



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: February 10, 2009

RE: GKN Aerospace Muncie, Inc / 035-27126-00059

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

Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures
FNPER.dot12/03/07



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Minor Source Operating Permit Renewal OFFICE OF AIR QUALITY

GKN Aerospace Muncie, Inc.
3901 South Delaware Drive
Muncie, Indiana 47302

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

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

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

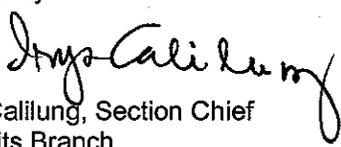
Operation Permit No.: M035-27126-00059	
Issued by:  Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: February 10, 2009 Expiration Date: February 10, 2019

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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 aircraft engine parts manufacturing source.

Source Address:	3901 South Delaware Drive, Muncie, Indiana 47302
Mailing Address:	3901 South Delaware Drive, Muncie, Indiana, 47302
General Source Phone Number:	(765) 747-7147
SIC Code:	3463
County Location:	Delaware
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) Wet abrasive and belt sanding operation, identified as PS-1, with a maximum capacity of 845 parts per hour, consisting of:
- (1) three (3) wet abrasive saws and two (2) belt sanders, and one (1) wheel grinder, constructed in 1999, controlled by a fabric filter identified as PSC-1, and exhausting to stack S-1, with a maximum process weight rate of 12 pounds of metal parts per hour; total,
 - (2) two (2) machine-operated wet abrasive saws, identified as MS-1 and MS-2, constructed in 1999, controlled by a fabric filter, exhausting to stack PT #S3, with a maximum process weight rate of 263 pounds of metal parts per hour, total,
 - (3) six (6) belt sanders, constructed in 1999, exhausting into the building, with a combined maximum process weight rate of 151 pounds of metal parts per hour; total,
 - (4) one (1) inspection booth including a small sand blasting unit controlled by an internal fabric filter, constructed in 1999, with a maximum process weight rate of 28 pounds of metal parts per hour and,
 - (5) three (3) belt sanders constructed in 1999, controlled by a fabric filter identified as PSC-2, and exhausting through to stack S-2, with a maximum process rate of 75 pound of metal parts per hour, total.
- (b) One (1) maintenance grind station, identified as PS-2, constructed in 1999, with a maximum capacity of 1 die and 500 pounds of metal dies per hour, all controlled by a fabric filter, identified as PSC-2, and exhausting to stack S-2, consisting of:
- (1) three (3) hand grind stations;

- (2) one (1) band saw;
 - (3) two (2) welding stations;
 - (4) three (3) wet saws; and
 - (5) one (1) machine grinder.
- (c) Six (6) Glass Frit ESP spray gun units, identified as PS-4a through f, constructed in 1999, each controlled with an internal cellulose cartridge filter, exhausting within the building, capacity: 845 parts per hour, total.
- (d) One (1) Wheelabrator steel shot blast machine, identified as PS-6, constructed in 1999, controlled by a dust collector, identified as WCC-6 and exhausting to stack S-6, capacity: 200 parts per hour, 400 pounds of metal parts per hour, and 1,000 pounds of steel shot per hour.
- (e) One (1) Irvin steel shot blast machine, identified as PS-6a, constructed in 1999, controlled by a dust collector, identified as WCC-6 and exhausting to stack S-6, capacity: 500 parts per hour, 300 pounds of metal parts per hour, and 1,000 pounds of steel shot per hour.
- (f) One (1) Goff shot blast machine, identified as PS-6b, constructed in 2001, controlled by an internal fabric filter, identified as PSC-6b, exhausting within the building, capacity: 100 pounds of parts and 2,600 pounds of shot per hour.
- (g) One (1) acid bath milling operation using hydrofluoric and sulfuric acids, identified as PS-7, constructed in 1999, controlled by a scrubber, identified as PSC-7, and exhausting to stack S-7, capacity: 0.4 tons of acid and 236 pounds of parts per hour.
- (h) One (1) forge operation, consisting of twenty-two (22) machines, identified as PS-8a through PS-8v, constructed in 1999, each controlled by a fabric filter, identified as PSC-8a through PSC-8v, exhausting into the building, capacity: 845 parts and 236 pounds per hour.
- (i) One (1) Pangborn roto blast machine, identified as PS-9a, constructed in 1999, controlled by a fabric filter, identified as PSC-2, and exhausting to stack S-2, capacity: 15 dies per hour, 2,200 pounds of metal dies per hour, and 1,000 pounds of blast material per hour.
- (j) Two (2) electrical discharge die cutting machines under an oil bath, identified as PS-10a and PS-10b, constructed in 1999, exhausting to stacks S-10a and S-10b, respectively, and have a combined capacity: 0.25 die parts per hour, 125 pounds of die parts per hour, and 0.11 gallons of oil per hour.
- (k) One (1) lime bag dumping station, identified as PS-11, constructed in 1999, controlled by a fabric filter, identified as PSC-11, and exhausting inside the building, capacity: 1,500 pounds of lime per hour.
- (l) One (1) molten salt bath cleaning operation with a 1.5 million British thermal unit per hour heater, identified as PS-12, constructed in 1998, exhausting to stack S-12.
- (m) Two (2) natural gas-fired process furnaces, identified as furnaces A1 and B1, constructed in 1999, each with a heat input capacity 5.7 million British thermal units.
- (n) One (1) natural gas-fired space heater, constructed in 1998 exhausting to stack S-13, capacity: 1.25 million British thermal units per hour.

