



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: May 14, 2008

RE: Kendon Corporation / 035-24861-00064

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

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER.dot12/03/07



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MINOR SOURCE OPERATING PERMIT RENEWAL OFFICE OF AIR QUALITY

**Kendon Corporation
3904 South Hoyt Avenue
Muncie, Indiana 47307**

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

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

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

Operation Permit No.: M035-24861-00064	
Original signed by: Matthew Stuckey, Chief Permits Branch Office of Air Quality	Issuance Date: May 14, 2008 Expiration Date: May 14, 2018

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SECTION A SOURCE SUMMARY

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

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

The Permittee owns and operates a stationary gray iron foundry.

Source Address:	3904 South Hoyt Avenue, Muncie, Indiana 47307
Mailing Address:	2905 North Hwy 61, Muscatine, Iowa 52671
General Source Phone Number:	(765) 282-1515
SIC Code:	3321, 3599
County Location:	Delaware
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary

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

One (1) gray iron foundry, with a maximum metal melting rate of one (1) ton per hour and consisting of the following processes and control devices constructed in 1974 (unless otherwise noted):

- (a) One (1) sand handling process, with a maximum raw material throughput of ten (10) tons per hour, using one (1) baghouse (Torit DF T2 8) for control, with emissions exhausting to the general exhaust vent identified as EP-03.
- (b) One (1) melting process, consisting of the melting of gray iron by two (2) electric induction furnaces, identified as EU-01 and EU-02, pouring and cooling, and charge handling with a maximum metal throughput of one (1) ton per hour. Emissions exhaust to stacks identified as EP-01 and EP-02.
- (c) One (1) metal cleaning and finishing process, with a maximum metal throughput of one (1) ton per hour, with emissions exhausting to the general exhaust vent, identified as EP-03.
- (d) One (1) shakeout process, with a maximum metal throughput of one (1) ton per hour, with emissions exhausting to the general exhaust vent identified as EP-03.
- (e) One (1) pouring and casting process, with a maximum metal throughput of one (1) ton per hour, with emissions exhausting to the general exhaust vent identified as EP-03.
- (f) One (1) cooling process, with a maximum metal throughput of one (1) ton per hour, with emissions exhausting to the general exhaust vent identified as EP-03.
- (g) One (1) initial grinding process, with a maximum throughput of one-half (0.5) ton of metal per hour, using one (1) dust collector (Uniblast DC-100) for control, with emissions

exhausting to the general exhaust vent identified as EP-03.

- (h) One (1) initial blasting process, with a maximum throughput of one-half (0.5) ton of metal per hour, using one (1) baghouse (Uniblast DC-100) for control, with emissions exhausting to the general exhaust vent identified as EP-03.
- (i) One (1) final grinding process, with a maximum throughput of one-half (0.5) ton of metal per hour, using one (1) dust collector (Uniblast DC-100) for control, with emissions exhausting to the general exhaust vent identified as EP-03.
- (j) One (1) final blasting process, with a maximum throughput of one-half (0.5) ton of metal per hour, using one (1) baghouse (Uniblast DC-100) for control, with emissions exhausting to the general exhaust vent identified as EP-03.
- (k) One (1) core and mold making operation, constructed in 2002, with a maximum throughput of 1.0 ton of metal per hour, with emissions exhausting to the general exhaust vent identified as EP-03.
- (l) One (1) mold blaster, constructed in 2003, with a maximum throughput rate of 1,500 pounds of mold segments per hour and a maximum abrasive (aluminum oxide) usage of 1,392 lbs/hour, using a dust collector for control, with emissions exhausting inside the building.

SECTION B GENERAL CONDITIONS

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

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

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

- (a) This permit, M035-24861-00064, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

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

B.4 Enforceability

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

B.5 Severability

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

B.6 Property Rights or Exclusive Privilege

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

B.7 Duty to Provide Information

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). 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

- (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 an "authorized individual" 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. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Notification [326 IAC 2-6.1-5(a)(5)]

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

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, IN 46204-2251
- (c) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

B.10 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) 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.
- (b) 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 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.11 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to M035-24861-00064 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

B.12 Termination of Right to Operate [326 IAC 2-6.1-7(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least ninety (90) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.13 Permit Renewal [326 IAC 2-6.1-7]

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

Request for renewal shall be submitted to:

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

- (b) A timely renewal application is one that is:
 - (1) Submitted at least ninety (90) days prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-6.1 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.14 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.

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

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

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(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)]

B.15 Source Modification Requirement

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

B.16 Inspection and Entry

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

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

(a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

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

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

B.17 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

(a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

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

- (c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

B.18 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.

B.19 Credible Evidence [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

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

C.3 Opacity [326 IAC 5-1]

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

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

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

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

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

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

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

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

C.7 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the plan submitted on. The plan is included as Attachment A.

C.8 Stack Height [326 IAC 1-7]

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

C.9 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
MC 61-52 IGCN 1003
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers

and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana 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 2-6.1-5(a)(2)]

C.10 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any

monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

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

C.12 Compliance Monitoring [326 IAC 2-1.1-11]

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

C.13 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.14 Instrument Specifications [326 IAC 2-1.1-11]

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

Corrective Actions and Response Steps

C.15 Response to Excursions or Exceedances

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or
 - (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;

- (2) review of operation and maintenance procedures and records; and/or
- (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
 - (1) monitoring data;
 - (2) monitor performance data, if applicable; and
 - (3) corrective actions taken.

