INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Michael R. Pence
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: April 16, 2013

RE: C&D Technologies, Inc. / 045 - 32647 - 00008

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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April 16, 2013

Mr. Jon P. Kapellusch
C & D Technologies, Inc.
P.O. Box 279
200 West Main Street
Attica, IN 47918-0279

Re: 045-32647-00008
Significant Revision to F045-19413-00008

Dear Mr. Kapellusch:

C & D Technologies, Inc. was issued a Federally Enforceable State Operating Permit (FESOP) Renewal No. F045-19413-00008 on March 20, 2009, for a stationary custom industrial battery manufacturing source located at 200 West Main Street, Attica, IN 47918-0279. On December 14, 2012, the Office of Air Quality (OAQ) received an application from the source requesting to update the permit to include a shot blasting unit that was installed in September 2011. The attached Technical Support Document (TSD) provides additional explanation of the changes to the source/permit. Pursuant to the provisions of 326 IAC 2-8-11.1, these changes to the permit are required to be reviewed in accordance with the Significant Permit Revision (SPR) procedures of 326 IAC 2-8-11.1(f). Pursuant to the provisions of 326 IAC 2-8-11.1, a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document (TSD).

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions
   The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit
   Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

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

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Attached please find the entire revised permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Kristen Willoughby, of my staff, at 317-233-3031 or 1-800-451-6027, and ask for extension 3-3031.

Sincerely,

Jenny Acker, Section Chief
Permits Branch
Office of Air Quality

Attachments: Technical Support Document and revised permit

JLA/kw

cc: File - Fountain County
Fountain County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch
Billing, Licensing and Training Section

Mr. Jason Young
C & D Technologies, Inc.
P.O. Box 279
200 West Main Street
Attica, IN 47918-0279

Ms. Julie Delp
Wilcox Environmental Engineering, Inc.
5757 West 74th Street
Indianapolis, IN 46278

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Federally Enforceable State Operating Permit Renewal
OFFICE OF AIR QUALITY

C&D Technologies, Inc.
200 West Main Street
Attica, Indiana 47918

(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.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.
This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-8-11.1, applicable to those conditions

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 FESOP under 326 IAC 2-8.

Operation Permit No.: F045-19413-00008	
Issued by: *Original Signed By:* Alfred C. Dumaual, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: March 20, 2009 Expiration Date: March 20, 2019

Administrative Amendment No.: 045-29416-00008, issued July 9, 2010

Significant Permit Revision No: 045-32647-00008	
Issued by: Jenny Acker, Section Chief Permits Branch Office of Air Quality	Issuance Date: April 16, 2013 Expiration Date: March 20, 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 through A.3 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 2-8-3(b)]

The Permittee owns and operates a stationary custom industrial battery manufacturing source.

Source Address:	200 West Main Street, Attica, Indiana 47918
General Source Phone Number:	765-762-2461
SIC Code:	3691
County Location:	Fountain
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State 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 [326 IAC 2-8-3(c)(3)]

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

Casting

(a) One (1) small parts casting operation, known as EU 0100A, installed in 1977, equipped with a Farr 48D cartridge dust collector, exhausting through Stack 195, capacity: 1,446 pounds of lead pigs per hour.

(b) One (1) small parts flaming operation, known as EU 0100B, installed in 1977, last modified October 13, 1977, equipped with a Farr 48D cartridge dust collector, exhausting through Stack 195, capacity: 488 pounds of small parts per hour.

(c) One (1) grid casting operation, known as EU 0200A, installed in 1977, equipped with a Farr 60LL cartridge dust collector, exhausting through Stack 196, capacity: 5,197 pounds of lead pigs per hour.

(d) Three (3) natural gas-fired grid curing ovens, known as EU 0200B through EU 0200D, installed in 2000, exhausting through Stacks 226 - 228, respectively, rated at 0.200 million British thermal units per hour each, total process capacity: 6,100 pounds of casted lead grid plates per hour.

Pasting

(e) Pneumatic conveying of positive lead oxide from trucks to a storage silo, known as EU 0300A, installed in 2000, equipped with an integral Pneumatics Bin Vent filter, exhausting to the indoors through bin vent 232, with a maximum silo loading rate of 45,000 pounds of positive lead oxide per hour.

(f) One (1) negative lead oxide storage silo, known as EU 0300B, installed in 1983, last modified June 10, 1983, equipped with a Flex-Kleen Model 84 dust collector, exhausting to the indoors through bin vent 85, with a maximum silo loading rate of 45,000 pounds of

negative lead oxide per hour. Storage silo EU 0300B is not connected to the pneumatic conveyance system and is not in use.

(g) Pneumatic conveying of negative lead oxide from trucks to a storage silo, known as EU 0300Bn, installed in 2000, equipped with an integral Pneumatics Bin Vent filter, exhausting to the indoors through bin vent 233, with a maximum silo loading rate of 45,000 pounds of positive lead oxide per hour.

(h) Pneumatic conveying of positive lead oxide from storage silo EU 0300A to the paste mixing system EU 0300C, with emissions controlled by one of two (2) Tri Mer wet scrubbers that exhaust through Stack 231, with a maximum silo unloading rate of 6,000 pounds of positive lead oxide per hour.

(i) Pneumatic conveying of negative lead oxide from storage silo EU 0300Bn to the paste mixing system EU 0300C, with emissions controlled by one of two (2) Tri Mer wet scrubbers that exhaust through Stack 231, with a maximum silo unloading rate of 6,000 pounds of negative lead oxide per hour.

(j) One (1) paste mixing system, known as EU 0300C, installed in 2000, consisting of two (2) weigh hoppers and two (2) mixing tubs, with emissions controlled by two (2) Tri Mer wet scrubbers that exhaust through Stack 231, capacity: 6,268 pounds of negative and positive lead oxide, expander, and dilute sulfuric acid per hour.

(k) One (1) expander manufacturing operation, known as EU 0300D, installed in 1983, equipped with Farr Model 24 LS dust collector, exhausting through Stack 159, capacity: 312 pounds of lead oxide, carbon black, barytes, and barium sulfate per hour.

(l) One (1) grid pasting system, known as EU 0300E, installed in 2000, equipped with a Sly Manufacturing scrubber, exhausting through Stack 230, capacity: 17,264 pounds of positive and negative lead paste and lead grids per hour.

(m) Two (2) natural gas-fired flash dry ovens, known as PA025 and PA026 approved for construction in 2009, exhausting through Stacks 249 and 250 respectively, rated at 1.6 million British thermal units per hour each, total process capacity: 17,264 pounds of positive and negative lead paste and lead grids per hour.

(n) Four (4) natural gas-fired humidity ovens, known as EU 0300 F, G, H and I, installed prior to 1999, exhausting through Stacks 26, 27, 28 and 29, respectively, rated at 0.840 million British thermal units per hour each, total process capacity: 2,012 pounds of lead plates per hour.

(o) Four (4) natural gas-fired OSI universal curing ovens, known as EU 0300 J, K, L and M, installed prior to 1999, exhausting through Stacks 179, 180, 193 and 194, respectively, rated at 0.840 million British thermal units per hour each, total process capacity: 2,012 pounds of lead plates per hour.

(p) Four (4) natural gas-fired OSI universal curing ovens, known as EU 0500E through EU 0500H, installed in 2000, exhausting through Stacks 234, 235, 237 and 238, respectively, rated at 0.840 million British thermal units per hour each, total process capacity: 2,456 pounds of lead plates per hour.

(q) Three (3) natural gas-fired bone dry curing ovens, known as BDO-8 through BDO-10, installed prior to 1999, exhausting through Stacks 24, 165 and 25, respectively, rated at 0.050 million British thermal units per hour each, total process capacity: 2,012 pounds of lead plates per hour.

Three Process Operation

(r) Two (2) enclosed pasted plate processing machines, known as PA027 and PA028, approved for construction in 2009, consisting of brushing and stacking of pasted lead plates, with excess lead oxide powder collected in trays and lead oxide air emissions controlled by a Sly Manufacturing scrubber, exhausting through Stack 230, capacity: 17,264 pounds of positive and negative lead paste and lead grids per hour.

(s) One (1) 3PO-plate processing operation, known as EU 0700B, installed in 1993, last modified October 26, 1993, equipped with an Krystal Kleen dust collector, exhausting through Stack 152, capacity: 2,914 pounds of plate frames per hour.

(t) One (1) 3PO-plate processing operation, known as EU 0700C, installed in 1993, last modified October 26, 1993, equipped with an Krystal Kleen dust collector, exhausting through Stack 151, capacity: 2,914 pounds of plate frames per hour.

(u) One (1) 3PO-plate processing operation, known as EU 0700E, installed in 1995, equipped with a Torit dust collector, exhausting through Stack 127, capacity: 160 pounds of plate frames per hour.

(v) One (1) 3PO-plate processing operation, known as EU 0700F, installed in 2001, equipped with a Farr dust collector, exhausting through Stack 247, capacity: 8,473 pounds of plate frames per hour.

(w) One (1) 3PO-L plate assembly operation, known as EU 0800A, installed March 30, 1984, equipped with an American air filter dust collector, exhausting through Stack 140, capacity: 1,444 pounds of cured plates and small parts per hour.

(x) One (1) 3PO-L plate assembly operation, known as EU 0800B, installed in 1988, last modified April 8, 1988, equipped with an American air filter dust collector, exhausting through Stack 166, capacity: 2,165 pounds of positive and negative plates and small parts per hour.

(y) One (1) 3PO-L plate assembly operation, known as EU 0800C, installed in 1984, last modified March 30, 1984, equipped with an OSI #10 dust collector, exhausting through Stack 142, capacity: 2,165 pounds of cured plates and small parts per hour.

(z) One (1) 3PO-MP assembly, known as EU 0800D, installed in 1993, last modified January 1, 1993, equipped with a Torit dust collector, exhausting through Stack 127, capacity: 2,404 pounds of cured plates and small parts and cell covers per hour.

(aa) One (1) 3PO-JC/D assembly, known as EU 0800E, installed in 1994, last modified December 5, 1994, equipped with a Farr dust collector, exhausting through Stack 247, capacity: 174 pounds of cured plates and small parts and cell covers per hour limited by the formation bottleneck to 56,550 pounds per month (44.5% of capacity) and 4.943 liters of cover adhesive per month.

(bb) One (1) 3PO-MCT assembly, known as EU 0800F, installed in 1999, equipped with a Farr 48D dust collector, exhausting through Stack 188, capacity: 3,813 pounds of lead plates and small parts and cell covers per hour.

(cc) One (1) L-cell cover adhesive station, known as EU 0800G, installed in 1982, exhausting through Stack 167, capacity: 4,000 pounds of L-cells per hour.

(dd) One (1) 3PO-L cell cover insert, known as EU 0800H, installed in 1984, last modified March 30, 1984, equipped with two (2) Torit dust collectors, exhausting through Stack 141, capacity: 600 pounds of assembled cells per hour.

(ee) One (1) LCT 1700 Assembly with two jigs, known as EU 0800K, installed in December 2000, equipped with a Farr dust collector, exhausting through Stack 244, capacity: 1,302 pounds of plates and small parts and cell covers per hour.

Formation

(ff) One (1) tank dry formation, known as EU 0900A, installed in 1990, last modified March 5, 1990, exhausting through Stack 178, capacity: 200 pounds of lead plates per hour.

(gg) One (1) tank wet formation, known as EU 0900B, installed in 1990, capacity: 3,420 pounds of dry batteries per hour (fugitive).

(hh) One (1) tank wet formation, known as EU 0900C, installed in 2000, capacity: 2,215 pounds of completed dry cells per hour (fugitive).

Central Vac

(ii) One (1) 3 process central vacuum, known as Maint2000A, installed in 1980, exhausting through Stack 113.

(jj) One (1) central vacuum #2, known as Maint2000B, installed October 6, 1980, exhausting through Stack 129.

(kk) One (1) 3 process central vacuum, known as Maint2000C, installed in 1980, exhausting through Stack 130.

(ll) One (1) 3 process central vacuum, known as Maint2000D, installed in 1980, exhausting through Stack 131.

(mm) One (1) casting and pasting central vacuum, known as Maint2000E, installed November 19, 1999, exhausting through Stack 224.

Polyurethane Room

(nn) One (1) polyurethane battery topping, known as Misc, installed in 1990, exhausting through Stack 160, using 30 gallons of a non-hazardous, non-chlorinated cleaning solvent per month.