SECTION B GENERAL CONDITIONS

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

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

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

- (a) This permit, M035-27126-00059, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

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

B.4 Enforceability

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

B.5 Severability

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

B.6 Property Rights or Exclusive Privilege

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

B.7 Duty to Provide Information

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain

certification by an "authorized individual" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

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

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

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

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

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.11 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to M035-27126-00059 and issued pursuant to permitting programs approved into the state implementation plan have been either:
- (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

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

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least 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.13 Permit Renewal [326 IAC 2-6.1-7]

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

Request for renewal shall be submitted to:

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

- (b) A timely renewal application is one that is:
- (1) Submitted at least 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 in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

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

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

- (c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.15 Source Modification Requirement

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

B.16 Inspection and Entry

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

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

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

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

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue

MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

B.18 Annual Fee Payment [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees due within 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.19 Credible Evidence [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

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

C.3 Opacity [326 IAC 5-1]

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

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

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

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

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

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

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

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

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

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
- (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
- (2) If there is a change in the following:
- (A) Asbestos removal or demolition start date;
- (B) Removal or demolition contractor; or
- (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue
MC 61-52 IGCN 1003
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

- (f) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Licensed Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

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

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

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

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

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

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

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.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 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60, Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

C.12 Instrument Specifications [326 IAC 2-1.1-11]

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

Corrective Actions and Response Steps

C.13 Response to Excursions or Exceedances

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

- (2) monitor performance data, if applicable; and
- (3) corrective actions taken.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

C.15 Malfunctions Report [326 IAC 1-6-2]

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

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.16 General Record Keeping Requirements [326 IAC 2-6.1-5]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the

Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance or ninety (90) days of initial start-up, whichever is later.

C.17 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

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

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

- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) Wet abrasive and belt sanding operation, identified as PS-1, with a maximum capacity of 845 parts per hour, consisting of:
 - (1) three (3) wet abrasive saws and two (2) belt sanders, and one (1) wheel grinder, constructed in 1999, controlled by a fabric filter identified as PSC-1, and exhausting to stack S-1, with a maximum process weight rate of 12 pounds of metal parts per hour; total,
 - (2) two (2) machine-operated wet abrasive saws, identified as MS-1 and MS-2, constructed in 1999, controlled by a fabric filter, exhausting to stack PT #S3, with a maximum process weight rate of 263 pounds of metal parts per hour, total,
 - (3) six (6) belt sanders, constructed in 1999, exhausting into the building, with a combined maximum process weight rate of 151 pounds of metal parts per hour; total,
 - (4) one (1) inspection booth including a small sand blasting unit controlled by an internal fabric filter, constructed in 1999, with a maximum process weight rate of 28 pounds of metal parts per hour and,
 - (5) three (3) belt sanders constructed in 1999, controlled by a fabric filter identified as PSC-2, and exhausting through to stack S-2, with a maximum process rate of 75 pound of metal parts per hour, total.
- (b) One (1) maintenance grind station, identified as PS-2, constructed in 1999, with a maximum capacity of one (1) die and 500 pounds of metal dies per hour, all controlled by a fabric filter, identified as PSC-2, and exhausting to stack S-2, consisting of:
 - (1) three (3) hand grind stations;
 - (2) one (1) band saw;
 - (3) two (2) welding stations;
 - (4) three (3) wet saws; and
 - (5) one (1) machine grinder.
- (c) Six (6) Glass Frit ESP spray gun units, identified as PS-4a through f, constructed in 1999, each controlled with an internal cellulose cartridge filter, exhausting within the building, capacity: 845 parts per hour, total.
- (d) One (1) Wheelabrator steel shot blast machine, identified as PS-6, constructed in 1999, controlled by a dust collector, identified as WCC-6 and exhausting to stack S-6, capacity: 200 parts per hour, 400 pounds of metal parts per hour, and 1,000 pounds of steel shot per hour.
- (e) One (1) Irvin steel shot blast machine, identified as PS-6a, constructed in 1999, controlled by a dust collector, identified as WCC-6 and exhausting to stack S-6, capacity: 500 parts per hour, 300 pounds of metal parts per hour, and 1,000 pounds of steel shot per hour.