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall 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 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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

C.17 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.18 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 within ninety (90) days of permit issuance.

C.19 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) 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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

One (1) gray iron foundry, with a maximum metal melting rate of one (1) ton per hour and consisting of the following processes and control devices constructed in 1974 (unless otherwise noted):

- (a) One (1) sand handling process, with a maximum raw material throughput of ten (10) tons per hour, using one (1) baghouse (Torit DF T2 8) for control, with emissions exhausting to the general exhaust vent identified as EP-03.
- (b) One (1) melting process, consisting of the melting of gray iron by two (2) electric induction furnaces, identified as EU-01 and EU-02, pouring and cooling, and charge handling with a maximum metal throughput of one (1) ton per hour. Emissions exhaust to stacks identified as EP-01 and EP-02.
- (c) One (1) metal cleaning and finishing process, with a maximum metal throughput of one (1) ton per hour, with emissions exhausting to the general exhaust vent, identified as EP-03.
- (d) One (1) shakeout process, with a maximum metal throughput of one (1) ton per hour, with emissions exhausting to the general exhaust vent identified as EP-03.
- (e) One (1) pouring and casting process, with a maximum metal throughput of one (1) ton per hour, with emissions exhausting to the general exhaust vent identified as EP-03.
- (f) One (1) cooling process, with a maximum metal throughput of one (1) ton per hour, with emissions exhausting to the general exhaust vent identified as EP-03.
- (g) One (1) initial grinding process, with a maximum throughput of one-half (0.5) ton of metal per hour, using one (1) dust collector (Uniblast DC-100) for control, with emissions exhausting to the general exhaust vent identified as EP-03.
- (h) One (1) initial blasting process, with a maximum throughput of one-half (0.5) ton of metal per hour, using one (1) baghouse (Uniblast DC-100) for control, with emissions exhausting to the general exhaust vent identified as EP-03.
- (i) One (1) final grinding process, with a maximum throughput of one-half (0.5) ton of metal per hour, using one (1) dust collector (Uniblast DC-100) for control, with emissions exhausting to the general exhaust vent identified as EP-03.
- (j) One (1) final blasting process, with a maximum throughput of one-half (0.5) ton of metal per hour, using one (1) baghouse (Uniblast DC-100) for control, with emissions exhausting to the general exhaust vent identified as EP-03.
- (k) One (1) core and mold making operation, constructed in 2002, with a maximum throughput of 1.0 ton of metal per hour, with emissions exhausting to the general exhaust vent identified as EP-03.
- (l) One (1) mold blaster, constructed in 2003, with a maximum throughput rate of 1,500 pounds of mold segments per hour and a maximum abrasive (aluminum oxide) usage of 1,392 lbs/hour, using a dust collector for control, with emissions exhausting inside the building.

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

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

D.1.1 Particulate Matter Limitations [326 IAC 2-2]

- (a) The Particulate Matter (PM) emissions from the following operations shall be limited as follows:

Process/Facility	PM (lb/hour)
Scrap and Charge Handling	0.60
(2) Electric Induction Furnaces	0.90
Pouring/ Casting	4.20
Castings Cooling	1.40
Castings Shakeout	3.20
Grinding/Blasting	0.58
Core Making	0.90
Metal Finishing	0.004
Mold Making	0.90
Mold Blaster	0.13

- (b) The raw material throughput for the sand handling operation shall be limited to 87,600 tons per twelve (12) consecutive months period, with compliance determined at the end of each month. The PM emissions from the sand handling operation baghouse shall not exceed 0.36 lb/ton.

Compliance with the above limits ensures the PM emissions from the entire source are limited to less than 100 tons per year and renders the requirements of 326 IAC 2-2 not applicable.

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

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions shall be limited as follows:

Process	PM (lb/hour)
(2) Electric Induction Furnaces	4.1
Pouring/ Casting	20.4
Castings Cooling	20.4
Castings Shakeout	20.4
Grinding/Blasting	6.52
Core Making	4.1
Metal Finishing	4.1
Mold Making	4.1
Sand Handling	41.0
Mold Blaster	3.38

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 these facilities and their control devices.

Compliance Determination Requirements

D.1.4 Particulate Control

- (a) In order to comply with condition D.1.1 and D.1.2, the baghouses Torit DF-T2-8, Uniblast DC-100, and the Mold Blaster baghouse for particulate control shall be in operation and control emissions from the sand handling operation, the grinding and blasting operations,

and the mold blaster at all times that the associated facilities are in operation.

- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.1.5 Testing Requirements [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition D.1.1, the Permittee shall perform PM testing for the sand handling operation within five (5) years of the last compliant stack test, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

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

D.1.6 Visible Emissions Notations

- (a) Daily visible emission notations of the stack exhaust EP-03 shall be performed 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) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.1.7 Parametric Monitoring

The Permittee shall record the pressure drop across the Torit DF-T2-8, and the Mold Blaster baghouses used in conjunction with the sand handling operation and mold blaster at least once per day when the sand handling and mold blaster are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 5.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.8 Broken or Failed Bag Detection

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, failed units and the associated process shall be shut down immediately until the failed unit have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For a single compartment baghouse-controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

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

D.1.9 Record Keeping Requirement

- (a) To document compliance with Condition D.1.1, the Permittee shall maintain records of the raw material throughput to the sand handling operation.
- (b) To document compliance with Condition D.1.6 the Permittee shall maintain records of daily visible emission notations of the stack exhaust EP-03. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (c) To document compliance with Condition D.1.7, the Permittee shall maintain daily records of the total static pressure drop during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.10 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.1 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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

