



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant
DATE: January 13, 2005
RE: Quest Stamping Technologies, LLC / 039-20024-00610
FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

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

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER.dot 1/10/05



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**NEW SOURCE CONSTRUCTION PERMIT
and MINOR SOURCE OPERATING PERMIT
OFFICE OF AIR QUALITY**

**Quest Stamping Technologies, LLC
21840 Protecta Drive
Elkhart, Indiana 46516**

(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, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 039-20024-00610	
Issued by: Original signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: January 13, 2005 Expiration Date: January 13, 2010

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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 metal brake shoe manufacturing and assembly source.

Authorized Individual:	Vice President of Manufacturing Operations
Source Address:	21840 Protecta Drive, Elkhart, Indiana 46516
Mailing Address:	21840 Protecta Drive, Elkhart, Indiana 46516
General Source Phone:	(574) 295-1644
SIC Code:	3714
County Location:	Elkhart
Source Location Status:	Nonattainment area for the 8-hour Ozone Standard Attainment area for all other criteria pollutants
Source Status:	Minor Source Operating Permit Minor Source, under PSD and Nonattainment NSR Minor Source, Section 112 of the Clean Air Act

A.2 Emissions Units and Pollution Control Equipment Summary

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

- (a) One (1) natural gas-fired office furnace, identified as F-01, exhausting through stack FSV-01, heat input capacity: 0.075 million British thermal units per hour.
- (b) One (1) natural gas-fired office furnace, identified as F-02, exhausting through stack FSV-02, heat input capacity: 0.045 million British thermal units per hour.
- (c) One (1) natural gas-fired air makeup unit, identified as AM-01, exhausting through stack AMSV-01, heat input capacity: 4.5 million British thermal units per hour.
- (d) One (1) large brake shoe bonding oven, identified as P30-01, fired by natural gas, exhausting through stack P30SV-01, heat input capacity: 2.4 million British thermal units per hour.
- (e) One (1) brake shoe debonding oven, identified as P31-01, exhausting through stack P31SV-01, fired by natural gas, heat input capacity: 0.75 million British thermal units per hour.
- (f) One (1) small brake shoe bonding oven, identified as P32-01, fired by natural gas, exhausting through stack P32SV-01, heat input capacity: 0.4 million British thermal units per hour.
- (g) One (1) brake shoe debonding oven, identified as P33-01, fired by natural gas, exhausting through stack P33SV-01, heat input capacity: 0.8 million British thermal units per hour.

- (h) One (1) varnish dip tank, identified as P37-01, equipped with a catalytic oxidizer with a supplemental fuel capacity of 0.5724 million British thermal units per hour of natural gas, exhausting through stack P37SV-01, capacity: 892.5 pounds of metal parts per hour.
- (i) One (1) enclosed wheelabrator shot blaster, equipped with a baghouse identified as P35-01, with internal return air, capacity: 847.9 pounds of metal parts and 1,000 pounds of steel shot per hour.
- (j) Friction brake material machining operations, equipped with an internal return bag filter identified as P38BF-01, with a capacity of 892.5 pounds of metal/friction brake material per hour, including the following:
 - (1) Seven (7) grinding/shaping stations.
 - (2) Wire/rod-free spot welding.

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 construct 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 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.5 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.6 Modification to Permit [326 IAC 2]

Notwithstanding the Section B condition entitled "Minor Source Operating Permit", all requirements and conditions of this construction 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.7 Minor Source Operating Permit [326 IAC 2-6.1]

This document shall also become a minor source operating permit pursuant to 326 IAC 2-6.1 when, prior to start of operation, the following requirements are met:

- (a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section.
 - (1) If the Affidavit of Construction verifies that the facilities covered in this Construction Permit were constructed as proposed in the application, then the facilities may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.
 - (2) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2-6.1-6 and an Operation Permit Validation Letter is

issued.

- (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (c) Upon receipt of the Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section, the Permittee shall attach it to this document.
- (d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-1.1-7(Fees).

B.8 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.9 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 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.10 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.11 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.12 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.13 Annual Fee Payment [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing.
- (b) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

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

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than one hundred (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 construct and 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 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 by using ambient air quality modeling pursuant to 326 IAC 1-7-4.

