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: June 5, 2008

RE: FCC (Adams), LLC / 001-26137-00064

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

Notice of Decision: Approval - Registration

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 4-21.5-3-4(d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 requires 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
FN-REGIS.dot 1/2/08

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REGISTRATION
OFFICE OF AIR QUALITY

FCC (Adams), LLC
Berne, Indiana 46711

Pursuant to 326 IAC 2-5.1 (Construction of New Sources: Registrations) and 326 IAC 2-5.5 (Registrations), (herein known as the Registrant) is hereby authorized to construct and operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this registration.

Registration No. 001-26137-00064	
Issued by: Original signed by Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date:June 5, 2008

SECTION A SOURCE SUMMARY

This registration 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 Registrant 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 Registrant to obtain additional permits pursuant to 326 IAC 2.

A.1 General Information

The Registrant owns and operates a stationary clutch packs manufacturing plant.

Source Address:	936 East Parr Rd., Berne, Indiana, 46711
Mailing Address:	936 East Parr Rd., Berne, Indiana, 46711
General Source Phone Number:	(260) 589 - 8555
SIC Code:	3714
County Location:	Adams County
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Registration

A.2 Emission Units and Pollution Control Equipment Summary

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

(a) Three (3) aluminum melting furnaces, identified as MF-1, MF-2, MF-3, constructed in June 2007, with a maximum capacity of 500 pounds of aluminum per hour each, and furnace MF-1 and MF-2 exhaust to stack S-6, and furnace MF-3 exhausts to stack S-7.

(b) One (1) aluminum melting furnace, identified as MF-4, approved for construction in 2008, with a maximum capacity of 500 pounds per hour, and exhausts to stack S-7.

(c) Three (3) die casting machines (pouring and casting), identified as DC-1, DC-2, and DC-3, constructed in 2007, with a maximum capacity of 0.09 tons of aluminum per hour each for DC-1 and DC-2, and 0.124 tons of aluminum per hour for DC-3, venting indoors.

(d) One (1) die casting machine (pouring and casting), identified as DC-4, approved for construction in 2008, with a maximum capacity of 0.124 tons of aluminum per hour, venting indoors.

(e) Two (2) shot blasting units, identified as SB1, SB2, constructed in June 2007, with a maximum zinc based media capacity of 14,072 pounds per hour each, controlled by bag filters, venting indoors.

(f) One (1) shot blasting unit, identified as SB3, approved for construction in 2008, with a maximum zinc based media capacity of 14,072 pounds per hour each, controlled by bag filters, venting indoors.

(g) Seven (7) parts washers; two (2) die cast washers, each constructed in 2007, one (1) press washer, one (1) assembly washer, one (1) Hub washer, one (1) Deburr washer, and one (1) RWG washer, each constructed in 2006, venting outdoors.

(h) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, including:

(1) Twelve (12) natural gas fired rooftop heaters, identified as RTU-1 to RTU-9, each constructed in 2004, and RTUDC-1 to RTUDC-3, each constructed in 2007, rated between 0.12 and 0.5 MMBtu/hr, with a combined capacity rating of 4.105 MMBtu/hr, and exhaust indoors.

(2) Six (6) natural gas propeller unit heaters, identified as UH-1 to UH-4, each constructed in 2004, and UHDC-1, UHDC-2, each constructed in 2007, rated between 0.075 and 0.12 MMBtu/hr, with a combined capacity rating of 0.585 MMBtu/hr, and exhaust indoors.

(3) One (1) 0.4 MMBtu/hr direct-fired natural gas air make-up unit, constructed in 2007.

(4) One (1) 1.5 MMBtu/hr natural gas water evaporator heater, constructed in 2004.

(i) Three (3) lathe machines, approved for construction in 2008, using Seal Cool 3990 as a cutting coolant oil, where coolant solution continuously flooding the machining interface, exhausting to the interior; with no particulate emissions and VOC emissions are determined at 100% flash off.

(j) Fifteen (15) lathe machines; four (4) constructed in 2004; two (2) constructed in 2006; and nine (9) constructed in 2007; using Seal Cool 3990 as a cutting coolant oil, where the coolant solution continuously flooding the machining interface, exhausting to the interior; with no particulate emissions and VOC emissions are determined at 100% flash off.

(k) Three (3) grob machines and presses; constructed in 2004, 2005, and 2007, respectively, utilize Draw-Eze 571 as a machining fluid. There are no criteria pollutants or HAPs emitted from this process.

SECTION B GENERAL CONDITIONS

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

Terms in this registration 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 Effective Date of Registration [IC 13-15-5-3]

Pursuant to IC 13-15-5-3, this registration 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.

B.3 Registration Revocation [326 IAC 2-1.1-9]

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

(a) Violation of any conditions of this registration.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this registration.

(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 registration shall not require revocation of this registration.

(d) For any cause which establishes in the judgment of IDEM, the fact that continuance of this registration is not consistent with purposes of this article.

B.4 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to Registration No. 001-26137-00064 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

(3) deleted.