Quarterly Report

Source Name: Kendon Corporation
Source Address: 3904 South Hoyt Avenue, Muncie, Indiana 47307
Mailing Address: 2905 North Hwy 61, Muscatine, Iowa 52671
MSOP Permit No.: M035-24861-00064
Source/Facility: Sand handling operation
Parameter: Maximum sand throughput
Limit: 87,600 tons per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR: _____

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

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

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

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
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:	Kendon Corporation
Address:	3904 South Hoyt Avenue
City:	Muncie, Indiana 47307
Phone #:	(765) 282-1515
MSOP #:	M035-24861-00064

I hereby certify that Kendon Corporation is :

still in operation.

I hereby certify that Kendon Corporation is :

no longer in operation.

in compliance with the requirements of MSOP M035-24861-00064.

not in compliance with the requirements of MSOP M035-24861-00064.

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 - 317 233-6865

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

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

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

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

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

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

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

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

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

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

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____

INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

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

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

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

326 IAC 1-6-1 Applicability of rule

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

326 IAC 1-2-39 "Malfunction" definition

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

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

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

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document for Minor Source Operating Permit (MSOP) Renewal

Source Background and Description

Source Name:	Kendon Corporation
Source Location:	3904 South Hoyt Avenue, Muncie Indiana 47307
County:	Delaware
SIC Codes:	3321, 3599
Operation Permit No.:	035-10273-00064
Operation Permit Issuance Date:	October 17, 2002
Permit Renewal No.:	035-24861-00064
Permit Reviewer:	ERG/TDP

On April 9, 2008, the Office of Air Quality (OAQ) had a notice published in the Muncie Star Press, Muncie, Indiana, stating that Kendon Corporation had applied for a Minor Source Operating Permit (MSOP) Renewal to operate a stationary gray iron foundry with control. 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.

Upon further review, the OAQ has decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted).

Change 1:

A typographical error in the "Potential to Emit After Issuance" table on page 4 of the Technical Support Document has been corrected as follows:

Pollutant	PM (ton/yr)	PM-10 (ton/yr)	SO ₂ (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO _x (ton/yr)
Sand Handling	1.58	0.24	--	--	--	--
Charge Handling	2.63	1.58	--	--	--	--
(2) Electric Induction Furnaces	3.94	3.77	--	--	--	--
Pouring/Casting	18.4	9.02	0.09	0.61	8.76	0.04
Castings Cooling	6.13	6.13	--	--	8.76	--
Castings Shakeout	14.0	9.81	--	5.26	8.76	--
Grinding/Blasting	2.53	0.25	--	--	--	--
Core Making	3.94	3.94	--	--	--	2.19
Castings Finishing	0.02	0.02	--	--	--	--
Mold Making	3.94	3.94	--	--	--	2.19
Fugitive Emissions	Negligible	Negligible	--	--	--	--
Total from Gray Iron Foundry	57.7	38.8	0.09	5.87	263 26.3	4.42
PSD Threshold	100	100	100	100	100	100

No changes have been made to the TSD because the OAQ prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision.

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

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

Source Background and Description

Source Name:	Kendon Corporation
Source Location:	3904 South Hoyt Avenue, Muncie, Indiana 47307
County:	Delaware
SIC Codes:	3321, 3599
Operation Permit No.:	035-10273-00064
Operation Permit Issuance Date:	October 17, 2002
Permit Renewal No.:	035-24861-00064
Permit Reviewer:	ERG/TDP

The Office of Air Quality (OAQ) has reviewed an application from Kendon Corporation relating to the operation of an existing gray iron foundry.

Permitted Emission Units and Pollution Control Equipment

This source consists of the following emissions units:

One (1) gray iron foundry, with a maximum metal melting rate of one (1) ton per hour and consisting of the following processes and control devices constructed in 1974 (unless otherwise noted):

- (a) One (1) sand handling process, with a maximum raw material throughput of ten (10) tons per hour, using one (1) baghouse (Torit DF T2 8) for control, with emissions exhausting to the general exhaust vent identified as EP-03.
- (b) One (1) melting process, consisting of the melting of gray iron by two (2) electric induction furnaces, identified as EU-01 and EU-02, pouring and cooling, and charge handling with a maximum metal throughput of one (1) ton per hour. Emissions exhaust to stacks identified as EP-01 and EP-02.
- (c) One (1) metal cleaning and finishing process, with a maximum metal throughput of one (1) ton per hour, with emissions exhausting to the general exhaust vent, identified as EP-03.
- (d) One (1) shakeout process, with a maximum metal throughput of one (1) ton per hour, with emissions exhausting to the general exhaust vent identified as EP-03.
- (e) One (1) pouring and casting process, with a maximum metal throughput of one (1) ton per hour, with emissions exhausting to the general exhaust vent identified as EP-03.
- (f) One (1) cooling process, with a maximum metal throughput of one (1) ton per hour, with emissions exhausting to the general exhaust vent identified as EP-03.
- (g) One (1) initial grinding process, with a maximum throughput of one-half (0.5) ton of metal per hour, using one (1) dust collector (Uniblast DC-100) for control, with emissions exhausting to the general exhaust vent identified as EP-03.
- (h) One (1) initial blasting process, with a maximum throughput of one-half (0.5) ton of metal per hour, using one (1) baghouse (Uniblast DC-100) for control, with emissions exhausting to the general exhaust vent identified as EP-03.