C.6 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.7 Performance Testing [326 IAC 3-6]

- (a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

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

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, 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 not later than forty-five (45) days after the completion of the testing. An extension may be granted by the 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.8 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.9 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.10 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.11 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11]

- (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) Whenever a condition in this permit requires the measurement of a (temperature or flow rate), the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (" 2%) of full scale reading.
- (c) 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.12 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.

C.13 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 emissions unit 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 re-testing in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the re-testing deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to non-compliant stack tests.

The response action documents submitted pursuant to this condition do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1.

Record Keeping and Reporting Requirements

C.14 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.15 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.16 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 or semi-annual report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The reports do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

SECTION D.1 EMISSIONS UNITS OPERATION CONDITIONS

Emissions Unit Description:

- (a) One (1) natural gas-fired office furnace, identified as F-01, exhausting through stack FSV-01, heat input capacity: 0.075 million British thermal units per hour.
- (b) One (1) natural gas-fired office furnace, identified as F-02, exhausting through stack FSV-02, heat input capacity: 0.045 million British thermal units per hour.
- (c) One (1) natural gas-fired air makeup unit, identified as AM-01, exhausting through stack AMSV-01, heat input capacity: 4.5 million British thermal units per hour.
- (d) One (1) large brake shoe bonding oven, identified as P30-01, fired by natural gas, exhausting through stack P30SV-01, heat input capacity: 2.4 million British thermal units per hour.
- (e) One (1) brake shoe debonding oven, identified as P31-01, exhausting through stack P31SV-01, fired by natural gas, heat input capacity: 0.75 million British thermal units per hour.
- (f) One (1) small brake shoe bonding oven, identified as P32-01, fired by natural gas, exhausting through stack P32SV-01, heat input capacity: 0.4 million British thermal units per hour.
- (g) One (1) brake shoe debonding oven, identified as P33-01, fired by natural gas, exhausting through stack P33SV-01, heat input capacity: 0.8 million British thermal units per hour.

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

There are no requirements specifically applicable to these facilities.

SECTION D.2

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (h) One (1) varnish dip tank, identified as P37-01, equipped with a catalytic oxidizer with a supplemental fuel capacity of 0.5724 million British thermal units per hour of natural gas, exhausting through stack P37SV-01, capacity: 892.5 pounds of metal parts per hour.

(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.2.1 Volatile Organic Compound (VOC) Content Limitations [326 IAC 8-2-9] [326 IAC 8-1-2]

- (a) Pursuant to 326 IAC 8-2-9, the Permittee shall not allow the discharge into the atmosphere of VOC in excess of three and five-tenths (3.5) pounds of VOC per gallon of coating, excluding water.
- (b) Pursuant to 326 IAC 8-1-2(b), the varnish dip tank VOC emissions shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon of coating solids, allowed in (a).

This equivalency was determined by the following equation:

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

Where

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

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

- (c) The pounds of VOC emitted per gallon of coating solids shall be limited to less than 6.7.
- (d) Pursuant to 326 IAC 8-1-2(c), the overall efficiency of the catalytic oxidizer shall be no less than the equivalent overall efficiency calculated by the following equation:

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

Where:

V = The actual VOC content of the coating or, if multiple coatings are used, the daily weighted average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied.

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

O = Equivalent overall efficiency of the capture system and control device as a percentage.

The overall efficiency of the catalytic oxidizer shall be greater than 95.9%.

D.2.2 Volatile Organic Compound (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9 (f), all solvents sprayed from the application equipment of the varnish dip tank during cleanup or color changes shall be directed into containers. Said containers shall be closed as soon as the solvent spraying is complete. In addition, all waste solvent shall be disposed of in such a manner that minimizes evaporation.

D.2.3 Preventive Maintenance Plan [326 IAC 1-6-3]

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

Compliance Determination Requirements

D.2.4 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

Pursuant to 326 IAC 8-1-2(a), the Permittee shall operate the catalytic oxidizer to achieve compliance with Condition D.2.1.

D.2.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

Within one hundred and eighty (180) days after initial startup, the Permittee shall conduct a performance test to verify the VOC control efficiency specified in Condition D.2.1 for the catalytic oxidizer utilizing methods as approved by the Commissioner. Testing shall be conducted in accordance with Section C - Performance Testing.