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

B.5 Annual Notification [326 IAC 2-5.1-2(f)(3)] [326 IAC 2-5.5-4(a)(3)]

Pursuant to 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3):

(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 registration.

(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.6 Source Modification Requirement [326 IAC 2-5.5-6(a)]

Pursuant to 326 IAC 2-5.5-6(a), an application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

B.7 Registrations [326 IAC 2-5.1-2(i)]

Pursuant to 326 IAC 2-5.1-2(i), this registration does not limit the source's potential to emit.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]

C.1 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 registration:

(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.2 Fugitive Dust Emissions [326 IAC 6-4]

The Registrant 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).

SECTION D.1 OPERATION CONDITIONS

Facility Description [326 IAC 2-5.1-2(f)(2)] [326 IAC 2-5.5-4(a)(2)]:

(a) Three (3) aluminum melting furnaces, identified as MF-1, MF-2, MF-3, constructed in June 2007, with a maximum capacity of 500 pounds of aluminum per hour each, and furnace MF-1 and MF-2 exhaust to stack S-6, and furnace MF-3 exhausts to stack S-7.

(b) One (1) aluminum melting furnace, identified as MF-4, approved for construction in 2008, with a maximum capacity of 500 pounds per hour, and exhausts to stack S-7.

(c) Three (3) die casting machines (pouring and casting), identified as DC-1, DC-2, and DC-3, constructed in 2007, with a maximum capacity of 0.09 tons of aluminum per hour each for DC-1 and DC-2, and 0.124 tons of aluminum per hour for DC-3, venting indoors.

(d) One (1) die casting machine (pouring and casting), identified as DC-4, approved for construction in 2008, with a maximum capacity of 0.124 tons of aluminum per hour, venting indoors.

(e) Two (2) shot blasting units, identified as SB1, SB2, constructed in June 2007, with a maximum zinc based media capacity of 14,072 pounds per hour each, controlled by bag filters, venting indoors.

(f) One (1) shot blasting unit, identified as SB3, approved for construction in 2008, with a maximum zinc based media capacity of 14,072 pounds per hour each, controlled by bag filters, venting indoors.

(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 2-5.1-2(f)(1)] [326 IAC 2-5.5-4(a)(1)]

D.1.1 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-2, the particulate from the Aluminum melting furnaces, MF-1, MF-2, MF-3, and MF-4 shall each not exceed 1.62 pounds per hour, when operating at a process weight rate of 0.25 tons per hour each. 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:

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

Emission Limitations and Standards [326 IAC 2-5.1-2(f)(1)] [326 IAC 2-5.5-4(a)(1)]

D.1.2 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the shot blasting units, SB1, SB2, and SB3 shall each not exceed 16.90 pounds per hour, when operating at a process weight rate of 8.28 tons per hour each. 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:

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH

REGISTRATION
ANNUAL NOTIFICATION

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3).

Company Name:	FCC (Adams), LLC
Address:	936 East Parr Rd.,
City:	Berne, Indiana 46711
Phone Number:	(260) 589-8555
Registration No.:	R001-26137-00064

I hereby certify that FCC (Adams), LLC is :
- ☐ still in operation.
- ☐ no longer in operation.

I hereby certify that FCC (Adams), LLC is :
- ☐ in compliance with the requirements of Registration No.:001-26137-00064.
- ☐ not in compliance with the requirements of Registration No. 001-26137-00064.

Authorized Individual (typed):
Title:
Signature:
Phone Number:
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:

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Registration

Source Description and Location

Source Name:	**FCC (Adams), LLC**
Source Location:	**936 East Parr Rd. Berne, Indiana, 46711**
County:	**Adams County**
SIC Code:	**3714**
Registration No.:	**001-26137-00064**
Permit Reviewer:	**Swarna Prabha**

On February 21, 2008, the Office of Air Quality (OAQ) received an application from FCC (Adams), LLC, related to the construction and operation of new emission units and the continued operation of an existing Clutch Packs Manufacturing plant.

Existing Approvals

There have been no previous approvals issued to this source, because the existing emission units prior to the addition of the new units were determined to be exempt by FCC (Adams), LLC.

County Attainment Status

The source is located in Adams County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O3	Unclassifiable or attainment effective June 15, 2004, 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 $PM_{2.5}$.

(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, 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. Adams 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) Adams County has been classified as attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM2.5 emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as a surrogate for PM2.5 emissions.

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

Fugitive Emissions

The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-5.1-2 (Registrations) applicability.

Background and Description of Emission Units and Pollution Control Equipment

The Office of Air Quality (OAQ) has reviewed an application, submitted by FCC (Adams), LLC on February 21, 2008, relating to a clutch packs manufacturing plant.

The source consists of the operation and construction of the following new and existing emission units:

(a) Three (3) aluminum melting furnaces, identified as MF-1, MF-2, MF-3, constructed in June 2007, with a maximum capacity of 500 pounds of aluminum per hour each, and furnace MF-1 and MF-2 exhaust to stack S-6, and furnace MF-3 exhausts to stack S-7.

