissions from magnet wire coating units 201E and 201W through 216E and 216W and 301E and 301W through 316E and 316W shall not exceed 453 tons per year **twelve consecutive month period with compliance determined at the end of each month.**

Compliance with these limits will satisfy the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) with respect to VOC for the affected units.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY Compliance Branch

Part 70 Quarterly Report

Source Name: Essex Group, Inc., Vincennes plant
Source Address: 1299 East Essex Road, Vincennes, IN, 47591
Mailing Address: 1299 East Essex Road, Vincennes, IN, 47591
Part 70 Permit No.: T083-7422-00008
Facilities: 201E and 201W through 216E and 216W and 301E and 301W through 316E and 316W
Parameter: Total VOC emissions
Limit: 453 tons of VOC per year **twelve consecutive month period with compliance determined at the end of each month.**

Comment 3:

Condition D.1.8: With an uncontrolled potential to emit of greater than 10,800 tpy and a controlled emission output of greater than 340 tpy, stack testing the control efficiency of the thermal oxidizers every 5 years does not seem sufficient to demonstrate compliance. It is suggested that a VOC CEM be required and/or the stack testing frequency be increased.

Additionally, there needs to be a periodic testing requirement to verify the 100% collection efficiency requirement specified in D.1.3. The stack test methodologies, i.e. Method 25A, etc., should be included in the permit to allow the public an opportunity to comment on the sufficiency of the proposed test method.

Response to Comment 3:

The IDEM, OAQ agrees that an increase in stack testing frequency is warranted to ensure continuous compliance.

The testing in Condition D.1.8 requires the verification of both the mandated collection and capture efficiencies of Conditions D.1.3 and D.1.4. However, this requirement has been clarified further as indicated below.

The following changes have been made to the permit as a result of this comment:

D.1.8 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

- (a) The Permittee shall conduct performance tests (as described in (b), (c) and (d) below) to verify the VOC ~~control~~ **capture and destruction** efficiency requirements in Conditions D.1.3 and D.1.4.
- (b) No later than January 11, 2010, the Permittee shall test one (1) integral thermal oxidizer from magnet wire coating units 213E/W through 216E/W that has not been tested in the past ten (10) years. This test shall be repeated at least once every ~~five (5)~~ **two and one-half (2.5)** years from the date of the most recent valid compliance demonstration. Testing shall be conducted using **Method 25A or** methods approved by the Commissioner and in accordance with 326 IAC 3-6-3 and Section C - Performance Testing.
- (c) No later than September 22, 2009, the Permittee shall test three (3) integral thermal oxidizers from magnet wire coating units 301E/W through 316E/W that have not been tested in the past ten (10) years. These tests shall be repeated at least once every ~~five (5)~~ **two and one-half (2.5)** years from the date of the most recent valid compliance demonstration. Testing shall be conducted using **Method 25A or** methods approved by the Commissioner and in accordance with 326 IAC 3-6-3 and Section C - Performance Testing.
- (d) No later than 180 days after the issuance of SSM 083-21221-~~00008~~**00038**, the Permittee shall test two (2) integral thermal oxidizers and two (2) lubricant coating subsection capture devices from magnet wire coating units 201E/W through 212E/W that have not been tested in the past ten (10) years. These tests shall be repeated at least once every ~~five (5)~~ **two and one-half (2.5)** years from the date of the most recent valid compliance demonstration. Testing shall be conducted using **Method 25A or** methods approved by the Commissioner and in accordance with 326 IAC 3-6-3 and Section C - Performance Testing.

Comment 4:

Regarding Condition D.1.11: The VOC content of the coating should be tested by an EPA approved methodology. Although the MSDS sheets may provide for an adequate test method, this should be verified and stated in the permit.

Response to Comment 4:

To ensure that the VOC content of the coatings used is accurately documented, the following changes have been made:

D.1.11 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.3 and D.1.4, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC usage and content limits established in Conditions D.1.3 and

D.1.4. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

...

(2) The amount of coating material and solvent used on a monthly basis.

...

(C) If MSDS sheets are used to determine the VOC content of the coating, the Permittee shall verify that the VOC content stated on the MSDS is based on EPA Method 24 or other Method, as determined by the Commissioner.