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

D.2.6 Catalytic Oxidizer Temperature

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the catalytic oxidizer for measuring the temperature at the inlet to the catalyst bed. The output of this system shall be recorded as a three-hour average. From the date of issuance of this permit until the approved stack test results are available, the Permittee shall take appropriate response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation whenever the three-hour average inlet temperature is below 550°F. A three-hour average temperature that is below 550°F is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation shall be considered a deviation from this permit.
- (b) The Permittee shall determine the three-hour average temperature from the most recent valid stack test that demonstrates compliance with the limits in Condition D.2.1, as approved by IDEM.
- (c) On and after the date the approved stack test results are available, the Permittee shall take appropriate response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation whenever the three-hour average inlet temperature of the catalyst bed is below the three-hour average temperature as observed during the compliant stack test. A three-hour average temperature that is below the three-hour average temperature as observed during the compliant stack test is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation shall be considered a deviation from this permit.

D.2.7 Catalyst Replacement Inspections

The Permittee shall inspect the catalyst activity level at least every twelve (12) months. If there are indications of excess fouling or excess catalyst degradation, the Permittee shall test the catalyst activity or replace the catalyst.

D.2.8 Parametric Monitoring

- (a) The Permittee shall determine fan amperage or duct pressure from the most recent valid stack test that demonstrates compliance with the limits in Condition D.2.1, as approved by IDEM.
- (b) The duct pressure or fan amperage shall be observed at least once per day when the catalytic oxidizer is in operation. When for any one reading, the duct pressure or fan amperage is outside the normal range as established in most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation. A reading that is outside the range as established in the most recent compliant stack test is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation shall be considered a deviation from this permit.

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

D.2.9 Record Keeping Requirements

- (a) To document compliance with Condition D.2.1, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC emission limit established in Condition D.2.1.
 - (1) The VOC content of each coating material and solvent used less water.
 - (2) The amount of coating material and solvent used on a monthly basis.
 - (A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
 - (B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.
 - (3) The continuous temperature records (on a three-hour average basis) for the catalytic oxidizer and the three-hour average temperature used to demonstrate compliance during the most recent compliant stack test.
 - (4) Daily records of the duct pressure or fan amperage.
- (b) To document compliance with Condition D.2.7, the Permittee shall maintain records of the results of the inspections required under Condition D.2.7.
- (c) To document compliance with Condition D.2.3, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.3

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (i) One (1) enclosed wheelabrator shot blaster, equipped with a baghouse identified as P35-01, with internal return air, capacity: 847.9 pounds of metal parts and 1,000 pounds of steel shot per hour.
- (j) Friction brake material machining operations, equipped with an internal return bag filter identified as P38BF-01, with a capacity of 892.5 pounds of metal/friction brake material per hour, including the following:
 - (1) Seven (7) grinding/shaping stations.
 - (2) Wire/rod-free spot welding.

(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.3.1 Particulate [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the wheelabrator shot blaster shall not exceed 3.89 pounds per hour, when operating at a process weight rate of 1,847.9 pounds per hour (847.9 pounds of metal parts and 1,000 pounds of steel shot).
- (b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the friction brake material machining operations, all exhausting to the bag filter identified as P38BF-01, shall not exceed 2.39 pounds per hour, when operating at a process weight rate of 892.5 pounds per hour.

The pounds per hour limitations were calculated with the following equation:

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

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

Compliance Determination Requirements

D.3.2 Particulate Control

- (a) In order to comply with Condition D.3.1(a), the baghouse for particulate control shall be in operation and control emissions from the wheelabrator shot blaster at all times that the shot blaster is in operation.
- (b) In order to comply with Condition D.3.1(b), the bag filter for particulate control shall be in operation and control emissions from the friction brake material machining operations at all times that any of the grinding/shaping stations are in operation.

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

**MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION**

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

Company Name:	Quest Stamping Technologies, LLC
Address:	21840 Protecta Drive
City:	Elkhart
Phone #:	(574) 295-1644
MSOP #:	039-20024-00610

I hereby certify that Quest Stamping Technologies, LLC is
 no longer in operation.

still in operation.

I hereby certify that Quest Stamping Technologies, LLC is

in compliance with the requirements of MSOP 039-20024-00610.
 not in compliance with the requirements of MSOP 039-20024-00610.