(b) One (1) aluminum melting furnace, identified as MF-4, approved for construction in 2008, with a maximum capacity of 500 pounds per hour, and exhausts to stack S-7.

(c) Three (3) die casting machines (pouring and casting), identified as DC-1, DC-2, and DC-3, constructed in 2007, with a maximum capacity of 0.09 tons of aluminum per hour each for DC-1 and DC-2, and 0.124 tons of aluminum per hour for DC-3, venting indoors.

(d) One (1) die casting machine (pouring and casting), identified as DC-4, approved for construction in 2008, with a maximum capacity of 0.124 tons of aluminum per hour, venting indoors.

(e) Two (2) shot blasting units, identified as SB1, SB2, constructed in June 2007, with a maximum zinc based media capacity of 14,072 pounds per hour each, controlled by bag filters, venting indoors.

(f) One (1) shot blasting unit, identified as SB3, approved for construction in 2008, with a maximum zinc based media capacity of 14,072 pounds per hour each, controlled by bag filters, venting indoors.

(g) Seven (7) parts washers; two (2) die cast washers, each constructed in 2007, one (1) press washer, one (1) assembly washer, one (1) Hub washer, one (1) Deburr washer, and one (1) RWG washer, each constructed in 2006, and exhaust outdoors.

(h) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, including:

(1) Twelve (12) natural gas fired rooftop heaters, identified as RTU-1 to RTU-9, each constructed in 2004, and RTUDC-1 to RTUDC-3, each constructed in 2007, rated between 0.12 and 0.5 MMBtu/hr, with a combined capacity rating of 4.105 MMBtu/hr, and exhaust indoors.

(2) Six (6) natural gas propeller unit heaters, identified as UH-1 to UH-4, each constructed in 2004, and UHDC-1, UHDC-2, each constructed in 2007, rated between 0.075 and 0.12 MMBtu/hr, with a combined capacity rating of 0.585 MMBtu/hr, and exhaust indoors.

(3) One (1) 0.4 MMBtu/hr direct-fired natural gas air make-up unit, constructed in 2007.

(4) One (1) 1.5 MMBtu/hr natural gas water evaporator heater, constructed in 2004.

(i) Three (3) lathe machines, approved for construction in 2008, using Seal Cool 3990 as a cutting coolant oil, where coolant solution continuously flooding the machining interface, exhausting to the interior; with no particulate emissions and VOC emissions are determined at 100% flash off.

(j) Fifteen (15) lathe machines; four (4) constructed in 2004; two (2) constructed in 2006; and nine (9) constructed in 2007; using Seal Cool 3990 as a cutting coolant oil, where the coolant solution continuously flooding the machining interface, exhausting to the interior; with no particulate emissions and VOC emissions are determined at 100% flash off.

(k) Three (3) grob machines and presses; constructed in 2004, 2005, and 2007, respectively, utilize Draw-Eze 571 as a machining fluid. There are no criteria pollutants or HAPs emitted from this process.

"Integral Part of the Process" Determination

The applicant has submitted the following information to justify such that the bag filters should be considered an integral part of the shot blasting operation:

The shot blasting units SB1, SB2, and SB3 are completely enclosed, self contained units, which contain and circulate the shot, allowing it to be continuously reused. It is not possible to bypass the control equipment while operating the units.

IDEM, OAQ has evaluated the justification submitted and does not agree that the bag filters controlling particulate emissions from shot blasting operations SB1, SB2, and SB3 are integral part of the process. This determination is based on the fact that the emission units can operate with out the bag filters and the shot blasting operation will not cease the operation if the control device is not functioning properly. Also, there is no significant cost savings by recycling the shot. Therefore, the permitting level will be determined using the potential to emit before the air pollution control device.

Enforcement Issues

There are no pending enforcement actions related to this source.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination –Registration

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.

Process/Emission Unit	Potential To Emit of the Entire Source (tons/year)							
	PM	PM10*	SO_2	NOx	VOC	CO	Total HAPs	Worst Single HAP
(4) Aluminum Melting FurnacesMF-1,-2,-3,-4	4.82	4.82	-	-	-	-	-	-
(4) Die Casting machines DC-1,-2,-3,-4	-	-	0.04	0.02	0.26	-	-	-
(3) Shot Blasting SB1, SB2, SB3	8.93	8.93	-	-	-	-	-	-
(17) Lathe Machines	-	-	-	-	1.53	-	-	-
(7) Parts Washer	-	-	-	-	1.08	-	-	-
Natural gas-fired combustion	0.29	0.29	0.02	3.76	0.21	3.16	0.07	0.068 (Hexane)
Total PTE of Entire Source	14.04	14.04	0.06	3.78	3.08	3.16	0.07	0.068 (Hexane)
Exemptions Levels	5	5	10	10	5 or 10	25	2.5	1
Registration Levels	25	25	25	25	25	100	-	-

negl. = negligible
* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

(a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of all criteria pollutants are within the ranges listed in 326 IAC 2-5.1-2(a)(1). The PTE of all other regulated criteria pollutants are less than the ranges listed in 326 IAC 2-5.1-2(a)(1). Therefore, the source is subject to the provisions of 326 IAC 2-5.1-2 (Registrations). A Registration will be issued.