VOC and Particulate
From Wire Coating Operations

Company Name: Essex Group, Inc - Vincennes
Address City IN Zip: Essex Rd., P.O. Box 259, Vincennes, IN, 47591
PSD SPM: 083-21551-00008
Reviewer: ERG/BS
Date: 07/18/05

Unit ID*	Coating Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/lb Cu)	Maximum throughput (lb Cu/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	Uncontrolled VOC PTE (ton/yr)	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency	Control efficiency (%)	Controlled VOC PTE (ton/yr)	
Dept 200	nylon top coat	8.60	83.70%	0.2%	83.5%	0.2%	13.07%	0.00297	14400.0	7.20	7.18	307.24	7373.72	1345.70	0.00	54.96	100%	98.50%	20.19	
Units	polyester base coat	9.10	69.90%	0.1%	69.8%	0.2%	21.40%	0.00566	14400.0	6.36	6.35	517.40	12417.61	2266.21	0.00	29.66	100%	98.50%	33.99	
(201E&W-	solvent blend	7.27	100.00%	0.2%	99.8%	0.2%	0.00%	0.00003	14400.0	7.27	7.26	2.72	65.19	11.90	0.00	0.00	100%	0.0%	11.90	
208E&W)	dri lube topical	5.90	98.80%	0.2%	98.6%	0.1%	0.92%	0.00036	14400.0	5.83	5.82	30.24	725.80	132.46	0.00	632.34	100%	98.5%	1.99	
Dept 200	nylon top coat	8.60	83.70%	0.2%	83.5%	0.2%	13.07%	0.00297	5264.0	7.20	7.18	112.31	2695.50	491.93	0.00	54.96	100%	98.50%	7.38	
Units	polyester base coat	9.10	69.90%	0.1%	69.8%	0.2%	21.40%	0.00566	5264.0	6.36	6.35	189.14	4539.33	828.43	0.00	29.66	100%	98.50%	12.43	
(209E&W-	solvent blend	7.27	100.00%	0.2%	99.8%	0.2%	0.00%	0.00003	5264.0	7.27	7.26	0.99	23.83	4.35	0.00	0.00	100%	0.0%	4.35	
212E&W)	dri lube topical	5.90	98.80%	0.2%	98.6%	0.1%	0.92%	0.00036	5264.0	5.83	5.82	11.06	265.32	48.42	0.00	632.34	100%	98.5%	0.73	
TOTAL															0.00					92.94

State Potential Emissions

* Each Unit (an 2XXE or 2XXW) consists of a combination of equipment: annealer, enamel applicator, curing oven, wire cooler, and topical lube applicator.

Baseline Actual VOC emissions (per unit) *** 3.85

** The copper throughput listed represents the total copper throughput of all the units in that group.

Baseline Actual VOC emissions (all units) *** 92.40

*** Represents the 2-yr (2003 and 2004) consecutive average actual emissions of the emissions units.

Projected Annual VOC Emissions ^ 92.94

^ Represents the VOC PTE of the units following the modification as a worst case estimate.

Net emissions increase of modification 0.54

Emissions from the enamel curing and lubricant coating sections are controlled by devices with 100% capture and 98.5% destruction efficiencies.

PSD significance threshold 40.00

Note: The emissions calculated using this spreadsheet represent emissions from the respective coating operations from each unit. The emissions resulting from curing oven and thermal oxidizer firing have not changed.

The 'solvent blend' coating material represents the clean up solvent used.