- (f) One (1) Goff shot blast machine, identified as PS-6b, constructed in 2001, controlled by an internal fabric filter, identified as PSC-6b, exhausting within the building, capacity: 100 pounds of parts and 2,600 pounds of shot per hour.
- (g) One (1) acid bath milling operation using hydrofluoric and sulfuric acids, identified as PS-7, constructed in 1999, controlled by a scrubber, identified as PSC-7, and exhausting to stack S-7, capacity: 0.4 tons of acid and 236 pounds of parts per hour.
- (h) One (1) forge operation, consisting of twenty-two (22) machines, identified as PS-8a through PS-8v, constructed in 1999, each controlled by a fabric filter, identified as PSC-8a through PSC-8v, exhausting into the building, capacity: 845 parts and 236 pounds per hour.
- (i) One (1) Pangborn roto blast machine, identified as PS-9a, constructed in 1999, controlled by a fabric filter, identified as PSC-2, and exhausting to stack S-2, capacity: 15 dies per hour, 2,200 pounds of metal dies per hour, and 1,000 pounds of blast material per hour.
- (j) Two (2) electrical discharge die cutting machines under an oil bath, identified as PS-10a and PS-10b, constructed in 1999, exhausting to stacks S-10a and S-10b, respectively, and have a combined capacity: 0.25 die parts per hour, 125 pounds of die parts per hour, and 0.11 gallons of oil per hour.
- (k) One (1) lime bag dumping station, identified as PS-11, constructed in 1999, controlled by a fabric filter, identified as PSC-11, and exhausting inside the building, capacity: 1,500 pounds of lime per hour.
- (l) One (1) molten salt bath cleaning operation with a 1.5 million British thermal unit per hour heater, identified as PS-12, constructed in 1998, exhausting to stack S-12.
- (m) Two (2) natural gas-fired process furnaces, identified as furnaces A1 and B1, constructed in 1999, each with a heat input capacity 5.7 million British thermal units.
- (n) One (1) natural gas-fired space heater, constructed in 1998 exhausting to stack S-13, capacity: 1.25 million British thermal units per hour.

(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 [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2(d), particulate from the Six (6) Glass Frit ESP spray gun units, identified as PS-4a through PS-4f, shall be controlled by dry filters, and the Permittee shall operate the control device in accordance with manufacturer 's specifications.

If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such observation:

Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

If overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

- (b) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from each of the following processes shall not exceed the pound per hour limits as follows.

Emission Units	Process Weight Rate (tons/hr)	Particulate Emissions (lbs/hr)
PS-1		
two (2) machine-operated wet abrasive saws (MS-1 and MS-2)	0.13	1.05
six (6) belt sanders	0.08	0.73
PS-2	0.25	1.62
PS-6	0.70	3.24
PS-6a	0.65	3.07
PS-6b	1.35	5.01
PS-9a	1.60	5.62

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

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

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

The corresponding control devices shall be in operation at all times the above processes are in operation, in order to comply with this limit.

D.1.2 Preventive Maintenance Plan

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for emission units PS-1, MS-1, MS-2, PS-2, PS-4a through PS-4f, PS-6, PS-6a, PS-6b, PS-9a, and their control devices.

Compliance Determination Requirements

D.1.3 Particulate Control

- (a) In order to comply with Condition D.1.1(b), the fabric filter shall be in operation at all times MS-1 and MS-2 are in operation.
- (b) In order to comply with Condition D.1.1(b), the fabric filter for particulate control shall be in operation at all times the six (6) belt sanders, included under emission unit PS-1, are in operation.
- (c) In order to comply with Condition D.1.1(b), the fabric filter PSC-2 for particulate control shall be in operation at all times the PS-2, and PS-9a is in operation.
- (d) In order to comply with Condition D.1.1(b), the dust collector WCC-6 for particulate control shall be in operation at all times PS-6 and PS-6a are in operation.
- (e) In order to comply with condition D.1.1(b), the internal fabric filter PSC-6b for particulate control shall be in operation at all times PS-6b is in operation.

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

**MINOR SOURCE OPERATING PERMIT (MSOP)
CERTIFICATION**

Source Name: GKN Aerospace Muncie, Inc.
Source Address: 3901 South Delaware Drive, Muncie, Indiana 47302
Mailing Address: 3901 South Delaware Drive, Muncie, Indiana, 47302
MSOP No.: M035-27126-00059

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify) _____
- Report (specify) _____
- Notification (specify) _____
- Affidavit (specify) _____
- Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

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

**MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION**

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

Company Name:	GKN Aerospace Muncie, Inc.
Address:	3901 South Delaware Drive
City:	Muncie, Indiana 47302
Phone #:	(765) 747-7147
MSOP #:	M035-27126-00059

I hereby certify that GKN Aerospace Muncie, Inc. is : still in operation.
 no longer in operation.
I hereby certify that GKN Aerospace Muncie, Inc. is : in compliance with the requirements of MSOP M035-27126-00059.
 not in compliance with the requirements of MSOP M035-27126-00059.

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

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

Noncompliance:

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY FAX NUMBER: (317) 233-6865

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

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

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

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

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

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

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

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

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

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

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

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

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

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

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

326 IAC 1-6-1 Applicability of rule

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

326 IAC 1-2-39 "Malfunction" definition

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

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

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

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

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

Source Description and Location
--

Source Name:	GKN Aerospace Muncie, Inc.
Source Location:	3901 South Delaware Drive, Muncie, IN 47302
County:	Delaware
SIC Code:	3463
Permit Renewal No.:	035-27126-00059
Permit Reviewer:	Jason R. Krawczyk

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from GKN Aerospace Muncie, Inc., formerly AeroForge Corporation, relating to the operation of a stationary aircraft engine parts manufacturing source.

Background and Description of Permitted Emission Units

On November 7, 2008, GKN Aerospace Muncie, Inc. submitted an application to the OAQ requesting to renew its operating permit. GKN Aerospace Muncie, Inc. was issued a MSOP on February 18, 2004.