Shot Blasting

(oo) One (1) shot blasting operation using aluminum oxide, identified as SB-01, constructed in 2011, with a maximum capacity of 0.21 tons per hour, with particulate emissions controlled by one (1) 3 process central vacuum, identified as Maint2000D, constructed in 1980, and exhausting through Stack 131.

Under 40 CFR 60, Subpart KK, and 40 CFR 63, Subpart PPPPPP, emission units (a) through (ee), and (ii) through (mm) listed above are considered affected facilities. [40 CFR 60, Subpart KK][326 IAC 12][40 CFR 63, Subpart PPPPPP]

A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities:

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour consisting of various existing facilities rated at total of 54.36 million British thermal units per hour. Additional natural gas-fired combustion sources include:

Casting

(1) One (1) natural gas-fired pasting boiler, installed prior to 1999, exhausting through Stack 163, rated at 0.690 million British thermal units per hour.

(2) One (1) natural gas-fired pasting boiler, installed prior to 1999, exhausting through Stack 164, rated at 1.050 million British thermal units per hour.

(3) One (1) natural gas-fired boiler, installed in December 2000, exhausting through Stack 236, rated at 0.340 million British thermal units per hour.

Pasting

(4) One (1) natural gas-fired boiler, installed in December 2000, exhausting through Stack 239, rated at 0.340 million British thermal units per hour.

LCT Assembly

(5) One (1) natural gas-fired rapid air heater, installed in December 2000, exhausting through Stack 245, rated at 1.650 million British thermal units per hour.

Plate Storage Area

(6) One (1) natural gas-fired universal oven boiler, installed in December 2000, exhausting through Stack 225, rated at 0.340 million British thermal units per hour.

Charging

(7) One (1) natural gas-fired rapid air heater, installed in December 2000, exhausting through Stack 243, rated at 0.750 million British thermal units per hour.

(b) The following VOC and HAP storage containers: vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.

(c) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. [326 IAC 8-3-2][326 IAC 8-3-5]

(d) A laboratory as defined in 326 IAC 2-7-1(21)(D).

(e) Cleaning - alcohol, mineral spirits, parts washer; gluing; paint; carbon steel welding. VOC less than 3 pounds per hour or 15 pounds per day, PM less than 5 pounds per hour or 25 pounds per day.

(f) Three (3) electric LCT 1700 battery curing ovens, installed in 2000, exhausting through Stack 246, capacity: 1,302 pounds of plates and small parts and cell covers per hour. Under 40 CFR 60, Subpart KK, and 40 CFR 63, Subpart PPPPPP, these units are considered affected facilities. [40 CFR 60, Subpart KK][326 IAC 12][40 CFR 63, Subpart PPPPPP]

(g) Twelve (12) sulfuric acid solution storage tanks.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-8-1]

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 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

(a) This permit, F045-19413-00008, 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 [326 IAC 2-8-6][IC 13-17-12]

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 [326 IAC 2-8-4(4)]

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 [326 IAC 2-8-4(5)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

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

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

B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:

(1) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), and

(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent 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 Compliance Certification [326 IAC 2-8-5(a)(1)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:

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

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

(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.

The Permittee shall implement the PMPs.

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

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

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

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

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

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

The Permittee shall implement the PMPs.

(c) 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. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

B.12 Emergency Provisions [326 IAC 2-8-12]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

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

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to F045-19413-00008 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.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

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 nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.16 Permit Renewal [326 IAC 2-8-3(h)]

(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 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

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

(1) Submitted at least nine (9) months 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 **a** have permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

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

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

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) and (c) without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any approval required by 326 IAC 2-8-11.1 has been obtained;

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

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

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b) and (c). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15(b) and (c).

(b) Emission Trades [326 IAC 2-8-15(b)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(~~c~~b).

(c) Alternative Operating Scenarios [326 IAC 2-8-15(c)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.

(d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.19 Source Modification Requirement [326 IAC 2-8-11.1]

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

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][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 FESOP 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.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

(a) The Permittee must comply with the requirements of 326 IAC 2-8-10 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.22 Annual Fee Payment [326 IAC 2-7-19][326 IAC 2-8-4(6)][326 IAC 2-8-16][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ no later than thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Failure to pay may result in administrative enforcement action or revocation of this permit.

(c) 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.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314][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 2-8-4(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 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM) and greenhouse gases (GHGs), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(4) The potential to emit greenhouse gases (GHGs) from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.3 Opacity [326 IAC 5-1]

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

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

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

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

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

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

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

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

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

C.7 Fugitive Lead Dust Emissions [326 IAC 15-1-3]

Pursuant to 326 IAC 15-1-3 (Lead emission limitations: control of fugitive lead dust),

(a) No source shall create or maintain outdoor storage of bulk materials containing more than one percent (1.0%) lead by weight of less than two hundred (200) mesh size particles.

(b) All materials containing more than one percent (1.0%) lead by weight of less than two hundred (200) mesh size particles shall be transported in closed containers or shall be transported by enclosed conveying systems that are vented to the atmosphere through particulate matter control equipment or shall be transported wet.

(c) Control programs shall be designed to minimize emissions of lead from all nonprocess fugitive emission points. The programs shall include good housekeeping practices for the cleanup of spills and for minimizing emissions from loading and unloading areas as applicable. Fugitive lead dust shall be controlled according to the plan submitted on April 25, 2003. The plan is included as Attachment A.

C.8 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

C.9 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
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 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 that meets the requirements of 326 IAC 2-8-5(a)(1)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.

Testing Requirements [326 IAC 2-8-4(3)]

C.10 Performance Testing [326 IAC 3-6]

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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.11 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 2-8-4][326 IAC 2-8-5(a)(1)]

C.12 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

C.13 Instrument Specifications [326 IAC 2-1.1-11][326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]

(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 [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

C.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.15 Risk Management Plan [326 IAC 2-8-4][40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.16 Response to Excursions or Exceedances [326 IAC 2-8-4][326 IAC 2-8-5]

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

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

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

(1) initial inspection and evaluation;

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

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

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

(1) monitoring results;

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

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

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

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

C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.

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

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

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.18 General Record Keeping Requirements [326 IAC 2-8-4(3)][326 IAC 2-8-5]

(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. Support information includes the following:

(AA) All calibration and maintenance records.
(BB) All original strip chart recordings for continuous monitoring instrumentation.
(CC) Copies of all reports required by the FESOP.

Records of required monitoring information include the following:

(AA) The date, place, as defined in this permit, and time of sampling or measurements.
(BB) The dates analyses were performed.
(CC) The company or entity that performed the analyses.
(DD) The analytical techniques or methods used.
(EE) The results of such analyses.
(FF) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner

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

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

C.19 General Reporting Requirements [326 IAC 2-8-4(3)(C)][326 IAC 2-1.1-11]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1~~1~~(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

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

(c) 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.

(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.

Stratospheric Ozone Protection

C.20 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Casting

(a) One (1) small parts casting operation, known as EU 0100A, installed in 1977, equipped with a Farr 48D cartridge dust collector, exhausting through Stack 195, capacity: 1,446 pounds of lead pigs per hour.

(b) One (1) small parts flaming operation, known as EU 0100B, installed in 1977, last modified October 13, 1977, equipped with a Farr 48D cartridge dust collector, exhausting through Stack 195, capacity: 488 pounds of small parts per hour.

(c) One (1) grid casting operation, known as EU 0200A, installed in 1977, equipped with a Farr 60LL cartridge dust collector, exhausting through Stack 196, capacity: 5,197 pounds of lead pigs per hour.

(d) Three (3) natural gas-fired grid curing ovens, known as EU 0200B through EU 0200D, installed in 2000, exhausting through Stacks 226 - 228, respectively, rated at 0.200 million British thermal units per hour each, total process capacity: 6,100 pounds of casted lead grid plates per hour.

Pasting

(e) Pneumatic conveying of positive lead oxide from trucks to a storage silo, known as EU 0300A, installed in 2000, equipped with an integral Pneumatics Bin Vent filter, exhausting to the indoors through bin vent 232, with a maximum silo loading rate of 45,000 pounds of positive lead oxide per hour.

(f) One (1) negative lead oxide storage silo, known as EU 0300B, installed in 1983, last modified June 10, 1983, equipped with a Flex-Kleen Model 84 dust collector, exhausting to the indoors through bin vent 85, with a maximum silo loading rate of 45,000 pounds of negative lead oxide per hour. Storage silo EU 0300B is not connected to the pneumatic conveyance system and is not in use.

(g) Pneumatic conveying of negative lead oxide from trucks to a storage silo, known as EU 0300Bn, installed in 2000, equipped with an integral Pneumatics Bin Vent filter, exhausting to the indoors through bin vent 233, with a maximum silo loading rate of 45,000 pounds of positive lead oxide per hour.

(h) Pneumatic conveying of positive lead oxide from storage silo EU 0300A to the paste mixing system EU 0300C, with emissions controlled by one of two (2) Tri Mer wet scrubbers that exhaust through Stack 231, with a maximum silo unloading rate of 6,000 pounds of positive lead oxide per hour.

(i) Pneumatic conveying of negative lead oxide from storage silo EU 0300Bn to the paste mixing system EU 0300C, with emissions controlled by one of two (2) Tri Mer wet scrubbers that exhaust through Stack 231, with a maximum silo unloading rate of 6,000 pounds of negative lead oxide per hour.

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

Emissions Unit Description: Continued

(j) One (1) paste mixing system, known as EU 0300C, installed in 2000, consisting of two (2) weigh hoppers and two (2) mixing tubs, with emissions controlled by two (2) Tri Mer wet scrubbers that exhaust through Stack 231, capacity: 6,268 pounds of negative and positive lead oxide, expander, and dilute sulfuric acid per hour.

(k) One (1) expander manufacturing operation, known as EU 0300D, installed in 1983, equipped with Farr Model 24 LS dust collector, exhausting through Stack 159, capacity: 312 pounds of lead oxide, carbon black, barytes, and barium sulfate per hour.

(l) One (1) grid pasting system, known as EU 0300E, installed in 2000, equipped with a Sly Manufacturing scrubber, exhausting through Stack 230, capacity: 17,264 pounds of positive and negative lead paste and lead grids per hour.

(m) Two (2) natural gas-fired flash dry ovens, known as PA025 and PA026 approved for construction in 2009, exhausting through Stacks 249 and 250 respectively, rated at 1.6 million British thermal units per hour each, total process capacity: 17,264 pounds of positive and negative lead paste and lead grids per hour.

(n) Four (4) natural gas-fired humidity ovens, known as EU 0300 F, G, H and I, installed prior to 1999, exhausting through Stacks 26, 27, 28 and 29, respectively, rated at 0.840 million British thermal units per hour each, total process capacity: 2,012 pounds of lead plates per hour.

(o) Four (4) natural gas-fired OSI universal curing ovens, known as EU 0300 J, K, L and M, installed prior to 1999, exhausting through Stacks 179, 180, 193 and 194, respectively, rated at 0.840 million British thermal units per hour each, total process capacity: 2,012 pounds of lead plates per hour.

(p) Four (4) natural gas-fired OSI universal curing ovens, known as EU 0500E through EU 0500H, installed in 2000, exhausting through Stacks 234, 235, 237 and 238, respectively, rated at 0.840 million British thermal units per hour each, total process capacity: 2,456 pounds of lead plates per hour.

(q) Three (3) natural gas-fired bone dry curing ovens, known as BDO-8 through BDO-10, installed prior to 1999, exhausting through Stacks 24, 165 and 25, respectively, rated at 0.050 million British thermal units per hour each, total process capacity: 2,012 pounds of lead plates per hour.

Three Process Operation

(r) Two (2) enclosed pasted plate processing machines, known as PA027 and PA028, approved for construction in 2009, consisting of brushing and stacking of pasted lead plates, with excess lead oxide powder collected in trays and lead oxide air emissions controlled by a Sly Manufacturing scrubber, exhausting through Stack 230, capacity: 17,264 pounds of positive and negative lead paste and lead grids per hour.

(s) One (1) 3PO-plate processing operation, known as EU 0700B, installed in 1993, last modified October 26, 1993, equipped with an Krystal Kleen dust collector, exhausting through Stack 152, capacity: 2,914 pounds of plate frames per hour.

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

Emissions Unit Description: Continued

(t) One (1) 3PO-plate processing operation, known as EU 0700C, installed in 1993, last modified October 26, 1993, equipped with an Krystal Kleen dust collector, exhausting through Stack 151, capacity: 2,914 pounds of plate frames per hour.

