INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

NOTICE OF 30-DAY PERIOD FOR PUBLIC COMMENT

Preliminary Findings Regarding a New Source Construction and Minor Source Operating Permit (MSOP) for Mahoney Foundries in Noble County

MSOP No.:M113-39179-00104

The Indiana Department of Environmental Management (IDEM) has received an application from Mahoney Foundries, located at 209 West Ohio Street, Kendallville, Indiana 46755, for a new source construction and MSOP. If approved by IDEM's Office of Air Quality (OAQ), this proposed permit would allow Mahoney Foundries to operate an existing stationary aluminum foundry.

The applicant intends to operate equipment that will emit air pollutants. IDEM has reviewed this application, and has developed preliminary findings, consisting of a draft permit and several supporting documents, that would allow the applicant to make this change.

IDEM is aware that the aluminum foundry has been constructed and operated prior to receipt of the proper permit. IDEM is reviewing this matter and will take appropriate action. This draft MSOP contains provisions to bring unpermitted equipment into compliance with construction and operation permit rules.

A copy of the permit application and IDEM's preliminary findings are available at:

Kendallville Public Library
221 South Park Avenue
Kendallville, IN 46755

and

IDEM Northern Regional Office
300 North Dr. Martin Luther King Jr. Boulevard, Suite 450
South Bend, IN 46601-1295

A copy of the preliminary findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/.

A copy of the preliminary findings is also available via IDEM's Virtual File Cabinet (VFC.) Please go to: http://www.in.gov/idem/ and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria.

How can you participate in this process?

The date that this notice is published in a newspaper marks the beginning of a 30-day public comment period. If the 30th day of the comment period falls on a day when IDEM offices are closed for business, all comments must be postmarked or delivered in person on the next business day that IDEM is open.

You may request that IDEM hold a public hearing about this draft permit. If adverse comments concerning the **air pollution impact** of this draft permit are received, with a request for a public hearing, IDEM will decide whether or not to hold a public hearing. IDEM could also decide to hold a public meeting instead of, or in addition to, a public hearing. If a public hearing or meeting is held, IDEM will make a separate announcement of the date, time, and location of that hearing or meeting. At a hearing,

you would have an opportunity to submit written comments and make verbal comments. At a meeting, you would have an opportunity to submit written comments, ask questions, and discuss any air pollution concerns with IDEM staff.

Comments and supporting documentation, or a request for a public hearing should be sent in writing to IDEM at the address below. If you comment via e-mail, please include your full U.S. mailing address so that you can be added to IDEM's mailing list to receive notice of future action related to this permit. If you do not want to comment at this time, but would like to receive notice of future action related to this permit application, please contact IDEM at the address below. Please refer to permit number M113-39179-00104 in all correspondence.

Comments should be sent to:

Kendra Sutherland
IDEM, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(800) 451-6027, ask for extension 4-5401
Or dial directly: (317) 234-5401
Fax: (317) 232-6749 attn: Kendra Sutherland
E-mail: Ksutherl@idem.IN.gov

All comments will be considered by IDEM when we make a decision to issue or deny the permit. Comments that are most likely to affect final permit decisions are those based on the rules and laws governing this permitting process (326 IAC 2), air quality issues, and technical issues. IDEM does not have legal authority to regulate zoning, odor, or noise. For such issues, please contact your local officials.

For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: http://www.in.gov/idem/airquality/2356.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

Air Permit Legal Notices
On November 14, 2018, the State of Indiana Environmental Rules Board adopted rule amendments to 326 IAC 2-1.1-6, 326 IAC 2-7-13, 326 IAC 2-7-17, 326 IAC 2-8-13, 326 IAC 2-8-18, and 326 IAC 2-12-1 (LSA #17-395), concerning legal notice provisions for air permits issued under the NSR and Title V permit programs and other air permits for which newspaper notices are published by IDEM OAQ. The adopted rule amendments require that IDEM OAQ provide electronic public notices on IDEM's website as the primary and consistent method for communicating air permit notices to the public. IDEM anticipates that the final (effective) rule amendments will be promulgated on or about March 14, 2019. The status of these rule amendments (LSA #17-395) and the final effective date will be posted on the following website: https://www.in.gov/idem/legal/2351.htm.

Until the rule amendments to 326 IAC 2-1.1-6, 326 IAC 2-7-13, 326 IAC 2-7-17, 326 IAC 2-8-13, 326 IAC 2-8-18, and 326 IAC 2-12-1 are promulgated final (effective), IDEM OAQ will publish both newspaper public notices and electronic public notices on IDEM's website. Once the rule amendments are promulgated final (effective), IDEM OAQ will no longer publish newspaper public notices and will only publish electronic public notices on IDEM's website.

Electronic public notices, including permitting, rulemaking, meeting, and hearing notices, are posted on IDEM's website at: https://www.in.gov/idem/5474.htm. Public notices posted on IDEM's webpage will be accessible for the duration of the public comment period.

IDEM OAQ provides alternative methods for receiving public notices, such as the interested parties mailing list. The IDEM OAQ interested parties mailing list consists of people who have asked to be notified by email list or direct mail delivery of air permit actions related to a specific source or multiple sources, or for all air permit actions in a certain county or multiple counties. If you would like to be added

to the IDEM OAQ interested parties mailing list, call Patty Pear at (317) 233-6875 or call (800) 451-6027, select option 4, and ask for the "Permits Administration Section".

Citizens and interested parties can also subscribe to IDEM's regional public notice pages and receive an e-mail or text message to your phone every time IDEM adds information to a subscribed region at the following website: https://public.govdelivery.com/accounts/INDEM/subscriber/new?qsp=INDEM_3

What will happen after IDEM makes a decision?

Following the end of the public comment period, IDEM will issue a Notice of Decision stating whether the permit has been issued or denied. If the permit is issued, it may be different than the draft permit because of comments that were received during the public comment period. If comments are received during the public notice period, the final decision will include a document that summarizes the comments and IDEM's response to those comments. If you have submitted comments or have asked to be added to the mailing list, you will receive a Notice of the Decision. The notice will provide details on how you may appeal IDEM's decision, if you disagree with that decision. The final decision will also be available on the Internet at the address indicated above, at the local library indicated above, at the IDEM Regional Office indicated above, and the IDEM public file room on the 12th floor of the Indiana Government Center North, 100 N. Senate Avenue, Indianapolis, Indiana 46204-2251.

If you have any questions, please contact Kendra Sutherland of my staff at the above address.

Heath Hartley, Section Chief
Permits Branch
Office of Air Quality

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Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

DRAFT

New Source Construction and Minor Source Operating Permit
OFFICE OF AIR QUALITY

Mahoney Foundries
209 West Ohio Street
Kendallville, Indiana 46755

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

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-5.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

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

Operation Permit No.: M113-39179-00104 Master Agency ID: 46032	
Issued by: Heath Hartley, Section Chief Permits Branch Office of Air Quality	Issuance Date: Expiration Date:

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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 aluminum foundry.

Source Address:	209 West Ohio Street, Kendallville, Indiana 46755
General Source Phone Number:	(260) 347-1768
SIC Code:	3365 (Aluminum Foundries)
County Location:	Noble
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary

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

(a) Metal melting operation, including all natural gas furnaces, identified as P001, with a combined nominal capacity of 1.10 tons of metal melted per hour and with a combined nominal heat input capacity of 11.2 MMBtu/hr, using a dust collector DC1 as control, and exhausting to stack S002.

(1) Three (3) crucible melting furnaces, constructed in 1997
(2) One (1) crucible melting furnaces, constructed in 1999
(3) Four (4) crucible melting furnaces, constructed in 2006
(4) Two (2) crucible melting furnaces, constructed in 2009
(5) Two (2) crucible melting furnaces, constructed in 2016

(b) Reclaimed sand bin transfer to mixer, identified as P002, constructed in 2006, with a nominal throughput of 3.0 tons per hour, using dust collector DC1 as control and exhausting to stack S002.