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

- (a) Wet abrasive and belt sanding operation, identified as PS-1, with a maximum capacity of 845 parts per hour, consisting of:
 - (1) three (3) wet abrasive saws and two (2) belt sanders, and one (1) wheel grinder, constructed in 1999, controlled by a fabric filter identified as PSC-1, and exhausting to stack S-1, with a maximum process weight rate of 12 pounds of metal parts per hour; total,
 - (2) two (2) machine-operated wet abrasive saws, identified as MS-1 and MS-2, constructed in 1999, controlled by a fabric filter, exhausting to stack PT #S3, with a maximum process weight rate of 263 pounds of metal parts per hour, total,
 - (3) six (6) belt sanders, constructed in 1999, exhausting into the building, with a combined maximum process weight rate of 151 pounds of metal parts per hour; total,
 - (4) one (1) inspection booth including a small sand blasting unit controlled by an internal fabric filter, constructed in 1999, with a maximum process weight rate of 28 pounds of metal parts per hour and,
 - (5) three (3) belt sanders constructed in 1999, controlled by a fabric filter identified as PSC-2, and exhausting through to stack S-2, with a maximum process rate of 75 pound of metal parts per hour, total.

- (b) One (1) maintenance grind station, identified as PS-2, constructed in 1999, with a maximum capacity of one (1) die and 500 pounds of metal dies per hour, all controlled by a fabric filter, identified as PSC-2, and exhausting to stack S-2, consisting of:
 - (1) three (3) hand grind stations;
 - (2) one (1) band saw;

- (3) two (2) welding stations;
 - (4) three (3) wet saws; and
 - (5) one (1) machine grinder.
- (c) Six (6) Glass Frit ESP spray gun units, identified as PS-4a through f, constructed in 1999, each controlled with an internal cellulose cartridge filter, exhausting within the building, capacity: 845 parts per hour, total.
- (d) One (1) Wheelabrator steel shot blast machine, identified as PS-6, constructed in 1999, controlled by a dust collector, identified as WCC-6 and exhausting to stack S-6, capacity: 200 parts per hour, 400 pounds of metal parts per hour, and 1,000 pounds of steel shot per hour.
- (e) One (1) Irvin steel shot blast machine, identified as PS-6a, constructed in 1999, controlled by a dust collector, identified as WCC-6 and exhausting to stack S-6, capacity: 500 parts per hour, 300 pounds of metal parts per hour, and 1,000 pounds of steel shot per hour.
- (f) One (1) Goff shot blast machine, identified as PS-6b, constructed in 2001, controlled by an internal fabric filter, identified as PSC-6b, exhausting within the building, capacity: 100 pounds of parts and 2,600 pounds of shot per hour.
- (g) One (1) acid bath milling operation using hydrofluoric and sulfuric acids, identified as PS-7, constructed in 1999, controlled by a scrubber, identified as PSC-7, and exhausting to stack S-7, capacity: 0.4 tons of acid and 236 pounds of parts per hour.
- (h) One (1) forge operation, consisting of twenty-two (22) machines, identified as PS-8a through PS-8v, constructed in 1999, each controlled by a fabric filter, identified as PSC-8a through PSC-8v, exhausting into the building, capacity: 845 parts and 236 pounds per hour.
- (i) One (1) Pangborn roto blast machine, identified as PS-9a, constructed in 1999, controlled by a fabric filter, identified as PSC-2, and exhausting to stack S-2, capacity: 15 dies per hour, 2,200 pounds of metal dies per hour, and 1,000 pounds of blast material per hour.
- (j) Two (2) electrical discharge die cutting machines under an oil bath, identified as PS-10a and PS-10b, constructed in 1999, exhausting to stacks S-10a and S-10b, respectively, and have a combined capacity: 0.25 die parts per hour, 125 pounds of die parts per hour, and 0.11 gallons of oil per hour.
- (k) One (1) lime bag dumping station, identified as PS-11, constructed in 1999, controlled by a fabric filter, identified as PSC-11, and exhausting inside the building, capacity: 1,500 pounds of lime per hour.
- (l) One (1) molten salt bath cleaning operation with a 1.5 million British thermal unit per hour heater, identified as PS-12, constructed in 1998, exhausting to stack S-12.
- (m) Two (2) natural gas-fired process furnaces, identified as furnaces A1 and B1, constructed in 1999, each with a heat input capacity 5.7 million British thermal units.
- (n) One (1) natural gas-fired space heater, constructed in 1998 exhausting to stack S-13, capacity: 1.25 million British thermal units per hour.

Unpermitted Emission Units and Pollution Control Equipment

There have been no unpermitted emission units constructed and/or operated without a permit at the source since the last approval.

Emission Units and Pollution Control Equipment Removed From the Source

- (a) One (1) graphite die pattern cutting operation, identified as PS-9b, constructed in 1999, controlled by a fabric filter, identified as PSC-2, and exhausting to stack S-2, capacity: 0.375 graphite electrodes per hour and 11 pounds of graphite per hour.
- (b) One (1) natural gas-fired process furnace, identified as furnace G1, constructed in 1999, heat input capacity: 5.7 million British thermal units per hour.
- (c) One (1) natural gas-fired process furnaces, identified as furnace E1, constructed in 1999, heat input capacities: 4.2 million British thermal units per hour.
- (d) One (1) natural gas-fired process furnace, identified as furnace BOX, constructed in 1999, with a heat input capacity of 0.65 million British thermal units per hour.