- (i) One (1) final grinding process, with a maximum throughput of one-half (0.5) ton of metal per hour, using one (1) dust collector (Uniblast DC-100) for control, with emissions exhausting to the general exhaust vent identified as EP-03.
- (j) One (1) final blasting process, with a maximum throughput of one-half (0.5) ton of metal per hour, using one (1) baghouse (Uniblast DC-100) for control, with emissions exhausting to the general exhaust vent identified as EP-03.
- (k) One (1) core and mold making operation, constructed in 2002, with a maximum throughput of 1.0 ton of metal per hour, with emissions exhausting to the general exhaust vent identified as EP-03.
- (l) One (1) mold blaster, constructed in 2003, with a maximum throughput rate of 1,500 pounds of mold segments per hour and a maximum abrasive (aluminum oxide) usage of 1,392 lbs/hour, using a dust collector for control, with emissions exhausting inside the building.

Existing Approvals

The source has been operating under previous approvals including, the following:

- (a) Minor Source Operating Permit 035-10273-00064 issued on October 17, 2002; and
- (b) Minor Permit Revision 035-17266-00064 issued on October 7, 2003.

All conditions from previous approvals were incorporated into this permit.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
01	North Electric Induction Furnace	25	1.0	1000	2600
02	South Electric Induction Furnace	25	1.5	1000	2600
EP-03	General Exhaust Vent	NA	NA	2696*	72*

*Data from Stack Test Results May 19 - 21, 2003

NA = information not available

Recommendation

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

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

An application for the purposes of this review was received on June 4, 2007 with additional information received on November 26, 2007.

Emission Calculations

See Appendix A of this document for detailed emission calculations (pages 1 through 4).

Potential to Emit of the Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit 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, the department, or the appropriate local air pollution control agency.”

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

Pollutant	Potential to Emit (tons/yr)
PM	415
PM-10	82.3
SO ₂	0.09
VOC	5.87
CO	26.3
NO _x	4.42

HAPs	Potential to Emit (tons/yr)
Chromium	0.10
Nickel	0.18
Arsenic	0.03
Lead	1.67
Manganese	8.13
Antimony	0.49
Organic HAPs	1.96
Total HAP	12.1

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM and PM10 is greater than 25 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1 (MSOP).
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM10, VOC, NOx, CO, and SO₂ are less than 100 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7. (Part 70 Operating Permit)
- (c) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-1.1-1(16)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.
- (d) Fugitive Emissions
Since this type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-2, the fugitive emissions are counted toward determination of PSD applicability.

Potential to Emit after Issuance

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

Pollutant	PM (ton/yr)	PM-10 (ton/yr)	SO ₂ (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO _x (ton/yr)
Sand Handling	1.58	0.24	--	--	--	--
Charge Handling	2.63	1.58	--	--	--	--
(2) Electric Induction Furnaces	3.94	3.77	--	--	--	--
Pouring/Casting	18.4	9.02	0.09	0.61	8.76	0.04
Castings Cooling	6.13	6.13	--	--	8.76	--
Castings Shakeout	14.0	9.81	--	5.26	8.76	--
Grinding/Blasting	2.53	0.25	--	--	--	--
Core Making	3.94	3.94	--	--	--	2.19
Castings Finishing	0.02	0.02	--	--	--	--
Mold Making	3.94	3.94	--	--	--	2.19
Fugitive Emissions	Negligible	Negligible	--	--	--	--
Total from Gray Iron Foundry	57.7	38.8	0.09	5.87	263	4.42
PSD Threshold	100	100	100	100	100	100

- (a) This source is not a major stationary source because even though it is one of the 28 listed source categories, it does not emit 100 tons per year or more of any regulated pollutant. Therefore, pursuant to 326 IAC 2-2 the PSD requirements do not apply.
- (b) The permittee uses baghouses to control PM/PM10 emissions from the Sand Handling, Grinding and Shotblasting equipment. The operation of these baghouses controls the potential to emit of the entire source below the PSD Major thresholds. Therefore, the permittee has limited the source-wide PM emissions to less than 100 tons per year and 326 IAC 2-2 is not applicable.

County Attainment Status

The source is located in Delaware County.

Pollutant	Status
PM-10	attainment
PM2.5	attainment
SO ₂	attainment
NO ₂	attainment
8-hour Ozone	attainment
CO	attainment
Lead	attainment

- (a) Delaware 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 PM2.5 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.
- (b) Volatile organic compounds (VOC) emissions 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 ozone. Delaware County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

- (c) Delaware County has been classified as attainment or unclassifiable in Indiana for PM10, SO₂, CO, and lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (d) Fugitive Emissions
Since this type of operation is one of the 28 listed source categories under 326 IAC 2-2 the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are counted toward determination of PSD and Emission Offset applicability.
- (e) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant (excluding PM) is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons per year.

This status is based on all previous air approvals issued to this source.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this permit.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63) included in this permit. The requirements of 40 CFR 63, Subpart EEEEE, National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries (326 IAC 20-92-1(b)) are not included in this permit because this source is not located at a source that is major for HAP.

State Rule Applicability – Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)

This source was constructed in 1974 and modified in 2002 and 2003. This source is in 1 of 28 source categories defined in 326 IAC 2-2-1(gg)(1) and has potential to emit PM before control greater than 100 tons/yr and potential to emit all other pollutants less than 100 tons/yr. The PM emissions from the existing units were limited to less than 100 tons/yr in MSOP #035-10273-00064, issued on October 17, 2002, and MPR #035-17266-00064, issued on October 7, 2003.