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

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

Noncompliance:

MALFUNCTION REPORT

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

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

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

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

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

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

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

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

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

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

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

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____

INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

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

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

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

326 IAC 1-6-1 Applicability of rule

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

326 IAC 1-2-39 "Malfunction" definition

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

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

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

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

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

Source Background and Description

Source Name:	Quest Stamping Technologies, LLC
Source Location:	21840 Protecta Drive, Elkhart, IN 46516
County:	Elkhart
SIC Code:	3714
Operation Permit No.:	039-20024-00610
Permit Reviewer:	CarrieAnn Paukowits

The Office of Air Quality (OAQ) has reviewed an application from Quest Stamping Technologies, LLC relating to the construction and operation of a metal brake shoe manufacturing and assembly source.

Permitted Emission Units and Pollution Control Equipment

There are no permitted emission units operating at this source during this review process.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted emission units operating at this source during this review process.

New Emission Units and Pollution Control Equipment Receiving Advanced Source Modification Approval

The application includes information relating to the prior approval for the construction and operation of the following equipment pursuant to 326 IAC 2-5.1-3:

- (a) One (1) natural gas-fired office furnace, identified as F-01, exhausting through stack FSV-01, heat input capacity: 0.075 million British thermal units per hour.
- (b) One (1) natural gas-fired office furnace, identified as F-02, exhausting through stack FSV-02, heat input capacity: 0.045 million British thermal units per hour.
- (c) One (1) natural gas-fired air makeup unit, identified as AM-01, exhausting through stack AMSV-01, heat input capacity: 4.5 million British thermal units per hour.
- (d) One (1) large brake shoe bonding oven, identified as P30-01, fired by natural gas, exhausting through stack P30SV-01, heat input capacity: 2.4 million British thermal units per hour.
- (e) One (1) brake shoe debonding oven, identified as P31-01, exhausting through stack P31SV-01, fired by natural gas, heat input capacity: 0.75 million British thermal units per hour.
- (f) One (1) small brake shoe bonding oven, identified as P32-01, fired by natural gas, exhausting through stack P32SV-01, heat input capacity: 0.4 million British thermal units per hour.

- (g) One (1) brake shoe debonding oven, identified as P33-01, fired by natural gas, exhausting through stack P33SV-01, heat input capacity: 0.8 million British thermal units per hour.
- (h) One (1) varnish dip tank, identified as P37-01, equipped with a catalytic oxidizer with a supplemental fuel capacity of 0.5724 million British thermal units per hour of natural gas, exhausting through stack P37SV-01, capacity: 892.5 pounds of metal parts per hour.
- (i) One (1) enclosed wheelabrator shot blaster, equipped with a baghouse identified as P35-01, with internal return air, capacity: 847.9 pounds of metal parts and 1,000 pounds of steel shot per hour.
- (j) Friction brake material machining operations, equipped with an internal return bag filter identified as P38BF-01, with a capacity of 892.5 pounds of metal/friction brake material per hour, including the following:
 - (1) Seven (7) grinding/shaping stations.
 - (2) Wire/rod-free spot welding.

Existing Approvals

There are no existing approvals.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (°F)
FSV-01	Furnace F-01	25.0	0.5	100	77
SFV-02	Furnace F-02	25.0	0.5	100	77
AMSV-01	Air Makeup Unit AM-01	8.0	1.5	20,000	77
P30-SV-01	Bonding Oven P30-01	25.0	1.5	4,000	700
P31SV-01	Debonding Oven P31-01	25.0	1.5	4,000	700
P32SV-01	Bonding Oven P32-01	21.5	0.83	1,000	445
P33SV-01	Debonding Oven P33-01	20.0	0.5	500	630
P37SV-01	Varnish Dip Tank P37-01 with Catalytic Oxidizer	25.0	1.5	2,000	1,150

Recommendation

The staff recommends to the Commissioner that the construction and 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 September 7, 2004, with additional information received on September 28, 2004.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

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.”

