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

Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

June 15, 2004

TO: Interested Parties / Applicant

RE: Ward Pattern & Engineering, Inc. - Heat Treat Plant / 003-17250-00263

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 9/16/03

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MINOR SOURCE OPERATING PERMIT
OFFICE OF AIR QUALITY

Ward Pattern & Engineering, Inc. – Heat Treat Plant
7603 Opportunity Drive
Fort Wayne, Indiana 46808

(herein known as the Permittee) is hereby authorized to *construct and* 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 2-5.1 if new source)*, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 003-17250-00263	
Issued by: Original signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date:June 15, 2004 Expiration Date:June 15, 2009

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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 stationary aluminum castings heat treat plant.

Authorized Individual:	V.P. Manufacturing
Source Address:	7603 Opportunity Drive, Fort Wayne, Indiana 46825
Mailing Address:	642 Opportunity Drive, Fort Wayne, Indiana 46808
General Source Phone:	(260) 426-8700
SIC Code:	3365
County Location:	Allen
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Minor Source, under PSD; Minor Source, Section 112 of the Clean Air Act

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) natural gas fired solution furnace (ID No. 1), rated at 12.75 million British thermal units per hour (MMBtu/hr), and exhausting through two (2) stacks identified as Stack Nos. 5 and 31.

(b) One (1) Goff Spin Blast shot blaster, identified as SB1, with a maximum charge rate of 1,471 pounds per hour, equipped with a common baghouse (BH-1) for particulate control, and exhausting through one (1) stack identified as Stack No. 2.

(c) One (1) Wheelabrator Tumbleblast shot blaster, identified as SB2, with a maximum charge rate of 2,400 pounds per hour, equipped with a common baghouse (BH-1) for particulate control, and exhausting through one (1) stack identified as Stack No. 2.

(d) One (1) Wheelabrator Tumbleblast shot blaster, identified as SB3, with a maximum charge rate of 2,100 pounds per hour, equipped with a common baghouse (BH-1) for particulate control, and exhausting through one (1) stack identified as Stack No. 2.

(e) One (1) natural gas fired solution furnace (ID No. 2) rated at 4.5 MMBtu/hr.

(f) Two (2) natural gas fired quench tank heaters (ID Nos. 1 and 3), each rated at 1.5 MMBtu/hr.

(g) Six (6) natural gas fired age ovens (ID Nos. 1 through 6), each rated at 0.5 MMBtu/hr.

(h) Four (4) natural gas fired age ovens (ID Nos. 7 through 10), each rated at 1.0 MMBtu/hr.

(i) One (1) natural gas fired space heater rated at 1.0 MMBtu/hr.

(j) One (1) natural gas fired office heater rated at 0.125 MMBtu/hr.

(k) One (1) natural gas fired water heater rated at 0.04 MMBtu/hr.

(l) Waste sand and recycled sand handling operations.

(m) Quenching operations used with heat treating processes.

(n) Paved and unpaved road and parking lots with public access.

(o) Blowdown for any of the following: sight glass, boiler, compressors, pumps, and cooling tower.

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, P.O. Box 6015
Indianapolis, IN 46206-6015

(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.

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

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The PMP extension notification does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The Permittee shall implement the PMPs, including any required record keeping, as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.

(c) A copy of the 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 PMP does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation, Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.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, P.O. Box 6015
Indianapolis, Indiana 46206-6015

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, I/M & Billing 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]

(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, P.O. Box 6015
Indianapolis, Indiana 46206-6015

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 2-7-1(34).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, 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

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 than180 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, P. O. Box 6015
Indianapolis, Indiana 46206-6015

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 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.9 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.10 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

(a) Whenever a condition in this permit requires the measurement of total static pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (2%) of full scale reading.

(b) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

C.11 Compliance Response Plan - Preparation and Implementation

(a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ**,** upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:

(1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.

(2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan, the Permittee shall amend its Compliance Response Plan to include such response steps taken.

(b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:

(1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or

(2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.

(3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, and it will be ten (10) days or more until the unit or device will be shut down, then the Permittee shall promptly notify the IDEM, OAQ of the expected date of the shut down. The notification shall also include the status of the applicable compliance monitoring parameter with respect to normal, and the results of the response actions taken up to the time of notification.

(4) Failure to take reasonable response steps shall be considered a deviation from the permit.

(c) The Permittee is not required to take any further response steps for any of the following reasons:

(1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.