(b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) 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) This source is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, 40 CFR Part 60.190, Subpart S, because it is not a primary aluminum reduction plant.

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

National Emission Standards for Hazardous Air Pollutants (NESHAP)

(a) This source is not subject to the requirements of the 40 CFR Subpart T (63.460 Through 63.470), NESHAP for for Halogenated Solvent Cleaning, because the parts washers at this source do not use a degreasing solvent that contains any of the halogenated compounds listed in 40 CFR 63.460(a).

(b) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR 63.840, Subpart LL, because it is not a primary aluminum reduction plant.

(c) Pursuant to 40 CFR 63.1503, Subpart RRR, the definition of a secondary aluminum production states that for purposes of this subpart, aluminum die casting facilities, aluminum foundries, and aluminum extrusion facilities are not considered to be secondary aluminum production facilities if the only materials they melt are clean charge, customer returns, or internal scrap, and if they do not operate sweat furnaces, thermal chip dryers, or scrap dryers/delacquering kilns/decoating kilns. This source melts only clean charge, customer returns or internal scrap and does not operate a sweat furnace, thermal chip dryer or scrap dryer/delacquering kiln/decoating kiln. Therefore, this source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR 63.1500, Subpart RRR.

(d) 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 for this source.

Compliance Assurance Monitoring (CAM)

(e) 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:

(a) 326 IAC 2-5.1-2 (Registrations)
Registration applicability is discussed under the Permit Level Determination – Registration section above.

(b) 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.

(c) 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.

(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 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.

(e) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
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.

(f) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is not subject to the requirements of 326 IAC 6-5, because the source does not have potential fugitive particulate emissions greater than 25 tons per year. Therefore, 326 IAC 6-5 does not apply.

(g) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Each of the emission units at this source is not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions from each emission unit is less than twenty-five (25) tons per year.

Shot Blasting Operation

(h) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the shot blasting operation shall each not exceed 16.9 pounds per hour, when operating at a process weight rate of 8.28 tons per hour. 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:

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

Based on calculations, the control device is not needed to comply with this limit.

Natural Gas Combustion Sources

(i) 326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)
The natural gas-fired air makeup heaters, rooftop heaters, air make-up unit, and heaters are not subject to 326 IAC 6-2 as they are not sources of indirect heating.

Aluminum Melting Process

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

Pursuant to 326 IAC 6-3-2, the particulate from the Aluminum melting furnaces shall each not exceed 1.62 pounds per hour, when operating at a process weight rate of 0.25 tons per hour each. 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:

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

Die Casting Machines

(k) All other facilities at this source have the potential particulate emissions less than 0.551pounds per hour. Therefore, pursuant to 326 IAC 6-3-1(b)(14), the other facilities listed in this document are exempt from the requirements of 326 IAC 6-3.

Parts Washer Degreaser and Lathing operation

(l) Parts washers and lathing operation are not subject to the requirements of the 326 IAC 20-6-1, since the degreasing operations do not use a solvent that contains any of the halogenated compounds listed in 326 IAC 20-6-1(a).

(m) Volatile Organic Compounds (VOC) [326 IAC 8-1-1]
Pursuant to 326 IAC 8-1-1 (Degreasing Operations), lathing operation and each of the parts washers, die cast washers, press washer, assembly washer, Hub washer, Deburr washer and RWG washer, are not subject to the requirements of 326 IAC 8-1-1. The potential VOC emissions are less than 15 pounds per day each. Therefore, the requirements of 326 IAC 8-1 do not apply.

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 February, 21, 2008. Additional information was submitted by the source by email March 6, 2008, March 19, 2008, March 31, 2008, April 16, April 24, 2008, and May 15, 2008.

The construction and operation of this source shall be subject to the conditions of the attached proposed Registration No. 001-26137-00064. The staff recommends to the Commissioner that this Registration be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Swarna Prabha 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) 234-5376 or toll free at 1-800-451-6027 extension (45376).

(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.

Appendix A: Emissions Calculations
Emission Summary

Company Name: FCC (Adams), LLC
Address City IN Zip: 936 East Parr Rd, Berne, Indiana, 46711
Registration Number: R 001-26137-00064
Reviewer: Swarna Prabha

		Uncontrolled Potential Emissions (tons/year)						
		Emission Generating Activity						
Category	Pollutant	Natural gas Furnace	Aluminium Melting furnace	Die Casting	Shot Blasting	Lathes	Parts Washer	**TOTAL**
Criteria Pollutants	PM	0.29	4.82		8.93			14.04
	PM10	0.29	4.82		8.93			14.04
	SO2	0.02		0.04				0.06
	NOx	3.76		0.02				3.78
	VOC	0.21		0.26		1.53	1.08	3.08
	CO	3.16						3.16
Hazardous Air Pollutant	DCB	4.5E-05						4.51E-05
	Cadmium	4.1E-05						4.14E-05
	Toluene	1.28E-04						1.28E-04
	Benzene	7.9E-05						7.90E-05
	Formaldehyde	2.8E-03						2.82E-03
	Lead	1.9E-05						1.88E-05
	Hexane	0.068						0.068
	Totals	**0.07**						**0.07**