Existing Approvals

Since the issuance of the MSOP 035-18183-00059 on February 18, 2004, the source has constructed or has been operating under the following approval as well.

- (a) MSOP Notice-Only Change No: 035-24056-00059 issued on January 26, 2007.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

Enforcement Issues

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Delaware County

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Attainment effective January 3, 2006, for the Muncie area, including Delaware County, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.
¹ Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM2.5.	

- (a) Ozone Standards
 - (1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.

- (2) On September 6, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Allen, Clark, Elkhart, Floyd, LaPorte, and St. Joseph as attainment for the 8-hour ozone standard.
- (3) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Joseph as attainment for the 8-hour ozone standard.
- (4) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Delaware County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) PM2.5

Delaware County has been classified as attainment for PM2.5. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions, and the effective date of these rules was July 15th, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM10 emissions as a surrogate for PM2.5 emissions until 326 IAC 2-2 is revised.

(c) Other Criteria Pollutants

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

(d) Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are not counted toward the determination of PSD and Emission Offset applicability.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Pollutant	tons/year
PM	Greater than 25, Less than 100
PM ₁₀	Greater than 25, Less than 100
PM _{2.5}	Greater than 25, Less than 100
SO ₂	Less than 25
VOC	Less than 25
CO	Less than 25
NO _x	Less than 25

HAPs	tons/year
Single	Less than 10
Combined	Less than 25

Appendix A of this TSD reflects the unrestricted potential emissions of the source.

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all criteria pollutants is still less than 100 tons per year. The source is not subject to the provisions of 326 IAC 2-7. Therefore, the source will be issued an MSOP Renewal.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year.

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-7, fugitive emissions are not counted toward the determination of Part 70 applicability.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (b) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Nine Metal Fabrication and Finishing Source Categories, 40 CFR 63.11514, Subpart XXXXXX, are not included in the permit, since the source is not primarily engaged in operations which are classified in one of the nine source categories listed in this NESHAP. This source performs nonferrous forgings.
- (c) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in this permit renewal.

Compliance Assurance Monitoring (CAM)

- (d) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the potential to emit of the source is limited to 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 entire source:

- (a) 326 IAC 1-6-3 (Preventive Maintenance Plan)
The source is subject to 326 IAC 1-6-3.
- (b) 326 IAC 2-4.1 (New Source Toxics Control)
The operation of the source will emit less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.
- (c) 326 IAC 2-6 (Emission Reporting)
This source is located in Delaware County and the potential to emit of each criteria pollutant is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.
- (d) 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 Exemptions), opacity shall meet the following, unless otherwise stated in the 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.
- (e) 326 IAC 6-4 (Fugitive Dust Emissions)
Pursuant to 326 IAC 6-4, fugitive dust shall not be visible crossing the boundary or property line of a source. Observances of visible emissions crossing property lines may be refuted by factual data expressed in 326 IAC 6-4-2(1), (2) or (3).

Wet Abrasive and Belt Sanding Operation

- (f) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(b)(14), the three (3) wet abrasive saws, two (2) belt sanders, and one (1) wheel grinder, one (1) inspection booth, and the three (3) belt sanders are exempt from the requirements of 326 IAC 6-3 because they have potential particulate emissions less than five hundred fifty-one thousandths (0.551) pounds per hour.
- (g) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from each of the following processes shall not exceed the pound per hour limits as follows.

Emission Units	Process Weight Rate (tons/hr)	Particulate Emissions (lbs/hr)
two (2) machine-operated wet abrasive saws (MS-1 and MS-2)	0.13	1.05
six (6) belt sanders	0.08	0.73

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

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

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

The corresponding control devices shall be in operation at all times the above processes are in operation, in order to comply with this limit.

Maintenance Grind Station

- (h) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(d), particulate from the one (1) maintenance grind station identified as PS-2 and consisting of three (3) hand grinders, one (1) band saw, two (2) welding stations, three (3) wet saws, and one (1) machine grinder, shall not exceed 1.62 pounds per hour, when operating at a process weight rate of 500 pounds per hour.

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

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

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

Glass Frit ESP guns

- (i) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(d), particulate from the Six (6) Glass Frit ESP spray gun units, identified as PS-4a through PS-4f, shall be controlled by dry filters, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such observation:

Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

If overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

- (j) 326 IAC 8-1-1 (Volatile Organic Compounds)
Pursuant to 326 IAC 8-1-1(b), the Six (6) Glass Frit ESP spray gun units, identified as PS-4a through PS-4f, are exempt from the requirements of 326 IAC 8 because they have potential volatile organic compound emissions less than fifteen (15) pounds per day.

Wheelabrator Steel Shot Blast Machine

- (k) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(d), particulate from the one (1) wheelabrator steel shot blast machine, identified as PS-6, shall not exceed 3.24 pounds per hour, when operating at a process weight rate of 1,400 pounds per hour.