(3) An automatic measurement was taken when the process was not operating.

(4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.

(d) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

Record Keeping and Reporting Requirements

C.12 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.13 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.14 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, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(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 report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The report does 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.

SECTION D.1 EMMISIONS UNITS OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) natural gas fired solution furnace (ID No. 1), rated at 12.75 million British thermal units per hour (MMBtu/hr), and exhausting through two (2) stacks identified as Stack Nos. 5 and 31.

(b) One (1) Goff Spin Blast shot blaster, identified as SB1, with a maximum charge rate of 1,471 pounds per hour, equipped with a common baghouse (BH-1) for particulate control, and exhausting through one (1) stack identified as Stack No. 2.

(c) One (1) Wheelabrator Tumbleblast shot blaster, identified as SB2, with a maximum charge rate of 2,400 pounds per hour, equipped with a common baghouse (BH-1) for particulate control, and exhausting through one (1) stack identified as Stack No. 2.

(d) One (1) Wheelabrator Tumbleblast shot blaster, identified as SB3, with a maximum charge rate of 2,100 pounds per hour, equipped with a common baghouse (BH-1) for particulate control, and exhausting through one (1) stack identified as Stack No. 2.

(e) One (1) natural gas fired solution furnace (ID No. 2) rated at 4.5 MMBtu/hr.

(f) Two (2) natural gas fired quench tank heaters (ID Nos. 1 and 3), each rated at 1.5 MMBtu/hr.

(g) Six (6) natural gas fired age ovens (ID Nos. 1 through 6), each rated at 0.5 MMBtu/hr.

(h) Four (4) natural gas fired age ovens (ID Nos. 7 through 10), each rated at 1.0 MMBtu/hr.

(i) One (1) natural gas fired space heater rated at 1.0 MMBtu/hr.

(j) One (1) natural gas fired office heater rated at 0.125 MMBtu/hr.

(k) One (1) natural gas fired water heater rated at 0.04 MMBtu/hr.

(l) Waste sand and recycled sand handling operations.

(m) Quenching operations used with heat treating processes.

(n) Paved and unpaved road and parking lots with public access.

(o) Blowdown for any of the following: sight glass, boiler, compressors, pumps, and cooling tower.

(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 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the shot blasters (SB1, SB2, and SB3) shall be limited as follows:

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 and
P = process weight rate in tons per hour

Emission Unit	Process Weight Rate (tons/hr)	Allowable PM Emissions from 326 IAC 6-3-2 (lb/hr)
SB1	0.735	3.33
SB2	1.20	4.63
SB3	1.05	4.23

D.1.2 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 any control devices.

Compliance Determination Requirements

D.1.3 Particulate Control

In order to comply with D.1.1, D.1.2, and D.1.3, the baghouses for particulate control shall be in operation and control emissions from the shot blasters (SB1, SB2, and SB3) at all times that the units are in operation.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.4 Visible Emissions Notations

(a) Visible emission notations of the shot blasters (SB1, SB2, and SB3) stacks exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

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

D.1.5 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the shot blasters (SB1, SB2, and SB3), at least once per shift when the units are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan -Preparation, Implementation, Records, and Reports. 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 - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

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

D.1.6 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the shot blasters (SB1, SB2, and SB3). Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

D.1.7 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit. If operations continue after bag failure is observed and it will be 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.

(b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units 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).

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.8 Record Keeping Requirements

(a) To document compliance with Condition D.1.4 the Permittee shall maintain records of visible emission notations of the shot blasters (SB1, SB2, and SB3) stacks exhaust once per shift.

(b) To document compliance with Condition D.1.5, the Permittee shall maintain records once per shift of the total static pressure drop.

(c) To document compliance with Condition D.1.6, the Permittee shall maintain records of the results of the inspections required under Condition D.1.6.

(d) To document compliance with Condition D.1.3, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.

(e) All records shall be maintained in accordance with Section C – General Record Keeping Requirements of this permit

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:	**Ward Pattern & Engineering, Inc. – Heat Treat Plant**
Address:	**7603 Opportunity Drive**
City:	**Fort Wayne, Indiana**
Phone #:	**(260) 426-8700**
MSOP #:	**003-17250-00263**

I hereby certify that [Ward Pattern & Engineering] is
☐ still in operation.
☐ no longer in operation.

I hereby certify that [Ward Pattern & Engineering] is
☐ in compliance with the requirements of MSOP 003-17250-00263.
☐ not in compliance with the requirements of MSOP 003-17250-00263.