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

		Controlled Potential Emissions (tons/year)						
		Emissions Generating Activity						
Category	Pollutant	Natural gas Furnace	Aluminium Melting furnace	Die Casting	Shot Blasting	Lathes	Parts Washer	**TOTAL**
Criteria Pollutants	PM	0.29	4.82		0.09			5.19
	PM10	0.29	4.82		0.09			5.19
	SO2	0.02		0.04				0.06
	NOx	3.76		0.02				3.78
	VOC	0.21		0.26		1.53	1.08	3.08
Category	CO	3.16						3.16
Hazardous Air Pollutants	DCB	4.51E-05						4.51E-05
	Cadmium	4.14E-05						4.14E-05
	Toluene	1.28E-04						1.28E-04
	Benzene	7.90E-05						7.90E-05
	Formaldehyde	2.82E-03						2.82E-03
	Lead	1.88E-05						1.88E-05
	Hexane	0.068						0.068
	Totals	**0.07**						**0.07**

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

Appendix A: Emissions Calculations
Natural Gas Combution (<100 MMBut/hr)

Company Name: **FCC (Adams), LLC**
Address City IN Zip: **936 East Parr Rd, Berne, Indiana, 46711**
Prepared By: **Cornerstone Environmental, Health & Safety**
Registration Number: **R001-26137-00064**
Reviewer: **Swarna Prabha**

Total Heat Input
MMBtu/hr
8.6

		PTE CRITERIA POLLUTANTS						**PTE HAPs**						
Emission Factor in lb/MMCF		PM* 7.6	PM10* 7.6	SO_2 0.6	NO_x 100	VOC 5.5	CO 84.0	Benzene 2.1E-03	DCB 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03	Pb 5.0E-04	Cd 1.1E-03
Unit ID	Heat Input Capacity (MMBtu/hr)	PTE of PM (tons/yr)	PTE of PM10 (tons/yr)	PTE of SO_2 (tons/yr)	PTE of NOx (tons/yr)	PTE of VOC (tons/yr)	PTE of CO (tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)
Roof Top Units														
RTU-1	0.235	0.01	0.01	0.001	0.10	0.01	0.09	2.16E-06	1.24E-06	7.72E-05	1.85E-03	3.50E-06	5.15E-07	1.13E-06
RTU-2	0.5	0.02	0.02	0.001	0.22	0.01	0.18	4.60E-06	2.63E-06	1.64E-04	3.94E-03	7.45E-06	1.10E-06	2.41E-06
RTU-3	0.4	0.01	0.01	0.001	0.18	0.01	0.15	3.68E-06	2.10E-06	1.31E-04	3.15E-03	5.96E-06	8.76E-07	1.93E-06
RTU-4	0.4	0.01	0.01	0.001	0.18	0.01	0.15	3.68E-06	2.10E-06	1.31E-04	3.15E-03	5.96E-06	8.76E-07	1.93E-06
RTU-5	0.4	0.01	0.01	0.001	0.18	0.01	0.15	3.68E-06	2.10E-06	1.31E-04	3.15E-03	5.96E-06	8.76E-07	1.93E-06
RTU-6	0.4	0.01	0.01	0.001	0.18	0.01	0.15	3.68E-06	2.10E-06	1.31E-04	3.15E-03	5.96E-06	8.76E-07	1.93E-06
RTU-7	0.4	0.01	0.01	0.001	0.18	0.01	0.15	3.68E-06	2.10E-06	1.31E-04	3.15E-03	5.96E-06	8.76E-07	1.93E-06
RTU-8	0.4	0.01	0.01	0.001	0.18	0.01	0.15	3.68E-06	2.10E-06	1.31E-04	3.15E-03	5.96E-06	8.76E-07	1.93E-06
RTU-9	0.2	0.01	0.01	0.001	0.09	0.00	0.07	1.84E-06	1.05E-06	6.57E-05	1.58E-03	2.98E-06	4.38E-07	9.64E-07
RTUDC-1	0.25	0.01	0.01	0.001	0.11	0.01	0.09	2.30E-06	1.31E-06	8.21E-05	1.97E-03	3.72E-06	5.48E-07	1.20E-06
RTUDC-2	0.4	0.01	0.01	0.001	0.18	0.01	0.15	3.68E-06	2.10E-06	1.31E-04	3.15E-03	5.96E-06	8.76E-07	1.93E-06
RTUDC-3	0.12	0.00	0.00	0.000	0.05	0.00	0.04	1.10E-06	6.31E-07	3.94E-05	9.46E-04	1.79E-06	2.63E-07	5.78E-07
Gas Unit Heater														
UH-1	0.12	0.00	0.00	0.000	0.05	0.00	0.04	1.10E-06	6.31E-07	3.94E-05	9.46E-04	1.79E-06	2.63E-07	5.78E-07
UH-2	0.075	0.00	0.00	0.000	0.03	0.00	0.03	6.90E-07	3.94E-07	2.46E-05	5.91E-04	1.12E-06	1.64E-07	3.61E-07
UH-3	0.075	0.00	0.00	0.000	0.03	0.00	0.03	6.90E-07	3.94E-07	2.46E-05	5.91E-04	1.12E-06	1.64E-07	3.61E-07
UH-4	0.075	0.00	0.00	0.000	0.03	0.00	0.03	6.90E-07	3.94E-07	2.46E-05	5.91E-04	1.12E-06	1.64E-07	3.61E-07
UHDC-1	0.12	0.00	0.00	0.000	0.05	0.00	0.04	1.10E-06	6.31E-07	3.94E-05	9.46E-04	1.79E-06	2.63E-07	5.78E-07
UHDC-2	0.12	0.00	0.00	0.000	0.05	0.00	0.04	1.10E-06	6.31E-07	3.94E-05	9.46E-04	1.79E-06	2.63E-07	5.78E-07
Make Up Air Unit														
MAU-1	0.4	0.01	0.01	0.001	0.18	0.01	0.15	3.68E-06	2.10E-06	1.31E-04	3.15E-03	5.96E-06	8.76E-07	1.93E-06
Process Equipment														
Water Evaporator	1.5	0.05	0.05	0.004	0.66	0.04	0.55	1.38E-05	7.88E-06	4.93E-04	1.18E-02	2.23E-05	3.29E-06	7.23E-06
Al melting furnace														
MF-1	0.5	0.02	0.02	0.001	0.22	0.01	0.18	4.60E-06	2.63E-06	1.64E-04	3.94E-03	7.45E-06	1.10E-06	2.41E-06
MF-1	0.5	0.02	0.02	0.001	0.22	0.01	0.18	4.60E-06	2.63E-06	1.64E-04	3.94E-03	7.45E-06	1.10E-06	2.41E-06
MF-1	0.5	0.02	0.02	0.001	0.22	0.01	0.18	4.60E-06	2.63E-06	1.64E-04	3.94E-03	7.45E-06	1.10E-06	2.41E-06
MF-1	0.5	0.02	0.02	0.001	0.22	0.01	0.18	4.60E-06	2.63E-06	1.64E-04	3.94E-03	7.45E-06	1.10E-06	2.41E-06
Total	**8.6**	**0.29**	**0.29**	**0.023**	**3.76**	**0.21**	**3.16**	**7.9E-05**	**4.5E-05**	**2.8E-03**	**0.068**	**1.3E-04**	**1.9E-05**	**4.1E-05**

