



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: March 20, 2006
RE: Essex Electronic Inc. / 053-16480-00027
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 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, 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.dot 1/10/05



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

**MINOR SOURCE OPERATING PERMIT
OFFICE OF AIR QUALITY**

**Essex Electric, Inc.
2201 South Branson
Marion, Indiana 46953**

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

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

Operation Permit No.: MSOP 053-16480-00027	
Issued by: Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: Expiration Date:

TABLE OF CONTENTS

A	SOURCE SUMMARY	4
A.1	General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]	
A.2	Emissions Units and Pollution Control Equipment Summary	
A.3	Part 70 Permit Applicability [326 IAC 2-7-2]	
B	GENERAL CONDITIONS	6
B.1	Permit No Defense [IC 13]	
B.2	Definitions	
B.3	Effective Date of the Permit [IC13-15-5-3]	
B.4	Permit Term and Renewal [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5]	
B.5	Modification to Permit [326 IAC 2]	
B.6	Annual Notification [326 IAC 2-6.1-5(a)(5)]	
B.7	Preventive Maintenance Plan [326 IAC 1-6-3]	
B.8	Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]	
B.9	Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)] [IC 13-14-2-2] [IC13-17-3-2][IC 13-30-3-1]	
B.10	Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]	
B.11	Annual Fee Payment [326 IAC 2-1.1-7]	
C	SOURCE OPERATION CONDITIONS.....	9
C.1	Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]	
C.2	Permit Revocation [326 IAC 2-1.1-9]	
C.3	Opacity [326 IAC 5-1]	
C.4	Fugitive Dust Emissions [326 IAC 6-4]	
C.5	Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]	
	Testing Requirements	
C.6	Performance Testing [326 IAC 3-6]	
	Compliance Requirements [326 IAC 2-1.1-11]	
C.7	Compliance Requirements [326 IAC 2-1.1-11]	
	Compliance Monitoring Requirements	
C.8	Monitoring Methods [326 IAC 3][40 CFR 60][40 CFR 63]	
	Record Keeping and Reporting Requirements	
C.9	Malfunctions Report [326 IAC 1-6-2]	
C.10	Emission Statement [326 IAC 2-6]	
C.11	General Record Keeping Requirements [326 IAC 2-6.1-5]	
C.12	General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]	
D.1	EMISSIONS UNIT OPERATION CONDITIONS - Plastic Pellet Production Process	13
	Emission Limitations and Standards	
D.1.1	Particulate [326 IAC 6-2-4]	
D.1.2	Particulate [326 IAC 6-3-2]	

D.1.3 Preventive Maintenance Plan [326 IAC 1-6-3]

Compliance Determination Requirements

D.1.4 Particulate Control

Annual Notification 15
Malfunction Report 16

SECTION A SOURCE SUMMARY

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

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

The Permittee owns and operates a stationary plastic pellet production operation.

Authorized Individual: Dennis Edom
Source Address: 2201 South Branson, Marion, IN 46953
Mailing Address: P.O. Box 1630 Marion, IN 46952
General Source Phone: (765) 664-6212
County Location: Grant
Source Location Status: Attainment for all criteria pollutants
Source Status: Minor Source, under PSD Rules and
Minor Source, Section 112 of the Clean Air Act
Not 1 of 28 Source Categories

A.2 Emissions Units and Pollution Control Equipment Summary

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

- (a) one (1) plastic pellet production process rated at a maximum of 10,000 pounds per hour, installed pre-1985, consisting of:
 - (1) one (1) material storage area consisting of four (4) silos each with 100,000 pounds of material capacity and a combined annual maximum throughput of 43,300 tons per year.
 - (2) one (1) raw material slurry tank, with particulate emissions controlled by one (1) dust collector, identified as D1, with emissions exhausted through dust collector then Stack D-1.
 - (3) one (1) Henschel mixing process, with particulate emissions controlled by one (1) dust collector, identified as D3, with all emissions exhausted through dust collector then Stack D-1.
 - (4) one (1) process cooler, top tank, and final mixer.
 - (5) one (1) final product extrusion process, with particulate emissions controlled by one (1) dust collector, identified as D2, with emissions exhausted through dust collector then Stack D-1.
 - (6) one (1) pelletizing, drying, and bagging process.
- (b) one (1) 1.05 MMBtu/hr natural gas-fired boiler, identified as B-1, manufactured in 1965, with all emissions exhausted through Stack B1.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is not required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a not major source, as defined in 326 IAC 2-7-1(22);
- (b) It is not an affected source under Title IV (Acid Deposition Control) of the Clean Air Act, as defined in 326 IAC 2-7-1(3);
- (c) It is not 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

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

B.1 Permit No Defense [IC 13]

This permit to operate does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions

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

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

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

B.4 Permit Term and Renewal [326 IAC 2-6.1-7(a)][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 of this permit do not affect the expiration date.

The Permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date. If a timely and sufficient permit application for a renewal has been made, this permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.

B.5 Modification to Permit [326 IAC 2]

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

B.6 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) Annual notification shall be submitted to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.
- (c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

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

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

B.7 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days (this time frame is determined on a case by case basis but no more than ninety (90) days) after issuance of this permit, including the following information on each emissions unit:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) A copy of the PMP's 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 PMP whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation, Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.8 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

- (a) Permit revisions are governed by the requirements of 326 IAC 2-6.1-6.
- (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 an "authorized individual" as defined by 326 IAC 2-1.1-1.
- (c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]
- (d) No permit amendment or modification is required for the addition, operation or removal of a non-road engine, as defined in 40 CFR 89.2.

B.9 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)] [IC 13-14-2-2]
[IC13-17-3-2][IC 13-30-3-1]

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

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.10 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

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

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAQ, Permits Branch within thirty (30) days of the change.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).
- (c) IDEM, OAQ, shall issue a revised permit.

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

B.11 Annual Fee Payment [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.
- (b) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (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 non-overlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

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

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

C.5 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

The Permittee shall comply with the applicable requirements of 326 IAC 14-10, 326 IAC 18, and 40 CFR 61.140.

Testing Requirements

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

- (a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. 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.

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual date.
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ (and local agency) not later than forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, (and local agency), if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.7 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

C.8 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.

Record Keeping and Reporting Requirements

C.9 Malfunctions Report [326 IAC 1-6-2]

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

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

- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.10 Emission Statement [326 IAC 2-6]

- (a) Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit an emission statement by July 1 following a calendar year when the source emits oxides of nitrogen into the ambient air equal to or greater than twenty – five (25) tons. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

The 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 “authorized individual” as defined by 326 IAC 2-1.1-1(1).

- (b) The 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.11 General Record Keeping Requirements [326 IAC 2-6.1-5]

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

C.12 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) Reports required by conditions in Section D of this permit shall be submitted to:

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

- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) Unless otherwise specified in this permit, any quarterly or semi-annual report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The report(s) does(do) not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

SECTION D.1 EMISSIONS UNITS OPERATION CONDITIONS

Emissions Unit Description:

- (a) one (1) plastic pellet production process rated at a maximum of 10,000 pounds per hour, installed pre-1985, consisting of:
 - (1) one (1) material storage area consisting of four (4) silos each with 100,000 pounds of material capacity and a combined annual maximum throughput of 43,300 tons per year.
 - (2) one (1) raw material slurry tank, with particulate emissions controlled by one (1) dust collector, identified as D1, with emissions exhausted through dust collector then Stack D-1.
 - (3) one (1) Henschel mixing process, with particulate emissions controlled by one (1) dust collector, identified as D3, with all emissions exhausted through dust collector then Stack D-1.
 - (4) one (1) process cooler, top tank, and final mixer.
 - (5) one (1) final product extrusion process, with particulate emissions controlled by one (1) dust collector, identified as D2, with emissions exhausted through dust collector then Stack D-1.
 - (6) one (1) pelletizing, drying, and bagging process.
- (b) one (1) 1.05 MMBtu/hr natural gas-fired boiler, identified as B-1, manufactured in 1965, with all emissions exhausted through Stack B1.

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

Emission Limitations and Standards

D.1.1 Particulate [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating) the PM emissions from the 1.05 MMBtu per hour heat input boiler shall be limited to 0.6 pounds per MMBtu heat input.

This limitation is based on the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:

- Pt: Pounds of particulate matter emitted per million Btu (lb/ MMBtu) heat input.
- Q: Total source maximum operating capacity rating in million Btu per hour (MMBtu /hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which the capacity specified in the operation permit shall be used.

D.1.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the Henschel mixing process shall not exceed 6.84 pounds per hour when operating at a process weight rate of 4,300 pounds per hour.

The pounds 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:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour;
and P = process weight rate in tons per hour

D.1.3 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and any control devices.

Compliance Determination Requirements

D.1.4 Particulate Control

In order to comply with condition D.1.2, the dust collector D3 for particulate control shall be in operation and control emissions from the Henschel mixing process at all times that the Henschel mixing process is in operation.