(c) One (1) enclosed sand mixer, identified as P003, constructed in 2017, with a nominal throughput of 3.0 tons per hour, using dust collector DC1 as control and exhausting to stack S002.

(d) One (1) silica sand storage bin, identified as P004, constructed in 2017, loaded pneumatically, with a nominal throughput of 0.33 tons per hour, using bin vent dust collector DC3 as control and exhausting to stack S003.

(e) One (1) metal pouring and cooling operation, identified as P005, constructed in 2000, with a nominal capacity of 1.1 tons per hour, using no control and exhausting indoors.

(f) Castings shakeout operations, identified as P006, with a nominal combined capacity of 1.1 tons per hour, using no control and exhausting indoors.

(g) One (1) enclosed sand reclamation system consisting of an elevator and rotary screen , identified as P007, constructed in 2006, with a nominal throughput of 3.0 tons per hour, using dust collector DC1 as control and exhausting to S002.

(h) One (1) core knockout process, identified as P008, constructed in 2011, with a nominal capacity of 0.6 tons per hour, using dust collector DC1 as control and exhausting to stack S002.

(i) One (1) casting cleaning and finishing process, identified as P009, constructed in 2009, with a nominal capacity of 0.6 tons per hour, using dust collector DC2 as control and exhausting to stack S001.

(j) One (1) tumble blast cleaning operation, identified as P010, constructed in 2011, with a nominal capacity of 0.6 tons per hour, using dust collector DC1 as control and exhausting to stack S002.

(k) Five (5) Olivine mold making process lines, identified as P011, with a combined nominal capacity of 3.0 tons per hour, using no control and exhausting indoors, consisting of the following:

(1) One (1), constructed in 1998 (Rotolift machine)
(2) Two (2), constructed in 2000 (Hunter 20H and Hunter 10C machines)
(3) One (1), constructed in 2006 Hunter 10C machine
(4) One (1), constructed in 2015 Hunter 20G machine

(l) Silica air set molding and core making, identified as P012, with a nominal capacity of 0.33 tons per hour, using no control and exhausting indoors.

(1) One (1) air set mixer, constructed in 1997
(2) Two (2) air set mixers, constructed in 2017

(m) Shell core machines, identified as P013, with a nominal combined capacity of 0.16 tons sand per hour and a combined nominal heat input capacity of 0.64 MMBtu/hr, using no control and exhausting indoors.

(1) Two (2) BP SF6CA machines, constructed in 1996
(2) Two (2) BP SF6CA machines, constructed in 2016

(n) Paved roads

SECTION B GENERAL CONDITIONS

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

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

B.2 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.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4]

This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 when prior to the start of operation, the following requirements are met:

(a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as described in the application or the permit. The emission units covered in this permit may continue operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM if constructed as described.

(b) If actual construction of the emission units differs from the construction described in the application, the source may not continue operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.

(c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) to this permit.

B.4 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

(a) This permit, M113-39179-00104, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

B.5 Term of Conditions [326 IAC 2-1.1-9.5]

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

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

B.6 Enforceability

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

B.7 Severability

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

B.8 Property Rights or Exclusive Privilege

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

B.9 Duty to Provide Information

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.10 Annual Notification [326 IAC 2-6.1-5(a)(5)]

(a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.

(b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

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

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

B.11 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) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

The Permittee shall implement the PMPs.

(b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions.

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

B.12 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to M113-39179-00104 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

(3) deleted.

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

B.13 Termination of Right to Operate [326 IAC 2-6.1-7(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least one hundred twenty (120) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.14 Permit Renewal [326 IAC 2-6.1-7]

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

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

(1) Submitted at least one hundred twenty (120) days prior to the date of the expiration of this permit; and

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

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-6.1 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-6.1-4(b), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.15 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]

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

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

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(c) The Permittee shall notify the OAQ no later than thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.16 Source Modification Requirement

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

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

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

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

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

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

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

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

B.18 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

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

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

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

B.19 Annual Fee Payment [326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees due no later than thirty (30) calendar days of receipt of a bill from IDEM, OAQ,

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

B.20 Credible Evidence [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to 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 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

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

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

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

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

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

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

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

The Permittee shall comply with the applicable requirements of 326 IAC 14-10, 326 IAC 18, and 40 CFR 61.140 when conducting any asbestos abatement project covered by those rules.

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

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

(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

no later than thirty-five (35) days prior to the intended test date.

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test 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 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.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

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

C.10 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.11 Instrument Specifications [326 IAC 2-1.1-11]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale. The analog instrument shall be capable of measuring values outside of the normal range.

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

Corrective Actions and Response Steps

C.12 Response to Excursions or Exceedances

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

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

(e) The Permittee shall record the reasonable response steps taken.

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 submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

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

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, startups or shutdowns of any emission unit or emission control equipment, that results in violations of applicable air pollution control regulations or applicable emission limitations must be kept and retained for a period of three (3) years and 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 emission unit or emission control equipment occurs that lasts more than one (1) hour, the condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification must be made by telephone or other electronic means, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of the occurrence.

(c) Failure to report a malfunction of any emission unit or emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information on the scope and expected duration of the malfunction must be provided, including the items specified in 326 IAC 1-6-2(c)(3)(A) through (E).

(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, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or

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

(c) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, 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 UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) Metal melting operation, including all natural gas furnaces, identified as P001, with a combined nominal capacity of 1.10 tons of metal melted per hour and with a combined nominal heat input capacity of 11.2 MMBtu/hr, using a dust collector DC1 as control, and exhausting to stack S002.

(1) Three (3) crucible melting furnaces, constructed in 1997
(2) One (1) crucible melting furnaces, constructed in 1999
(3) Four (4) crucible melting furnaces, constructed in 2006
(4) Two (2) crucible melting furnaces, constructed in 2009
(5) Two (2) crucible melting furnaces, constructed in 2016

(b) Reclaimed sand bin transfer to mixer, identified as P002, constructed in 2006, with a nominal throughput of 3.0 tons per hour, using dust collector DC1 as control and exhausting to stack S002.

(c) One (1) enclosed sand mixer, identified as P003, constructed in 2017, with a nominal throughput of 3.0 tons per hour, using dust collector DC1 as control and exhausting to stack S002.

(d) One (1) silica sand storage bin, identified as P004, constructed in 2017, loaded pneumatically, with a nominal throughput of 0.33 tons per hour, using bin vent dust collector DC3 as control and exhausting to stack S003.

(e) One (1) metal pouring and cooling operation, identified as P005, constructed in 2000, with a nominal capacity of 1.1 tons per hour, using no control and exhausting indoors.

(f) Castings shakeout operations, identified as P006, with a nominal combined capacity of 1.1 tons per hour, using no control and exhausting indoors.

(g) One (1) enclosed sand reclamation system consisting of an elevator and rotary screen , identified as P007, constructed in 2006, with a nominal throughput of 3.0 tons per hour, using dust collector DC1 as control and exhausting to S002.

(h) One (1) core knockout process, identified as P008, constructed in 2011, with a nominal capacity of 0.6 tons per hour, using dust collector DC1 as control and exhausting to stack S002.

(i) One (1) casting cleaning and finishing process, identified as P009, constructed in 2009, with a nominal capacity of 0.6 tons per hour, using dust collector DC2 as control and exhausting to stack S001.

(j) One (1) tumble blast cleaning operation, identified as P010, constructed in 2011, with a nominal capacity of 0.6 tons per hour, using dust collector DC1 as control and exhausting to stack S002.

(k) Five (5) Olivine mold making process lines, identified as P011, with a combined nominal capacity of 3.0 tons per hour, using no control and exhausting indoors, consisting of the following:

(1) One (1), constructed in 1998 (Rotolift machine)
(2) Two (2), constructed in 2000 (Hunter 20H and Hunter 10C machines)
(3) One (1), constructed in 2006 Hunter 10C machine
(4) One (1), constructed in 2015 Hunter 20G machine

(l) Silica air set molding and core making, identified as P012, with a nominal capacity of 0.33 tons per hour, using no control and exhausting indoors.