- (a) The Particulate Matter (PM) emissions from the following operations shall be limited as follows:

Process/Facility	PM (tons/year)	PM (lb/hour)
Scrap and Charge Handling	2.63	0.60
(2) Electric Induction Furnaces	3.94	0.90
Pouring/ Casting	18.4	4.20
Castings Cooling	6.13	1.40
Castings Shakeout	14.0	3.20
Grinding/Blasting	2.53	0.58
Core Making	3.94	0.90
Metal Finishing	0.02	0.004
Mold Making	3.94	0.90
Flame Cutting	0.66	0.15
Mold Blaster	0.56	0.13

In the above table, the PM emission rate is calculated as follows:

$$\text{PM emission rate (lb/hour)} = \text{tons of PM / year} \times 2000 \text{ lb / ton} \times 1 \text{ year} / 8760 \text{ hours}$$

The baghouses Torit DF-T2-8, Uniblast DC-100, and the Mold Blaster baghouse shall be operated at all times the sand handling operation and the grinding and blasting operations are being performed. The operation of these controls limits the PM emissions from the entire source to below 100 tons per year. Therefore, the requirements of 326 IAC 2-2 do not apply.

- (b) The raw material throughput for the Sand Handling operation shall be limited to 87,600 tons per twelve (12) consecutive month period with compliance determined at the end of each of month. The PM emissions from the sand handling operation shall not exceed 0.36 lb/ton of sand throughput. The annual throughput is calculated as follows:

$$\text{Sand throughput rate} = 10 \text{ tons/ hour} \times 8760 \text{ hour / year} = 87,600 \text{ tons of sand/year}$$

The above limits ensure the PM emissions from the entire source are limited to less than 100 tons/yr. Therefore, the requirements of 326 IAC 2-2 are not applicable.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of this gray iron foundry will emit less than 10 tons per year of a single HAP and 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-6 (Emission Reporting)

This source is located in Delaware County and the potential to emit of each criteria pollutant is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

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 the 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 6-4 (Fugitive Dust)

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 6-5 (Particulate Matter Limitations Except Lake County)

This source is not subject to 325 IAC 6-5 (Particulate Matter Limitations Except Lake County) because the fugitive particulate matter emissions from this source are negligible.

State Rule Applicability - Electric Induction Furnaces

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

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions from the two (2) electric induction furnaces shall not exceed 4.1 pounds per hour when operating at process weight of 1.0 ton per hour.

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

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

The furnaces are able to comply with 326 IAC 6-3 because the potential to emit from these units is 0.90 pounds per hour, which is less than the allowable emissions of 4.1 lbs per hour.

326 IAC 9-1-2 (Carbon Monoxide Emission Limitations)

The requirements of 326 IAC 9-1-2 (Carbon Monoxide Emission Limitations) are not applicable to this operation because the process weight of the furnaces are less than 10 tons per hour.

State Rule Applicability - Pouring and Casting, Cooling, and Shakeout Operations

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

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions from the pouring and casting, castings cooling, and shakeout operation shall each not exceed 20.4 pounds per hour when operating at process weight of 11.0 tons per hour (10 tons sand and 1 ton metal).

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

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

The pouring and casting operation is able to comply with 326 IAC 6-3 because the potential to emit from these units is 4.20 pounds per hour, which is less than the allowable emissions of 20.4 pounds per hour.

The castings cooling operation is able to comply with 326 IAC 6-3 because the potential to emit from these units is 1.40 pound per hour, which is less than the allowable emissions of 20.4 pounds per hour.

The shakeout operation is able to comply with 326 IAC 6-3 because the potential to emit from these units is 3.20 pound per hour, which is less than the allowable emissions of 20.4 pounds per hour.

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

The requirements of 326 IAC 8-1-6 (Best Available Control Technology) are not applicable to the pouring and casting operation, or the shakeout operation. The potential to emit of VOC from each operation is less than twenty-five (25) tons per year.

State Rule Applicability - Metal Cleaning and Finishing

326 IAC 6-3-2 (Particulate emission limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions from the metal cleaning and finishing shall each not exceed 4.1 pounds per hour when operating at process weight of 1.0 tons per hour.

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

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

The castings finishing operation is able to comply with 326 IAC 6-3 because the potential to emit from these units is 0.0046 pounds per hour, which is less than the allowable emissions of 4.1 pounds per hour.

State Rule Applicability - Core Making and Mold Making

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

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate matter (PM) from the core making and mold making operation shall each not exceed 4.1 lbs per hour when operating at a process weight of 1.0 ton per hour.

Interpolation of the data for the process weight rate up to sixty thousand (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,
P = process weight in tons per hour.

The core making and mold making processes will be able to comply with 326 IAC 6-3 because the potential to emit from each process is 0.90 pounds per hour after control, which is less than the allowable emissions of 4.1 pounds per hour. The baghouse shall be in operation at all times the sand handling is in operation, in order to comply with this limit.

326 IAC 8 (VOC Rules)

There are no VOC rules applicable to the core and mold making operations. These operations do not utilize resins and there are no VOC emissions from these processes.

State Rule Applicability - Four (4) Grinding and Blasting Operations

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

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions from the grinding and blasting operations shall not exceed 6.52 lbs per hour when operating at a process weight of 2 tons per hour.