(u) One (1) 3PO-plate processing operation, known as EU 0700E, installed in 1995, equipped with a Torit dust collector, exhausting through Stack 127, capacity: 160 pounds of plate frames per hour.

(v) One (1) 3PO-plate processing operation, known as EU 0700F, installed in 2001, equipped with a Farr dust collector, exhausting through Stack 247, capacity: 8,473 pounds of plate frames per hour.

(w) One (1) 3PO-L plate assembly operation, known as EU 0800A, installed March 30, 1984, equipped with an American air filter dust collector, exhausting through Stack 140, capacity: 1,444 pounds of cured plates and small parts per hour.

(x) One (1) 3PO-L plate assembly operation, known as EU 0800B, installed in 1988, last modified April 8, 1988, equipped with an American air filter dust collector, exhausting through Stack 166, capacity: 2,165 pounds of positive and negative plates and small parts per hour.

(y) One (1) 3PO-L plate assembly operation, known as EU 0800C, installed in 1984, last modified March 30, 1984, equipped with an OSI #10 dust collector, exhausting through Stack 142, capacity: 2,165 pounds of cured plates and small parts per hour.

(z) One (1) 3PO-MP assembly, known as EU 0800D, installed in 1993, last modified January 1, 1993, equipped with a Torit dust collector, exhausting through Stack 127, capacity: 2,404 pounds of cured plates and small parts and cell covers per hour.

(aa) One (1) 3PO-JC/D assembly, known as EU 0800E, installed in 1994, last modified December 5, 1994, equipped with a Farr dust collector, exhausting through Stack 247, capacity: 174 pounds of cured plates and small parts and cell covers per hour limited by the formation bottleneck to 56,550 pounds per month (44.5% of capacity) and 4.943 liters of cover adhesive per month.

(bb) One (1) 3PO-MCT assembly, known as EU 0800F, installed in 1999, equipped with a Farr 48D dust collector, exhausting through Stack 188, capacity: 3,813 pounds of lead plates and small parts and cell covers per hour.

(cc) One (1) L-cell cover adhesive station, known as EU 0800G, installed in 1982, exhausting through Stack 167, capacity: 4,000 pounds of L-cells per hour.

(dd) One (1) 3PO-L cell cover insert, known as EU 0800H, installed in 1984, last modified March 30, 1984, equipped with two (2) Torit dust collectors, exhausting through Stack 141, capacity: 600 pounds of assembled cells per hour.

(ee) One (1) LCT 1700 Assembly with two jigs, known as EU 0800K, installed in December 2000, equipped with a Farr dust collector, exhausting through Stack 244, capacity: 1,302 pounds of plates and small parts and cell covers per hour.

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

Emissions Unit Description: Continued

Formation

(ff) One (1) tank dry formation, known as EU 0900A, installed in 1990, last modified March 5, 1990, exhausting through Stack 178, capacity: 200 pounds of lead plates per hour.

Central Vac

(ii) One (1) 3 process central vacuum, known as Maint2000A, installed in 1980, exhausting through Stack 113.

(jj) One (1) central vacuum #2, known as Maint2000B, installed October 6, 1980, exhausting through Stack 129.

(kk) One (1) 3 process central vacuum, known as Maint2000C, installed in 1980, exhausting through Stack 130.

(ll) One (1) 3 process central vacuum, known as Maint2000D, installed in 1980, exhausting through Stack 131.

(mm) One (1) casting and pasting central vacuum, known as Maint2000E, installed November 19, 1999, exhausting through Stack 224.

Shot Blasting

(oo) One (1) shot blasting operation using aluminum oxide, identified as SB-01, constructed in 2011, with a maximum capacity of 0.21 tons per hour, with particulate emissions controlled by one (1) 3 process central vacuum, identified as Maint2000D, constructed in 1980, and exhausting through Stack 131.

Under 40 CFR 60, Subpart KK, and 40 CFR 63, Subpart PPPPPP, emission units (a) through (ee), and (ii) through (mm) listed above are considered affected facilities. [40 CFR 60, Subpart KK][326 IAC 12][40 CFR 63, Subpart PPPPPP]

Insignificant Activities

(f) Three (3) electric LCT 1700 battery curing ovens, installed in 2000, exhausting through Stack 246, capacity: 1,302 pounds of plates and small parts and cell covers per hour. Under 40 CFR 60, Subpart KK, and 40 CFR 63, Subpart PPPPPP, these units are considered affected facilities. [40 CFR 60, Subpart KK][326 IAC 12][40 CFR 63, Subpart PPPPPP]

(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 2-8-4(1)]

D.1.1 General Provisions Relating to New Source Performance Standards (NSPS) for Lead-Acid Battery Manufacturing Plants [40 CFR Part 60, Subpart A][326 IAC 12-1]

Pursuant to 40 CFR 60.370, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, as specified in 40 CFR Part 60, Subpart KK in accordance with schedule in 40 CFR 60 Subpart KK.

D.1.2 New Source Performance Standards (NSPS) for Lead-Acid Battery Manufacturing Plants [40 CFR Part 60, Subpart KK][326 IAC 12-1]

(a) The Permittee, which engages in lead oxide battery manufacturing, shall comply with the following provisions of 40 CFR Part 60, Subpart KK (included as Attachment B of this permit):

(1) 40 CFR 60.370
(2) 40 CFR 60.371
(3) 40 CFR 60.372
(4) 40 CFR 60.373
(5) 40 CFR 60.374

(b) Pursuant to 40 CFR Part 60.372; the Permittee shall comply with the following:

(1) the grid casting facilities (EU 0100A, EU 0100B, and EU 0200A) shall not emit any gases that contain in excess of 0.000175 grains of lead per dry standard cubic foot of exhaust,

(2) the grid curing ovens (EU 0200B - D), the pasting operations (EU 0300A, B, Bn, C, and E), the expander manufacturing operation (EU 0300D), flash dry ovens (PA025 and PA026), the plate curing ovens (EU 0300F - M, EU500E - H, and BDO-8 - 10), the three process operations (PA027, PA028, EU 0700B, C, E, F, EU0800A - H, K), the Central Vac operations (Maint2000A - E), and the LCT 1700 battery curing ovens shall not emit any gases that contain in excess of 0.000437 grains of lead per dry standard cubic foot of exhaust

(3) the grid casting facilities exhaust stacks (195 and 196), the grid curing oven exhaust stacks (226 - 228), the pasting operations exhaust stacks (232, 85, 233, 231, and 230), the expander manufacturing operation exhaust stack (159), flash dry oven exhaust stacks (249 and 250), the plate curing ovens exhaust stacks (26 - 29, 179, 180, 193, 194, 234, 235, 237, 238, 127, 247, 23, 24, 165 and 25), the three process operations exhaust stacks (230, 152, 151, 127, 247, 140, 166, 142, 188, 167, 141, and 244), the Central Vac operations exhaust stacks (113, 129, 130, 131, and 224), and the LCT 1700 battery curing ovens exhaust stack (246) shall be limited to zero (0) percent opacity.

D.1.3 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) for Lead-Acid Battery Manufacturing Area Sources [40 CFR Part 63, Subpart A][326 IAC 20-1]

Pursuant to 40 CFR 63.11421, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, as specified in 40 CFR Part 63, Subpart PPPPPP in accordance with schedule in 40 CFR 63 Subpart PPPPPP.

D.1.4 Emission Standards for Hazardous Air Pollutants (NESHAP) for Lead-Acid Battery Manufacturing Area Sources [40 CFR Part 63, Subpart PPPPPP][326 IAC 20-1]

The Permittee, which engages in lead oxide battery manufacturing, shall comply with the following provisions of 40 CFR Part 63, Subpart PPPPPP (included as Attachment C of this permit), with a compliance date of July, 16 2008:

(1) 40 CFR 63.11421
(2) 40 CFR 63.11422
(3) 40 CFR 63.11423
(4) 40 CFR 63.11424
(5) 40 CFR 63.11425

(6) 40 CFR 63.11426
(7) 40 CFR 63.11427

D.1.5 Lead Battery Production and Lead Emission Limitations [326 IAC 2-8][326 IAC 2-2]

(a) The production of lead batteries shall be less than 2,000 batteries per day, with compliance determined at the end of each day.

(b) Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable, lead emissions from the individual emissions units shall not exceed the following:

Operation/Stack ID	Hourly Lead Emission Limits (pounds per hour)
Small parts flaming (EU 0100 A and B) Stack 195	0.07920 total
Grid casting operation (EU 0200A) Stack 196	0.09900
Natural gas-fired grid curing ovens (EU 0200B through EU 0200D) Stacks 226 - 228	0.01236 0.01236 0.01236
Paste mixing system (EU 0300C) Stack 231	0.03461
Expander manufacturing (EU 0300D) Stack 159	0.06098
Grid pasting (EU 0300E) and Pasted Plate Processing Machines (PA027 and PA028) Stack 230	0.31417 total
Flash dry oven (PA025) Stack 249	0.00742
Flash dry oven (PA026) Stack 250	0.00742
Humidity ovens (EU 0300 F, G, H, and I) Stacks 26 - 29	0.00348 0.00348 0.00348 0.00348
Natural gas-fired Universal curing ovens (EU 0300 J, K, L and M) Stacks 179, 180, 193 and 194	0.00227 0.00227 0.00227 0.00227
Natural gas-fired OSI Universal ovens (EU 0500E through EU 0500H) Stacks 234, 235, 237 and 238	0.00227 0.00227 0.00227 0.00227
Natural gas-fired Bone Dry ovens (BDO-8 through BDO-10) Stacks 24, 165 and 25	0.00227 0.00227 0.00227
3PO-plate processing (EU 0700B) Stack 152	0.16481
3PO-plate processing (EU 0700C) Stack 151	0.16481

Operation/Stack ID	Hourly Lead Emission Limits (pounds per hour)
3PO-plate processing (EU 0700E) and 3PO-MP assembly (EU 0800D) Stack 127	0.10713 total
3PO-plate processing (EU 0700F) and 3PO-JC/D assembly (EU 0800E) Stack 247	0.41203 total
3PO-L plate assembly (EU 0800A) Stack 140	0.08570
3PO-L plate assembly (EU 0800B) Stack 166	0.08570
3PO-L plate assembly (EU 0800C) Stack 142	0.07087
3PO-MCT assembly (EU 0800F) Stack 188	0.20601
3PO-L cell cover insert (EU 0800H) Stack 141	0.01978
LCT 1700 assembly with two jigs (EU 0800K) Stack 244	0.18129
LCT 1700 Battery Curing Ovens Stack 246	0.00989
Central Vacuum (Maint2000A) Stack 113	0.00412
Central Vacuum (Maint2000B) Stack 129	0.00412
Central Vacuum (Maint2000C) Stack 130	0.00412
Central Vacuum (Maint2000D) Stack 131	0.00412
Central Vacuum (Maint2000E) Stack 224	0.00412
Total	2.21

Compliance with these limits, combined with the potential lead emissions from all other emission units at this source, shall limit the source-wide total potential to emit lead to less than 10 tons per 12 consecutive month period, and render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

D.1.6 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the facilities listed in this section shall not exceed the allowable emission rates listed in the following table:

Operation/Stack ID	Process Weight Rate (pounds per hour)	326 IAC 6-3-2 Allowable Particulate Emission Rate (pounds per hour)
Grid casting operation (EU 0200A) Stack 196	5,197	7.77
Paste mixing system (EU 0300C) Stack 231	6,268	8.81

Operation/Stack ID	Process Weight Rate (pounds per hour)	326 IAC 6-3-2 Allowable Particulate Emission Rate (pounds per hour)
Pasted Plate Processing Machines (PA027 and PA028) Stack 230	17264	17.38
3PO-plate processing (EU 0700B) Stack 152	4000	6.52
3PO-plate processing (EU 0700C) Stack 151	4000	6.52
3PO-plate processing (EU 0700F) Stack 127	8,473	10.79
3PO-L plate assembly (EU 0800A) Stack 140	1,444	3.30
3PO-L plate assembly (EU 0800B) Stack 166	3,400	5.85
3PO-L plate assembly (EU 0800C) Stack 142	2,165	4.32
3PO-MP assembly (EU 0800D) Stack 127	2,404	4.64
3PO-MCT assembly (EU 0800F) Stack 188	4,000	6.52
LCT 1700 assembly with two jigs (EU 0800K) Stack 244	1,302	3.08
Central Vacuum (Maint2000A) Stack 113	0.375	0.551
Central Vacuum (Maint2000B) Stack 129	0.375	0.551
Central Vacuum (Maint2000C) Stack 130	0.375	0.551
Central Vacuum (Maint2000D) Stack 131	0.375	0.551
Central Vacuum (Maint2000E) Stack 224	0.375	0.551
Shot Blasting Operation (SB-01)	420	1.44

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

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

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

When the process weight rate is less than one hundred (100) pounds per hour, the allowable rate of emission is five hundred fifty-one thousandths (0.551) pound per hour.