(1) One (1) air set mixer, constructed in 1997
(2) Two (2) air set mixers, constructed in 2017

(m) Shell core machines, identified as P013, with a nominal combined capacity of 0.16 tons sand per hour and a combined nominal heat input capacity of 0.64 MMBtu/hr, using no control and exhausting indoors.

(1) Two (2) BP SF6CA machines, constructed in 1996
(2) Two (2) BP SF6CA machines, constructed in 2016

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

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

D.1.1 Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the aluminum foundry shall not exceed the particulate emission limits in pounds per hour as shown in the table below:

Emission Unit	ID	Process Weight (tons/hr)	Particulate Emission Limit (lbs/hr)
Metal Melting Operation	P001	1.10	4.37
Reclaimed Sand Bin Transfer to Mixer	P002	3.0	8.56
Sand Mixer	P003	3.0	8.56
Silica Sand Storage Silo	P004	0.33	1.95
Metal Pouring and Cooling Operation	P005	1.10	4.37
Casting Shakeout Operation	P006	1.10	4.37
Sand Reclamation System	P007	3.0	8.56
Core Knockout Process	P008	0.6	2.91
Casting Cleaning and Finishing Process	P009	0.6	2.91
Shot Blasting Operation	P010	0.6	2.91
Olivine Mold Making Process Lines	P011	3.0	8.56
Silica Air Set Molding and Core Making	P012	0.33	1.95

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

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

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

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

D.1.2 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan is required for this facility and any control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

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

D.1.3 Particulate Control

In order to assure compliance with Conditions D.1.1, baghouse DC1 for particulate control shall be in operation and control emissions from the reclaimed sand bin loading, enclosed sand reclamation system and shot blast cleaning operation at all times the these units are in operation.

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

D.1.4 Visible Emissions Notations

(a) Visible emission notations of stack exhaust (S002) shall be performed once per day 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) If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.5 Broken or Failed Bag Detection - DC1

(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

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

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

D.1.6 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.4 the Permittee shall maintain records of daily visible emission notations of the baghouse DC1 stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation (e.g., the process did not operate that day).

(b) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT 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:	Mahoney Foundries
Address:	209 West Ohio Street
City:	Kendallville, Indiana 46755
Phone #:	(260) 347-1768
MSOP #:	M113-39179-00104

I hereby certify that Mahoney Foundries is : ☐ still in operation.
☐ no longer in operation.

I hereby certify that Mahoney Foundries is : ☐ in compliance with the requirements of MSOP M113-39179-00104.
☐ not in compliance with the requirements of MSOP M113-39179-00104.

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
COMPLIANCE AND ENFORCEMENT BRANCH
FAX NUMBER: (317) 233-6865

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

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

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

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

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

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

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

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

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

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

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____
_____

MEASURES TAKEN TO MINIMIZE EMISSIONS:_____
_____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES:_____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS:_____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT:_____
INTERIM CONTROL MEASURES: (IF APPLICABLE)_____
_____
_____

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

MALFUNCTION RECORDED BY:_____DATE:_____TIME:_____
*SEE PAGE 2

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

326 IAC 1-6-1 Applicability of rule

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

326 IAC 1-2-39 "Malfunction" definition

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

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

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

_____
_____

Mail to: Permit Administration and Support Section
Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Mahoney Foundries
209 West Ohio Street
Kendallville, Indiana 46755

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.

2. I hold the position of _____ for _____.
(Title) (Company Name)

3. By virtue of my position with _____, I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____.
(Company Name)

4. I hereby certify that Mahoney Foundries 209 West Ohio Street, Kendallville, Indiana 46755, has constructed and will operate a aluminum foundry on _____in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on October 17, 2017,and as permitted pursuant to New Source Construction Permit and Minor Source Operating Permit No. M113-39179-00104, Plant ID No. 113-00104 issued on _____.

5. **Permittee, please cross out the following statement if it does not apply:** Additional (operations/facilities) were constructed/substituted as described in the attachment to this document and were not made in accordance with the construction permit.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature_____
Date_____

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana

on this _____ day of _____, 20 _____. My Commission expires: _____.

Signature_____
Name_____ (typed or printed)

Indiana Department of Environmental Management
Office of Air Quality

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

Source Description and Location

Source Name:	**Mahoney Foundries**
Source Location:	**209 West Ohio Street, Kendallville, Indiana 46755**
County:	**Noble**
SIC Code:	**3365 (Aluminum Foundries)**
Operation Permit No.:	**M113-39179-00104**
Permit Reviewer:	**Kendra Sutherland**

On October 17, 2017, the Office of Air Quality (OAQ) received an application from Mahoney Foundries related to the operation of an existing stationary aluminum foundry.

Existing Approvals

There have been no previous approvals issued to this source.

County Attainment Status

The source is located in Noble County. The following attainment status designations are applicable to Noble County:

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard.[1]
$PM_{2.5}$	Unclassifiable or attainment effective April 5, 2005, for the annual $PM_{2.5}$ standard.
$PM_{2.5}$	Unclassifiable or attainment effective December 13, 2009, for the 24-hour $PM_{2.5}$ standard.
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.

[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.

(a) Ozone Standards

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 ozone. Noble County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$

Noble County has been classified as attainment for $PM_{2.5}$. Therefore, direct $PM_{2.5}$, SO_2, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

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

Fugitive Emissions

(a) The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-6.1 (Minor Source Operating Permits) applicability.

(b) This source melts no materials other than clean charge and does not operate a thermal chip dryer, sweat furnace or scrap dryer/delacquering kiln/decoating kiln. Therefore, it is not a secondary metal production plant under 326 IAC 2-7. Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Unpermitted Emission Units and Pollution Control Equipment

The Office of Air Quality (OAQ) has reviewed an application, submitted by Mahoney Foundries on October 17, 2017, relating to a stationary aluminum foundry that is already operating. This unpermitted source began operation in 1996.

The source consists of the following unpermitted emission unit*(s)*:

(a) Metal melting operation, including all natural gas furnaces, identified as P001, with a combined nominal capacity of 1.10 tons of metal melted per hour and with a combined nominal heat input capacity of 11.2 MMBtu/hr, using a dust collector DC1 as control, and exhausting to stack S002.

(1) Three (3) crucible melting furnaces, constructed in 1997
(2) One (1) crucible melting furnaces, constructed in 1999
(3) Four (4) crucible melting furnaces, constructed in 2006
(4) Two (2) crucible melting furnaces, constructed in 2009
(5) Two (2) crucible melting furnaces, constructed in 2016

(b) Reclaimed sand bin transfer to mixer, identified as P002, constructed in 2006, with a nominal throughput of 3.0 tons per hour, using dust collector DC1 as control and exhausting to stack S002.

(c) One (1) enclosed sand mixer, identified as P003, constructed in 2017, with a nominal throughput of 3.0 tons per hour, using dust collector DC1 as control and exhausting to stack S002.

(d) One (1) silica sand storage bin, identified as P004, constructed in 2017, loaded pneumatically, with a nominal throughput of 0.33 tons per hour, using bin vent dust collector DC3 as control and exhausting to stack S003.

(e) One (1) metal pouring and cooling operation, identified as P005, constructed in 2000, with a nominal capacity of 1.1 tons per hour, using no control and exhausting indoors.

(f) Castings shakeout operations, identified as P006, with a nominal combined capacity of 1.1 tons per hour, using no control and exhausting indoors.

(g) One (1) enclosed sand reclamation system consisting of an elevator and rotary screen , identified as P007, constructed in 2006, with a nominal throughput of 3.0 tons per hour, using dust collector DC1 as control and exhausting to S002.

(h) One (1) core knockout process, identified as P008, constructed in 2011, with a nominal capacity of 0.6 tons per hour, using dust collector DC1 as control and exhausting to stack S002.

(i) One (1) casting cleaning and finishing process, identified as P009, constructed in 2009, with a nominal capacity of 0.6 tons per hour, using dust collector DC2 as control and exhausting to stack S001.