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 PERMI 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:	Ward Pattern & Engineering, Inc. – Heat Treat Plant
Source Location:	7603 Opportunity Drive, Fort Wayne, IN 46852
County:	Allen
SIC Code:	3365
Operation Permit No.:	003-17250-00263
Permit Reviewer:	Adeel Yousuf / EVP

The Office of Air Quality (OAQ) has reviewed an application from Ward Pattern & Engineering, Inc. – Heat Treat Plant relating to the operation of heat treatment of aluminum castings operation.

Source History

Ward Pattern & Engineering, Inc. – Heat Treat Plant was originally issued a FESOP (No.: 003-8477-00263) on August 11, 1997. The source applied for a FESOP renewal permit on May 8, 2003. During this FESOP permit renewal process, IDEM, OAQ has determined that the permit level for this source will transition from FESOP to MSOP level. This determination is based on the revised PM/PM10 emission factor for the three shotblasters which is consistent with the recent stack test conducted by the source. Previously used PM/PM10 emission factors, which highly exaggerated the Ward Pattern & Engineering, Inc.'s particulate emissions, were based on an industrial study for abrasive blasting. These emission factors have been replaced by PM/PM10 emission factors for "Grinding and Cleaning operations (SCC # 30400340)" from the FIRE version 6.23, which best represents the operation at this source and are more conservative than the ones from obtained from the stack test. Therefore, this source will be issued a MSOP based on revised potential emissions.

Permitted Emission Units and Pollution Control Equipment

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

(a) One (1) natural gas fired solution furnace (ID No. 1), rated at 12.75 million British thermal units per hour (MMBtu/hr), and exhausting through two (2) stacks identified as Stack Nos. 5 and 31.

(b) One (1) Goff Spin Blast shot blaster, identified as SB1, with a maximum charge rate of 1,471 pounds per hour, equipped with a common baghouse (BH-1) for particulate control, and exhausting through one (1) stack identified as Stack No. 2.

(c) One (1) Wheelabrator Tumbleblast shot blaster, identified as SB2, with a maximum charge rate of 2,400 pounds per hour, equipped with a common baghouse (BH-1) for particulate control, and exhausting through one (1) stack identified as Stack No. 2.

(d) One (1) Wheelabrator Tumbleblast shot blaster, identified as SB3, with a maximum charge rate of 2,100 pounds per hour, equipped with a common baghouse (BH-1) for particulate control, and exhausting through one (1) stack identified as Stack No. 2.

(e) One (1) natural gas fired solution furnace (ID No. 2) rated at 4.5 MMBtu/hr.

(f) Two (2) natural gas fired quench tank heaters (ID Nos. 1 and 3), each rated at 1.5 MMBtu/hr.

(g) Six (6) natural gas fired age ovens (ID Nos. 1 through 6), each rated at 0.5 MMBtu/hr.

(h) Four (4) natural gas fired age ovens (ID Nos. 7 through 10), each rated at 1.0 MMBtu/hr.

(i) One (1) natural gas fired space heater rated at 1.0 MMBtu/hr.

(j) One (1) natural gas fired office heater rated at 0.125 MMBtu/hr.

(k) One (1) natural gas fired water heater rated at 0.04 MMBtu/hr.

(l) Waste sand and recycled sand handling operations.

(m) Quenching operations used with heat treating processes.

(n) Paved and unpaved road and parking lots with public access.

(o) Blowdown for any of the following: sight glass, boiler, compressors, pumps, and cooling tower.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) FESOP 003-8477-00263, issued on August 11, 1997.

(b) First Significant Permit Revision 003-12515-00263, issued on December 15, 2000.

Enforcement Issue

(a) IDEM is aware that the FESOP permit renewal application was due on November 11, 2001 and the source failed to submit it on time. The FESOP renewal application was submitted by the source on May 8, 2003.

(b) IDEM is reviewing this matter and is taking appropriate action.

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 May 8, 2003, with additional information received on June 17, 2003 and March 16, 2004.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, pages 1 through 7).

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, inclulding 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."

Pollutant	Potential to Emit (tons/yr)
PM	105.96
PM-10	25.08
SO_2	0.07
VOC	0.69
CO	10.45
NO_x	12.44

HAPs	Potential to Emit (tons/yr)
Hexane	0.22
Total	0.23

(a) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of pollutants are less than 100 tons per year and PTE of PM and PM10 are greater than 25 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1.