All coatings represent the worst case use scenario

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/lb Cu) * Maximum (lb Cu/hr)

Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/lb) * Maximum (lb/hr) * (24 hr/day)

Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/lb) * Maximum (lb/hr) * (8760 hr/yr) * (1 ton/2000 lbs)

Particulate Potential Tons per Year = (lb/hour) * (gal/lb) * (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: Emissions Calculations
HAP Emissions
From Wire Coating Operations**

**Company Name: Essex Group, Inc - Vincennes
Address City IN Zip: Essex Rd., P.O. Box 259, Vincennes, IN, 47591
PSD SPM: 083-21551-00008
Reviewer: ERG/BS
Date: 07/18/05**

Unit ID*	Coating Material	Density (Lb/Gal)	Gal of Mat. (gal/lb Cu)	Maximum throughput (lb Cu/hour)**	Weight % Phenol	Weight % Cresylic Acid	Weight % Xylene	Weight % Cumene	Uncontrolled HAPs				control efficiency (%)	Potential HAPs after integral contro			
									Phenol Emissions (ton/yr)	Cresylic Acid (ton/yr)	Xylene Emission (ton/yr)	Cumene Emission (ton/yr)		Phenol Emission (ton/yr)	Cresylic Acid (ton/yr)	Xylene Emissions (ton/yr)	Cumene Emissions (ton/yr)
Dept 200	nylon top coat	8.60	0.00297	14400.0	43.60%	22.90%	0.52%	0.26%	702.39	368.92	8.31	4.16	98.5%	10.54	5.53	0.12	0.06
Units	polyester base coat	9.10	0.00566	14400.0	19.80%	28.33%	0.62%	0.31%	643.22	920.32	20.08	10.04	98.5%	9.65	13.80	0.30	0.15
(201E&W-	solvent blend	7.27	0.00003	14400.0	0.00%	0.00%	3.00%	1.50%	0.00	0.00	0.45	0.23	0.0%	0.00	0.00	0.45	0.23
208E&W)	dri lube topical	5.90	0.00036	14400.0	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	98.5%	0.00	0.00	0.00	0.00
Dept 200	nylon top coat	8.60	0.00297	5264.0	43.60%	22.90%	0.52%	0.26%	256.76	134.86	3.04	1.52	98.5%	3.85	2.02	0.05	0.02
Units	polyester base coat	9.10	0.00566	5264.0	19.80%	28.33%	0.62%	0.31%	235.13	336.43	7.34	3.67	98.5%	3.53	5.05	0.11	0.06
(209E&W-	solvent blend	7.27	0.00003	5264.0	0.00%	0.00%	3.00%	1.50%	0.00	0.00	0.17	0.08	0.0%	0.00	0.00	0.17	0.08
212E&W)	dri lube topical	5.90	0.00036	5264.0	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	98.5%	0.00	0.00	0.00	0.00

** The copper throughput listed represents the copper throughput of one unit of that production group multiplied by the number of units in that group

Individual HAP Totals	27.56	26.41	1.20	0.60
PTE of Total HAPs	55.77			

METHODOLOGY

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

Appendix A: Emissions Calculations
Natural Gas Combustion from Magnet Wire Curing Ovens

Company Name: Essex Group, Inc - Vincennes
Address City IN Zip: Essex Rd., P.O. Box 259, Vincennes, IN, 47591
PSD SPM: 083-21551-00008
Reviewer: ERG/BS
Date: 07/18/05

Aggregate Heat Input Capacity (64 units @ 1.4 MMBtu/hr each)

89.6 MMBtu/hr Potential Throughput: **784.9** MMCF/yr **89,600** MMCF/yr

Criteria Pollutants	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential To Emit (ton/yr)	2.98	2.98	0.24	39.24	2.16	32.97

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

METHODOLOGY

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu; MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4,

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

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

**Company Name: Essex Group, Inc - Vincennes
Address City IN Zip: Essex Rd., P.O. Box 259, Vincennes, IN, 47591
PSD SPM : 083-21551-00008**

new control efficiency = 98.50%
new coating capacity = 900.00

**Reviewer: ERG/BS
Date: 08/21/03**

NEW coating input capacity (ton/yr - all ovens) = 10463.17 (vs. 9228)
NEW lubricant/solvent input capacity (ton/yr - all ovens) = 364.94 (vs. 314)