D.1.7 PM Emission Limitations [326 IAC 2-2]

In order to render of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable, particulate matter (PM) emissions from the individual emissions units shall each not exceed the following:

Operation/Stack ID	Hourly PM Emission Limit (pounds per hour)
Small parts flaming (EU 0100 A and B) Stack 195	0.13601 total
Grid casting operation (EU 0200A) Stack 196	0.91562
Natural gas-fired grid curing ovens (EU 0200B through EU 0200D) Stacks 226 - 228	0.02510 0.02510 0.02510
Paste mixing system (EU 0300C) Stack 231	1.13783
Expander manufacturing (EU 0300D) Stack 159	0.02999
Grid pasting (EU 0300E) and Pasted Plate Processing Machines (PA027 and PA028) Stack 230	16.83672 total
Flash dry oven (PA025) Stack 249	0.13746
Flash dry oven (PA026) Stack 250	0.13746
Humidity ovens (EU 0300 F, G, H, and I) Stacks 26 - 29	0.00382 0.00382 0.00382 0.00382
Natural gas-fired Universal curing ovens (EU 0300 J, K, L and M) Stacks 179, 180, 193, and 194	0.00382 0.00382 0.00382 0.00382
Natural gas-fired OSI Universal ovens (EU 0500E through EU 0500H) Stacks 234, 235, 237, and 238	0.00382 0.00382 0.00382 0.00382
Bone Dry Ovens (BDO-8 through BDO-10) Stacks 24, 165, and 25	0.00382 0.00382 0.00382
3PO-plate processing (EU 0700B) Stack 152	2.92575
3PO-plate processing (EU 0700C) Stack 151	2.92575
3PO-plate processing (EU 0700E) and 3PO-MP assembly (EU 0800D) Stack 127	1.64175 total
3PO-plate processing (EU 0700F) and 3PO-JC/D assembly (EU 0800E) Stack 247	6.19747 total
3PO-L plate assembly (EU 0800A) Stack 140	0.98614
3PO-L plate assembly (EU 0800B) Stack 166	2.32195
3PO-L plate assembly (EU 0800C) Stack 142	1.47853
3PO-MCT assembly (EU 0800F) Stack 188	2.73170

Operation/Stack ID	Hourly PM Emission Limit (pounds per hour)
3PO-L cell cover insert (EU 0800H) Stack 141	0.00695
LCT 1700 assembly with two jigs (EU 0800K) Stack 244	0.88917
LCT 1700 Battery Curing Ovens Stack 246	0.04220
Tank dry formation (EU 0900A) Stack 178	11.34000
Central Vacuum (Maint2000A) Stack 113	0.18729
Central Vacuum (Maint2000B) Stack 129	0.18729
Central Vacuum (Maint2000C) Stack 130	0.18729
Central Vacuum (Maint2000D) & Shot Blasting Operation (SB-01) Stack 131	0.22850
Central Vacuum (Maint2000E) Stack 224	0.18729
Total	53.93

Compliance with these limits, combined with the potential PM emissions from all other emission units at this source, shall limit the source-wide total potential to emit PM to less than 250 tons per 12 consecutive month period and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

D.1.8 PM10 and PM2.5 Limitations [326 IAC 2-8-4][326 IAC 2-2]

Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable, particulate matter less than 10 microns in diameter (PM10) and particulate matter less than 2.5 microns in diameter (PM2.5) emissions from the individual emissions units shall not exceed the following:

Operation/Stack ID	Hourly PM_{10} / $PM_{2.5}$ Emission Limit (pounds per hour)
Small parts flaming (EU 0100 A and B) Stack 195	0.05440 total
Grid casting operation (EU 0200A) Stack 196	0.36625
Natural gas-fired grid curing ovens (EU 0200B through EU 0200D) Stacks 226 - 228	0.01004 0.01004 0.01004
Paste mixing system (EU 0300C) Stack 231	0.45513
Expander manufacturing (EU 0300D) Stack 159	0.01200
Grid pasting (EU 0300E) and Pasted Plate Processing Machines (PA027 and PA028) Stack 230	6.73469 total
Flash dry oven (PA025) Stack 249	0.05498

Operation/Stack ID	Hourly PM_{10} / $PM_{2.5}$ Emission Limit (pounds per hour)
Flash dry oven (PA026) Stack 250	0.05498
Humidity ovens (EU 0300 F, G, H, and I) Stacks 26 - 29	0.00153 0.00153 0.00153 0.00153
Natural gas-fired Universal curing ovens (EU 0300 J, K, L and M) Stacks 179, 180, 193, and 194	0.00153 0.00153 0.00153 0.00153
Natural gas-fired OSI Universal ovens (EU 0500E through EU 0500H) Stacks 234, 235, 237, and 238	0.00153 0.00153 0.00153 0.00153
Bone Dry Ovens (BDO-8 through BDO-10) Stacks 24, 165, and 25	0.00153 0.00153 0.00153
3PO-plate processing (EU 0700B) Stack 152	1.17030
3PO-plate processing (EU 0700C) Stack 151	1.17030
3PO-plate processing (EU 0700E) and 3PO-MP assembly (EU 0800D) Stack 127	0.65670 total
3PO-plate processing (EU 0700F) and 3PO-JC/D assembly (EU 0800E) Stack 247	2.47899 total
3PO-L plate assembly (EU 0800A) Stack 140	0.39446
3PO-L plate assembly (EU 0800B) Stack 166	0.92878
3PO-L plate assembly (EU 0800C) Stack 142	0.59141
3PO-MCT assembly (EU 0800F) Stack 188	1.09268
3PO-L cell cover insert (EU 0800H) Stack 141	0.00278
LCT 1700 assembly with two jigs (EU 0800K) Stack 244	0.35567
LCT 1700 Battery Curing Ovens Stack 246	0.01688
Tank dry formation (EU 0900A) Stack 178	4.53600
Central Vacuum (Maint2000A) Stack 113	0.07491
Central Vacuum (Maint2000B) Stack 129	0.07491
Central Vacuum (Maint2000C) Stack 130	0.07491
Central Vacuum (Maint2000D) & Shot Blasting Operation (SB-01) Stack 131	0.10376

Operation/Stack ID	Hourly PM_{10} / $PM_{2.5}$ Emission Limit (pounds per hour)
Central Vacuum (Maint2000E) Stack 224	0.07491
Total	21.59

Compliance with these limits, combined with the potential PM10 and PM2.5 emissions from all other emission units at this source, shall limit the source-wide total potential to emit PM10 and PM2.5 to less than 100 tons per 12 consecutive month period, each, and will render 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-7 (Part 70 Permits) not applicable.

D.1.9 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

Compliance Determination Requirements

D.1.10 Testing Requirements [326 IAC 2-8-5(a)(1) and (4)][326 IAC 2-1.1-11]

(a) No later than two and one-half (2.5) years from the date of the most recent valid compliance demonstration of a group, the Permittee shall perform lead and opacity testing of one (1) of the stacks in each group as specified in the following table utilizing methods as approved by the Commissioner to demonstrate compliance with Condition D.1.5(b) and the NSPS Subpart KK requirements of Condition D.1.2. US EPA has approved an alternative stack testing parameter for only the Group 3 (EU 0300A and EU 0300Bn) lead oxide storage silos. The stack sampling time for the Group 3 test is decreased to fifteen (15) minutes. The Permittee shall perform two (2) tests and the results of these two (2) tests shall be averaged. These lead and opacity performance tests shall be repeated on a different stack for groups with multiple stacks no less than once every two and one-half (2.5) years from the date of the last valid compliance demonstration of the group. For groups with multiple stacks, testing of any individual stack shall not be repeated until each stack within the group has been tested. In addition to these requirements, IDEM may require compliance testing when necessary to determine if these facilities are in compliance.

EMISSION UNITS GROUPED BY LIKE PROCESSES AND COLLECTION EQUIPMENT		
Group	Emission Unit	Stack
1	EU 0100A and 0100B	195
	EU 0200A	196
2	EU 0200B	226
	EU 0200C	227
	EU 0200D	228
	EU 0300D	159
3	EU 0300A	Bin Vent 232
	EU 0300Bn	Bin Vent 233
4	EU 0300C	231
	EU 0300E, PA027, and PA028	230

EMISSION UNITS GROUPED BY LIKE PROCESSES AND COLLECTION EQUIPMENT		
Group	Emission Unit	Stack
5	PA025	249
	PA026	250
	EU 0300F	26
	EU 0300G	27
	EU 0300H	28
	EU 0300I	29
	EU 0300J	179
	EU 0300K	180
	EU 0300L	193
	EU 0300M	194
	EU 0500E	234
	EU 0500F	235
	EU 0500G	237
	EU 0500H	238
	BDO-8	24
	BDO-9	165
	BDO-10	25
6	EU 0700F and 0800E	247
	EU 0700B	152
	EU 0700C	151
	EU 0800D and 0700E	127
7	MAINT2000A	113
	MAINT2000B	129
	MAINT2000C	130
	MAINT2000D	131
	MAINT2000E	224
8	EU 0800A	140
	EU 0800B	166
	EU 0800C	142
	EU 0800F	167
	EU 0800H	141
	EU 0800K	244
	LCT 1700 Battery Curing Ovens	246

(b) The Permittee is not required to test these facilities for PM and PM10 by this permit. However, IDEM may require compliance testing when necessary to determine if these facilities are in compliance. If testing is required by IDEM, compliance with the PM and PM10 limits specified in Conditions D.1.6, D.1.7, and D.1.8 shall be determined by a performance test. Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.1.11 Particulate Control

(a) The particulate control devices shall be in operation at all times when any of the facilities listed in Section D.1 are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.1.12 Visible Emissions Notations

(a) Daily visible emission notations of stack exhausts 195, 196, 226 - 228, 232, 233, 231, 230, 159, 249, 250, 26 - 29, 179, 180, 193, 194, 234, 235, 237, 238, 127, 247, 24, 165, 25, 152, 151, 140, 166, 142, 188, 167, 141, 244, 113, 129, 130, 131, 224, and 246 exhausts shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to reasonable response steps required by this condition.

D.1.13 Parametric Monitoring

(a) The Permittee shall record the pressure drop across the baghouses used in conjunction with the pasting, three process, and Central Vac operations, at least once per day when the pasting, three process and Central Vac processes are in operation. When for any one reading, the pressure drop across a baghouse is outside the normal range, the Permittee shall take a reasonable response. The normal range for these units is specified in the table below unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to reasonable response steps required by this condition.

Emission Unit	Stack/Vent ID	Pressure Drop (inches of water)
EU 0100A	195	1 - 6
EU 0200A	196	1 - 6
EU 0300A	232	1 - 7
EU 0300Bn	233	1 - 7
EU 0300D	159	2 - 7
EU 0700B	152	2 - 7
EU 0700C	151	2 - 7
EU 0700E and 0800D	127	2 - 8
EU 0700F and 0800E	247	1 - 7
EU 0800A	140	1 - 6
EU 0800B	166	1 - 6
EU 0800C	142	5 - 11
EU 0800F	188	1 - 6
EU 0800H	141	2 - 6 and 2 - 6

Emission Unit	Stack/Vent ID	Pressure Drop (inches of water)
EU 0800K	244	1 - 6
MAINT2000A	113	2 - 10
MAINT2000B	129	0.5 - 8
MAINT2000C	130	1 - 9
MAINT2000D / SB-01	131	2 - 10
MAINT2000E	224	2 - 10

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

(b) The Permittee shall record the pressure drop across the Tri Mer wet scrubbers (Stack 231) and the water flow rate and pressure drop across the Sly Manufacturing scrubber (Stack 230) at least once per day when the pasting and three process operations are in operation. When for any one reading, the pressure drop across a scrubber or a water flow rate of a scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal range for these units is specified in the table below unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. A water flow rate reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to reasonable response steps required by this condition.