*PM and PM10 emission factors are condensable and filterable PM10 combined.
Emission factors are from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
(AP-42 Supplement D 3/98)

Methodology

Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Potential to Emit (tons/yr) = Potential Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1 ton/2000 lbs
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu, MMCF = 1,000,000 Cubic Feet of Gas

Abbreviations

PM = Particulate Matter	NOx = Nitrous Oxides	DCB = Dichlorobenzene
PM10 = Particulate Matter (<10 ur	VOC - Volatile Organic Compounc	Pb = Lead
SO2 = Sulfur Dioxide	CO = Carbon Monoxide	Cd = Cadmium

Appendix A: Emissions Calculations
Aluminum Melting

Company Name: **FCC (Adams), LLC**
Address City and zip: **936 East Parr Rd, Berne, Indiana, 46711**
Prepared By: **Cornerstone Environmental, Health & Safety**
Registration Number: **R001-26137-00064**
Reviewer: **Swarna Prabha**

		PM*	PM10*
	Emission Factor lb/ton	1.1	1.1
Unit ID	Maximum Aluminum Processed (lbs/hr)	PTE of PM (tons/yr)	PTE of PM10 (tons/yr)
MF-1	500	1.20	1.20
MF-2	500	1.20	1.20
MF-3	500	1.20	1.20
MF-4 (new)	500	1.20	1.20
Total	**2000.0**	**4.82**	**4.82**

*Note: Emission factor are from STAPPA/ALAPCA Handbook, Section 11 (5/30/91)

Methodology

Potential Emissions (lbs/hr) = Maximum Aluminum Processed (lbs/hr) x 1 ton/2,000 lb x Emission Factor (lb/ton Al processed)
Potential Emissions (tons/yr) = Potential Emissions (lbs/hr) * 8,760 hrs/yr x 1 ton/2,000 lb

Appendix A: Emissions Calculations
Die Casting

Company Name: FCC (Adams), LLC
Address City IN Zip: 936 East Parr Rd, Berne, Indiana, 46711
Prepared By: Cornerstone Environmental, Health & Safety
Registration Number: R001-26137-00064
Reviewer: Swarna Prabha