Unit ID*	Coating Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/lb Cu)	Maximum throughput (lb Cu/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	Uncontrolled VOC PTE (ton/yr)	Particulate Potential (ton/yr)	lb VOC/ gal solids	Transfer Efficiency	Control efficiency (%)	Controlled VOC PTE (ton/yr)	
Dept 200	nylon top coat	8.60	83.70%	0.2%	83.5%	0.2%	13.07%	0.00297	5400.0	7.20	7.18	115.21	2765.15	504.64	0.00	54.96	100%	98.50%	7.57	
Group 1 EUs	polyester base coat	9.10	69.90%	0.1%	69.8%	0.2%	21.40%	0.00566	5400.0	6.36	6.35	194.03	4656.60	849.83	0.00	29.66	100%	98.50%	12.75	
(201E&W-	solvent blend	7.27	100.00%	0.2%	99.8%	0.2%	0.00%	0.00003	5400.0	7.27	7.26	1.02	24.45	4.46	0.00	#DIV/0!	100%	0.0%	4.46	
203E&W)	dri lube topical	5.90	98.80%	0.2%	98.6%	0.1%	0.92%	0.00036	5400.0	5.83	5.82	11.34	272.18	49.67	0.00	632.34	100%	98.5%	0.75	
Dept 200	nylon top coat	8.60	83.70%	0.2%	83.5%	0.2%	13.07%	0.00297	9000.0	7.20	7.18	192.02	4608.58	841.07	0.00	54.96	100%	98.50%	12.62	
Group 1 EUs	polyester base coat	9.10	69.90%	0.1%	69.8%	0.2%	21.40%	0.00566	9000.0	6.36	6.35	323.38	7761.01	1416.38	0.00	29.66	100%	98.50%	21.25	
(204E&W-	solvent blend	7.27	100.00%	0.2%	99.8%	0.2%	0.00%	0.00003	9000.0	7.27	7.26	1.70	40.75	7.44	0.00	#DIV/0!	100%	0.0%	7.44	
208E&W)	dri lube topical	5.90	98.80%	0.2%	98.6%	0.1%	0.92%	0.00036	9000.0	5.83	5.82	18.90	453.63	82.79	0.00	632.34	100%	98.5%	1.24	
Dept 200	nylon top coat	8.60	83.70%	0.2%	83.5%	0.2%	13.07%	0.00297	2108.0	7.20	7.18	44.98	1079.43	197.00	0.00	54.96	100%	98.50%	2.95	
Group 2 EUs	polyester base coat	9.10	69.90%	0.1%	69.8%	0.2%	21.40%	0.00566	2108.0	6.36	6.35	75.74	1817.80	331.75	0.00	29.66	100%	98.50%	4.98	
(215E&W-	solvent blend	7.27	100.00%	0.2%	99.8%	0.2%	0.00%	0.00003	2108.0	7.27	7.26	0.40	9.54	1.74	0.00	#DIV/0!	100%	0.0%	1.74	
216E&W)	dri lube topical	5.90	98.80%	0.2%	98.6%	0.1%	0.92%	0.00036	2108.0	5.83	5.82	4.43	106.25	19.39	0.00	632.34	100%	0.0%	19.39	
Dept 200	nylon top coat	8.60	83.70%	0.2%	83.5%	0.2%	13.07%	0.00297	5264.0	7.20	7.18	112.31	2695.50	491.93	0.00	54.96	100%	98.50%	7.38	
Group 3 EUs	polyester base coat	9.10	69.90%	0.1%	69.8%	0.2%	21.40%	0.00566	5264.0	6.36	6.35	189.14	4539.33	828.43	0.00	29.66	100%	98.50%	12.43	
(209E&W-	solvent blend	7.27	100.00%	0.2%	99.8%	0.2%	0.00%	0.00003	5264.0	7.27	7.26	0.99	23.83	4.35	0.00	#DIV/0!	100%	0.0%	4.35	
212E&W)	dri lube topical	5.90	98.80%	0.2%	98.6%	0.1%	0.92%	0.00036	5264.0	5.83	5.82	11.06	265.32	48.42	0.00	632.34	100%	98.5%	0.73	
Dept 200	nylon top coat	8.60	83.70%	0.2%	83.5%	0.2%	13.07%	0.00297	2108.0	7.20	7.18	44.98	1079.43	197.00	0.00	54.96	100%	98.50%	2.95	
Group 3 EUs	polyester base coat	9.10	69.90%	0.1%	69.8%	0.2%	21.40%	0.00566	2108.0	6.36	6.35	75.74	1817.80	331.75	0.00	29.66	100%	98.50%	4.98	
(213E&W-	solvent blend	7.27	100.00%	0.2%	99.8%	0.2%	0.00%	0.00003	2108.0	7.27	7.26	0.40	9.54	1.74	0.00	#DIV/0!	100%	0.0%	1.74	
214E&W)	dri lube topical	5.90	98.80%	0.2%	98.6%	0.1%	0.92%	0.00036	2108.0	5.83	5.82	4.43	106.25	19.39	0.00	632.34	100%	0.0%	19.39	
Dept 300	nylon top coat	8.50	87.80%	0.2%	87.6%	0.2%	7.57%	0.00700	2840.0	7.46	7.45	148.07	3553.61	648.53	0.00	98.39	100%	98.50%	9.73	
Group 1 EUs	urethane base coat	8.43	70.90%	0.1%	70.8%	0.1%	21.89%	0.01010	2840.0	5.97	5.96	171.10	4106.33	749.41	0.00	27.25	100%	98.50%	11.24	
(301-304,	solvent blend	7.60	100.00%	0.2%	99.8%	0.2%	0.00%	0.00004	2840.0	7.60	7.58	0.86	20.68	3.77	0.00	#DIV/0!	100%	0.0%	3.77	
307E&W)	dri lube topical	5.90	98.80%	0.2%	98.6%	0.1%	0.92%	0.00049	2840.0	5.83	5.82	8.10	194.30	35.46	0.00	632.34	100%	0.0%	35.46	
Dept 300	nylon top coat	8.50	87.80%	0.2%	87.6%	0.2%	7.57%	0.00700	6248.0	7.46	7.45	325.75	7817.94	1426.77	0.00	98.39	100%	98.50%	21.40	
Group 2 EUs	urethane base coat	8.43	70.90%	0.1%	70.8%	0.1%	21.89%	0.01010	6248.0	5.97	5.96	376.41	9033.93	1648.69	0.00	27.25	100%	98.50%	24.73	
(305,306,	solvent blend	7.60	100.00%	0.2%	99.8%	0.2%	0.00%	0.00004	6248.0	7.60	7.58	1.90	45.49	8.30	0.00	#DIV/0!	100%	0.0%	8.30	
308E&W-316E&W)	dri lube topical	5.90	98.80%	0.2%	98.6%	0.1%	0.92%	0.00049	6248.0	5.83	5.82	17.81	427.45	78.01	0.00	632.34	100%	0.0%	78.01	
TOTAL															0.00					343.72