Emission Unit	Stack/Vent ID	Pressure Drop (inches of water)	Flow Rate (gallons per minute)
EU 0300C	231	4 - 10	Not Applicable
EU 0300E, PA027, and PA028	230	3 - 8	30

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

D.1.14 Baghouse Inspections

An inspection shall be performed semiannually of all bags controlling the battery manufacturing operation. All defective bags shall be replaced. A record shall be kept of the results of the inspection.

D.1.15 Scrubber Inspection

An inspection shall be performed semiannually of the scrubber. Defective scrubber part(s) shall be replaced. A record shall be kept of the results of the inspection.

D.1.16 Broken or Failed Bag Detection

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

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the

processing of the material in the emission unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

D.1.17 Scrubber Failure Detection

In the event that a scrubber failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emission unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.1.18 Record Keeping Requirement

(a) To document the compliance status with Condition D.1.5(a), the Permittee shall maintain daily records of the number lead batteries produced per day.

(b) To document the compliance status with Condition D.1.12, the Permittee shall maintain a daily record of visible emission notations of Stacks 195, 196, 226 - 228, 232, 233, 231, 230, 159, 249, 250, 26 - 29, 179, 180, 193, 194, 234, 235, 237, 238, 127, 247, 24, 165, 25, 152, 151, 140, 166, 142, 188, 167, 141, 244, 113, 129, 130, 131, 224, and 246 exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).

(c) To document the compliance status with Condition D.1.13(a), the Permittee shall maintain a daily record of the pressure drop across the baghouses associated with the grid casting, pasting, three process, and Central Vac operations. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g., the process did not operate that day).

(d) To document the compliance status with Condition D.1.13(b), the Permittee shall maintain a daily record of the pressure drop across each of the scrubbers (Tri Mer wet scrubbers and Sly Manufacturing scrubber). The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g., the process did not operate that day).

(e) To document the compliance status with Condition D.1.13(b), the Permittee shall maintain a daily record of the water flow rate of the Sly Manufacturing scrubber. The Permittee shall include in its daily record when a water flow rate reading is not taken and the reason for the lack of a water flow rate reading (e.g., the process did not operate that day).

(f) To document the compliance status with Conditions D.1.14 and D.1.15, the Permittee shall maintain records of the results of the inspections required under Conditions D.1.14 and D.1.15.

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

D.1.19 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.1.5(a) shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meet the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Insignificant Activities

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour consisting of various existing facilities rated at total of 54.36 million British thermal units per hour. Additional natural gas-fired combustion sources include:

Casting

(1) One (1) natural gas-fired pasting boiler, installed prior to 1999, exhausting through Stack 163, rated at 0.690 million British thermal units per hour.

(2) One (1) natural gas-fired pasting boiler, installed prior to 1999, exhausting through Stack 164, rated at 1.050 million British thermal units per hour.

(3) One (1) natural gas-fired boiler, installed in December 2000, exhausting through Stack 236, rated at 0.340 million British thermal units per hour.

Pasting

(4) One (1) natural gas-fired boiler, installed in December 2000, exhausting through Stack 239, rated at 0.340 million British thermal units per hour.

Plate Storage Area

(6) One (1) natural gas-fired universal oven boiler, installed in December 2000, exhausting through Stack 225, rated at 0.340 million British thermal units per hour.

(c) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. [326 IAC 8-3-2][326 IAC 8-3-5]

(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 2-8-4(1)]

D.2.1 Particulate Limitations [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4(a) (Particulate emission limitations for sources of indirect heating: emission limitations for facilities specified in 326 IAC 6-2-1(d)), particulate emissions from all facilities used for indirect heating purposes which were existing and in operation after September 21, 1983, shall in no case exceed 0.6 pounds of particulate matter per million British thermal units heat input.

D.2.2 Cold Cleaner Degreaser Control Equipment and Operating Requirements [326 IAC 8-3-2]

(a) Pursuant to 326 IAC 8-3-2(a) (Cold Cleaner Degreaser Control Equipment and Operating Requirements), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

(1) Equip the degreaser with a cover.

(2) Equip the degreaser with a device for draining cleaned parts.

(3) Close the degreaser cover whenever parts are not being handled in the degreaser.

(4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases.

(5) Provide a permanent, conspicuous label that lists the operating requirements in subdivisions (3), (4), (6), and (7).

(6) Store waste solvent only in covered containers.

(7) Prohibit the dispose or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.

(b) Pursuant to 326 IAC 8-3-2(b) (Cold Cleaner Degreaser Control Equipment and Operating Requirements), for cold cleaner degreaser operations without remote solvent reservoirs, the Permittee shall ensure that the following additional control equipment and operating requirements are met:

(1) Equip the degreaser with one (1) of the following control devices if the solvent is heated to a temperature of greater than forty-eight and nine-tenths (48.9) degrees Celsius (one hundred twenty (120) degrees Fahrenheit):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent used is insoluble in, and heavier than, water.

(C) A refrigerated chiller.

(D) Carbon adsorption.

(E) An alternative system of demonstrated equivalent or better control as those outlined in clauses (A) through (D) that is approved by the department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.

(2) Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.

(3) If used, solvent spray:

(A) must be a solid, fluid stream; and

(B) shall be applied at a pressure that does not cause excessive splashing.

D.2.3 Material Requirements for Cold Cleaner Degreasers [326 IAC 8-3-8]

Pursuant to 326 IAC 8-3-8(b)(2), on and after January 1, 2015, no person shall operate a cold cleaner degreaser with a solvent that has a VOC composite partial vapor pressure that exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.2.4 Record Keeping Requirements

(a) In order to document the compliance status with Condition D.2.3, on and after January 1, 2015, the Permittee shall maintain each of the following records for each purchase:

(1) The name and address of the solvent supplier.

(2) The date of purchase (or invoice/bill date of contract servicer indicating service date).

(3) The type of solvent purchased.

(4) The total volume of the solvent purchased.

(5) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty eight (68) degrees Fahrenheit).

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: C&D Technologies, Inc.
Source Address: 200 West Main Street, Attica, Indiana 47918
FESOP Permit No.: F045-19413-00008

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 AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT

Source Name: C&D Technologies, Inc.
Source Address: 200 West Main Street, Attica, Indiana 47918
FESOP Permit No.: F045-19413-00008

This form consists of 2 pages **Page 1 of 2**

☐ This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Production Report
(Submit Report Quarterly)

Source Name: C&D Technologies, Inc.
Source Address: 200 West Main Street, Attica, Indiana 47918
FESOP Permit No.: F045-19413-00008
Facility: Entire Source
Parameter: Lead Battery Production
Limit: The production of lead batteries shall be less than 2,000 batteries per day, with compliance determined at the end of each day.

Month: _____ Year: _____

Day	Lead Batteries Produced per day	Day	Lead Batteries Produced per day
1		17	
2		18	
3		19	
4		20	
5		21	
6		22	
7		23	
8		24	
9		25	
10		26	
11		27	
12		28	
13		29	
14		30	
15		31	
16			

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: C&D Technologies, Inc.
Source Address: 200 West Main Street, Attica, Indiana 47918
FESOP Permit No.: F045-19413-00008

Months: _____ **to** _____ **Year:** _____

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

ATTACHMENT A
FUGITIVE DUST CONTROL PLAN

C&D Technologies, Inc.
Attica Facility
200 West Main Street, Attica, Indiana 47918

Revised October 2008

C&D has two (2) active, inside bulk storage tanks for lead oxide and one that hasn't been used in years. All other lead oxide bearing material shall also be stored inside the plant. The inactive oxide bulk storage tank has a Flex-Kleen Model 84 BVBS-16 dust collector on top of the tank, and the two (2) newer oxide bulk storage tanks have Premier Pneumatics bin vents, Model #F15214 – 118, with sixteen (16) Gortex bags each.

The oxide is unloaded into the tanks pneumatically via semi-trailer bulk tank. Both Positive & Negative Oxide is brought in from an outside supplier, and is loaded into their respective silos. In the future, this oxide may be loaded into the bulk tank by an air pump located near the bulk storage tanks. Also, the two (2) lead oxide bulk storage tanks are equipped with load cells with an emergency overfill alarm that will measure the weight of the contents to help assure the tanks will not be overloaded. Plant personnel check the silos before ordering oxide to ensure they can accept the full contents of lead oxide deliveries. See Form "Lead Oxide Unloading Inspection Log". Each task completed needs initialed by the C&D employee or truck driver who oversees it's completion. As applicable, C&D employees responsible for oversite of these unloading tasks will be trained in this procedure. C&D will, also, forward this procedure and log to the trucking concerns with instructions that each driver be trained in their responsibilities including notification for spills, initialing their completed tasks on the log, etc.

If cleanup is required, the plant central vacuum system and/or the plant Goodway wet/dry vacuum (equipped with H.E.P.A. filters) will be utilized. If material is too large to be vacuumed, sweeping and compound shoveling shall be used only to pick up the larger debris.

Upon Supervisor notification of a spill to the Plant Environmental Administrator, immediate clean up shall commence, with the Environmental Administrator and/or his/her designee supervising the clean up and disposal. The Environmental Administrator shall notify the proper Local and State authorities as required.

SPILL RESPONSE & CLEAN UP PROCEDURES:

The clean up procedures include, but are not limited to the following:

If the spill occurs outside:

1. Immediately stop all traffic in, and around, the contaminated area.
2. Utilize material out of metal spill response box near the oxide unloading area, which contains the following material for use in responding to an oxide spill.
    a. 2 rolls of plastic (12'x50'). This will allow for coverage of the contaminated area in case of a breeze or while waiting for an appropriate number of personnel to gather.
    b. 10 disposable respirators. For personnel while clean up activities are in progress.
    c. 1 shovel. For picking up oxide and any visibly contaminated soil.
    d. 10 sand bags. For holding down plastic.
    e. 5 bags Zorb-All. For holding down the plastic or soaking up puddles of oxide contaminated water.
    f. Drain plug for plugging a drain in case of a spill during a rainy day.

If the spill occurs inside the enclosure:

1. Immediately shutoff truck and pumping into silo AND CLOSE NORTH DOOR! (This will stop the spread of oxide outside the building and to other areas in the plant).
2. Use Goodway wet/dry vacuum equipped with H.E.P.A. filters to clean up any wet oxide, or on any paved areas allowing for the wash down of pavement to a diked area and the vacuuming up of the lead contaminated water. Do this in a manner so as not to spread the lead contaminated water to the manhole located inside this enclosure. The captured water that is lead contaminated is at the present time (for plant process water), and always will be (in case of spill) treated and filtered through the plant on-site wastewater treatment facility. All plant personnel shall be trained on the Stormwater Pollution Prevention Plan on a yearly basis, as applicable to their responsibilities at the facility.

LEAD OXIDE UNLOADING PROCEDURE

The following procedure shall be used during the unloading of lead oxide (PbO) at the C&D Technologies Attica facility. This procedure shall insure the safety of those involved in unloading lead oxide and prevent spills of this material to the environment. Lead oxide is a toxic material and must be given proper respect in its handling.

Any deviation from this procedure must be approved by the Plant Environmental Administrator prior to implementing the change. Unapproved deviations shall result in disciplinary action, notification of the trucking concern involved, and other actions deemed necessary to insure there are no repeated occurrences.

Procedure for Lead Oxide Unloading

A. The Truck Driver shall:
    1. Back truck in so that exhaust from the truck is close to the overhead exhaust ventilation hoses.
    2. Turn the ventilation on the overhead exhaust ventilation hoses and open dampers.

B. A designated C&D Management Employee shall establish when unloading may commence:
    1. Insure that the bulk storage tank is sufficiently empty, so it can accept the full contents of the truck. (Pasting Supervisor)
    2. Unlock the lead oxide loading line. (Quality Tech)
    3. Notify the driver that the unloading may commence. (Quality Tech)
    4. Fill out the “Lead Oxide Unloading Inspection Log.” (Quality Tech & Truck driver)
    5. Shall instruct the truck driver of the overfill alarm and procedures to follow in case of alarm situation. (Quality Tech)

C. The Truck Driver shall prepare for oxide unloading:
    1. Insure that a respirator is donned during unloading in case of a leak.
    2. Hearing protection shall be worn at this stage until truck’s unloading pump is turned off. In the event that the driver does not have his/her own earplugs, earplugs located in a dispenser within the north alleyway enclosure shall be used.
    3. Gloves and safety glasses shall be worn throughout the hook-up and unloading processes.
    4. Turn the bin vent fan on.
    5. Connect lead oxide hose(s) between truck and unlocked lead oxide loading pipe, insuring that no kinks in hose exist and that couplings are tight. (Connection of multiple hoses may be necessary to insure that the truck is located where truck exhaust ventilation can be properly used.)
    6. Begin the unloading operation.