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

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

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

Irvin Steel Shot Blast Machine

- (l) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(d), particulate from the one (1) Irvin steel shot blast machine, identified as PS-6a, shall not exceed 3.07 pounds per hour, when operating at a process weight rate of 1,300 pounds per hour.

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

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

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

Goff Shot Blast Machine

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

Pursuant to 326 IAC 6-3-2(d), particulate from the one (1) Goff shot blast machine, identified as PS-6b, shall not exceed 5.01 pounds per hour, when operating at a process weight rate of 2,700 pounds per hour.

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

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

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

Acid Bath Milling

- (n) There are no applicable regulations for the acid bath milling operations.

Forge Operation

- (o) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(14), the forge operation consisting of units PS-8a through PS-8v, is exempt from the requirements of 326 IAC 6-3 because it has potential particulate emissions less than five hundred fifty-one thousandths (0.551) pounds per hour.
- (p) 326 IAC 8-1-1 (Volatile Organic Compounds)
Pursuant to 326 IAC 8-1-1(b), the forge operation consisting of units PS-8a through PS-8v, is exempt from the requirements of 326 IAC 8 because it has potential volatile organic compound emissions less than fifteen (15) pounds per day.

Pangborn Roto Blast Machine

- (q) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(d), particulate from the one (1) Pangborn roto blast machine, identified as PS-9a, shall not exceed 5.62 pounds per hour, when operating at a process weight rate of 3,200 pounds per hour.

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

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

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

Electrical Discharge Die Cutting Machines

- (r) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(14), the two (2) electrical discharge die cutting machines under an oil bath identified as units PS-10a and PS-10b, are exempt from the requirements of 326 IAC 6-3 because they have potential particulate emissions less than five hundred fifty-one thousandths (0.551) pounds per hour.
- (s) 326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
Pursuant to 326 IAC 8-1-6, the two (2) electrical discharge die cutting machines under an oil bath identified as units PS-10a and PS-10b, are exempt from the requirements of 326 IAC 8-1-6 because they have potential volatile organic compound (VOC) emissions less than twenty-five (25) tons per year.

Compliance Determination Monitoring and Testing Requirements

- (a) There are compliance no determination or monitoring requirements applicable to this source.

- (b) There are no testing requirements applicable to this source.

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 November 7, 2008.

The operation of this source shall be subject to the conditions of the attached proposed MSOP Renewal No. 035-27126-00059. The staff recommends to the Commissioner that this MSOP Renewal be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Jason R. Krawczyk 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) 234-5175 or toll free at 1-800-451-6027 extension 4-5175.
- (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's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

SUMMARY OF EMISSIONS

Company Name: GKN Aerospace Muncie, Inc
Address City IN Zip: 3901 South Delaware Drive, Muncie, IN 47302
Permit Number: 035-27126-00059
Plt ID: 035-00059
Reviewer: Jason R. Krawczyk
Date: December 1, 2008

Uncontrolled Emissions (Tons/Yr)														
Pollutant	Combustion	Miscellaneous Operations	Process Operations								Wet Saws	Welding	Acid Milling	Total PTE
			PSC-1	PSC-2	Inspection Booth	PSC-6	PSC-6a	PSC-6b	PSC-11	Grinders	(MS-1 & MS-2)			
PM	0.12	4.54	2.14	5.24	1.35	3.29	3.29	2.93	0.79	7.85	4.38	0.00	-	35.90
PM10	0.47	4.54	2.14	5.24	1.35	3.29	3.29	2.93	0.79	7.85	4.38	0.00	-	36.25
PM2.5	0.47	4.54	2.14	5.24	1.35	3.29	3.29	2.93	0.79	7.85	4.38	0.00	-	36.25
VOC	0.34	9.31	-	-	-	-	-	-	-	-	-	-	-	9.65
NOx	6.20	-	-	-	-	-	-	-	-	-	-	-	-	6.20
SO2	1.77	-	-	-	-	-	-	-	-	-	-	-	1.05	1.77
CO	5.21	-	-	-	-	-	-	-	-	-	-	-	-	5.21
Single HAP	0.11	-	-	-	-	-	-	-	-	-	-	-	-	0.11
Combined HAP	0.12	-	-	-	-	-	-	-	-	-	-	0.00	-	0.12

Controlled Emissions (Tons/Yr)														
Pollutant	Combustion	Miscellaneous Operations	Process Operations								Wet Saws	Welding	Acid Milling	Total PTE
			PSC-1	PSC-2	Inspection Booth	PSC-6	PSC-6a	PSC-6b	PSC-11	Grinders	(MS-1 & MS-2)			
PM	0.12	0.05	0.00	0.05	0.01	0.00	0.00	0.00	0.00	7.85	0.44	0.00	-	8.53
PM10	0.47	0.05	0.00	0.05	0.01	0.00	0.00	0.00	0.00	7.85	0.44	0.00	-	8.89
PM2.5	0.47	0.05	0.00	0.05	0.01	0.00	0.00	0.00	0.00	7.85	0.44	0.00	-	8.89
VOC	0.34	9.31	-	-	-	-	-	-	-	-	-	-	-	9.65
NOx	6.20	-	-	-	-	-	-	-	-	-	-	-	-	6.20
SO2	1.77	-	-	-	-	-	-	-	-	-	-	-	0.01	1.77
CO	5.21	-	-	-	-	-	-	-	-	-	-	-	-	5.21
Single HAP	0.11	-	-	-	-	-	-	-	-	-	-	-	-	0.11
Combined HAP	0.12	-	-	-	-	-	-	-	-	-	-	0.00	-	0.12