State Potential Emissions

* Each Emission Unit (EU) as denoted by the source, consists of a combination of equipment: annealer (shared by E&W units), enamel applicator, curing oven, wire cooler, and topical lube applicator.

** The copper throughput listed represents the total copper throughput of all the units in that group.

The estimated control efficiency of the thermal oxidizers is at least 98.5%.

Note: The emissions calculated using this spreadsheet represent emissions from only the respective coating operations from each EU. The emissions resulting from curing oven and thermal oxidizer firing are included on another page.

All coatings represent the worst case use scenario

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/lb Cu) * Maximum (lb Cu/hr)

Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/lb) * Maximum (lb/hr) * (24 hr/day)

Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/lb) * Maximum (lb/hr) * (8760 hr/yr) * (1 ton/2000 lbs)

Particulate Potential Tons per Year = (lb/hour) * (gal/lb) * (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 B

BEST AVAILABLE CONTROL TECHNOLOGY (BACT) DETERMINATION

Source Information and Description

Source Name:	Essex Group, Inc. - Vincennes plant
Source Location:	1299 East Essex Road, Vincennes, IN, 47591
County:	Knox
SIC Code:	3351 and 3357
Operation Permit No.:	T083-7422-00008
Operation Permit Issuance Date:	May 3, 2004
Significant Source Modification No.:	083-21221-00008
Significant Permit Modification No.:	083-21551-00008
Permit Reviewer:	ERG/BS

The Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) has performed the following federal BACT (Best Available Control Technology) review for a modification proposed by Essex Group, Inc. ("Essex"), located in Vincennes, Indiana. The modification consists of the following:

- (a) An increase in the production capacity of sixteen (16) existing magnet wire coating units: 201E and 201W through 208E and 208W. The existing capacity is 658 pounds of copper wire per hour, per unit. The new capacity is 900 pounds of copper wire per hour, per unit.
- (b) An increase in the production capacity of eight (8) existing magnet wire coating units: 209E and 209W through 212E and 212W. The existing capacity is 527 pounds of copper wire per hour, per unit. The new capacity is 658 pounds of copper wire per hour, per unit.
- (c) The addition of ten (10) wire annealers to magnet wire coating units 201E and 201W - 203E and 203W, 206E and 206W - 208E and 208W and 209E and 209W - 212E and 212W. Currently, each E/W pair shares a common annealer. After the modification, each unit will have its own annealer. The annealer additions allow Essex greater flexibility in oven scheduling, reduced downtime, reduced scrap generation and greater energy use efficiency.
- (d) The addition of emission capture devices on the lubricant coating subsections of units 201E and 201W through 212E and 212W. Emissions captured by the devices will be routed to, and destroyed by, integral thermal oxidizers.

Background and Process Description

Each magnet wire coating unit consists of an enamel applicator, drying/curing oven, wire cooler, and topical lube applicator. Each pair of magnet wire coating units (units which share the same numerical ID number) shares a thermal oxidizer. Raw wire is first annealed then sent to the enamel applicator where the wire is coated. The coated wire then passes to a drying/curing oven equipped with an integral thermal oxidizer. The dried/cured wire is then cooled, and finally coated with a topical lubricant. VOC emissions generated by the magnet wire coating units result from the evaporation of VOC from: 1) enamel coatings during drying/curing and 2) topical lubricant. As a result, BACT for VOC is evaluated for the enamel curing subsection and lubricant coating subsection of the units.

The enamel curing operation is totally enclosed, as defined by Method 204 of 40 CFR Part 51, Appendix M, which allows for complete capture of the VOC emissions. The far majority of the VOC emissions are subsequently destroyed in the integral thermal oxidizers which serve to satisfy the heat requirement of the ovens and also function as control devices. The lubricant coating operation is uncontrolled.

BACT Description

The source is located in Knox County which is designated as attainment or unclassifiable for all criteria pollutants. For the purposes of evaluating VOC emissions, each magnet wire coating unit consists of two subsections, a basecoat/topcoat coating subsection (using integral thermal oxidization for VOC control) and a topical lubricant coating subsection (no controls). Pursuant to 326 IAC 2-2-3, BACT for VOC has been evaluated and determined for each of these subsections.

BACT is defined as “an emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under the CAA emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production processes and available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of each such pollutant. In no event shall application of ‘best available control technology’ result in emissions of any pollutants which will exceed the emissions allowed by any applicable standard established pursuant to section 111 or 112 of this Act.”

According to the “*Top-Down*” *Best Available Control Technology Guidance Document* outlined in the 1990 draft USEPA *New Source Review Workshop Manual*, BACT analyses are conducted with a ‘top-down’ approach which consists of the following steps:

- (1) Identify all potentially available control options;
- (2) Eliminate technically infeasible control options;
- (3) Rank remaining control technologies by control effectiveness;
- (4) Evaluate the most effective controls and document the results; and
- (5) Select BACT.

Also in accordance with the “*Top-Down*” *Best Available Control Technology Guidance Document* outlined in the 1990 draft USEPA *New Source Review Workshop Manual*, BACT analyses (specifically step 4) must take into account the energy, environmental, and economic impacts on the source. These reductions may be determined through the application of available control techniques, process design, and/or operational limitations. Such reductions are necessary to demonstrate that the emissions remaining after application of BACT will not cause or contribute to air pollution, thereby protecting public health and the environment. This BACT determination is based on the following information:

- (1) The PSD permit application submitted by Essex Group, Inc. on May 3, 2005;
- (2) The EPA RACT/BACT/LAER (RBLCL) Clearinghouse;
- (3) Permit requirements of other magnet wire production facilities; and
- (4) Results from stack testing on representative emission units at the Vincennes plant.