Pollutant	Potential to Emit (tons/yr)
PM	50.8
PM ₁₀	18.7
SO ₂	0.024
VOC	38.2
CO	3.30
NO _x	3.93

HAPs	Potential to Emit (tons/yr)
Benzene	< 0.001
Dichlorobenzene	< 0.001
Formaldehyde	0.003
Hexane	0.071
Toluene	< 0.001
Lead	0.009
Cadmium	0.002

HAPs	Potential to Emit (tons/yr)
Chromium	0.013
Manganese	< 0.001
Nickel	0.022
MEK	0.420
Cobalt	0.001
Arsenic	0.004
Selenium	< 0.001
Total	0.545

- (a) The potentials to emit (as defined in 326 IAC 2-7-1(29)) of PM and VOC are greater than twenty-five (25) tons per year and the potential to emit VOC is less than one hundred (100) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1. An MSOP will be issued.
- (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 Elkhart County.

Pollutant	Status
PM ₁₀	Attainment
SO ₂	Attainment
NO ₂	Attainment
1-Hour Ozone	Maintenance Attainment
8-Hour Ozone	Basic Nonattainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and nitrogen oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as nonattainment for the 8-hour ozone standard. Therefore,

VOC and NO_x emissions were reviewed pursuant to the requirements for nonattainment new source review.

- (b) Elkhart County has been classified as attainment or unclassifiable in Indiana for all remaining 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

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

Pollutant	Emissions (tons/yr)
PM	27.6
PM ₁₀	18.7
SO ₂	0.024
VOC	38.2
CO	3.30
NO _x	3.93
Single HAP	0.420
Combination HAPs	0.545

- (a) This new source is **not** a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater, no nonattainment pollutant is emitted at a rate of 100 tons per year or greater, and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. This source will also not violate 326 IAC 2-1.1-5, Air Quality Requirements.
- (b) All of the values in the table represent the unrestricted potential emissions, except for the value for PM, which is limited by 326 IAC 6-3-2. The catalytic oxidizer was not taken into account for this table because it is required in order for the source to comply with 326 IAC 8-2-9, but that limit does not translate into an annual limit on the potential emissions.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is 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) the combination of HAPs is less than 25 tons per year.

This is the first air approval 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 the permit for this source.
- (b) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Surface Coating of Miscellaneous Metal Parts and Products, Subpart M MMM, because this source is not a major source of HAPs.
- (c) This source does not manufacture the friction materials. Therefore, this source is not subject to the requirements of the the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Friction Materials Manufacturing Facilities, Subpart QQQQ.

State Rule Applicability – Entire Source

326 IAC 2-1.1-5 (Air quality requirements)

The unrestricted potential VOC emissions and the unrestricted potential NO_x emissions are less than 100 tons per year. Therefore, this source is a minor source pursuant to 326 IAC 2-1.1-5 for nonattainment new source review.

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

The unrestricted potential emissions of each attainment criteria pollutant are less than 250 tons per year. Therefore, this source, which is not one of the twenty-eight (28) listed source categories, is a minor source pursuant to 326 IAC 2-2, PSD.

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

The operation of this metal brake shoe manufacturing and assembly source will emit less than ten (10) tons per year of a single HAP and twenty-five (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 not located in Lake or Porter County with the potential to emit greater than twenty-five (25) tons per year of NO_x, does not emit five (5) tons per year or more of lead and does not require a Part 70 Operating Permit. Therefore, the requirements of 326 IAC 2-6 do 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.

State Rule Applicability – Individual Facilities

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

- (a) The bonding and debonding ovens have potential particulate emissions less than 0.551 pounds per hour. Therefore, pursuant to 326 IAC 6-3-1(b)(14), the bonding and debonding ovens are exempt from the requirements of 326 IAC 6-3.
- (b) The varnish dip tank is a dip coating process. Therefore, pursuant to 326 IAC 6-3-1(b)(5), the varnish dip tank is exempt from the requirements of 326 IAC 6-3.
- (c) Pursuant to 326 IAC 6-3-2, the particulate from the wheelabrator shot blaster shall not exceed 3.89 pounds per hour, when operating at a process weight rate of 1,847.9 pounds per hour (847.9 pounds of metal parts and 1,000 pounds of steel shot). The potential to emit particulate is 4.00 pounds per hour before control and 0.004 pounds per hour after control by the baghouse. Therefore, the wheelabrator shot blaster will comply with this rule, and the baghouse shall be in operation and control emissions from the shot blaster at all times when the shot blaster is in operation.
- (d) Pursuant to 326 IAC 6-3-2, the particulate from the friction brake material machining operations, all exhausting to the bag filter identified as P38BF-01, shall not exceed 2.39 pounds per hour, when operating at a process weight rate of 892.5 pounds per hour. The potential to emit particulate is 7.59 pounds per hour before control and 0.008 pounds per hour after control by the bag filter. Therefore, the friction brake material machining will comply with this rule, and the bag filter shall be in operation and control emissions from the friction brake material machining operations at all times when the grinding/shaping stations are in operation.