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

**MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION**

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

Company Name:	Essex Electric, Inc.
Address:	2201 South Branson
City:	Marion, IN 46953
Phone #:	(765) 664-6212
MSOP #:	053-16480-00027

I hereby certify that Essex Electric, Inc. is still in operation.
 no longer in operation.

I hereby certify that Essex Electric, Inc. is in compliance with the requirements of MSOP 053-16480-00027.
 not in compliance with the requirements of MSOP 053-16480-00027.

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

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

Noncompliance:

MALFUNCTION REPORT

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
FAX NUMBER - 317 233-5967**

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

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

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

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

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

COMPANY: _____ PHONE NO. () _____
LOCATION: (CITY AND COUNTY) _____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP: _____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: ____/____/19____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE ____/____/19____ _____ AM/PM

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

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____

INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

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

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

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

326 IAC 1-6-1 Applicability of rule

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

326 IAC 1-2-39 "Malfunction" definition

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

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

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

Indiana Department of Environmental Management Office of Air Quality

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

Source Background and Description

Source Name: Essex Electric, Inc.
Source Location: 2201 South Branson, Marion, IN 46953
County: Grant
SIC Code: 3087
Operating Permit No.: 053-16480-00027
Permit Reviewer: SDF/ L. Stapf

The Office of Air Quality (OAQ) has reviewed an application from Essex Electric, Inc. for a plastic pellet production operation consisting of:

- (a) one (1) plastic pellet production process rated at a maximum of 10,000 pounds per hour, installed pre-1985, consisting of:
 - (1) one (1) material storage area consisting of four (4) silos each with 100,000 pounds of material capacity and a combined annual maximum throughput of 43,300 tons per year.
 - (2) one (1) raw material slurry tank, with particulate emissions controlled by one (1) dust collector, identified as D1, with emissions exhausted through dust collector then Stack D-1.
 - (3) one (1) Henschel mixing process, with particulate emissions controlled by one (1) dust collector, identified as D3, with all emissions exhausted through dust collector then Stack D-1.
 - (4) one (1) process cooler, top tank, and final mixer.
 - (5) one (1) final product extrusion process, with particulate emissions controlled by one (1) dust collector, identified as D2, with emissions exhausted through dust collector then Stack D-1.
 - (6) one (1) pelletizing, drying, and bagging process.
- (b) one (1) 1.05 MMBtu/hr natural gas-fired boiler, identified as B-1, manufactured in 1965, with all emissions exhausted through Stack B1.

Existing Approvals

This MSOP will be the source's first operating approval.

Recommendation

The staff recommends to the Commissioner that the Minor Source Operating Permit (MSOP) 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 received on July 14, 2004, and additional information received on July 23, 2004.

Emission Calculations

The emissions generated by this source are particulate matter (PM), PM10, and particulate HAP emissions from the pellet production process, and the NOx and CO emissions from boiler B-1.

The following calculations determine the potential to emit before controls and the estimated PTE after controls:

1. PTE Before Controls:

The following calculations determine the PTE before controls:

(a) Pellet Production Process:

The emissions generated by the pellet production process are the PM/PM10 and particulate HAP emissions from the henschel mixing operation. All of the other units of the pellet production process handle product in a slurry form. According to the Permittee, stack test results were available from a test on December 8, 1998. During the test the process was ran at a rate of 6,456 pounds of raw material per hour.

The following calculations were used to determine the emissions:

PM/PM10:

According to the test report, the maximum inlet emissions to the control device were as follows:

$$1.49 \frac{\text{pounds}}{\text{hour}} * 8,760 \frac{\text{hours}}{\text{year}} * \frac{1 \text{ ton}}{2000 \text{ lbs}} = 6.53 \frac{\text{tons}}{\text{year}}$$

The maximum fugitive emission rate was measured as follows:

$$0.671 \frac{\text{pounds}}{\text{hour}} * 8,760 \frac{\text{hours}}{\text{year}} * \frac{1 \text{ ton}}{2000 \text{ lbs}} = 2.94 \frac{\text{tons}}{\text{year}}$$

The total emissions before controls were used to calculate the potential to emit (PTE). That included the sum of the fugitive portion and the control device inlet loading as follows:

$$0.671 + 1.49 = 2.16 \text{ pounds per hour}$$

$$2.94 + 6.53 = 9.47 \text{ tons per year}$$

HAPs:

The Permittee supplied raw material rates as follows on their permit application:

Component	Maximum Throughput Rate (lbs / hour)	Percent Weight Fraction
Lead oxide (HAP group)	200	0.02
Antimony oxide (HAP group)	240	0.024
Summary of Total HAPs	440	0.044
Summary of all particulate	10,000	1.00

Uncontrolled emissions, PTE, were:

Lead Compounds: (200 lb Pb /10,000 lb total) * 9.47 tons PM/year = 0.189 tons / yr
 Antimony Compounds: (240 lb Pb /10,000 lb total) * 9.47 tons PM/year = 0.227 tons / yr
 Total HAPs PTE 0.416 tons / yr

(b) Boiler Emissions:

The following calculations determine the boiler emissions based on natural gas combustion, a maximum capacity of 1.05 MMBtu/hr, and AP-42 emission factors. The emissions are calculated before controls, and at 8760 hours of operation:

$$1.05 \text{ MMBtu/hr} * 8760 \text{ hr/yr} * 1.0\text{E}6 \text{ Btu/MMBtu} * 1/1000 \text{ cf/Btu} * 1/1\text{E}6 \text{ MMcf/cf} * \text{Ef lb poll/MMcf} * 1/2000 \text{ ton poll/lb poll} = \text{ton poll/yr}$$

	PM 1.9 lb/MMcf	PM10 7.6 lb/MMcf	SO2 0.6 lb/MMcf	NOx 100 lb/MMcf	VOC 5.5 lb/MMcf	CO 84 lb/MMcf
Ton/yr	neg.	neg.	neg.	0.50	neg.	0.40

(c) Total PTE Before Controls:

The following table lists the source PTE before controls:

	PM (tons per year)	PM10 (tons per year)	SO2 (tons per year)	NOx (tons per year)	VOC (tons per year)	CO (tons per year)	Single HAP (tons per year)	Combined HAP (tons per year)
Process	9.47	9.47	-	-	-	-	0.227	0.416
Boiler	neg.	neg.	neg.	0.50	neg.	0.40	neg.	neg.
Total	9.47	9.47	neg.	0.50	neg.	0.40	0.227	0.416

2. Emissions After Controls:

PM/PM10:

The PM/PM10 and particulate HAP emissions are controlled by a dust collector. According to the test report, maximum fugitive emission rate was measured as follows:

$$0.671 \frac{\text{pounds}}{\text{hour}} * 8,760 \frac{\text{hours}}{\text{year}} * \frac{1 \text{ ton}}{2000 \text{ lbs}} = 2.94 \frac{\text{tons}}{\text{year}}$$

The stack test resulted in a minimum control efficiency of 99.93%. The emission rate at the outlet was measured with maximum outlet emissions as follows:

$$0.00104 \frac{\text{pounds}}{\text{hour}} * 8,760 \frac{\text{hours}}{\text{year}} * \frac{1 \text{ ton}}{2000 \text{ lbs}} = 0.00456 \frac{\text{tons}}{\text{year}}$$

The total emissions after controls were the sum of the fugitive and control device outlet:

$$0.671 + 0.00104 = 0.672 \text{ pounds per hour}$$

$$2.94 + 0.00456 = 2.94 \text{ tons per year}$$

HAPs:

The following calculations determine the single HAP, and combined HAP PTE after controls:

Lead Compounds: (200 lb Pb /10,000 lb total) * 2.94 tons PM/year = 0.0588 tpy
 Antimony Compounds: (240 lb Pb /10,000 lb total) * 2.94 tons PM/year = 0.0706 tpy
 Total HAPs 0.1294 tpy

The following table lists the source emissions after controls:

	PM (tons per year)	PM10 (tons per year)	SO2 (tons per year)	NOx (tons per year)	VOC (tons per year)	CO (tons per year)	Single HAP (tons per year)	Combined HAP (tons per year)
Process	2.94	2.94	-	-	-	-	0.0706	0.1294
Boiler	neg.	neg.	neg.	0.50	neg.	0.40	neg.	neg.
Total	2.94	2.94	neg.	0.50	neg.	0.40	0.0706	0.1294

Source Potential Emissions

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

This table reflects the PTE before controls from the source based on the above estimated emissions calculations. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	9.47
PM10	9.47
SO2	neg.
VOC	neg.
CO	0.40
NO _x	0.50

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

Pollutant	Potential To Emit (tons/year)
Worst Case Single HAP	0.227
Combined HAPs	0.416

The potential to emit (PTE) of all criteria pollutants, before controls, is less than 100 tons per year. The PTE of any single HAP, before controls, does not exceed ten (10) tons per year, and the PTE of a combination of HAPs, before controls, do not exceed twenty-five (25) tons per year. However, the PTE of PM and PM10, before controls, exceeds the Minor Source Operating Permit (MSOP) applicable level of twenty-five (25) tons per year pursuant to 326 IAC 2-5.1-3(a)(1)(E). Therefore, the proposed source shall be permitted under a Minor Source Operating Permit (MSOP) pursuant to 326 IAC 2-6.1-2.