D. The Truck Driver shall continuously monitor the oxide unloading:
    1. Stay with the truck until the unloading procedure is complete.

2. Monitor gauges on truck to insure working pressures are not exceeded.
3. Monitor exhaust from the bin vents for visible emissions.
4. In the case of emergency shutdown, the driver shall notify a C&D Management Employee, explaining the nature of the emergency.

E. The Truck Driver shall complete the oxide unloading procedure:
1. Allow sufficient air to pass through the lines after unloading to insure complete evacuation of lead oxide from the lines.
2. Unhook the lead oxide hose(s) from the truck and return hoses to platform next to lead oxide silo.
3. Place oxide fill cap on pipe end and lock with padlock provided.
4. Vacuum any spilled lead oxide, including the floor, the outside of the truck, and the hoses and pipes.
5. Gloves shall be placed within the hazardous waste drum located within the north alleyway enclosure, and the lid to the hazardous waste drum shall be replaced on the top of the drum.
6. Vacuum any lead oxide off of hair and clothes including bottom of shoes.
7. Wash the tires of the truck with, as provided, insuring that water used is not excessive.
8. Shall notify a C&D Quality Tech that delivery is complete.

F. C&D Quality Tech shall:
1. Insure that the floor, outside of truck, and unloading hoses and pipes are free of lead oxide dust.
2. Insure that the tires of the truck have been thoroughly washed.
3. Insure that the oxide fill cap has been secured onto the pipe end. Release the Truck Driver to leave the premises.
4. Complete and initial the “Lead Oxide Unloading Inspection Log.”
5. Provide the completed “Lead Oxide Unloading Inspection Log” to the Environmental Administrator.

ATTACHMENT B

Subpart KK—Standards of Performance for Lead-Acid Battery Manufacturing Plants

Source: 47 FR 16573, Apr. 16, 1982, unless otherwise noted.

§ 60.370 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the affected facilities listed in paragraph (b) of this section at any lead-acid battery manufacturing plant that produces or has the design capacity to produce in one day (24 hours) batteries containing an amount of lead equal to or greater than 5.9 Mg (6.5 tons).

(b) The provisions of this subpart are applicable to the following affected facilities used in the manufacture of lead-acid storage batteries:

(1) Grid casting facility.

(2) Paste mixing facility.

(3) Three-process operation facility.

(4) Lead oxide manufacturing facility.

(5) Lead reclamation facility.

(6) Other lead-emitting operations.

(c) Any facility under paragraph (b) of this section the construction or modification of which is commenced after January 14, 1980, is subject to the requirements of this subpart.

§ 60.371 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(a) *Grid casting facility* means the facility which includes all lead melting pots and machines used for casting the grid used in battery manufacturing.

(b) *Lead-acid battery manufacturing plant* means any plant that produces a storage battery using lead and lead compounds for the plates and sulfuric acid for the electrolyte.

(c) *Lead oxide manufacturing facility* means a facility that produces lead oxide from lead, including product recovery.

(d) *Lead reclamation facility* means the facility that remelts lead scrap and casts it into lead ingots for use in the battery manufacturing process, and which is not a furnace affected under subpart L of this part.

(e) *Other lead-emitting operation* means any lead-acid battery manufacturing plant operation from which lead emissions are collected and ducted to the atmosphere and which is not part of a grid casting, lead oxide manufacturing, lead reclamation, paste mixing, or three-process operation facility, or a furnace affected under subpart L of this part.

(f) *Paste mixing facility* means the facility including lead oxide storage, conveying, weighing, metering, and charging operations; paste blending, handling, and cooling operations; and plate pasting, takeoff, cooling, and drying operations.

(g) *Three-process operation facility* means the facility including those processes involved with plate stacking, burning or strap casting, and assembly of elements into the battery case.

§ 60.372 Standards for lead.

(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere:

(1) From any grid casting facility any gases that contain lead in excess of 0.40 milligram of lead per dry standard cubic meter of exhaust (0.000175 gr/dscf).

(2) From any paste mixing facility any gases that contain in excess of 1.00 milligram of lead per dry standard cubic meter of exhaust (0.000437 gr/dscf).

(3) From any three-process operation facility any gases that contain in excess of 1.00 milligram of lead per dry standard cubic meter of exhaust (0.000437 gr/dscf).

(4) From any lead oxide manufacturing facility any gases that contain in excess of 5.0 milligrams of lead per kilogram of lead feed (0.010 lb/ton).

(5) From any lead reclamation facility any gases that contain in excess of 4.50 milligrams of lead per dry standard cubic meter of exhaust (0.00197 gr/dscf).

(6) From any other lead-emitting operation any gases that contain in excess of 1.00 milligram of lead per dry standard cubic meter of exhaust (0.000437 gr/dscf).

(7) From any affected facility other than a lead reclamation facility any gases with greater than 0 percent opacity (measured according to Method 9 and rounded to the nearest whole percentage).

(8) From any lead reclamation facility any gases with greater than 5 percent opacity (measured according to Method 9 and rounded to the nearest whole percentage).

(b) When two or more facilities at the same plant (except the lead oxide manufacturing facility) are ducted to a common control device, an equivalent standard for the total exhaust from the commonly controlled facilities shall be determined as follows:

$$S_e = \sum_{a=1}^{N} S_a (Q_{sd_a} / Q_{sd_T})$$

Where:

S_e=is the equivalent standard for the total exhaust stream.

S_a=is the actual standard for each exhaust stream ducted to the control device.

N=is the total number of exhaust streams ducted to the control device.

Q_{sda}=is the dry standard volumetric flow rate of the effluent gas stream from each facility ducted to the control device.

Q_{sdT}=is the total dry standard volumetric flow rate of all effluent gas streams ducted to the control device.

[47 FR 16573, Apr. 16, 1982, as amended at 65 FR 61760, Oct. 17, 2000]

§ 60.373 Monitoring of emissions and operations.

The owner or operator of any lead-acid battery manufacturing facility subject to the provisions of this subpart and controlled by a scrubbing system(s) shall install, calibrate, maintain, and operate a monitoring device(s) that measures and records the pressure drop across the scrubbing system(s) at least once every 15 minutes. The monitoring device shall have an accuracy of ±5 percent over its operating range.

§ 60.374 Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).

(b) The owner or operator shall determine compliance with the lead standards in §60.372, except §60.372(a)(4), as follows:

(1) Method 12 shall be used to determine the lead concentration and, if applicable, the volumetric flow rate (Q_{sda}) of the effluent gas. The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf).

(2) When different operations in a three-process operation facility are ducted to separate control devices, the lead emission concentration (C) from the facility shall be determined as follows:

$$C = \left[\sum_{a=1}^{N}\left(C_a Q_{sda}\right)\right] / \sum_{a=1}^{N} Q_{sda}$$

where:

C=concentration of lead emissions for the entire facility, mg/dscm (gr/dscf).

C_a=concentration of lead emissions from facility “a”, mg/dscm (gr/dscf).

Q_{sda}=volumetric flow rate of effluent gas from facility “a”, dscm/hr (dscf/hr).

N=total number of control devices to which separate operations in the facility are ducted.

(3) Method 9 and the procedures in §60.11 shall be used to determine opacity. The opacity numbers shall be rounded off to the nearest whole percentage.

(c) The owner or operator shall determine compliance with the lead standard in §60.372(a)(4) as follows:

(1) The emission rate (E) from lead oxide manufacturing facility shall be computed for each run using the following equation:

$$E = \left(\sum_{i=1}^{M} C_{Pbi} Q_{sdi} \right) / (PK)$$

where:

E=emission rate of lead, mg/kg (lb/ton) of lead charged.

C_{Pbi}=concentration of lead from emission point "i," mg/dscm (gr/dscf).

Q_{sdi}=volumetric flow rate of effluent gas from emission point "i," dscm/hr (sdcf/hr).

M=number of emission points in the affected facility.

P=lead feed rate to the facility, kg/hr (ton/hr).

K=conversion factor, 1.0 mg/mg (7000 gr/lb).

(2) Method 12 shall be used to determine the lead concentration (C_{Pb}) and the volumetric flow rate (Q_{sd}) of the effluent gas. The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf).

(3) The average lead feed rate (P) shall be determined for each run using the following equation:

$P=N\ W/\Theta$

where:

N=number of lead pigs (ingots) charged.

W=average mass of a pig, kg (ton).

Θ=duration of run, hr.

[54 FR 6675, Feb. 14, 1989, as amended at 65 FR 61760, Oct. 17, 2000]

ATTACHMENT C

Subpart PPPPPP—National Emission Standards for Hazardous Air Pollutants for Lead Acid Battery Manufacturing Area Sources

Source: 72 FR 38913, July 16, 2007, unless otherwise noted.

Applicability and Compliance Dates

§ 63.11421 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate a lead acid battery manufacturing plant that is an area source of hazardous air pollutants (HAP) emissions.

(b) This subpart applies to each new or existing affected source. The affected source is each lead acid battery manufacturing plant. The affected source includes all grid casting facilities, paste mixing facilities, three-process operation facilities, lead oxide manufacturing facilities, lead reclamation facilities, and any other lead-emitting operation that is associated with the lead acid battery manufacturing plant.

(1) An affected source is existing if you commenced construction or reconstruction of the affected source on or before April 4, 2007.

(2) An affected source is new if you commenced construction or reconstruction of the affected source after April 4, 2007.

(c) This subpart does not apply to research and development facilities, as defined in section 112(c)(7) of the Clean Air Act (CAA).

(d) You are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not otherwise required by law to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a). Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart.

§ 63.11422 What are my compliance dates?

(a) If you own or operate an existing affected source, you must achieve compliance with the applicable provisions in this subpart by no later than July 16, 2008.

(b) If you startup a new affected source on or before July 16, 2007, you must achieve compliance with the applicable provisions in this subpart not later than July 16, 2007.

(c) If you startup a new affected source after July 16, 2007, you must achieve compliance with the provisions in this subpart upon startup of your affected source.

Standards and Compliance Requirements

§ 63.11423 What are the standards and compliance requirements for new and existing sources?

(a) You must meet all the standards for lead in 40 CFR 60.372.

(b) You must meet the monitoring requirements in paragraphs (b)(1) and (2) of this section.

(1) For any emissions point controlled by a scrubbing system, you must meet the requirements in 40 CFR 60.373.

(2) For any emissions point controlled by a fabric filter, you must meet the requirements of paragraph (b)(2)(i) of this section and either paragraph (b)(2)(ii) or (iii) of this section. Fabric filters equipped with a high efficiency particulate air (HEPA) filter or other secondary filter are allowed to monitor less frequently, as specified in paragraph (b)(2)(iv) of this section.

(i) You must perform semiannual inspections and maintenance to ensure proper performance of each fabric filter. This includes inspection of structural and filter integrity. You must record the results of these inspections.

(ii) You must install, maintain, and operate a pressure drop monitoring device to measure the differential pressure drop across the fabric filter during all times when the process is operating. The pressure drop shall be recorded at least once per day. If a pressure drop is observed outside of the normal operational ranges, you must record the incident and take immediate corrective actions. You must also record the corrective actions taken. You must submit a monitoring system performance report in accordance with §63.10(e)(3).

(iii) You must conduct a visible emissions observation at least once per day to verify that no visible emissions are occurring at the discharge point to the atmosphere from any emissions source subject to the requirements of paragraph (a) of this section. If visible emissions are detected, you must record the incident and conduct an opacity measurement in accordance with 40 CFR 60.374(b)(3). You must record the results of each opacity measurement. If the measurement exceeds the applicable opacity standard in 40 CFR 60.372(a)(7) or (8), you must submit this information in an excess emissions report required under §63.10(e)(3).

(iv) Fabric filters equipped with a HEPA filter or other secondary filter are allowed to monitor less frequently, as specified in paragraph (b)(2)(iv)(A) or (B) of this section.

(A) If you are using a pressure drop monitoring device to measure the differential pressure drop across the fabric filter in accordance with paragraph (b)(2)(ii) of this section, you must record the pressure drop at least once per week. If a pressure drop is observed outside of the normal operational ranges, you must record the incident and take immediate corrective actions. You must also record the corrective actions taken. You must submit a monitoring system performance report in accordance with §63.10(e)(3).