The limitations in (c) and (d) are based upon the following:

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:

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

326 IAC 8-2-9 (Miscellaneous Metal Coating)

- (a) The varnish dip tank will have actual VOC emissions greater than fifteen (15) pounds per day and potential VOC emissions greater than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 8-2-9 are applicable to this new source. Pursuant to 326 IAC 8-2-9(d), the Permittee shall not cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of 3.5 pounds of VOCs per gallon of coating less water, for air dried and forced warm air dried coatings. Pursuant to 326 IAC 8-1-2(a)(2), the Permittee will use a catalytic oxidizer to comply with this emission limitation at all times.
- (b) Pursuant to 326 IAC 8-1-2(b), VOC emissions shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon of coating solids, determined by the following equation:

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

Where: E = Equivalent emission limit in pounds of VOC per gallon of coating solids, as applied

L = Applicable emission limit from this article in pounds of VOC per gallon of coating

D = Baseline solvent density of VOC in the coating and shall be equal to seven and thirty-six hundredths (7.36) pounds of VOC per gallon of solvent

$E = 3.5 / (1 - 3.5 / 7.36) = 6.7 \text{ lbs VOC / gallon of coating solids}$

Compliance with an equivalent emission limit established above shall be determined according to the following equation:

$$E_a = L_a / (1 - (L_a / D_a))$$

Where: E_a = Actual emissions in pounds of VOC per gallon of coating solids, as applied

L_a = Actual VOC content in pounds of VOC per gallon of coating, as applied

D_a = Actual density of the VOC in the coating, as applied, in pounds per gallon of VOC

- (c) Pursuant to 326 IAC 8-1-2(c), The overall efficiency of the thermal oxidizer shall be no less than the equivalent overall efficiency, calculated by the following equation:

$$O = ((V - E) / V) \times 100$$

Where: V = The actual VOC content of the coating or, if multiple coatings are used, the daily weighted average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in section 4 of this rule in units of pounds of VOC per gallon of coating solids as applied

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied

O = Equivalent overall efficiency of the capture system and control device as a percentage

$$O = ((164 - 6.7) / 164) \times 100$$
$$O = 95.9\%$$

- (d) Pursuant to 326 IAC 8-2-9(f), solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

Testing Requirements

An initial test is required for the varnish dip tank and the catalytic oxidizer to demonstrate compliance with the control efficiency required to comply with 326 IAC 8-2-9, and to develop the required operating temperature and fan amperage or duct pressure.

Compliance Monitoring

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

The one (1) varnish dip tank, identified as P37-01, has applicable compliance monitoring conditions as specified below:

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the catalytic oxidizer for measuring the temperature at the inlet to the catalyst bed. The output of this system shall be recorded as a three-hour average. From the date of issuance of this permit until the approved stack test results are available, the Permittee shall take appropriate response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation whenever the three-hour average inlet temperature is below 550°F. A three-hour average temperature that is below 550°F is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation shall be considered a deviation from this permit.
- (b) The Permittee shall determine the three-hour average temperature from the most recent valid stack test that demonstrates compliance with the limits in the permit, as approved by IDEM.
- (c) On and after the date the approved stack test results are available, the Permittee shall take appropriate response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation whenever the three-hour average inlet temperature of the catalyst bed is below the three-hour average temperature as observed during the compliant stack test. A three-hour average temperature that is below the three-hour average temperature as observed during the compliant stack test is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation shall be considered a deviation from this permit.
- (d) The Permittee shall inspect the catalyst activity level at least every twelve (12) months. If there are indications of excess fouling or excess catalyst degradation, the Permittee shall test the catalyst activity or replace the catalyst.
- (e) The Permittee shall determine fan amperage or duct pressure from the most recent valid stack test that demonstrates compliance with the limits in the permit, as approved by IDEM.
- (f) The duct pressure or fan amperage shall be observed at least once per day when the catalytic oxidizer is in operation. When for any one reading, the duct pressure or fan amperage is outside the normal range as established in most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation. A reading that is outside the range as established in the most recent compliant stack test is not a deviation from

this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation shall be considered a deviation from this permit.