(b) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

County Attainment Status

The source is located in Allen County.

Pollutant	Status
PM-10	Attainment
SO_2	Attainment
NO_2	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Allen County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.

(b) Allen County has been classified as attainment or unclassifiable for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.

Source Status

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

Pollutant	Emissions (tons/yr)
PM	0.77
PM-10	1.00
SO_2	0.07
VOC	0.69
CO	10.45
NO_x	12.44
Single HAP	0.22
Combination HAPs	0.22

(a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories.

(b) These emissions were based on emission calculations derived from information provided in the application submitted by the Ward Pattern & Engineering, Inc. – Heat Treat Plant received on July 7, 2003.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit 003-17250-00263, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant 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 the air approvals issued to the source. This status has been verified by the OAQ inspector assigned to the source.

Federal Rule Applicability

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

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

(c) The source is not subject to Compliance Assurance Monitoring (CAM), 40 CFR Part 64. This rule applies to pollutant-specific emissions unit at a major source that is required to obtain a Part 70 permit. This is a FESOP source therefore, this rule does not apply.

State Rule Applicability – Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))
This source is not subject to this rule because potential uncontrolled emissions of all criteria pollutants are less than 250 tons per year. This source is also not one of the 28 listed source categories. Therefore, this source is not subject to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)).

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
This source is not subject to this rule. This rule applies to major sources of hazardous air pollutants (HAP) that were constructed or reconstructed after July 27, 1997. The source emits less than 10 tons per year of a single HAP and less than 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 Jay County and the potential to emit for each of all criteria pollutants 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 this permit:

(a) Opacity shall not exceed an average of forty percent (40%) 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 Emissions)
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 (Fugitive Particulate Matter Emission Limitations)
This source is not subject to 326 IAC 6-5, for fugitive particulate matter emissions, because the fugitive particulate matter emissions from this source are less than 25 tons per year.

State Rule Applicability – Individual Facilities

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

(a) The allowable particulate emission rate from the Goff Spin Blast shot blaster (SB1) shall not exceed 3.33 pounds per hour when operating at a process weight rate of 0.735 tons per hour. The pounds per hour limitation was calculated using the following equation:

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 and
P = process weight rate in tons per hour

$E = 4.10\ (0.735)^{0.67} = 3.33$ lb PM/hr;

The baghouse (BH-1) shall be in operation at all times the shot blaster (SB1) is in operation, in order to comply with this limit.

(b) The allowable particulate emission rate from the Wheelabrator Tumbleblast shot blaster (SB2) shall not exceed 4.63 pounds per hour when operating at a process weight rate of 1.20 tons per hour. The pounds per hour limitation was calculated using the following equation:

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 and
P = process weight rate in tons per hour

$E = 4.10\ (1.20)^{0.67} = 4.63$ lb PM/hr;

The baghouse (BH-1) shall be in operation at all times the shot blaster (SB2) is in operation, in order to comply with this limit.

(c) The allowable particulate emission rate from the Wheelabrator Tumbleblast shot blaster (SB3) shall not exceed 4.23 pounds per hour when operating at a process weight rate of 1.05 tons per hour. The pounds per hour limitation was calculated using the following equation:

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 and
P = process weight rate in tons per hour

$E = 4.10\ (1.05)^{0.67} = 4.23$ lb PM/hr;

The baghouse (BH-1) shall be in operation at all times the shot blaster (SB3) is in operation, in order to comply with this limit.

(d) Pursuant to 326 IAC 6-3-1(b)(14), waste sand and recycle sand handling are exempt from 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because the uncontrolled potential to emit is less than 0.551 pound per hour.

Compliance Requirements

Permits issued under 326 IAC 2-6 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 2-6.1-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

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

All compliance requirements from previous approvals were incorporated into this FESOP except the daily frequency of performing visible emission notations and recording of pressure drop readings has been changed to once per shift.

Reason changed: Compliance monitoring conditions are in the permit in order to ensure continuous compliance with the requirements. Baghouse failure can occur suddenly; therefore monitoring of baghouse operational parameters should be more frequently than weekly or even daily in such cases where a source operates more than one shift per day. The OAQ believes that changing visible emissions notations to once per operating shift is a reasonable requirement. Therefore, the requirements to perform visible emissions notations have been changed from daily to once per shift. This change likewise applies to the pressure drop readings.