Interpolation of the data for the process weight rate up to sixty thousand (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,
P = process weight in tons per hour.

This process will be able to comply with 326 IAC 6-3 because the potential to emit from the process is 0.58 lbs per hour after controls, which is less than the allowable emissions of 6.52 lbs per hour. The baghouses shall be in operation at all times the grinding and blasting processes are in operation, in order to comply with this limit.

State Rule Applicability - Mold Blaster

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

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate matter (PM) from the mold blaster shall not exceed 3.38 lbs per hour when operating at a process weight of 0.75 tons per hour.

Interpolation of the data for the process weight rate up to sixty thousand (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,
P = process weight in tons per hour.

This process will be able to comply with 326 IAC 6-3 because the potential to emit from the process is 0.13 pounds per hour after controls, which is less than the allowable emissions of 3.38 lbs per hour. The baghouse shall be in operation at all times the mold blaster is in operation, in order to comply with this limit.

State Rule Applicability - Sand Handling

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

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions from the sand handling operation shall not exceed 41.0 lbs per hour when operating at a process weight of 10 tons per hour.

Interpolation of the data for the process weight rate up to sixty thousand (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,
P = process weight in tons per hour.

This process will be able to comply with 326 IAC 6-3 because the potential to emit from the process is 0.36 lbs per hour after controls, which is less than the allowable emissions of 41.0 lbs per hour. The baghouse shall be in operation at all times the sand handling is in operation, in order to comply with this limit.

Testing Requirements

To demonstrate compliance with 326 IAC 2-2 (Prevention of Significant Deterioration), the Permittee is required to perform compliance stack testing to determine the PM emission rate for the sand handling operation. Previous testing for this operation was conducted on May 19-21, 2003. The testing shall be repeated at least once every five (5) years from this date.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-6.1 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-6.1. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

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

The compliance monitoring requirements applicable to this source are as follows:

Control	Parameter	Frequency	Range	Excursions and Exceedances
Sand Handling Baghouse (Torit DF-T2-8)	Water Pressure Drop	Daily	1.0 to 5.0 inches	Response Steps
	Visible Emissions		Normal-Abnormal	

Control	Parameter	Frequency	Range	Excursions and Exceedances
Mold Blaster Baghouse	Water Pressure Drop	Daily	1.0 to 5.0 inches	Response Steps
	Visible Emissions		Normal-Abnormal	

Recommendation

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

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

An application for the purposes of this review was received on April 5, 2007. Additional information was received on November 26, 2007.

Conclusion

The operation of this gray iron foundry shall be subject to the conditions of the Minor Source Operating Permit Renewal M035-24861-00064.

**Appendix A: Potential Emission Calculations
Grey Iron Foundry Operations**

Company Name: Kendon Corporation
Address: 39.4 South Hoyt Avenue, Muncie, Indiana 47307
Permit Number: M035-24861-00064
Reviewer: ERG/TDP
Date: December 21, 2007

Emission Unit	SCC	Emission Factors (lbs/ton)						
		PM	PM10	SO2	NOx	VOC	*CO	Lead
Charge Handling	30400315	0.60	0.36	0.00	0.00	0.00	0.00	0.00
Electric Induction Furnace	30400303	0.90	0.86	0.00	0.00	0.00	0.00	0.10
Pouring/Casting *	30400320	4.20	2.06	0.02	0.01	0.14	6.00	0.00
Castings Cooling	30400325	1.40	1.40	0.00	0.00	0.00		0.00
Main Castings Shakeout	30400331	3.20	2.24	0.00	0.00	1.20		0.00
Grinding/Blasting	30400340	17.0	1.70	0.00	0.00	0.00	0.00	0.00
Metal Finishing	30400360	4.50E-03	4.50E-03	0.00	0.00	0.00	0.00	0.00
Core Making	30400353	0.90	0.90	0.00	0.50	**	0.00	0.00
Mold Making	30400353	0.90	0.90	0.00	0.50	**	0.00	0.00
Mold Blaster	30400340	17.0	1.70	0.00	0.00	0.00	0.00	0.00
Main Sand Handling	30400350	3.60	0.54	0.00	0.00	0.00	0.00	0.00

* The August 11, 2006 Indiana Cast Metals Association memo contained the CO emission factor of 6.0 lbs/ton of metal poured for the combined pouring, cooling, and shakeout processes.

** The core/mold making processes do not use resins. There are no VOC emissions from this process. Emission factors from EPA's FIRE version 6.25.

Control Efficiencies

Emission Unit	Control Device	PM Efficiency
Grinding/Blasting	Uniblast DC-100	98.3%
Mold Blaster	Baghouse	99.0%
Main Sand Handling	Torit DF T2 8	99.0%

Uncontrolled Potential Emissions (tons/yr)