(B) If you are conducting visible emissions observations in accordance with paragraph (b)(2)(iii) of this section, you must conduct such observations at least once per week and record the results in accordance with paragraph (b)(2)(iii) of this section. If visible emissions are detected, you must record the incident and conduct an opacity measurement in accordance with 40 CFR 60.374(b)(3). You must record the results of each opacity measurement. If the measurement exceeds the applicable opacity standard in 40 CFR 60.372(a)(7) or (8), you must submit this information in an excess emissions report required under §63.10(e)(3).

(c) You must meet the testing requirements in 40 CFR 60.374.

(1) Existing sources are not required to conduct a performance test if a prior performance test was conducted using the same methods specified in 40 CFR 60.374 and either no process changes have been made since the test, or you can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance with this subpart despite process changes.

(2) Sources without a prior performance test, as described in paragraph (c)(1) of this section, must conduct a performance test using the methods specified in 40 CFR 60.374 by 180 days after the compliance date.

[72 FR 38913, July 16, 2007, as amended at 73 FR 15929, Mar. 26, 2008]

§ 63.11424 [Reserved]

Other Requirements and Information

§ 63.11425 What General Provisions apply to this subpart?

(a) The provisions in 40 CFR part 63, subpart A, that are applicable to this subpart are specified in Table 1 to this subpart.

(b) For existing sources, the initial notification required by §63.9(b) must be submitted not later than November 13, 2007.

(c) For existing sources, the initial notification of compliance required by §63.9(h) must be submitted not later than March 13, 2009.

[72 FR 38913, July 16, 2007, as amended at 73 FR 15929, Mar. 26, 2008]

§ 63.11426 What definitions apply to this subpart?

The terms used in this subpart are defined in the CAA; 40 CFR 60.371; 40 CFR 60.2 for terms used in the applicable provisions of 40 CFR part 60, subpart A; and §63.2 for terms used in the applicable provisions of 40 CFR part 63, subpart A.

[72 FR 38913, July 16, 2007, as amended at 73 FR 15929, Mar. 26, 2008]

§ 63.11427 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. EPA or a delegated authority such as a State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or tribal agency pursuant to 40 CFR part 63, subpart E, then that Agency has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out if this subpart is delegated to a State, local, or tribal agency within your State.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the approval authorities contained in paragraphs (b)(1) through (4) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(1) Approval of an alternative non-opacity emissions standard under §63.6(g).

(2) Approval of a major change to test methods under §63.7(e)(2)(ii) and (f). A “major change to test method” is defined in §63.90.

(3) Approval of a major change to monitoring under §63.8(f). A “major change to monitoring” is defined in §63.90.

(4) Approval of a major change to recordkeeping/reporting under §63.10(f). A “major change to recordkeeping/reporting” is defined in §63.90.

[72 FR 38913, July 16, 2007, as amended at 73 FR 15929, Mar. 26, 2008]

Table 1 to Subpart PPPPPP of Part 63—Applicability of General Provisions to Subpart PPPPPP

As required in §63.11425, you must comply with the requirements of the NESHAP General Provisions (40 CFR part 63, subpart A) as shown in the following table.

Citation	Subject	Applies to Subpart PPPPPP?	Explanation
63.1	Applicability	Yes	
63.2	Definitions	Yes	
63.3	Units and Abbreviations		
63.4	Prohibited Activities and Circumvention	Yes	
63.5	Preconstruction Review and Notification Requirements	No	
63.6(a)–(d), (e)(1), (f)–(j)	Compliance with Standards and Maintenance Requirements	Yes	
63.6(e)(3)		No	Subpart PPPPPP does not require a startup, shutdown, and malfunction plan.
63.7	Performance Testing Requirements	Yes	
63.8	Monitoring Requirements	Yes	
63.9	Notification Requirements	Yes	
63.10(a)–(c), (d)(1)–(4), (e), (f)	Recordkeeping and Reporting Requirements	Yes	

Citation	Subject	Applies to Subpart PPPPPP?	Explanation
63.10(d)(5)		No	Subpart PPPPPP does not require a startup, shutdown, and malfunction plan.
63.11	Control Device Requirements	No	Subpart PPPPPP does not require flares.
63.12	State Authorities and Delegations	Yes.	
63.13	Addresses	Yes	
63.14	Incorporations by Reference	Yes	
63.15	Availability of Information and Confidentiality	Yes	
63.16	Performance Track Provisions	Yes	
63.1(a)(5), (a)(7)–(9), (b)(2), (c)(3), (d), 63.6(b)(6), (c)(3), (c)(4), (d), (e)(2), (e)(3)(ii), (h)(3), (h)(5)(iv), 63.8(a)(3), 63.9(b)(3), (h)(4), 63.10(c)(2)–(c)(4), (c)(9)	Reserved	No	

[72 FR 38913, July 16, 2007, as amended at 73 FR 15929, Mar. 26, 2008]

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the
Technical Support Document for a Significant Permit Revision to a Federally Enforceable State Operating Permit (FESOP)

Source Description and Location

Source Name:	C & D Technologies, Inc.
Source Location:	200 West Main Street, Attica, IN 47918-0279
County:	Fountain
SIC Code:	3691
Operation Permit No.:	F045-19413-00008
Operation Permit Issuance Date:	March 20, 2009
Significant Permit Revision No.:	045-32647-00008
Permit Reviewer:	Kristen Willoughby

On March 12, 2013, the Office of Air Quality (OAQ) had a notice published in the Fountain County Neighbor, Attica, Indiana, stating that C & D Technologies, Inc. had applied for a Significant Permit Revision to a stationary custom industrial battery manufacturing source. The notice also stated that OAQ proposed to issue a permit for this revision and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Upon further review, the OAQ has made the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted). The Table Of Contents has been modified to reflect these changes.

1. Effective March 1, 2013 the Organic Solvent Degreasing Rules under 326 IAC 8-3 have been revised. Condition D.5.2 has been modified as follows due to the changes in the rule.

D.2.2 ~~Volatile Organic Compounds (VOC)~~ **Cold Cleaner Degreaser Control Equipment and Operating Requirements**~~-~~ [326 IAC 8-3-2]

(a) Pursuant to 326 IAC 8-3-2**(a)** (Cold Cleaner ~~Operations~~ **Degreaser Control Equipment and Operating Requirements**), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

(~~a~~**1**) Equip the ~~cleaner~~**degreaser** with a cover.

(~~b~~**2**) Equip the ~~cleaner~~**degreaser** with a ~~facility~~**device** for draining cleaned parts.

(~~c~~**3**) Close the degreaser cover whenever parts are not being handled in the ~~cleaner~~**degreaser**.

(~~d~~**4**) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases.

(~~e~~**5**) Provide a permanent, conspicuous label **that lists** ~~summarizing~~ the operati~~o~~n**g** requirements **in subdivisions (3), (4), (6), and (7)**.

(~~f~~**6**) Store waste solvent only in covered containers**.**

(7) ~~and do not~~ **Prohibit the** dispose **or transfer** of waste solvent ~~or transfer it to another party,~~ in such a manner that **could allow** greater than twenty percent (20%) of the waste solvent (by weight) ~~can~~ **to** evaporate into the atmosphere.

~~D.2.3 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]~~

(~~a~~**b**) Pursuant to 326 IAC 8-3-~~5(a)~~**2(b)** (Cold Cleaner Degreaser ~~Operation and~~ Control **Equipment and Operating Requirements**), for cold cleaner degreaser operations without remote solvent reservoirs, the Permittee shall ensure that the following **additional control equipment and operating** requirements are met:

~~(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:~~

~~(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));~~

~~(B) The solvent is agitated; or~~

~~(C) The solvent is heated.~~

~~(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.~~

~~(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).~~

~~(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.~~

(~~5~~**1**) Equip the degreaser with one (1) of the following control devices if the solvent ~~volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent~~ is heated to a temperature **of** greater than forty-eight and nine-tenths **(48.9)** degrees Celsius ~~(48.9°C)~~ (one hundred twenty **(120)** degrees Fahrenheit ~~(120°F)~~):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent ~~is~~ used is insoluble in, and heavier than, water.

(C) A refrigerated chiller.

(D) Carbon adsorption.

(~~C~~**E**) ~~Other~~**An alternative** system~~s~~ of demonstrated equivalent **or better** control ~~such as a refrigerated chiller of carbon adsorption~~ **as those outlined in clauses (A) through (D) that is approved by the department**. ~~Such~~ **An alternative** system~~s~~ shall be submitted to the U.S. EPA as a SIP revision.

(2) Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.

(3) If used, solvent spray:

(A) must be a solid, fluid stream; and

(B) shall be applied at a pressure that does not cause excessive splashing.

~~(b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:~~

~~(1) Close the cover whenever articles are not being handled in the degreaser.~~

~~(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.~~

~~(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.~~

D.2.3 Material Requirements for Cold Cleaner Degreasers [326 IAC 8-3-8]

Pursuant to 326 IAC 8-3-8(b)(2), on and after January 1, 2015, no person shall operate a cold cleaner degreaser with a solvent that has a VOC composite partial vapor pressure that exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.2.4 Record Keeping Requirements

(a) In order to document the compliance status with Condition D.2.3, on and after January 1, 2015, the Permittee shall maintain each of the following records for each purchase:

(1) The name and address of the solvent supplier.

(2) The date of purchase (or invoice/bill date of contract servicer indicating service date).

(3) The type of solvent purchased.

(4) The total volume of the solvent purchased.

(5) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty eight (68) degrees Fahrenheit).

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

No change will be made to the original TSD. The OAQ prefers that the TSD reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Significant Permit Revision to a Federally Enforceable State Operating Permit (FESOP)

Source Description and Location

Source Name:	C & D Technologies, Inc.
Source Location:	200 West Main Street, Attica, IN 47918-0279
County:	Fountain
SIC Code:	3691
Operation Permit No.:	F045-19413-00008
Operation Permit Issuance Date:	March 20, 2009
Significant Permit Revision No.:	045-32647-00008
Permit Reviewer:	Kristen Willoughby

On December 14, 201, the Office of Air Quality (OAQ) received an application from C & D Technologies, Inc. related to a modification to an existing stationary custom industrial battery manufacturing source.

Existing Approvals

The source was issued FESOP Renewal No. 045-32647-00008 on March 20, 2009. The source has since received the following approvals:

(a) Administrative Amendment No. 045-29416-00008, issued on July 9, 2010.

County Attainment Status

The source is located in Fountain County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	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 PM2.5.

(a) Ozone Standards
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. Fountain 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) $PM_{2.5}$
Fountain County has been classified as attainment for $PM_{2.5}$. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct $PM_{2.5}$ significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct $PM_{2.5}$, SO_2, and NO_X emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants
Fountain 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.

Fugitive Emissions

This type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, however, there is an applicable New Source Performance Standard that was in effect on August 7, 1980, therefore fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Status of the Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed revision, after consideration of all enforceable limits established in the effective permits:

This PTE table is from the TSD or Appendix A of Administrative Amendment No. 045-29416-00008, issued on July 9, 2010.

	Potential To Emit of the Entire Source Prior to Revision (tons/year)									
Process/ Emission Unit	PM	PM10	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO_2e**	Total HAPs	Worst Single HAP
Lead Oxide Pneumatic Conveying	1.99	1.09	1.09	--	--	--	--	--	1.84	1.84 (Pb)
Small Parts Casting	0.60	0.24	0.24	--	--	--	--	--	0.1621	0.16 (Pb) 0.0021 (Sb)
Grid Casting	4.34	1.74	1.74	--	--	--	--	--	0.2714	0.27 (Pb) 0.0014 (Sb)
Pasting/Mixing	6.57	2.63	2.63	--	--	--	--	--	0.30	0.30 (Pb)
3PO Process	170.75	68.30	68.30	--	--	--	--	--	3.63	3.63 (Pb)
Formation Process	49.67	19.87	19.87	--	--	--	--	--	--	--
Central Vac	4.10	1.64	1.64	--	--	--	--	--	0.041	0.041 (Pb)
Adhesives and Degreasing	--	--	--	--	--	2.07	--	--	0.0021	0.0021 (toluene)
Ovens, Heaters, and Boilers	0.60	2.41	2.41	0.19	31.65	1.74	26.58	38,208	0.60	0.57 (hexane) 0.00016 (Pb)

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)									
	PM	PM10	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO_2e**	Total HAPs	Worst Single HAP
Total PTE of Entire Source	**238.62**	**97.91**	**97.91**	**0.19**	**31.65**	**3.81**	**26.58**	**38,208**	**6.84**	**0.57 (hexane) 6.24 (Pb) 0.0035 (Sb)**
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds**	250	250	250	250	250	250	250	100,000	NA	NA

negl. = negligible
Pb = lead
Sb = antimony
These emissions are based upon Appendix A of Administrative Amendment No. 045-29416-00008, issued on July 9, 2010.
**The 100,000 CO_2e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

(a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because the Permittee has accepted limits on HAPs emissions to less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by C & D Technologies, Inc. on December 14, 2012, relating to updating the permit to include a shot blasting unit that was installed in September 2011.