These monitoring conditions are necessary because the catalytic oxidizer must operate properly to ensure compliance with 326 IAC 8-2-9 (Miscellaneous Metal Coating).

Conclusion

The construction and operation of this metal brake shoe manufacturing and assembly source shall be subject to the conditions of the New Source Construction and Minor Source Operating Permit 039-20024-00610.

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

**Company Name: Quest Stamping Technologies, LLC
Address City IN Zip: 21840 Protecta Drive, Elkhart, Indiana 46516
MSOP: 039-20024
Plt ID: 039-00610
Reviewer: CarrieAnn Paukowits
Application Date: September 7, 2004**

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.90	7.60	0.600	100	5.50	84.0
				**see below		

*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

Equipment	Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Potential Emission in tons/yr					
			PM*	PM10*	SO2	NOx	VOC	CO
Furnace F-01	0.075	0.66	0.001	0.002	0.000	0.033	0.002	0.028
Furnace F-02	0.045	0.39	0.000	0.001	0.000	0.020	0.001	0.017
Air Makeup Unit AM-01	4.5	39.42	0.037	0.150	0.012	1.971	0.108	1.656
Large Bonding Oven P30-01	2.4	21.02	0.020	0.080	0.006	1.051	0.058	0.883
Debonding Oven P31-01	0.75	6.57	0.006	0.025	0.002	0.329	0.018	0.276
Small Bonding Oven P32-01	0.4	3.50	0.003	0.013	0.001	0.175	0.010	0.147
Debonding Oven P33-01	0.8	7.01	0.007	0.027	0.002	0.350	0.019	0.294
Catalytic Oxidizer Supplemental Fuel	0.5724	5.01	0.005	0.019	0.002	0.251	0.014	0.211
Total	8.97	78.6	0.075	0.299	0.024	3.93	0.216	3.30

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 2 for HAPs emissions calculations.

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

**Company Name: Quest Stamping Technologies, LLC
 Address City IN Zip: 21840 Protecta Drive, Elkhart, Indiana 46516
 MSOP: 039-20024
 Pit ID: 039-00610
 Reviewer: CarrieAnn Paukowits
 Application Date: September 7, 2004**

HAPs - Organics

Emission Factor in lb/MMcf	Benzene 2.10E-03	Dichlorobenzene 1.20E-03	Formaldehyde 7.50E-02	Hexane 1.80E+00	Toluene 3.40E-03
Potential Emission in tons/yr	8.25E-05	4.71E-05	2.95E-03	7.07E-02	1.34E-04

HAPs - Metals

Emission Factor in lb/MMcf	Lead 5.00E-04	Cadmium 1.10E-03	Chromium 1.40E-03	Manganese 3.80E-04	Nickel 2.10E-03	Total HAPs
Potential Emission in tons/yr	1.96E-05	4.32E-05	5.50E-05	1.49E-05	8.25E-05	0.074

Methodology is the same as page 1.

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: Federal Potential Emissions Calculations
VOC and Particulate
From Surface Coating Operations**

Company Name: Quest Stamping Technologies, LLC
Address City IN Zip: 21840 Protecta Drive, Elkhart, Indiana 46516
MSOP: 039-20024
Pit ID: 039-00610
Reviewer: CarrieAnn Paukowits
Application Date: September 7, 2004

Varnish Dip Tank

Material	Density (lb/gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Vol (solids)	Gal of Material (gal/unit)	Maximum (unit/hour)	Flash-off (fraction)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC (lbs/hr)	Potential VOC (lbs/day)	Potential VOC (tons/yr)	Particulate Potential (tons/yr)	VOC solids (lbs/gal)	Transfer Efficiency	Material Substrate
SEV 1000	7.61	51.300%	0.0%	51.30%	0.0%	42.00%	0.00024	525.000	1.0	3.90	3.90	0.49	12	2.2	0.0	9.30	100%	Metal
Isopropyl Alcohol	6.50	100.000%	0.0%	100.00%	0.0%	0.00%	0.00240	525.000	1.0	6.50	6.50	8.19	197	35.9	0.0	n/a	100%	Metal
R-T-S	6.60	94.90%	0.00%	94.90%	0.0%	3.8%	0.00264	525.00	1.0	6.26	6.26	8.7	208	38.0	0.0	164.06	100%	Metal
State Potential Emissions											TOTALS:		8.68	208	38.0	0.00		