			Pollutant			
		Emission Factor in lb/ton Al processed		NOx* 0.01	SOx* 0.02	VOC* 0.14
Unit ID	**Maximum Cycles/hr**	Casting Weight (lbs)	Maximum Aluminum Processed (tons/hr)	PTE of NOx (tons/yr)	PTE of SOx (tons/yr)	PTE of VOC (tons/yr)
DC-1	85	2.1125	0.090	0.00	0.01	0.06
DC-2	85	2.1125	0.090	0.00	0.01	0.06
DC-3	78	3.175	0.124	0.01	0.01	0.08
DC-4 (new)	78	3.175	0.124	0.01	0.01	0.08
Total			**0.427**	**0.02**	**0.04**	**0.26**

*NOx, SOx, and VOC emission factors are from Fire Version 6.25 for Aluminum Pouring/Casting (SIC 30400114)

Methodology

Maximum Aluminum Processed (tons/hr) = Maximum Cycles / hr * Casting Weight (lbs/cycle)

Potential Emissions (tons/yr) = Maximum Aluminum Processed (tons/hr) * Emission Factor (lb/ton Al processed) * 1 ton / 2,000 lb * 8,760 hr / yr

Appendix A: Emissions Calculations
Lathe Operations

Company Name: **FCC (Adams), LLC**
Address City IN Zip: **936 East Parr Rd, Berne, Indiana, 46711**
Prepared By: **Cornerstone Environmental, Health & Safety**
Registration Number: **R001-26137-00064**
Reviewer: **Swarna Prabha**

Seal Cool 3990 Information

specific gravity	1.10
density (lb/ft^3)	68.64
density (lb/gal)	9.18
VOC wt %	6.00%

VOC Emissions from Lathe Operations

Lathe ID	Lathe Oil	Product Density (lb/gal)	Potential Coating Usage (gal/unit)	Maximum Product Rate (units/hr)	Flash-off (%)	VOC Content (lbs/gal)	Potential VOC Emissions (lbs/hr)	Potential VOC Emissions (tons/yr)
RWG Lathe 1	Seal Cool 3990	9.18	1.00E-04	78.50	100%	0.55	0.004	0.02
RWG Lathe 2	Seal Cool 3990	9.18	1.00E-04	78.50	100%	0.55	0.004	0.02
A-1 Lathe 1	Seal Cool 3990	9.18	5.74E-04	104.66	100%	0.55	0.033	0.14
A-2 Lathe 2	Seal Cool 3990	9.18	5.74E-04	52.33	100%	0.55	0.017	0.07
A-2 Lathe 3	Seal Cool 3990	9.18	5.74E-04	52.33	100%	0.55	0.017	0.07
A-1 Lathe 4 (new)	Seal Cool 3990	9.18	5.74E-04	104.66	100%	0.55	0.033	0.14
A-2 Lathe 5 (new)	Seal Cool 3990	9.18	5.74E-04	52.33	100%	0.55	0.017	0.07
B Lathe 1	Seal Cool 3990	9.18	2.30E-04	104.66	100%	0.55	0.013	0.06
B Lathe 2 (new)	Seal Cool 3990	9.18	2.30E-04	104.66	100%	0.55	0.013	0.06
DC-A-1 Lathe 1	Seal Cool 3990	9.18	5.74E-04	52.33	100%	0.55	0.017	0.07
DC-A-1 Lathe 2	Seal Cool 3990	9.18	5.74E-04	52.33	100%	0.55	0.017	0.07
DC-A-1 Lathe 3	Seal Cool 3990	9.18	5.74E-04	52.33	100%	0.55	0.017	0.07
DC-A-2 Lathe 4	Seal Cool 3990	9.18	5.74E-04	78.50	100%	0.55	0.025	0.11
DC-A-2 Lathe 5	Seal Cool 3990	9.18	5.74E-04	78.50	100%	0.55	0.025	0.11
DC-B-1 Lathe 1	Seal Cool 3990	9.18	5.74E-04	78.50	100%	0.55	0.025	0.11
DC-B-1 Lathe 2	Seal Cool 3990	9.18	5.74E-04	78.50	100%	0.55	0.025	0.11
DC-B-2 Lathe 3	Seal Cool 3990	9.18	5.74E-04	78.50	100%	0.55	0.025	0.11
DC-B-2 Lathe 4	Seal Cool 3990	9.18	5.74E-04	78.50	100%	0.55	0.025	0.11
								1.53

Methodology

Potential VOC Emissions (lbs/hr) = Potential Coating Usage (gal/unit) x Maximum Product Rate (units/hr) x Flash-off (%) x VOC Content (lbs/gal)
Potential Emissions (tons/yr) = Potential Emissions (lb/hr) * 8,760 hrs/yr x 1 ton/2,000 lb
100 % Flash off of VOC emissions

Appendix A: Emissions Calculations
Shot Blasting

Company Name: **FCC (Adams), LLC**
Address City IN Zip: **936 East Parr Rd, Berne, Indiana, 46711**
Prepared By: **Cornerstone Environmental, Health & Safety**
Registration Number: **R001-26137-00064**
Reviewer: **Swarna Prabha**