BACT for VOC – Enamel curing subsection

Step 1 - Identify Control Options

The following technologies were identified as potentially available options that could be used to control VOC emissions from the enamel curing subsection of the magnet wire coating units. IDEM and the Permittee searched EPA's RACT/BACT/LAER Clearinghouse (RBLC) and reviewed permits of nearly identical sources to produce this list.

SIC Code	Source Name (location)	RBLC ID or Permit Number (issuance date)	Process	Technology	Control Efficiency
3357	Essex Group - Vincennes (Vincennes, IN)	T083-7422-00008 (May 3, 2004)	Magnet wire curing	Integral thermal oxidization	98.5%
3357	Rea Magnet Wire Company (Lafayette, IN)	T157-6960-00032 (February 18, 1999)	Magnet wire curing	Integral thermal oxidization	98.5%
3357	Phelps Dodge Magnet Wire Company (Fort Wayne, IN)	T003-6925-00013 (October 10, 2002)	Magnet wire curing	Thermal oxidization	96.7%
3357	Essex Group - Franklin (Franklin, TN)	LAER TN-0022	Magnet wire curing	Incineration using an afterburner	95%
3357	Essex Group - Franklin (Franklin, TN)	LAER TN-0120	Magnet wire curing	Thermal oxidization	87%

Step 2 - Eliminate technically infeasible control options

As with all baking/curing operations, the temperature used to cure the product must be high enough to ensure product quality (e.g. the enamel is not "sticky") but low enough to ensure that the coating is not damaged (e.g. the enamel is not burned or "coked"). The use of integral thermal oxidization at a destruction efficiency of greater than 98.5% is not technically feasible because the corresponding oven temperatures at that destruction efficiency would potentially damage the coatings and compromise product quality. This determination was made by Essex in preparation for the BACT determination included in the TSD for T083-7422-00008, issued May 3, 2004. As the above table indicates, pursuant to T083-7422-00008, issued May 3, 2004, Essex is currently required to maintain a destruction efficiency of at least 98.5%. Combined with a mandated capture efficiency of 100%, Essex currently achieves an overall control efficiency of 98.5% on their magnet wire coating units.

Note that a review of additional control options provided in the EPA's Air Pollution Control Technology Fact Sheets (located at www.epa.gov/ttn/catc/products.html) was not completed because Essex uses, and has proposed to continue using, the control option with the greatest emission reduction potential.

Step 3 - Rank remaining control technologies by control effectiveness

The technically feasible control options rank as follows:

Control Type	Estimated VOC Control Efficiency
Integral Thermal Oxidization	98.5%
Non-integral Thermal Oxidization	96.7%

Incineration with an Afterburner	95%
Non-integral Thermal Oxidization	87%

Step 4 - Evaluate the most effective controls and document results

Integral thermal oxidization, operating with a 98.5% destruction efficiency, is the best (i.e. has the greatest emission reduction potential) technically feasible control option. Since this option is currently employed by Essex as required by existing permit requirements, economic and energy analyses are not necessary. The use of integral thermal oxidation (on the respective units) will result in potential VOC emission reductions of up to 4600 tons per year based on an overall control efficiency of 98.5% (100% capture and 98.5% destruction).

Step 5 - Select BACT

Based on the considerations mentioned above, IDEM has determined that BACT for VOC for the enamel curing subsections of the magnet wire coating units (201E and 201W through 208E and 208W, and 209E and 209W through 212E and 212W) shall remain as follows:

VOC emissions from the enamel curing subsection of magnet wire coating units 201E and 201W through 216E and 216W and 301E and 301W through 316E and 316W shall be controlled by a device with a minimum one-hundred percent (100%) capture efficiency (as defined by Method 204 of 40 CFR Part 52, Appendix M). The captured VOC emissions shall be routed to the integral thermal oxidizers and destroyed with a minimum ninety-eight and five tenths percent (98.5%) destruction efficiency.