1. The shot blasters (SB1, SB2, and SB3) have applicable compliance monitoring conditions as specified below:

   (a) Once per shift visible emissions notations of the shot blasters (SB1, SB2, and SB3) stacks exhaust shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. 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. 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. 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. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

   (b) The Permittee shall record the total static pressure drop across the baghouse controlling the shot blasters (SB1, SB2, and SB3), at least once per shift when the units are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan- Preparation, Implementation, Records, and Reports. 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 - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

   (c) An inspection shall be performed each calendar quarter of all bags controlling the process. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

(d) In the event that bag failure has been observed:

(1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(2) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse=s pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units 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).

These monitoring conditions are necessary because the baghouses for shot blasters (SB1, SB2, and SB3) must operate properly to ensure compliance with 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes).

Conclusion

The operation of this aluminum castings heat treat plant shall be subject to the conditions of the attached proposed Minor Source Operating Permit 003-17250-00263.

Appendix A: Emission Calculations

Company Name: Ward Pattern & Engineering, Inc. - Heat Treat Plant
Address City IN Zip: 7603 Opportunity Drive, Fort Wayne, Indiana 46808
Permit No.: MSOP 003-17250-00263
Reviewer: Adeel Yousuf / EVP
Date: March 23, 2004

Uncontrolled Potential Emissions (tons/year)

	Emissions Generating Activity			
Pollutant	Natural Gas Combustion Furnace No. 1	Shotblasting	Insignificant Activities	**TOTAL**
PM	0.11	105.72	0.14	105.96
PM10	0.42	24.14	0.52	25.08
SO2	0.03	0.00	0.04	0.07
NOx	5.58	0.00	6.86	12.44
VOC	0.31	0.00	0.38	0.69
CO	4.69	0.00	5.76	10.45
total HAPs	0.11	0.00	0.13	0.23
worst case single HAP	0.10 (Hexane)	0.00	0.12 (Hexane)	0.22 (Hexane)

Total emissions based on rated capacity at 8,760 hours/year.

Controlled Potential Emissions (tons/year)

	Emissions Generating Activity			
Pollutant	Natural Gas Combustion Furnace No. 1	Shotblasting	Insignificant Activities	**TOTAL**
PM	0.11	0.53	0.14	0.77
PM10	0.42	0.05	0.52	1.00
SO2	0.03	0.00	0.04	0.07
NOx	5.58	0.00	6.86	12.44
VOC	0.31	0.00	0.38	0.69
CO	4.69	0.00	5.76	10.45
total HAPs	0.11	0.00	0.13	0.23
worst case single HAP	0.10 (Hexane)	0.00	0.12 (Hexane)	0.22 (Hexane)

Total emissions based on rated capacity at 8,760 hours/year.

Appendix A: Emission Calculations
Abrasive Shot Blasting

Company Name: **Ward Pattern & Engineering, Inc. - Heat Treat Plant**
Address City IN Zip: **7603 Opportunity Drive, Fort Wayne, Indiana 46808**
Permit No.: **MSOP 003-17250-00263**
Reviewer: **Adeel Yousuf / EVP**
Date: **March 23, 2004**

Unit ID	Machine	Blast Time/Cycle Min	Non-Blast Time/Cycle - Min	Total Time/cycle - Min	Fraction time shotblast feed	cycles/hr	cycles/day	Pounds / cycle	tons/day Charge
SB1	Goff 1	1.5	2.58	4.08	0.368	14.71	352.94	100	17.65
SB2	Wheelabrator	3	2	5	0.600	12.00	288.00	200	28.80
SB3	Goff 2	3.17	4.58	7.75	0.409	7.00	168.00	300	25.20

Unit ID	PM Filterable Factor #/ton Charged	PM 10 Filterable Factor #/ton Charged	PTE PM Uncontrolled ton/yr	PTE PM-10 Uncontrolled ton/yr	Control Unit Efficiency	PTE PM Controlled ton/yr	PTE PM-10 Controlled ton/yr
SB1	17	1.7	20.129	2.013	99.500	0.101	0.010
SB2	17	1.7	53.611	5.361	99.500	0.268	0.027
SB3	17	1.7	31.979	3.198	99.500	0.160	0.016
		Total	**105.719**	**10.572**		**0.529**	**0.053**