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

Company Name: GKN Aerospace Muncie, Inc
Address City IN Zip: 3901 South Delaware Drive, Muncie, IN 47302
Permit Number: 035-27126-00059
Plant ID: 035-00059
Reviewer: Jason R. Krawczyk
Date: December 1, 2008

<u>Heat Input Capacity</u> MMBtu/hr	<u>Potential Throughput</u> MMCF/yr	<u>Emission Unit ID</u>
5.70	49.93	A1
5.70	49.93	B1
1.25	10.95	Space Heater
1.50	13.14	Molten Salt Bath Heater
14.2	123.95	

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	28.5	100 **see below	5.5	84
Potential Emission in tons/yr	0.12	0.47	1.77	6.20	0.34	5.21

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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/1,000 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 3 for HAPs emissions calculations.

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

Company Name: GKN Aerospace Muncie, Inc
Address City IN Zip: 3901 South Delaware Drive, Muncie, IN 47302
Permit Number: 035-27126-00059
Plt ID: 035-00059
Reviewer: Jason R. Krawczyk
Date: November 19, 2008

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	1.302E-04	7.437E-05	4.648E-03	1.116E-01	2.107E-04

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	3.099E-05	6.817E-05	8.677E-05	2.355E-05	1.302E-04

Methodology is the same as page 2.

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
VOC and Particulate
From Miscellaneous Operations**

**Company Name: GKN Aerospace Muncie, Inc
Address City IN Zip: 3901 South Delaware Drive, Muncie, IN 47302
Permit Number: 035-27126-00059
Pit ID: 035-00059
Reviewer: Jason R. Krawczyk
Date: December 1, 2008**

Processes, Units, & Materials	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency	Particulate Control Efficiency
Glass Frit ESP																	
PS-4a through PS-4f																	
Oxylub-174	5.6	0.000%	0.0%	0.0%	0.0%	100.00%	0.00059	845	0.00	0.00	0.00	0.00	0.00	4.28	0.00	65%	99.00%
Forges																	
PS-8a through PS-8v																	
14-462LB DR (Graphite)	9.4	90.1%	90.1%	0.0%	95.0%	5.00%	0.00009	845	0.00	0.00	0.00	0.00	0.00	0.258	0.00	15%	96.75%
Die Cutting																	
PS-10a and PS-10b																	
Norpar 15 (oil bath)	6.4	100%	0.0%	100.0%	0.0%	0.00%	0.44000	0.750	6.44	6.44	2.13	51.0	9.31	0.00	n/a	100%	

State Potential Emissions

**Uncontrolled PTE: 2.13 51.0 9.31 4.54
Controlled PTE: 2.13 51.0 9.31 0.05**

Methodology:

- Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
- Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
- Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
- Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
- Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
- Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
- Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)

Appendix A: Emission Calculations
Process Operations with Filters and Uncontrolled Sanding

Company Name: GKN Aerospace Muncie, Inc
Address City IN Zip: 3901 South Delaware Drive, Muncie, IN 47302
Permit Number: 035-27126-00059
Pit ID: 035-00059
Reviewer: Jason R. Krawczyk
Date: December 1, 2008

Control Device ID	Control Efficiency (%)	Grain Loading per Actual Cubic foot of Outlet Air (grains/cub. ft.)	Gas or Air Flow Rate (acfm.)	PM Emission Rate before Controls (lb/hr)	PM Emission Rate before Controls (tons/yr)	PM Emission Rate after Controls (lb/hr)	PM Emission Rate after Controls (tons/yr)	
PSC-1	99.9%	0.000019	3000	0.489	2.14	0.0005	0.002	
Inspection Booth Filter	99.0%	0.0009	400	0.309	1.35	0.003	0.014	
PSC-2	99.0%	0.000093	15000	1.20	5.24	0.012	0.052	
WCC-6 (PS-6)	99.9%	0.000025	3500	0.750	3.29	0.0008	0.003	
WCC-6 (PS-6a)	99.9%	0.000025	3500	0.750	3.29	0.0008	0.003	
PSC-6b	99.9%	0.000100	780	0.669	2.93	0.0007	0.003	
PSC-11	99.9%	0.000020	1050	0.180	0.788	0.0002	0.001	
State Potential Emissions				Total PTE:	4.34	19.0	0.018	0.078

Methodology:

PM = PM10 = PM2.5

Emission Rate in lbs/hr (after controls) = (grains/cub. ft.) (sq. ft.) ((cub. ft./min.)/sq. ft.) (60 min/hr) (lb/7000 grains)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Emission Rate in lbs/hr (before controls) = Emission Rate (after controls): (lbs/hr)/(1-control efficiency)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

	Number of Units	PM Emission Rate (lbs/hr)	PM Emission Rate (lbs/hr)	PM Emission rate (tons/yr)
Uncontrolled Belt sanders	11	0.16	1.79	7.85