(j) One (1) tumble blast cleaning operation, identified as P010, constructed in 2011, with a nominal capacity of 0.6 tons per hour, using dust collector DC1 as control and exhausting to stack S002.

(k) Five (5) Olivine mold making process lines, identified as P011, with a combined nominal capacity of 3.0 tons per hour, using no control and exhausting indoors, consisting of the following:

(1) One (1), constructed in 1998 (Rotolift machine)
(2) Two (2), constructed in 2000 (Hunter 20H and Hunter 10C machines)
(3) One (1), constructed in 2006 Hunter 10C machine
(4) One (1), constructed in 2015 Hunter 20G machine

(l) Silica air set molding and core making, identified as P012, with a nominal capacity of 0.33 tons per hour, using no control and exhausting indoors.

(1) One (1) air set mixer, constructed in 1997
(2) Two (2) air set mixers, constructed in 2017

(m) Shell core machines, identified as P013, with a nominal combined capacity of 0.16 tons sand per hour and a combined nominal heat input capacity of 0.64 MMBtu/hr, using no control and exhausting indoors.

(1) Two (2) BP SF6CA machines, constructed in 1996
(2) Two (2) BP SF6CA machines, constructed in 2016

(n) Paved roads

Process Bottleneck

The throughputs of the olivine sand are based the design throughput of the furnace melting operation P001. The sand the facility reuses is dictated by the furnaces' combined nominal rate of 1.1 tons of metal melted. The furnace process dictates the throughput of the ancillary operations.

The source consists of the following bottlenecked units:

(a) Two (2) reclaimed sand bin loading, identified as P002, constructed in 2006, with a bottleneck capacity of 3.0 tons per hour, using dust collector DC1 as control and exhausting to stack S002.

(b) One (1) enclosed sand mixer, identified as P003, constructed in 2017, with a bottleneck capacity of 3.0 tons per hour, using dust collector DC1 as control and exhausting to stack S002.

(c) One (1) enclosed sand reclamation system consisting of an elevator and rotary screen, identified as P007, constructed in 2006, with a bottleneck capacity of 3.0 tons per hour, using dust collector DC1 as control and exhausting to S002.

(d) Five (5) Olivine mold making process lines, identified as P011, with a combined bottleneck capacity of 3.0 tons per hour, using no control and exhausting indoors, consisting of the following:

(1) One (1), constructed in 1998 (Rotolift machine)
(2) Two (2), constructed in 2000 (Hunter 20H and Hunter 10C machines)
(3) One (1), constructed in 2006 Hunter 10C machine
(4) One (1), constructed in 2015 Hunter 20G machine

"Integral Part of the Process" Determination

Mahoney Foundries submitted information in support of a request that IDEM make an "integral part of the process" determination for the facility's 15,000 cfm Collector, 8,000 cfm Collector, and the Bin Vent Filters for the silica sand storage silo. IDEM has reviewed that information and has determined that it these units are not considered integral.

Enforcement Issues

IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. IDEM is reviewing this matter and will take the appropriate action. This proposed approval is intended to satisfy the requirements of the construction permit rules.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – MSOP

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Unrestricted Potential Emissions	
Pollutant	**Tons/year**
PM	<250
PM_{10}	<100
$PM_{2.5}$	<100
SO_2	<100
NO_x	<100
VOC	<100
CO	<100
Single HAP	<10
Total HAP	<25

(a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) of PM10 and PM2.5 are each less than one hundred (100) tons per year, but greater than or equal to twenty-five (25) tons per year. The PTE of all other regulated criteria pollutants are less than twenty-five (25) tons per year.

Therefore, the source is subject to the provisions of 326 IAC 2-6.1. A Minor Source Operating Permit (MSOP) will be issued.

(b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

(a) The requirements of the New Source Performance Standard for Primary Aluminum Reduction Plants, 40 CFR 60, Subpart S and 326 IAC 12, are not included for this proposed permit, because this source is not a primary Aluminum Reduction Plant, as defined in §60.191, because it does not manufacture aluminum by electrolytic reduction.

(b) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

(a) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Primary Aluminum Reduction Plants, 40 CFR 63.840, Subpart LL, are not included in this permit because the source is not a primary aluminum reduction plant, as defined in 40 CFR 63.842, because it does not manufacture aluminum by electrolytic reduction.

(b) National Emission Standards of Hazardous Air Pollutants for Secondary Aluminum Production (40 CFR Part 63, Subpart RRR (3R) The provisions of NESHAP Subpart RRR are not included in this permit for this aluminum foundry because, pursuant to 40 CFR 63.1500(f), the requirements of this subpart do not apply to manufacturers of aluminum die castings, aluminum foundries, or aluminum extruders that melt no materials other than clean charge and materials generated within the facility; and that also do not operate a thermal chip dryer, sweat furnace or scrap dryer/delacquering kiln/decoating kiln. This source melts clean charge, and has no new or existing secondary aluminum processing unit, containing one or more group 1 furnace emission units processing other than clean charge, therefore, the requirements of this rule do not apply.

(c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries, 40 CFR 63, Subpart ZZZZZZ (6Z), are not included in this permit. Although the source is an area source and an aluminum foundry, it does not use material containing one or more aluminum foundry HAP as defined in 40 CFR 63.11556.

(d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) Area Source Standards for Nine Metal Fabrication and Finishing Source Categories, Subpart XXXXXX, are not included in the permit, as follows because the source is not primarily engaged in the operations of one of the nine metal fabrication and finishing source categories, as defined in 40 CFR 63.11514 and 63.11522.

(e) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Secondary Nonferrous Metals Processing Area Sources, 40 CFR 63.11462, Subpart TTTTTT, are not included in the permit, since the source does not own or operate a secondary nonferrous metals processing facility as defined in §63.11472, because it is not a brass and bronze ingot making, secondary magnesium processing, or secondary zinc processing plant that uses furnace

melting operations to melt post-consumer nonferrous metal scrap to make products including bars, ingots, blocks, or metal powders.

(f) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

Compliance Assurance Monitoring (CAM)

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

The following state rules are applicable to the source:

326 IAC 2-6.1 (Minor Source Operating Permits (MSOP))
MSOP applicability is discussed under the Permit Level Determination – MSOP section above.

326 IAC 2-2 (Prevention of Significant Deterioration(PSD)
This source is not a major stationary source, under PSD (326 IAC 2-2), because:

(1) The potential to emit PM is less than 250 tons per year,
(2) The potential to emit all other PSD regulated pollutants are less than 250 tons per year,
(3) This source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-4.1.

326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 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:

(1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-4 (Fugitive Dust Emissions Limitations)
The source is subject to the requirements of 326 IAC 6-4, because the paved roads have the potential to emit fugitive particulate emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source 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.

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The requirements of 326 IAC 6-5 are not included in the permit because the source does not have the potential fugitive particulate matter emissions of twenty-five (25) tons per year or more.

326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.

(326 IAC 20 (Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD.

State Rule Applicability Determination-Individual Facility

Melting Furnaces and Foundry Facilities

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

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the brass and aluminum foundry shall not exceed the particulate emission limits in pounds per hour as shown in the table below:

Emission Unit	ID	Process Weight (tons/hr)	Particulate Emission Limit (lbs/hr)
Metal Melting Operation	P001	1.10	4.37
Reclaimed Sand Bin Loading	P002	3.0	8.56
Sand Mixer	P003	3.0	8.56
Silica Sand Storage Silo	P004	0.33	1.95
Metal Cooling Operation	P005	1.10	4.37
Casting Shakeout Operation	P006	1.10	4.37
Sand Reclamation System	P007	3.0	8.56
Core Knockout Process	P008	0.6	2.91
Casting Cleaning and Finishing Process	P009	0.6	2.91
Shot Blasting Operation	P010	0.6	2.91
Olivine Mold Making Process Lines	P011	3.0	8.56
Silica Air Set Molding and Core Making	P012	0.33	1.95

The pounds per hour limitations were calculated with the following 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

The dust collectors for the reclaimed sand bin loading, sand reclamation system, shot blasting operation shall be in operation at all times when these units are in operation to comply with these limits.