Emission Unit	SCC	Maximum Throughput (tons/hr)	PM	PM10	SO2	NOx	VOC	CO	Lead
Charge Handling	30400315	1.00	2.63	1.58	0.00	0.00	0.00	0.00	0.00
Electric Induction Furnace	30400303	1.00	3.94	3.77	0.00	0.00	0.00	0.00	0.44
Pouring/Casting	30400320	1.00	18.4	9.02	0.09	0.04	0.61	26.3	0.00
Castings Cooling	30400325	1.00	6.13	6.13	0.00	0.00	0.00		0.00
Main Castings Shakeout	30400331	1.00	14.0	9.81	0.00	0.00	5.26		0.00
Grinding/Blasting	30400340	2.00	149	14.9	0.00	0.00	0.00	0.00	0.00
Metal Finishing	30400360	1.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00
Core Making	30400353	1.00	3.94	3.94	0.00	2.19	0.00	0.00	0.00
Mold Making	30400353	1.00	3.94	3.94	0.00	2.19	0.00	0.00	0.00
Mold Blaster	30400340	0.75	55.8	5.58	0.00	0.00	0.00	0.00	0.00
Main Sand Handling	30400350	10.00	158	23.7	0.00	0.00	0.00	0.00	0.00
Total			415	82.3	0.09	4.42	5.87	26.3	0.44

Methodology:

Uncontrolled Potential Emissions (tons/yr) = Maximum Throughput (tons/hr) * Emission Factors (lbs/ton) * 1 ton/ 2000 lbs * 8760 hrs/ 1 yr

Controlled Potential Emissions (tons/yr)

Emission Unit	SCC	Maximum Throughput (tons/hr)	PM	PM10	SO2	NOx	VOC	CO	Lead
Charge Handling	30400315	1.00	2.63	1.58	0.00	0.00	0.00	0.00	0.00
Electric Induction Furnace	30400303	1.00	3.94	3.77	0.00	0.00	0.00	0.00	0.44
Pouring/Casting	30400320	1.00	18.4	9.02	0.09	0.04	0.61	26.3	0.00
Castings Cooling	30400325	1.00	6.13	6.13	0.00	0.00	0.00		0.00
Main Castings Shakeout	30400331	1.00	14.0	9.81	0.00	0.00	5.26		0.00
Grinding/Blasting	30400340	2.00	2.53	0.25	0.00	0.00	0.00	0.00	0.00
Metal Finishing	30400360	1.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00
Core Making	30400353	1.00	3.94	3.94	0.00	2.19	0.00	0.00	0.00
Mold Making	30400353	1.00	3.94	3.94	0.00	2.19	0.00	0.00	0.00
Mold Blaster	30400340	0.75	0.56	0.06	0.00	0.00	0.00	0.00	0.00
Main Sand Handling	30400350	10.00	1.58	0.24	0.00	0.00	0.00	0.00	0.00
Total			57.7	38.8	0.09	4.42	5.87	26.3	0.44

Methodology:

Controlled Potential Emissions (tons/yr) = Maximum Throughput (tons/hr) * Emission Factors (lbs/ton) * 1 ton/ 2000 lbs * 8760 hrs/ 1 yr * (1 - Control Efficiency %)

**Appendix A: Secondary Metal Production
Gray Iron Foundry
Pouring, Cooling and Shakeout HAP Emissions**

Company Name: Kendon Corporation
Address: 39.4 South Hoyt Avenue, Muncie, Indiana 47307
Permit Number: M035-24861-00064
Reviewer: ERG/TDP
Date: December 21, 2007

Organic Hazardous Air Pollution Emission Estimates

Maximum Throughput for Pouring/Cooling/Shakeout	1	tons/hr
	8,760	tons/yr
Pollutant	Combined Pouring, Cooling, and Shakeout Emission Factor (lbs/ton)	Emissions (tons/yr)
Phenol	0.0718	0.3145
Benzene	0.1643	0.7196
Aniline	0.0366	0.1603
o-Cresol	0.0185	0.0810
Naphthalene	0.0048	0.0210
N,N-Dimethylaniline	0.0085	0.0372
Toluene	0.0647	0.2834
m, p-Cresol	0.0059	0.0258
m, p-Xylene	0.0044	0.0193
Xylene (Total)	0.0383	0.1678
Acetaldehyde	0.0100	0.0438
Ethylbenzene	0.0070	0.0307
Formaldehyde	0.0011	0.0048
Hexane	0.0046	0.0201
Other HAPs	0.0070	0.0307
Total HAPs	0.4475	1.9601

METHODOLOGY

Potential to Emit HAP = Maximum Throughput (tons/hr) * 8760 hrs/yr * Emission Factor (lb/ton) * 1 tons/2000 lbs

The organic HAP emission factors are from Reference Tests Recommended in "Organic Hazardous Air Pollutant Emission Factors for Iron Foundries", Prepared by the Air Quality Committee (10-E) of the American Foundry Society August 16, 2005 for Calculating Emission Factors for Pouring, Cooling and Shakeout.

Appendix A: Emission Calculations
HAP Emissions from Foundry Operations

Company Name: Kendon Corporation
Address: 39.4 South Hoyt Avenue, Muncie, Indiana 47307
Permit Number: M035-24861-00064
Reviewer: ERG/TDP
Date: December 21, 2007