0.192 kg Weight of full dust collection container:
0.026 kg Weight of empty dust colection container:
0.166 kg Weight of dust collected during test

0.366 lb Weight of dust collected during test

1,232 parts Number of parts run during test

PM/PM10 Collected During Test	Control Efficiency of Shot Blast Filters	Total PM/PM10 Generated During Test	Number of Parts Run During Test	PM/PM10 Emissions per Part	PM/PM10 Emissions per Part
(lbs)	(%)	(lbs)	(parts)	(lb/part)	(lb/ 1,000 part)
0.366	95%	0.385	1,232	0.0003127	0.313

Emission Factor lbs/1000 parts		PM* 0.313	PM10* 0.313					
Unit ID	Maximum Throughput Rate (parts/hr)	PTE of PM (tons/yr)	PTE of PM10 (tons/yr)	PTE of PM/PM10 lbs/hr	Filter Control Efficiency	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Allowable PM/PM10 Emissions (lbs/hr)
SB-1	2172	2.98	2.98	0.68	99.0%	0.03	0.03	16.90
SB-2	2172	2.98	2.98	0.68	99.0%	0.03	0.03	16.90
SB-3 (new)	2172	2.98	2.98	0.68	99.0%	0.03	0.03	16.90
Total		**8.93**	**8.93**	**2.04**		**0.09**	**0.09**	

Total Abrasives throughput per shot blast =14,072 lbs/hr

*PM and PM10 emission factors are derived from the data collected by FCC (Adams) .

*Total PM/PM10 generated during test (lbs) = PM/PM10 collected during test (lbs)/ control Efficiency of shot blast filters(%)
*Emission Factor (lb/part) =Total PM/PM10 generated during test (lbs)/ Number of parts run during the test
Maximum process throughput = (weight of shot blast + weight of parts) = (14072+ 2172*1.141) =16,550.25 lbs/hr
Maximum process throughput =(16550.25 lbs/hr)*1/2000 tons/lbs= 8.28 tons/hr

Methodology
Potential Emissions (lparts/hr) = Maximum Throughput Rate (parts/hr) x Emission Factor (lb/1,000 lb parts Throughput)
Potential Emissions (tons/yr) = Potential Emissions (lb/hr) * 8,760 hrs/yr x 1 ton/2,000 lb
Controlled PTE of PM (tons/yr) = PTE of PM (tons/yr) x (1 - Filter Control Efficiency)

Allowable Emissions, E = 4.10 * P^0.67 (for weight rates up to 60,000 lb/hr)
E= emissions in lbs/hr
P= process weight in tons/hr
P= 8.28 tons/hr

Allowable PM Emissions(E)= 16.90 lbs/hr

Appendix A: Emissions Calculations
Parts Washer Activities

Company Name: FCC (Adams), LLC
Address City IN Zip: 936 East Parr Rd, Berne, Indiana, 46711
Prepared By: Cornerstone Environmental, Health & Safety
Registration Number: R 001-26137-00064
Reviewer: Swarna Prabha

Emission Unit	Chemical Used	Specific Gravity	Product Density [lb/gal]	VOC Content [lb/gal]	Typical Annual Chemical Usage [gal/yr]	Max. Annual Chemical Usage [gal/yr]	Max. Hourly Chemical Usage [gal/hr]	Max. Hourly Chemical Usage [gal/hr]	Max. Hourly Chemical Usage [gal/hr]	Potential VOC Emissions [lb/hr]	Potential VOC Emissions [tpy]
Die Cast Washer 1	J&B 1097	1.04	8.65	0.26	104	156	0.018	0.43	0.285	0.005	0.020
Die Cast Washer 2	Water							0			
Press Washer	Kleen-Eze 305	1.06	8.84	0.00	1560	2340	0.267	6.41	4.274	0.000	0.000
Hub Washer	J&B 1097	1.04	8.65	0.26	520	780	0.089	2.14	1.425	0.023	0.101
Deburr Washer	J&B 1097	1.04	8.65	0.26	416	624	0.071	1.71	1.140	0.018	0.081
Assembly Washer	M-1	1.05	8.76	0.88	1300	1950	0.223	5.34	3.562	0.195	0.854
RWG Washer	J&B 1097	1.04	8.65	0.26	104	156	0.018	0.43	0.285	0.005	0.020
								Total:			**1.076**

Methodology

Product Density [lb/gal] = Specific Gravity x 8.34 lb/gal
Increased the typical annual chemical usage by 50% to estimate a maximum annual chemical usage.
Max. Hourly Chemical Usage [gal/hr] = Max. Annual Solvent Usage [gal/yr] / 8,760 hr/yr
Potential VOC Emissions [lb/hr] = Max. Hourly Solvent Usage [gal/hr] x VOC Content [lb/gal]
Potential VOC Emissions [tpy] = Potential VOC Emissions [lb/hr] x 8,760 hr/yr / 2,000 lb/ton