Note:

The PM Emission Rate (lb/hr), as used in MSOP 035-18183-00059, is assumed to be 1/3 of the Uncontrolled Emission Rate for PSC-1

Methodology:

PM = PM10 = PM2.5

PM emission rate (lbs/hr) = Number of Units * PM Emission Rate

PM emission rate (tons/yr) = PM emission rate (lbs/hr) x 8,760 hrs/yr / 2,000 lbs/ton

**Appendix A: Emission Calculations
Particulate Emissions
Wet Saws**

**Company Name: GKN Aerospace Muncie, Inc
Address City IN Zip: 3901 South Delaware Drive, Muncie, IN 47302
Permit Number: 035-27126-00059
Plt ID: 035-00059
Reviewer: Jason R. Krawczyk
Date: December 1, 2008**

Unit ID	Production Schedule (hrs/yr)	Weight of Material Collected (lbs/yr)	Amount Collected (lbs/hr)	Amount Collected (tons/yr)	Control Efficiency	PM Emissions before controls (lbs/hr)	PM Emissions before controls (tons/yr)	PM Emissions after controls (lbs/hr)	PM Emissions after controls (tons/yr)
MS-1 and MS-2	4000	3600	0.900	3.94	90.0%	1.00	4.38	0.100	0.438

Note:

PM = PM10 = PM2.5

Production Schedule (hrs/yr) is 4,000 hrs/yr for MS-1 and MS-2 as determined in MSOP 035-18183-00059, issued February 18, 2004.

Methodology:

Actual collected (lbs/hr) = Weight of Material Collected (lbs/yr) / Production schedule (hrs/yr)

Potential collected (tons/yr) = Amount collected (lbs/hr) x 8,760 hrs/yr / 2,000 lbs/ton

Potential generated (lbs/hr) = Amount collected (lbs/hr) / control efficiency (%)

Potential generated (tons/yr) = Potential generated (lbs/hr) * (8760 hr/yr) * (ton/2000 lb)

Emissions after controls (lbs/hr) = Potential generated (lbs/hr) * (1-control efficiency (%))

Emissions after controls (tons/yr) = Emissions after controls (lbs/hr) * (8760 hr/yr) * (ton/2000 lb)

**Appendix A: Emissions Calculations
Welding and Thermal Cutting**

Company Name: GKN Aerospace Muncie, Inc
Address City IN Zip: 3901 South Delaware Drive, Muncie, IN 47302
Permit Number: 035-27126-00059
Plt ID: 035-00059
Reviewer: Jason R. Krawczyk
Date: December 1, 2008

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	EMISSION FACTORS* (lb pollutant/lb electrode)				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
			PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
WELDING											
Tungsten Inert Gas (TIG)(carbon steel)	2	0.008	0.0055	0.0005			0.00009	0.000008	0.000	0.000	0.000008
EMISSION TOTALS											
Potential Emissions lbs/hr							0.00009	0.00001	0.00	0.00	0.00001
Potential Emissions lbs/day							0.002	0.0002	0.00	0.00	0.0002
Potential Emissions tons/year							0.0004	0.00004	0.00	0.00	0.00004

Methodology:

*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column.

**Emission Factor for plasma cutting from American Welding Society (AWS). Trials reported for wet cutting of 8 mm thick mild steel with 3.5 m/min cutting speed (at 0.2 g/min emitted). Therefore, the emission factor for plasma cutting is for 8 mm thick rather than 1 inch, and the maximum metal thickness is not used in calculating the emissions.

Using AWS average values: (0.25 g/min)/(3.6 m/min) x (0.0022 lb/g)/(39.37 in./m) x (1,000 in.) = 0.0039 lb/1,000 in. cut, 8 mm thick

Plasma cutting emissions, lb/hr: (# of stations)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 8 mm thick)

Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" thick)

Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)

Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day

Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lbs.

**Appendix A: Emission Calculations
Acid Milling**

Company Name: GKN Aerospace Muncie, Inc
Address City IN Zip: 3901 South Delaware Drive, Muncie, IN 47302
Permit Number: 035-27126-00059
Plt ID: 035-00059
Reviewer: Jason R. Krawczyk
Date: December 1, 2008

**** SO2 emissions before scrubber ****

Acid Cleaning Bath (pickling) 0.400 ton/hr x 0.60 lb/ton / 2000 lb/ton x 8760 hr/yr = 1.051 tons/yr
AIRS SCC 3-09-011-02

**** SO2 emissions after scrubber ****

Acid Cleaning Bath (pickling) 1.05 tons/yr x 1% emitted after controls = 0.011 tons/yr

**** HF emissions before scrubber****

Acid Cleaning Bath (pickling) 0.400 ton/hr x 0.84 lb/ton / 2000 lb/ton x 8760 hr/yr = 1.472 tons/yr

The emission factor for the hydroflouric (HF) acid was determined during the review of CP 035-9563-00011, issued on July 6, 1998, and is based on the ratio of HF acid to sulfuric acid in the bath.

**** HF emissions after scrubber ****

Acid Cleaning Bath (pickling) 1.47 tons/yr x 1% emitted after controls = 0.015 tons/yr

Note:

Scrubber has a 99% control efficiency.