Process	Maximum Throughput (tons iron/hr)	PM emission factor lb/ton	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Eac (ton/yr)	Control Device	Control Efficiency (%)
Charge Handling SCC# 3-04-003-15 AP-42 Ch. 12.10	1.0	0.60	chromium	0.00023	0.001	0.001	N/A	
			nickel	0.00040	0.002	0.002		
			arsenic	0.00008	0.000	0.000		
			Lead	0.00231	0.010	0.010		
			Manganese	0.01860	0.081	0.081		
			Antimony	0.00111	0.005	0.005		
			TOTAL	0.02273	0.10	0.10		
Melting - Electric Induction Furnaces EPA SCC# 3-04-003-03 AP-42 Ch. 12.10	1.0	0.90	chromium	0.00034	0.001	0.001	N/A	
			nickel	0.00060	0.003	0.003		
			arsenic	0.00012	0.001	0.001		
			Lead	0.05450	0.239	0.239		
			Manganese	0.02790	0.122	0.122		
			Antimony	0.00167	0.007	0.007		
			TOTAL	0.08513	0.37	0.37		
Pouring/Casting Cooling EPA SCC#3-04-003-18 AP-42 Ch. 12.10	1.0	4.20	chromium	0.00160	0.007	0.007	N/A	
			nickel	0.00281	0.012	0.012		
			arsenic	0.00055	0.002	0.002		
			Lead	0.01617	0.071	0.071		
			Manganese	0.13020	0.570	0.570		
			Antimony	0.00777	0.034	0.034		
			TOTAL	0.15910	0.70	0.70		
Casting Shakeout EPA SCC#3-04-003-31 AP-42 Ch. 12.10	1.0	3.20	chromium	0.00122	0.005	0.000	N/A	
			nickel	0.00214	0.009	0.000		
			arsenic	0.00042	0.002	0.000		
			Lead	0.01232	0.054	0.000		
			Manganese	0.09920	0.434	0.000		
			Antimony	0.00592	0.026	0.000		
			TOTAL	0.12122	0.53	0.00		
Mold Blaster SCC# 3-04-003-40 AP-42 Ch. 12.10	1.0	17.00	chromium	0.00646	0.028	0.000	Baghouse	99.0%
			nickel	0.01139	0.050	0.002		
			arsenic	0.00221	0.010	0.000		
			Lead	0.06545	0.287	0.003		
			Manganese	0.52700	2.308	0.023		
			Antimony	0.03145	0.138	0.001		
			TOTAL	0.64396	2.82	0.03		
Grinding/Finishing SCC# 3-04-003-40 AP-42 Ch. 12.10	2.0	17.00	chromium	0.00646	0.057	0.001	Baghouse	98.3%
			nickel	0.01139	0.100	0.002	DC-100	
			arsenic	0.00221	0.019	0.019		
			Lead	0.06545	0.573	0.010		
			Manganese	0.52700	4.617	0.078		
			Antimony	0.03145	0.276	0.005		
			TOTAL	0.64396	5.64	0.11		

* Note: HAP emission factors for PM that is HAP based on information from SPECIATE, v 3.1. Lead emission factors for electric induction furnaces are from US EPA's AP-42.

USEPA Speciate v 3.1 Data	
Metal	Gen. Foundry
Manganese	3.100%
Chromium	0.038%
Nickel	0.067%
Arsenic	0.013%
Antimony	0.185%
Lead	0.385%

Total Potential Emissions Before Controls

chromium	0.10 tons/year
nickel	0.18 tons/year
arsenic	0.03 tons/year
Lead	1.23 tons/year
Manganese	8.13 tons/year
Antimony	0.49 tons/year
Total	10.16 tons/year

Total emissions after controls

chromium	0.010 tons/year
nickel	0.021 tons/year
arsenic	0.022 tons/year
Lead	0.333 tons/year
Manganese	0.875 tons/year
Antimony	0.052 tons/year
Total	1.313 tons/year

Methodology:

Ef = HAP Emission factor(lb/ton) = FIRE PM Emission Factor x Gen. Foundry HAP (%)

Ebc = Potential to Emit before controls (tons/yr) = Max. Throughput (tons/hr) x HAP Emission Factor (lbs/ton) x 8760 hrs/yr x 1 ton/2000 lbs/hr

Eac = Potential to Emit after controls (tons/yr) = (1- control efficiency/100) x Potential to Emit before control (tons/yr)

Appendix A: Emission Calculations

PM and HAP Emissions From One Oxyacetylene Station

Company Name: Kendon Corporation

Address: 39.4 South Hoyt Avenue, Muncie, Indiana 47307

Registration: M035-24861-00064

Reviewer: ERG/TDP

Date: December 21, 2007

FLAME CUTTING	Number of Stations	Max. Metal Thickness Cut (in.)	Max. Metal Cutting Rate (in./minute)	EMISSION FACTORS** (lb pollutant/1,000 inches cut, 1" thick)**				EMISSIONS (lbs/hr)				Total HAPS (lbs/hr)
				PM=PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
Oxypropylene	1	0.5	30	0.1622	0.0005	0.0001	0.0003	0.146	4.5E-04	9.0E-05	2.7E-04	0.0008

EMISSION TOTALS	PM = PM10	Mn	Ni	Cr	Total HAPS
Potential to Emit (lbs/hr)	0.15	4.50E-04	9.00E-05	2.70E-04	0.0008
Potential to Emit (lbs/day)	3.50	1.08E-02	2.16E-03	6.48E-03	0.019
Potential to Emit (tons/year)	0.64	1.97E-03	3.94E-04	1.18E-03	0.004

**Emissions factors are the ones for Oxyacetylene cutting from American Welding Society (AWS).

METHODOLOGY

Potential to Emit (lb/hr) = (# of stations) x (max. metal thickness, in.) x (max. cutting rate, in./min.) x (60 min./hr.) x (emission factor, lb. pollutant/1,000 in. cut, 1" thick)

Potential to Emit (lbs/day) = emissions (lbs/hr) x 24 hrs/day

Potential to Emit (tons/yr) = emissions (lb/hr) x 8,760 hrs/year x 1 ton/2,000 lbs.