METHODOLOGY

RTS Density (lbs/gal) = ((Da*Va)+(Db*Vb))/(Va+Vb)

RTS Weight % H2O + Organics = ((Wa*Da*Va)+(Wb*Db*Vb))/((Da*Va)+(Db*Vb))

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)

Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)

Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * Flash-off

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

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

Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)

Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids) * Flash-off

Total = RTS

Appendix A: Potential Emissions Calculations

HAPs

From Surface Coating Operations

Company Name: Quest Stamping Technologies, LLC
Address City IN Zip: 21840 Protecta Drive, Elkhart, Indiana 46516
MSOP: 039-20024
Plt ID: 039-00610
Reviewer: CarrieAnn Paukowits
Application Date: September 7, 2004

Varnish Dip Tank

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % MEK	MEK Emissions (ton/yr)
SEV 1000	7.61	0.00024	525.000	10.00%	0.420
Isopropyl Alcohol	6.50	0.00240	525.000	0.00%	0.000

Total State Potential Emissions **0.420**

METHODOLOGY

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

**Appendix A: Emission Calculations
Abrasive Blasting - Confined**

Company Name: Quest Stamping Technologies, LLC
Address City IN Zip: 21840 Protecta Drive, Elkhart, Indiana 46516
MSOP: 039-20024
Plt ID: 039-00610
Reviewer: CarrieAnn Paukowits
Application Date: September 7, 2004

Table 1 - Emission Factors for Abrasives

Abrasive	Emission Factor	
	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft3)
Al oxides	160
Sand	99
Steel	487

Calculations

Flow Rate (FR) (lb/hr) = **1000** per nozzle

Uncontrolled Emissions (E, lb/hr)

EF = emission factor (lb PM/ lb abrasive) From Table 1 =
FR = Flow Rate (lb/hr) =
w = fraction of time of wet blasting =
N = number of nozzles =

0.004
1000
0 %
1

PM Uncontrolled Emissions =	4.00 lb/hr
	17.5 ton/yr

lb PM10/ lb PM 0.86

PM10 Uncontrolled Emissions =	3.44 lb/hr
	15.1 ton/yr

Control Efficiency **99.9%**

PM Controlled Emissions =	0.004 lb/hr
	0.018 ton/yr

PM10 Controlled Emissions =	0.003 lb/hr
	0.015 ton/yr

METHODOLOGY

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)
Ton/yr = lb/hr X 8760 hr/yr X ton/2000 lbs
Uncontrolled PM Emissions = EF x FR x (1-
Uncontrolled PM10 Emissions = Uncontrolled PM Emissions x lb PM10/ lb PM

**Appendix A: Emission Calculations
Grinding/Shaping**

Company Name: Quest Stamping Technologies, LLC
Address City IN Zip: 21840 Protecta Drive, Elkhart, Indiana 46516
MSOP: 039-20024
Plt ID: 039-00610
Reviewer: CarrieAnn Paukowits
Application Date: September 7, 2004

Process:	Rate (tons metal/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Grinding <i>Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-40 AP-42 Ch. 12.10 Fifth edition 1995 Gray Iron Foundry Cleaning and Finishing</i>	0.446	PM	17.00	33.2		99.9%	0.033
		PM-10	1.70	3.32		99.9%	0.003
		SO2	0.00	0.00			0.00
		NOx	0.00	0.00			0.00
		VOC	0.00	0.00			0.00
		CO	0.00	0.00			0.00
		chromium	6.5E-03	1.26E-02			1.3E-02
		cobalt	5.1E-04	9.97E-04			1.0E-03
		nickel	1.1E-02	2.23E-02			2.2E-02
		arsenic	2.2E-03	4.32E-03			4.3E-03
		cadmium	1.0E-03	1.99E-03			2.0E-03
		selenium	1.7E-04	3.32E-04			3.3E-04
		Lead	4.5E-03	8.80E-03			8.8E-03

Total HAPs: 0.051