Based on the potential to emit calculations, the particulate emissions from the Metal Melting Operation, Metal Pouring and Cooling Operation, Sand Mixer, Silica Sand Storage Silo, Casting Shakeout Operation, Core Knockout Process, Casting Cleaning and Finishing Process, Mold Making Process Lines and Silica Air Set Molding and Core Making are less than the particulate emission limit calculated above (see Appendix A). Therefore, the source will be in compliance with this rule.

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
Pursuant to 326 IAC 8-1-6, facilities constructed after January 1, 1980, that have potential VOC emissions

of twenty-five (25) tons or more per year are subject to this rule. The metal pouring and cooling, casting shakeout operations, core knockout process and shell core machines are each not subject to 326 IAC 8-1-6, because the VOC emissions these units are each less than twenty-five (25) tons per year.

Natural Gas Combustion Units

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Each natural gas furnace and the shell core machines are exempt from the requirements of 326 IAC 6-3, because pursuant to 326 IAC 1-2-59, because liquid and gaseous fuels and combustion air are not considered as part of the process weight.

326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heat)
Pursuant to 326 IAC 6-2-1(a) the natural gas furnace and shell core machines are not subject to the provisions of 326 IAC 6-2-1, because they are not a source of indirect heat.

326 IAC 7 (Sulfur Dioxide Rules)
Pursuant to 326 IAC 7-1.1-1(a), the requirements of 326 IAC 7 are not applicable to the natural gas furnace and shell core machines, since the natural gas-fired furnace does not have a potential to emit twenty-five (25) tons per year or ten (10) pounds per hour.

326 IAC 8-1-6 (New facilities; general reduction requirements)
Pursuant to 326 IAC 8-1-6(a), the requirements of 326 IAC 8-1-6 are not applicable to the natural gas furnace and shell core machines, since each does not have potential emissions of twenty-two and seven-tenths (22.7) megagrams (twenty-five (25) tons) or more per year.

326 IAC 9 (Carbon Monoxide Emission Rules)
Pursuant to 326 IAC 9-1-2, the natural gas furnace and shell core machines are not subject to the requirements of 326 IAC 9, since the source is not a petroleum refinery, ferrous metal smelter, refuse incinerator, and the natural gas furnace and shell core machines are not a refuse burner.

326 IAC 10 (Nitrogen Oxides Rules)
Pursuant to 326 IAC 10-1-1, the natural gas furnace and shell core machines are not subject to the requirements of 326 IAC 10, since the source is not located in Clark or Floyd County, and the natural gas-fired furnace is not a steam generating unit, a portland cement long dry kiln, a portland dry preheat process dry kiln, or has the potential to emit NO_x greater than or equal to forty (40) tons per year.

Compliance Determination, Monitoring and Testing Requirements

(a) The compliance determination and monitoring requirements applicable to this source are as follows:

Emission Unit	Control	Operating Parameters	Frequency	Range	Excursions & Exceedances
Sand bin loading (P002)	DC1	Visible Emissions	Once per day	Normal-Abnormal	Response Steps
Sand reclamation system (P007)					
Shot blasting operation (P010)					

These monitoring conditions are necessary because the baghouse DC1 must operate properly to assure compliance with and 326 IAC 6-3-2.

Conclusion and Recommendation

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 October 17, 2017. Additional information was received on September 10, 2018.

The operation of this source shall be subject to the conditions of the attached proposed New Source Construction and MSOP No. M113-39179-00104. The staff recommends to the Commissioner that this New Source Construction and MSOP be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Kendra Sutherland at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5401 or toll free at 1-800-451-6027 extension 4-5401.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: http://www.in.gov/idem/airquality/2356.htm; and the Citizens' Guide to IDEM on the Internet at: 4395943959.

Appendix A: Emission Calculations
PTE Summary

Company Name: Mahoney Foundries
Address: 209 West Ohio Street, Kendallville, Indiana 46755
Permit No.: 113-39179-00104
Reviewer: Kendra Sutherland

Uncontrolled Potential to Emit (tons/yr)									
Emission Unit	**PM**	**PM10**	**PM2.5 ***	**SO_2**	**NOx**	**VOC**	**CO**	**Total HAPs**	**Highest single HAP****
Melting Furnaces P001	9.15	8.19	8.19	-	-	-	-	-	-
Melting Furnaces P001 NG	0.09	0.37	0.37	0.03	4.81	0.26	4.04	0.09	0.09
Reclaimed Sand Bin Transfer to Mixer P002	46.80	7.02	7.02	-	-	-	-	-	-
Sand Mixer P003	7.44	2.03	2.03	-	-	-	-	-	-
Silica Sand Storage Bin P004	1.04	0.66	0.66	-	-	-	-	-	-
Metal Pouring and Cooling P005	6.75	6.75	6.75	0.10	0.05	0.67	-	-	-
Casting Shakeout Operations P006	15.42	10.79	6.46	-	-	5.78	-	-	-
Sand Reclamation System P007	46.80	7.02	7.02	-	-	-	-	-	-
Core Knockout Process P008	8.41	5.89	3.52	-	-	3.15	-	-	-
Casting Cleaning and Finishing Process P009	4.20	4.20	4.20	-	-	-	-	-	-
Shot Blasting Operation P010	44.68	4.47	4.47	-	-	-	-	-	-
Mold Making Process Lines P011 and Air-set Molding P012	7.22	1.08	1.08	-	-	-	-	-	-
Shell Core Machines P013	0.77	0.77	0.77	0.22	0.35	1.26E-02	-	1.26E-02	-
Shell Core Machines P013 NG	0.01	0.02	0.02	0.00	0.27	0.02	0.23	0.01	-
Paved Roads	0.83	0.17	0.04	-	-	-	-	-	-
Total	**199.60**	**59.43**	**52.60**	**0.35**	**5.48**	**9.90**	**4.27**	**0.11**	**0.09**

** PM2.5 listed is direct PM2.5*

***Highest single source wide HAP is Hexane*

Appendix A: Emissions Calculations
Melting Furnaces
Process P001

Company Name: Mahoney Foundries
Address: 209 West Ohio Street, Kendallville, Indiana 46755
Permit No.: 113-39179-00104
Reviewer: Kendra Sutherland

Emission Unit	Nominal Capacity (tons/hr)	Nominal Capacity (ton/yr)
Melting funaces	1.1	9636

	Emission Factors (lbs/ton)								
	PM*	PM10*	PM2.5*	SO2	Nox	VOC	CO	Single Worse HAP	Total HAP
	1.9	1.7	1.7	-	-	-	-	0.00E+00	0.00E+00

	PTE (ton/yr)								
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Single Worse HAP**	Total HAP**
Melting Furnaces	9.15	8.19	8.19	-	-	-	-	-	-
Total:	**9.15**	**8.19**	**8.19**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Methodology
Potential to Emit = Max Capacity (tons/yr) * Emission Factor (lbs/ton) * 1 ton/2000 lbs
PM2.5=PM10
Notes:
*Emission factor is WebFIRE Aluminum Smelting Furnace/ Crucible SCC 3-04-001-02
**The facility only melts new ingot, gates, runners and scrap castings from their facility. There are no HAPs emissions.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Process P001-Natural Gas

Company Name: Mahoney Foundries
Address: 209 West Ohio Street, Kendallville, Indiana 46755
Permit No.: 113-39179-00104
Reviewer: Kendra Sutherland

Emission Units	Nominal Capacity
Twelve (12) Natural Gas crucible melting furnaces	11.2

Heat Input Capacity MMBtu/hr	HHV mmBtu/mmscf	Potential Throughput MMCF/yr
11.20	1020	96.2

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.09	0.37	0.37	0.03	4.81	0.26	4.04

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 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
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
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Hazardous Air Pollutants (HAPs)