Methodology:
PM and PM10 Emission factors are from FIRE version 6.23 for Gray Iron Foundries, grinding and cleaning operation (SCC # 30400340)
Total Charge (tons/day) = (1/Total Time (cycle-Min) * 60 (min/hr)) x 24 hr/day x # cycles x (1/2000) (ton/lb)
Uncontrolled PM/PM10 Emissions (tons/yr) = Charge Rate (ton/day) x Fraction time shotblas feed x Emission Factor (llb/ton) x 1/24 (day/hrs) x 8760 (hrs/yr)
Controlled PM/PM10 Emissions (ton/yr) = Uncontrolled PM/PM10 Emissions (ton/yr) x (1 - Control Efficiency) * 8760 (hrs/yr) * (1 ton/2000 lbs)

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: **Ward Pattern & Engineering, Inc. - Heat Treat Plant**
Address City IN Zip: **7603 Opportunity Drive, Fort Wayne, Indiana 46808**
Permit No.: **MSOP 003-17250-00263**
Reviewer: **Adeel Yousuf / EVP**
Date: **March 23, 2004**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
12.8	111.7

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.11	0.42	0.03	5.58	0.31	4.69

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
See page 4 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler
HAPs Emissions

Company Name: **Ward Pattern & Engineering, Inc. - Heat Treat Plant**
Address City IN Zip: **7603 Opportunity Drive, Fort Wayne, Indiana 46808**
Permit No.: **MSOP 003-17250-00263**
Reviewer: **Adeel Yousuf / EVP**
Date: **March 23, 2004**

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.173E-04	6.701E-05	4.188E-03	1.005E-01	1.899E-04

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	2.792E-05	6.143E-05	7.818E-05	2.122E-05	1.173E-04

Methodology is the same as page 3.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler

Company Name: Ward Pattern & Engineering, Inc. - Heat Treat Plant
Address City IN Zip: 7603 Opportunity Drive, Fort Wayne, Indiana 46808
Permit No.: MSOP 003-17250-00263
Reviewer: Adeel Yousuf / EVP
Date: March 23, 2004

Unit	Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
One (1) Heat Treat Furnace (ID No. 2)	4.5	
Two (2) Quench Tank Heaters (ID No. 1 and 3), each rated @ 1.5 MMBtu/hr	3.0	
Six (6) age ovens (ID No. 1 through 6), each rated @ 0.5 MMBtu/hr	3.0	
Four (4) age ovens (ID No. 7 through 10), each rated @ 1.0 MMBtu/hr	4.0	
One (1) space heater	1.000	
One (1) office heater	0.125	
One (1) water heater	0.04	
	15.665	137.2

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.13	0.52	0.04	6.86	0.38	5.76

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler
HAPs Emissions

Company Name: **Ward Pattern & Engineering, Inc. - Heat Treat Plant**
Address City IN Zip: **7603 Opportunity Drive, Fort Wayne, Indiana 46808**
Permit No.: **MSOP 003-17250-00263**
Reviewer: **Adeel Yousuf / EVP**
Date: **March 23, 2004**

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.441E-04	8.234E-05	5.146E-03	1.235E-01	2.333E-04

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	3.431E-05	7.547E-05	9.606E-05	2.607E-05	1.441E-04

Methodology is the same as page 5.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Insignificant Activity
Sand Handling

Company Name: **Ward Pattern & Engineering, Inc. - Heat Treat Plant**
Address City IN Zip: **7603 Opportunity Drive, Fort Wayne, Indiana 46808**
Permit No.: **MSOP 003-17250-00263**
Reviewer: **Adeel Yousuf / EVP**
Date: **March 23, 2004**

*** * conveying / handling * ***

Waste sand and recycled sand handling operation

The following calculations determine the amount of emissions created by material handling, based on 8.760 hours of use and AP-42, Section 13.2.4, Equation 1. The emission factor for calculating PM emissions is calculated as follows:

PM & PM-10 Emissions:

E =	k*(0.0032)*(((U/5)^1.3)/((M/2)^1.4))	
=	5.60E-04	lb PM-10/ton
	1.18E-03	lb PM/ton
where k =	0.35	(particle size multiplier for <10um)
	0.74	(particle size multiplier for <30um)
U =	12	mph mean wind speed
M =	7.4	material moisture content (%)

$$\frac{1.1 \text{ ton/hr} * 8{,}760 \text{ hrs/yr}}{2{,}000 \text{ lb/ton}} * \text{Ef (lb/ton of material)} = \text{(ton/yr)}$$

Total PM 10 Emissions:	**0.0027**	**tons/yr**
Total PM Emissions:	**0.0057**	**tons/yr**