County Attainment Status

The source is located in Grant County.

Pollutant	Status
PM-10	Attainment
PM-2.5	Attainment
SO ₂	Attainment
NO ₂	Attainment
1-hour ozone	Attainment
8-hour ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Grant County has been designated as attainment or unclassifiable for ozone. Therefore, the VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) Grant County has been classified as unclassifiable or attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 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 a surrogate for PM2.5 emissions.

- (c) Grant County has been classified as attainment or unclassifiable for all of the other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Existing Source Status

Existing Source PSD Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

	PM (tons per year)	PM10 (tons per year)	SO2 (tons per year)	NOx (tons per year)	VOC (tons per year)	CO (tons per year)	Single HAP (tons per year)	Combined HAP (tons per year)
Process	2.94	2.94	-	-	-	-	0.0706	0.1294
Boiler	neg.	neg.	neg.	0.50	neg.	0.40	neg.	neg.
Total	2.94	2.94	neg.	0.50	neg.	0.40	0.0706	0.1294
PSD Major Levels	250	250	250	250	250	250	-	-
Part 70 Major Levels	-	100	100	100	100	100	10	25

- (a) This existing source is not a major PSD stationary source because no attainment regulated pollutant is emitted at a rate of two hundred fifty (250) tons per year or more and it is not one of the 28 listed source categories.
- (b) This existing source is not a Title V major stationary source because no criteria pollutant PTE before controls exceed the applicable level of one hundred (100) tons per year and the single and combined HAP PTE before controls do not exceed the respective applicable levels of ten (10) and twenty-five (25) tons per year.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (40 CFR 60) that apply to the proposed source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (40 CFR 61 and 63) that apply to the proposed source.

State Rule Applicability - Entire Source

- (a) 326 IAC 5-1-2 (Opacity Limitations):

The requirements of 326 IAC 5 apply.

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:

- (1) 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.

- (2) 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 non-overlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

(b) 326 IAC 6-4 (Fugitive Dust Emissions):

The requirements of 326 IAC 6-4 apply.

Pursuant to 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).

Individual State Rule Applicability

(a) 326 IAC 6-2-4 (Particulate Emissions from the Combustion of Fuel for Indirect Heating):

Boiler B-1 is subject to the requirements of 326 IAC 6-2-4 because the boiler is a source of indirect heating and the construction of the boiler commenced after September 21, 1983.

Pursuant to 326 IAC 6-2-4(a) particulate emissions from indirect heating facilities constructed after September 21, 1983 shall be limited by the following equation:

$$PT = 1.09/Q^{0.26} = 1.09/(1.05 \text{ MMBtu/hr})^{0.26} = 1.08 \text{ lb PM/MMBtu}$$

where: Pt = limit (lb PM/MMBtu)

Q = total source maximum operating capacity in MMBtu/hr (1.05 MMBtu/hr)

The allowable rate using the equation is determined to be 1.08 lb PM/MMBtu.

However, 326 IAC 6-2-4(a) also states that for boilers with a capacity less than 10 MMBtu/hr, the allowable rate shall not exceed 0.6 lb PM/MMBtu.

Therefore, the PM emissions from the boiler (capacity = 1.05 MMBtu/hr) shall be limited to 0.6 lb/MMBtu.

The PM emissions from the boiler are estimated to be 0.001 lb/MMBtu which is less than the 326 IAC 6-2-4 limit of 0.6 lb/MMBtu.

$$1.05 \text{ lb PM/MMcf} * 1 \text{ MMcf}/1000 \text{ MMBtu} = 0.001 \text{ lb PM/MMBtu}$$

Therefore, the source is capable of complying with the emission limitation.

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

Pursuant to 326 IAC 6-3-2, the allowable PM emission rate from the henschel mixer for a maximum raw material process rate of 6,456 lbs/hour (3.23 tons/hr), is estimated as follows:

$$E = 4.10 * P^{0.67}$$

where: E = rate of emission in pounds per hour,

P = process weight in tons per hour (2.15 tons/hr)

$$E = 4.10 * (3.23)^{0.67} = 8.99 \text{ lb/hr}$$

Based on the estimated annual emissions after controls from the henschel mixer (2.94 ton/yr), the hourly rate was determined to be 0.672 lb/hr which is less than the 326 IAC 6-3-2 hourly limit.

Therefore, the source is capable of complying with the emission limitation.

Conclusion

This source shall be operated according to the requirements specified in Minor Source Operating Permit (MSOP) No. 053-16480-00027.