	HAPs - Organics					
	Benzene	Dichlorobenzen	Formaldehyde	Hexane	Toluene	**Total - Organics**
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	1.0E-04	5.8E-05	3.6E-03	0.09	1.6E-04	**0.09**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
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	2.4E-05	5.3E-05	6.7E-05	1.8E-05	1.0E-04	**2.6E-04**
					Total HAPs	**0.09**
					Worst HAP	**0.09**

Methodology is the same as above.
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
Reclaimed Sand Bin Transfer to Mixer
Process P002

Company Name: Mahoney Foundries
Address: 209 West Ohio Street, Kendallville, Indiana 46755
Permit No.: 113-39179-00104
Reviewer: Kendra Sutherland

Emission Unit	Nominal Throughput Rate (tons/hour)	Nominal Annual Throughput Rate (tons/year)*	Emission Factors (lbs/ton)			PTE (ton/yr)		
			PM	PM10	PM2.5	PM	PM10	PM2.5
Reclaimed Sand Bin Transfer to Mixer	3	26000	3.6	0.54	0.54	46.80	7.02	7.02

Methodology
Potential to Emit before controls = Max Capacity (tons/yr) * Emission Factor (lbs/ton) * 1 ton/2000 lbs
Potential to Emit after controls=Potential to Emit before controls (tons/year) * [1- control efficiency (%)]
PM2.5=PM10

Notes:
Emission factors used in the calculations were obtained from AP-42 (Section 12.10, Table 12.10-7). SCC 3-04-003-50
*The throughput rate is bottlenecked by the throughput of the furnace P001.

Appendix A: Emissions Calculations
Enclosed Sand Mixer
Process P003

Company Name: Mahoney Foundries
Address: 209 West Ohio Street, Kendallville, Indiana 46755
Permit No.: 113-39179-00104
Reviewer: Kendra Sutherland

Emission Unit	Nominal Throughput Rate (tons/hour)	Nominal Annual Throughput Rate	Emission Factors (lbs/ton)			PTE (ton/yr)		
			PM	PM10	PM2.5	PM	PM10	PM2.5
Enclosed Sand Mixer	3.0	26000	0.572	0.156	0.156	7.44	2.03	2.03

Methodology
Potential to Emit before controls = Max Capacity (tons/yr) * Emission Factor (lbs/ton) * 1 ton/2000 lbs
PM2.5=PM10
Notes:
Emission factor is from AP-42 12.10-7/ WebFIRE Grey Iron Foundries - Sand Grinding/Handling SCC 3-04-003-50

Appendix A: Emissions Calculations
Silica Sand Storage Bin
Process P004

Company Name: Mahoney Foundries
Address: 209 West Ohio Street, Kendallville, Indiana 46755
Permit No.: 113-39179-00104
Reviewer: Kendra Sutherland

Emission Unit	Nominal Capacity (ton/hr)	Nominal Capacity (tons/year)	Emission Factors (lbs/ton)			PTE (ton/yr)		
			PM	PM10	PM2.5	PM	PM10	PM2.5
Silica Sand Storage Bin	0.33	2891	0.72	0.46	0.46	1.04	0.66	0.66

Methodology
Potential to Emit before controls = Max Capacity (tons/yr) * Emission Factor (lbs/ton) * 1 ton/2000 lbs
PM2.5=PM10
Notes:
Emission factors used in the calculations were obtained from AP-42 (Section 11.12, Table 11.12-2). SCC 3-05-011-07
*The throughput rate is bottlenecked by the throughput of the furnace P001.

Appendix A: Emissions Calculations
Metal Pouring and Cooling Operation
Process P005

Company Name: Mahoney Foundries
Address: 209 West Ohio Street, Kendallville, Indiana 46755
Permit No.: 113-39179-00104
Reviewer: Kendra Sutherland

Emission Unit	Nominal Capacity (tons/hour)	Nominal Capacity (tons/year)
Metal Pouring and Cooling Operation	1.1	9636

	Emission Factors (lbs/ton)								
	PM	PM10	PM2.5	SO2	Nox	VOC**	CO	Single Worse HAP	Total HAP
Pouring/Casting**	-	-	-	0.02	0.01	0.14	-	0.00E+00	0.00E+00
Cooling*	1.4	1.4	1.4	-	-	-	-	-	-

	PTE (ton/yr)								
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Single Worse HAP	Total HAP
Pouring/Casting	-	-	-	0.10	0.05	0.67	-	-	-
Cooling	6.75	6.75	6.75	-	-	-	-	-	-
Total:	**6.75**	**6.75**	**6.75**	**0.10**	**0.05**	**0.67**	**0.00**	**0.00**	**0.00**

Methodology
Potential to Emit = Max Capacity (tons/yr) * Emission Factor (lbs/ton) * 1 ton/2000 lbs
PM2.5=PM10
Notes:
* Emission factors are from SCC 3-04-003-25
**Emission factors are from AP-42 12.10-7/ WebFIRE Aluminum Pouring and Casting SCC 3-04-001-14

Appendix A: Emissions Calculations
Casting Shakeout Operations
Process P006

Company Name: Mahoney Foundries
Address: 209 West Ohio Street, Kendallville, Indiana 46755
Permit No.: 113-39179-00104
Reviewer: Kendra Sutherland

Emission Unit	Nominal Capacity (tons/hour)	Nominal Capacity (tons/year)
Casting shakeout operations	1.1	9636

	Emission Factors (lbs/ton)								
	PM	PM10	PM2.5	SO2	Nox	VOC	CO	Single Worse HAP	Total HAP
Casting Shakeout	3.2	2.24	1.34	0	0	1.2	-	0.00E+00	0.00E+00

	PTE (ton/yr)								
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Single Worse HAP	Total HAP
Casting shakeout operations	15.42	10.79	6.46	0.00	0.00	5.78	-	-	-
Total:	**15.42**	**10.79**	**6.46**	0.00	0.00	5.78	0.00	**0.00**	**0.00**

Methodology
Potential to Emit = Max Capacity (tons/yr) * Emission Factor (lbs/ton) * 1 ton/2000 lbs
PM2.5=PM10
Notes:
Emission factors are from AP-42 12.10-6/WebFIRE Grey Iron Foundries Casting Shakeout SCC 3-04-003-31

Appendix A: Emissions Calculations
Olivine Sand Reclamation (Elevator/Rotary Screen)
Process P007

Company Name: Mahoney Foundries
Address: 209 West Ohio Street, Kendallville, Indiana 46755
Permit No.: 113-39179-00104
Reviewer: Kendra Sutherland

Emission Unit	Nominal Throughput Rate (tons/hour)	Nominal Annual Throughput Rate (tons/year)*	Emission Factors (lbs/ton)			PTE (ton/yr)		
			PM	PM10	PM2.5	PM	PM10	PM2.5
Olivine Sand Reclamation	3.0	26000	3.6	0.54	0.54	46.80	7.02	7.02

Methodology
Potential to Emit = Max Capacity (tons/yr) * Emission Factor (lbs/ton) * 1 ton/2000 lbs
PM2.5=PM10
Notes:
Emission factors used in the calculations were obtained from AP-42 (Section 12.10, Table 12.10-7) and SCC 3-04-003-50.
Process is controlled by a dust collector with a 99% control efficiency

Appendix A: Emissions Calculations
Core Knockout Process
Process P008

Company Name: Mahoney Foundries
Address: 209 West Ohio Street, Kendallville, Indiana 46755
Permit No.: 113-39179-00104
Reviewer: Kendra Sutherland

Emission Unit	Nominal Capacity (tons/hour)	Nominal Capacity (tons/year)
Core Knockout Process	0.6	5256

	Emission Factors (lbs/ton)								
	PM	PM10	PM2.5	SO2	Nox	VOC	CO	Single Worse HAP	Total HAP
Casting Shakeout	3.2	2.24	1.34	0	0	1.2	-	0.00E+00	0.00E+00

	PTE (ton/yr)								
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Single Worse HAP	Total HAP
Core Knockout Process	8.41	5.89	3.52	0.00	0.00	3.15	-	-	-
Total:	**8.41**	**5.89**	**3.52**	0.00	0.00	3.15	0.00	**0.00**	**0.00**

Methodology
Potential to Emit = Max Capacity (tons/yr) * Emission Factor (lbs/ton) * 1 ton/2000 lbs
PM2.5=PM10
Notes:
Emission factors are from WebFIRE Grey Iron Foundries Casting Shakeout SCC 3-04-003-31.