Note that Essex has decided to retain its existing (pursuant to T083-7422-00008, May 3, 2004) VOC BACT emission limit of 453 tons per year. This limit applies to all sixty-four (64) Department 200 and 300 magnet wire coating units; many of which are not involved in the corresponding modification. **As a result, the allowable VOC increase associated with this modification is zero (0) tons per year.**

Due to the operational design of the magnet wire coating units, and to allow maximum operational flexibility, the structure of the final BACT limits for the enamel curing and lubricant coating subsections will be presented together at this end of this document.

BACT for VOC – Lubricant coating subsection

A review of EPA's RBLC identified zero (0) facilities under the RBLC Code 41.010 (Organic Evaporative losses – Magnet Wire Surface Coating) that implemented BACT to control VOC emissions from lubricant coating. A review of the permit requirements of other magnet wire production facilities revealed zero (0) facilities that control VOC emissions from lubricant coating. As a result, the OAQ considered control technologies from similar operations; specifically, technically feasible controls for magnet wire enamel curing subsections.

Essex proposed that BACT for the lubricant coating subsection to be equivalent to BACT for the enamel curing subsection. Since BACT for the enamel curing subsection is the highest feasible level of control, further review is not necessary.

Note that a review of the information provided in the EPA's Air Pollution Control Technology Fact Sheets (located at www.epa.gov/ttn/catc/products.html) indicates that other available VOC-control technologies (such as catalytic oxidization) can not achieve the destruction efficiencies of thermal oxidization. As a result, those technologies were not reviewed in detail.

Based on the considerations mentioned above, IDEM has determined that BACT for VOC for the lubricant coating subsections of the magnet wire coating units (201E and 201W through 208E and 208W, and 209E and 209W through 212E and 212W) shall be as follows:

VOC emissions from the lubricant coating subsection of magnet wire coating units 201E and 201W through 212E and 212W shall be controlled by a device with a minimum one-hundred percent (100%) capture efficiency (as defined by Method 204 of 40 CFR Part 52, Appendix M). The captured VOC emissions shall be routed to the thermal oxidizers and destroyed with a minimum ninety-eight and five tenths percent (98.5%) destruction efficiency.

Final BACT

Note that Essex has decided to retain its existing (pursuant to T083-7422-00008, May 3, 2004) VOC BACT emission limit of 453 tons per year. This limit applies to all sixty-four (64) Department 200 and 300 magnet wire coating units; many of which are not involved in the corresponding modification. **As a result, the allowable VOC increase associated with this modification is zero (0) tons per year.**

The existing BACT requirements for those magnet wire coating units not affected by this modification, units 213E and 213W through 216E and 216W and 301E and 301W through 316E and 316W, has been unchanged and included here for clarification. However, the structure of original BACT limitation (pursuant to T083-7422-00008, May 3, 2004) has been revised to accommodate the BACT limits contained in this document and provide maximum operational flexibility.

As a result, BACT for the Department 200 and 300 magnet wire coating units shall be the following:

Pursuant to 326 IAC 2-2-3 and PSD SSM 083-21221-00008:

- (a) VOC emissions from the enamel curing subsection of magnet wire coating units 201E and 201W through 216E and 216W and 301E and 301W through 316E and 316W shall be controlled by a device with a minimum one-hundred percent (100%) capture efficiency (as defined by Method 204 of 40 CFR Part 52, Appendix M). The captured VOC emissions shall be routed to the integral thermal oxidizers and destroyed with a minimum ninety-eight and five tenths percent (98.5%) destruction efficiency.
- (b) VOC emissions from the lubricant coating subsection of magnet wire coating units 201E and 201W through 212E and 212W shall be controlled by a device with a minimum one-hundred percent (100%) capture efficiency (as defined by Method 204 of 40 CFR Part 52, Appendix M). The captured VOC emissions shall be routed to the thermal oxidizers and destroyed with a minimum ninety-eight and five tenths percent (98.5%) destruction efficiency.
- (c) The total VOC emissions from magnet wire coating units 201E and 201W through 216E and 216W and 301E and 301W through 316E and 316W shall not exceed 453 tons per year.

Compliance with these limits will satisfy the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) with respect to VOC for the affected units.

The procedures for demonstrating compliance are listed in the Technical Support Document.