Appendix A: Emissions Calculations
Casting Cleaning and Finishing Process
Process P009

Company Name: Mahoney Foundries
Address: 209 West Ohio Street, Kendallville, Indiana 46755
Permit No.: 113-39179-00104
Reviewer: Kendra Sutherland

Emission Unit	Nominal Capacity (tons/hour)	Nominal Capacity (tons/year)	Emission Factors (lbs/ton melt)			PTE (ton/yr)		
			PM	PM10	PM2.5	PM	PM10	PM2.5
Casting Cleaning and Finishing Process	0.6	5256	1.6	1.6	1.6	4.20	4.20	4.20

Methodology
Potential to Emit = Max Capacity (tons/yr) * Emission Factor (lbs/ton) * 1 ton/2000 lbs
PM2.5=PM10
Notes:
Emission factor is the portion of the grinding/cleaning emission factor from AP-42, see also Gutlow, B., "An Inventory of Iron Foundry Emissions", Modern Casting, January 1972.

Appendix A: Emissions Calculations
Shotblasting Operation
Process P010

Company Name: Mahoney Foundries
Address: 209 West Ohio Street, Kendallville, Indiana 46755
Permit No.: 113-39179-00104
Reviewer: Kendra Sutherland

Emission Unit	Nominal Capacity (tons/hour)	Nominal Capacity (tons/year)	Emission Factors (lbs/ton)			PTE (ton/yr)		
			PM	PM10	PM2.5	PM	PM10	PM2.5
Shot Blasting Operation	0.6	5256	17	1.7	1.7	44.68	4.47	4.47

Methodology
Potential to Emit = Max Capacity (tons/yr) * Emission Factor (lbs/ton) * 1 ton/2000 lbs
PM2.5=PM10
Notes:
Emission factor from AP-42 Table 12.10-7 for the amount of particulate emitted to atmosphere from cleaning, finishing at gray iron foundries (SCC 3-04-003-40). The reference indicates that the emission factor was developed for grit blasting, rather than steel shot, and so would be conservative for this steel shot machine.
Process is controlled by a dust collector with a 99% control efficiency

Appendix A: Emissions Calculations
Mold Making Process Lines/Air-set Mixer
Process P011 and P012

Company Name: Mahoney Foundries
Address: 209 West Ohio Street, Kendallville, Indiana 46755
Permit No.: 113-39179-00104
Reviewer: Kendra Sutherland

Emission Unit	Nominal Throughput Rate (tons/hour)	Nominal Annual Throughput Rate (tons/year)*	Emission Factors (lbs/ton)			PTE (ton/yr)		
			PM	PM10	PM2.5	PM	PM10	PM2.5
Mold Making Process Lines (P011)	3.0	26000	0.5	0.075	0.075	6.50	0.98	0.98
Air set Mixer (P012)	0.33	2890.8				0.72	0.11	0.11
Total						7.22	1.08	1.08

Methodology
Potential to Emit = Max Capacity (tons/yr) * Emission Factor (lbs/ton) * 1 ton/2000 lbs
PM2.5=PM10
Notes:
Emission factor is the "Molding" emission factor (also "Prepared Sand Handling" emission factor) given in "An Inventory of Iron Foundry Emissions", Modern Casting, January 1972. This emission factor used instead of AP-42 emission factor because the sand has been coated with the binding materials which make the sand grains heavier.
*The throughput rate is bottlenecked by the throughput of the furnace P001.
**The five (5) molding sand bins (P011a-P011e) include water and emissions are negl.
***P011 the binder is clay and water and there are no VOC's associated

Appendix A: Emissions Calculations
Shell Core Machines
Process P013

Company Name: Mahoney Foundries
Address: 209 West Ohio Street, Kendallville, Indiana 46755
Permit No.: 113-39179-00104
Reviewer: Kendra Sutherland

Emission Unit	Nominal Capacity (tons/hour)	Nominal Capacity (tons/year)
Shell Core Machines	0.16	1401.6

	Emission Factors (lbs/ton)						
	PM	PM10	PM2.5	SO2	Nox	VOC	CO
Shell core machine	1.1	1.1	1.1	0.32	0.5	-	-

	PTE (ton/yr)						
	PM	PM10	PM2.5	SO2	NOx	VOC	CO
Shell Core Machines	0.77	0.77	0.77	0.22	0.35	-	-
Total:	**0.77**	**0.77**	**0.77**	0.22	0.35	0.00E+00	0.00

Methodology
Potential to Emit = Max Capacity (tons/yr) * Emission Factor (lbs/ton) * 1 ton/2000 lbs
PM2.5=PM10
Emission Factors
Emission factor for SO2 and Nox are from WebFIRE grey iron foundires shell core machine SCC 3-04-003-70
Emission factors for PM used in the calculations were obtained from AP-42 (Section 12.10, Table 12.10-7) and SCC 3-04-003-19

HAPS

Resin coated silica sand

	Min	Max	Weight
Phenol-Formaldehyde Resin %	1.00%	6.00%	0.30%

For Phenolic Hot Box Binder System	% Reacted	% Released	% Remaining in Core
Formaldehyde	95.00%	5.00%	0.00%
Phenol	95.00%	0.00%	5.00%

	Tons/yr
Formaldehyde used	2.52E-01
Formaldehyde emitted	1.26E-02
Phenol used	2.52E-01
Phenol emitted	0

Methodology
Usage (tons/year) = Max Capacity (tons/yr) * % Phenol-Formaldehyde Resin * % by weight of Formaoldehyde/Phenol
Emissions= Usage (tons/yr) * % Resleased
PM2.5=PM10

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Process P013 NG

Company Name: Mahoney Foundries
Address : 209 West Ohio Street, Kendallville, Indiana 46755
Permit No.: 113-39179-00104
Reviewer: Kendra Sutherland

Emission Units	**Nominal Capacity (MMBtu**
Four (4) Natural Gas shell core machines	0.64

Heat Input Capacity MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr
0.64	1020	5.5

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.01	0.02	0.02	0.00	0.27	0.02	0.23

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 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
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
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Hazardous Air Pollutants (HAPs)

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
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	5.8E-06	3.3E-06	2.1E-04	0.00	9.3E-06	**0.01**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
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	1.4E-06	3.0E-06	3.8E-06	1.0E-06	5.8E-06	**1.5E-05**
					Total HAPs	**0.01**
					Worst HAP	**0.00**

Methodology is the same as above.
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: Emission Calculations
Fugitive Dust Emissions - Paved Roads

Company Name: Mahoney Foundries
Address: 209 West Ohio Street, Kendallville, Indiana 46755
Permit No.: 113-39179-00104
Reviewer: Kendra Sutherland

Paved Roads at Industrial Site
The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

Vehicle Informtation (provided by source)

Type	Maximum number of vehicles per day	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Vehicle (entering plant) (one-way trip)	25.0	1.0	25.0	2.0	50.0	725	0.137	3.4	1253.0
Vehicle (leaving plant) (one-way trip)	25.0	1.0	25.0	2.0	50.0	725	0.137	3.4	1253.0
Truck (entering plant) (one-way trip)	5.0	1.0	5.0	30.0	150.0	725	0.137	0.7	250.6
Truck (entering plant) (one-way trip)	5.0	1.0	5.0	30.0	150.0	725	0.137	0.7	250.6
		Totals	**60.0**		**400.0**			**8.2**	**3007.1**

Average Vehicle Weight Per Trip = 6.7 tons/trip
Average Miles Per Trip = 0.14 miles/trip

Unmitigated Emission Factor, Ef = [k * (sL)^0.91 * (W)^1.02] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	6.7	6.7	6.7	tons = average vehicle weight (provided by source)
sL =	9.7	9.7	9.7	g/m^2 = silt loading value for paved roads at iron and steel production facilities - Table 13.2.1-3)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)] (Equation 2 from AP-42 13.2.1)
Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]
where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	0.602	0.120	0.0296	lb/mile
Mitigated Emission Factor, Eext =	0.551	0.110	0.0270	lb/mile
Dust Control Efficiency =	50%	50%	50%	

Process	Mitigated PTE of PM (Before Control) (tons/yr)	Mitigated PTE of PM10 (Before Control) (tons/yr)	Mitigated PTE of PM2.5 (Before Control) (tons/yr)	Mitigated PTE of PM (After Control) (tons/yr)	Mitigated PTE of PM10 (After Control) (tons/yr)	Mitigated PTE of PM2.5 (After Control) (tons/yr)
Vehicle (entering plant) (one-way trip)	0.34	0.07	0.02	0.17	0.03	0.01
Vehicle (leaving plant) (one-way trip)	0.34	0.07	0.02	0.17	0.03	0.01
Truck (entering plant) (one-way trip)	0.07	0.01	0.00	0.03	0.01	0.00
Truck (entering plant) (one-way trip)	0.07	0.01	0.00	0.03	0.01	0.00
Totals	**0.83**	**0.17**	**0.04**	**0.41**	**0.08**	**0.02**

Methodology
Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Unmitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Mitigated PTE (Before Control) (tons/yr) = [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Mitigated PTE (After Control) (tons/yr) = [Mitigated PTE (Before Control) (tons/yr)] * [1 - Dust Control Efficiency]

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particle Matter (<2.5 um)
PTE = Potential to Emit

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
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Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

December 13, 2018

Mr. Stephen Mahoney
Mahoney Foundries
209 W. Ohio Street
Kendallville, IN 46755

Re: Public Notice
Mahoney Foundries
Permit Level: MSOP – New Source Construction
Permit Number: 113-39179-00104

Dear Mr. Mahoney:

Enclosed is a copy of your draft M, Technical Support Document, emission calculations, and the Public Notice which will be printed in your local newspaper.

The Office of Air Quality (OAQ) has prepared two versions of the Public Notice Document. The abbreviated version will be published in the newspaper, and the more detailed version will be made available on the IDEM's website and provided to interested parties. Both versions are included for your reference. The OAQ has requested that the News – Sun in Kendallville, Indiana publish the abbreviated version of the public notice no later than December 17, 2018. You will not be responsible for collecting any comments, nor are you responsible for having the notice published in the newspaper.

OAQ has submitted the draft permit package to the Kendallville Public Library, 221 South Park Avenue in Kendallville, Indiana 46755. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.

Please review the enclosed documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to Kendra Sutherland, Indiana Department of Environmental Management, Office of Air Quality, 100 N. Senate Avenue, Indianapolis, Indiana, 46204 or call (800) 451-6027, and ask for extension 4-5401 or dial (317) 234-5401.

Sincerely,

Vicki Biddle

Vicki Biddle
Permits Branch
Office of Air Quality

Enclosures
PN Applicant Cover Letter 1/9/2017

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Governor

Bruno L. Pigott
Commissioner

ATTENTION: PUBLIC NOTICES, LEGAL ADVERTISING

December 13, 2018

News – Sun
102 N. Main
Kendallville, IN 46755

Enclosed, please find one Indiana Department of Environmental Management Notice of Public Comment for Mahoney Foundries, Noble County, Indiana.

Since our agency must comply with requirements which call for a Notice of Public Comment, we request that you print this notice one time, no later than December 17, 2018.

Please send the invoice, notarized form, clippings showing the date of publication to Bo Liu, at the Indiana Department of Environmental Management, Accounting, Room N1340, 100 North Senate Avenue, Indianapolis, Indiana, 46204.

To ensure proper payment, please reference account # 100174737.

We are required by the Auditor's Office to request that you place the Federal ID Number on all claims. If you have any conflicts, questions, or problems with the publishing of this notice or if you do not receive complete public notice information for this notice, please call Vicki Biddle at 800-451-6027 and ask for extension 3-6867 or dial 317-233-6867.

Sincerely,

Vicki Biddle

Vicki Biddle
Permit Branch
Office of Air Quality

Permit Level: MSOP – New Source Construction
Permit Number: 113- 39179 -00104

Enclosure

PN Newspaper Letter 8/22/2018

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December 13, 2018

To: Kendallville Public Library

From: Jenny Acker, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information to Display Regarding a Public Notice for an Air Permit**

Applicant Name: Mahoney Foundries
Permit Number: 113-39179-00104

Enclosed is a copy of important information to make available to the public. This proposed project is regarding a source that may have the potential to significantly impact air quality. Librarians are encouraged to educate the public to make them aware of the availability of this information. The following information is enclosed for public reference at your library:

- Notice of a 30-day Period for Public Comment
- Request to publish the Notice of 30-day Period for Public Comment
- Draft Permit and Technical Support Document

You will not be responsible for collecting any comments from the citizens. Please refer all questions and request for the copies of any pertinent information to the person named below.

Members of your community could be very concerned in how these projects might affect them and their families. **Please make this information readily available until you receive a copy of the final package.**

If you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185. Questions pertaining to the permit itself should be directed to the contact listed on the notice.

Enclosures
PN Library 1/9/2017

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Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

Notice of Public Comment

December 13, 2018
Mahoney Foundries
113-39179-00104

Dear Concerned Citizen(s):

You have been identified as someone who could potentially be affected by this proposed air permit. The Indiana Department of Environmental Management, in our ongoing efforts to better communicate with concerned citizens, invites your comment on the draft permit.

Enclosed is a Notice of Public Comment, which has been placed in the Legal Advertising section of your local newspaper. The application and supporting documentation for this proposed permit have been placed at the library indicated in the Notice. These documents more fully describe the project, the applicable air pollution control requirements and how the applicant will comply with these requirements.

If you would like to comment on this draft permit, please contact the person named in the enclosed Public Notice. Thank you for your interest in the Indiana's Air Permitting Program.

Please Note: *If you feel you have received this Notice in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV. If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.*

Enclosure
PN AAA Cover Letter 1/9/2017

Mail Code 61-53

IDEM Staff	VBIDDLE 12/13/2018 Mahoney Foundries 113-39179-00104 DRAFT			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Stephen Mahoney Mahoney Foundries 209 W Ohio St Kendallville IN 46755 (Source CAATS)									
2		Noble County Board of Commissioners 101 North Orange Street Albion IN 46701 *(Local Official)*									
3		Noble County Health Department 2090 N. State Rd 9, Suite C Albion IN 46701-9566 *(Health Department)*									
4		Mr. Steve Roosz NISWMD 2320 W 800 S, P.O. Box 370 Ashley IN 46705 *(Affected Party)*									
5		Kendallville Public Library 221 S Park Avenue Kendallville IN 46755-1740 *(Library)*									
6		Frederick & Iva Moore 6019 W 650 N Ligonier IN 46767 *(Affected Party)*									
7		Ligonier City Council and Mayors Office 301 S. Cavin St. #2 Ligonier IN 46767 *(Local Official)*									
8		Kendallville City Council and Mayors Office 234 S. Main Street Kendallville IN 46755 *(Local Official)*									
9		Christopher Proctor Free Flow Technologies 4920 Forest Hills Rd., Ste. 200 Loves Park IL 61111 *(Consultant)*									
10		Reliable Production Machining and Welding 301 W. Ohio St. Kendallville IN 46755 *(Affected Party)*									
11		Lewger Machine and Tool 201 W. Ohio St. Kendallville IN 46755 *(Affected Party)*									
12		Garrett LLC 163 Kentucky Ave. Lexington KY 40502 *(Affected Party)*									
13		Lisa Green The Journal Gazette 600 W Main St Fort Wayne IN 46802 (Affected Party)									
14		Mr. Roger Schneider The Goshen News 114 S. Main St Goshen IN 46526 *(Affected Party)*									
15											

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
14			

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