The following is a list of the unpermitted emission units:

(a) One (1) shot blasting operation using aluminum oxide, identified as SB-01, constructed in 2011, with a maximum capacity of 0.21 tons per hour, with particulate emissions controlled by one (1) 3 process central vacuum, identified as Maint2000D, constructed in 1980, and exhausting through Stack 131.

Enforcement Issues

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

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – FESOP Revision

The following table is used to determine the appropriate permit level under 326 IAC 2-8.11.1. This table reflects the PTE before controls of the proposed revision. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	PTE of Proposed Revision (tons/year)									
	PM	PM10	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO_2e	Total HAPs	Worst Single HAP
SB-01	18.05	12.64	12.64	-	-	-	-	-	-	-

Pursuant to 326 IAC 2-8-11.1(g), this FESOP is being revised through a FESOP Significant Permit Revision because the proposed revision requires adjustment of the FESOP emission limitations.

PTE of the Entire Source After Issuance of the FESOP Revision

The table below summarizes the potential to emit of the entire source *(reflecting adjustment of existing limits)*, with updated emissions shown as **bold** values and previous emissions shown as ~~strikethrough~~ values.

Process/ Emission Unit	Potential To Emit of the Entire Source After the Revision (tons/year)									
	PM	PM10	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO_2e**	Total HAPs	Worst Single HAP
Lead Oxide Pneumatic Conveying	1.99	1.09	1.09	--	--	--	--	--	1.84	1.84 (Pb)
Small Parts Casting	0.60	0.24	0.24	--	--	--	--	--	0.1621	0.16 (Pb) 0.0021 (Sb)
Grid Casting	4.34	1.74	1.74	--	--	--	--	--	0.2714	0.27 (Pb) 0.0014 (Sb)
Pasting/Mixing	6.57	2.63	2.63	--	--	--	--	--	0.30	0.30 (Pb)
3PO Process	170.75	68.30	68.30	--	--	--	--	--	3.63	3.63 (Pb)
Formation Process	49.67	19.87	19.87	--	--	--	--	--	--	--
Central Vac **& Shot Blasting Operation (SB-01)**	~~4.10~~ **4.28**	~~1.64~~ **1.77**	~~1.64~~ **1.77**	--	--	--	--	--	0.041	0.041 (Pb)
Adhesives and Degreasing	--	--	--	--	--	2.07	--	--	0.0021	0.0021 (toluene)
Ovens, Heaters, and Boilers	0.60	2.41	2.41	0.19	31.65	1.74	26.58	38,208	0.60	0.57 (hexane) 0.00016 (Pb)

Process/ Emission Unit	Potential To Emit of the Entire Source After the Revision (tons/year)									
	PM	PM10	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO_2e**	Total HAPs	Worst Single HAP
Total PTE of Entire Source	~~238.62~~ **238.80**	~~97.91~~ **98.04**	~~97.91~~ **98.04**	0.19	31.65	3.81	26.58	38,208	6.84	0.57 (hexane) 6.24 (Pb) 0.0035 (Sb)
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds**	250	250	250	250	250	250	250	100,000	NA	NA

negl. = negligible
Pb = lead
Sb = antimony
These emissions are based upon Appendix A of Administrative Amendment No. 045-29416-00008, issued on July 9, 2010.
**The 100,000 CO_2e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this FESOP permit revision, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. (Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted)

Process/ Emission Unit	Potential To Emit of the Entire Source After the to Revision (tons/year)									
	PM	PM10	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO_2e**	Total HAPs	Worst Single HAP
Lead Oxide Pneumatic Conveying	1.99	1.09	1.09	--	--	--	--	--	1.84	1.84 (Pb)
Small Parts Casting	0.24	0.35	0.35	--	--	--	--	--	0.1621	0.16 (Pb) 0.0021 (Sb)
Grid Casting	1.74	1.74	1.74	--	--	--	--	--	0.2714	0.27 (Pb) 0.0014 (Sb)
Pasting/Mixing	2.63	2.63	2.63	--	--	--	--	--	0.30	0.30 (Pb)
3PO Process	68.30	68.30	68.30	--	--	--	--	--	3.63	3.63 (Pb)
Formation Process	19.87	19.87	19.87	--	--	--	--	--	--	--
Central Vac & Shot Blasting Operation (SB-01)	4.28	1.77	1.77	--	--	--	--	--	0.041	0.041 (Pb)
Adhesives and Degreasing	--	--	--	--	--	2.07	--	--	0.0021	0.0021 (toluene)
Ovens, Heaters, and Boilers	0.60	2.41	2.41	0.19	31.65	1.74	26.58	38,208	0.60	0.57 (hexane) 0.00016 (Pb)

Process/ Emission Unit	Potential To Emit of the Entire Source After the to Revision (tons/year)									
	PM	PM10	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO_2e**	Total HAPs	Worst Single HAP
Total PTE of Entire Source	238.80	98.04	98.04	0.19	31.65	3.81	26.58	38,208	6.84	0.57 (hexane) 6.24 (Pb) 0.0035 (Sb)
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds**	250	250	250	250	250	250	250	100,000	NA	NA

negl. = negligible
Pb = lead
Sb = antimony
These emissions are based upon Appendix A of Administrative Amendment No. 045-29416-00008, issued on July 9, 2010.
**The 100,000 CO_2e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

(a) FESOP Status
This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP).

In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), the source shall comply with the following:

(1) PM_{10} emissions from the Central Vacuum (Maint2000D) and Shot Blaster (SB-01) (stack 131) shall not exceed 0.10376 pounds per hour.

(2) $PM_{2.5}$ emissions from the Central Vacuum (Maint2000D) and Shot Blaster (SB-01) (stack 131) shall not exceed 0.10376 pounds per hour.

Compliance with these limits, combined with the potential to emit PM_{10} and $PM_{2.5}$ from all other emission units at this source, shall limit the source-wide total potential to emit of PM_{10} and $PM_{2.5}$ to less than 100 tons per 12 consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permits), and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

(b) PSD Minor Source
This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the source shall comply with the following:

(1) PM emissions from the Central Vacuum (Maint2000D) and Shot Blaster (SB-01) (stack 131) shall not exceed 0.22850 pounds per hour.

Compliance with this limit, combined with the potential to emit PM from all other emission units at this source, shall limit the source-wide total potential to emit of PM to less than 250 tons per 12

consecutive month period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

Federal Rule Applicability Determination

There are no new Federal Rule applicabilities due to this revision.

NSPS:

(a) The shot blaster (BS-01) is not subject to the requirements of the New Source Performance Standard for Lead-Acid Battery Manufacturing Plants, 40 CFR 60, Subpart KK), because the unit is used to prepare the surface of plastic jar covers prior to assembly of the battery. There are small lead rings in the holes of the covers (lids) but they are covered during the process with a cap so they are not damaged. The shot basting process ruffs-up the plastic so the glue adheres better when they battery is sealed by putting the jar and cover together. Therefore, BS-01 is not a lead-emitting operation and not subject to the requirements of 40 CFR 60, Subpart KK.

State Rule Applicability Determination

The following state rules are applicable to the proposed revision:

(a) 326 IAC 2-8-4 (FESOP)
This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP). See PTE of the Entire Source After Issuance of the FESOP Revision Section above.

(b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. See PTE of the Entire Source After Issuance of the FESOP Revision Section above.

(c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The proposed revision is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the new unit is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.

(d) 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 (SB-01) shall not exceed 1.44 pounds per hour when operating at a process weight rate of 0.21 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

The central vacuum (Maint2000D) shall be in operation at all times the shot blaster (SB-01) is in operation, in order to comply with this limit.

Compliance Determination, Monitoring and Testing Requirements

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

Emission Unit/Control	Operating Parameters	Frequency
Maint2000D	Pressure Drop	Once per day
	Visible Emission	

Proposed Changes

*(1) Upon further review, IDEM, OAQ has decided to make the following changes to the permit. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:*

(a) Multiple Conditions - Typographical Errors, Language Clarification
Throughout the permit, typographical and grammatical errors have been corrected. Additionally, changes to language for clarification or to align with the current preferred permit language conventions have been made.

(b) Multiple Conditions - Certification Requirement References
IDEM, OAQ has decided to clarify what rule requirements a certification needs to meet.

(c) Multiple Conditions - Rule Cites
On October 27, 2010, the Indiana Air Pollution Control Board issued revisions to 326 IAC 2. These revisions resulted in changes to the rule sites listed in the permit. These changes are not changes to the underlining provisions. The change is only to site of these rules in Section B - Operational Flexibility. IDEM, OAQ has clarified the rule sites for the Preventive Maintenance Plan.

(d) Multiple Conditions - Branch Names
IDEM's OAQ Compliance Section has been renamed Compliance and Enforcement Branch.

(e) Multiple Conditions - Reserved
IDEM, OAQ has removed all "Reserved" conditions from the permit.

(f) Section C - Overall Source Limit has been updated to include greenhouse gases.

(g) IDEM, OAQ has clarified the Permittee's responsibility with regards to record keeping.

(h) IDEM, OAQ has clarified the interaction of the Quarterly Deviation and Compliance Monitoring Report and the Emergency Provisions.

(i) IDEM, OAQ has decided to revise Section D - Parametric Monitoring to clarify what the normal pressure drop range is.

(j) For clarity, IDEM, OAQ has changed references to the general conditions such as "in accordance with Section B", "in accordance with Section C", or other similar language to "Section C...contains the Permittee's obligation with regard to the records required by this condition.

*(2) The following changes listed below are due to the proposed revision. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:*

(a) Administrative Amendment No. 045-29416-00008, issued on July 9, 2010, stated incorrect issuance and expiration dates for Operation Permit No.: F045-19413-00008. These dates have been corrected.

(b) Condition A.2 and Section D.1 Facility Description Box have been updated to include the new unit SB-01.

(c) The Permittee has potential emissions greater than 100 tpy. Therefore, new Condition C - Emergency Reduction Plans has been added.

(d) Section D.1 has been updated to include the new shot blasting operation.

(e) Condition D.1.7 has been modified to move the PM2.5 limits to Condition D.1.8 since PM2.5 must stay under 100 tpy pursuant to 326 IAC 2-8-4.

B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:

(~~i~~**1**) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), and

(~~ii~~**2**) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent 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 Compliance Certification [326 IAC 2-8-5(a)(1)]

***

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require ~~the~~ **a** certification that **meets the requirements of 326 IAC 2-8-5(a)(1)** by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

***

B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]~~[326 IAC 2-8-5(a)(1)]~~

***

(c) 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 and their submittal do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

***

B.12 Emergency Provisions [326 IAC 2-8-12]

***

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

***

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance ~~Section~~ **and Enforcement Branch**), or
Telephone Number: 317-233-0178 (ask for Compliance ~~Section~~ **and Enforcement Branch)**
Facsimile Number: 317-233-6865

***

~~B.15 Reserved~~

***

B.1~~8~~**7** Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

***

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

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

Any such application ~~shall be certified~~**does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1)** by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

***

B.1~~9~~**8** Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) ~~through (d)~~**and (c)** without a prior permit revision, if each of the following conditions is met:

***

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b) ~~through (d)~~**and (c)**. The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15(b)~~(2), (c)(1),~~ and (~~d~~**c**).

(b) Emission Trades [326 IAC 2-8-15(~~c~~**b**)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(~~c~~**b**).

(c) Alternative Operating Scenarios [326 IAC 2-8-15(~~d~~**c**)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.

***

C.2 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM) **and greenhouse gases (GHGs)**, from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(4) The potential to emit greenhouse gases (GHGs) from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per twelve (12) consecutive month period.

***

C.9 Asbestos Abatement Projects [326 IAC 14-10][326 IAC 18][40 CFR 61, Subpart M]

***

(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
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 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 **that meets the requirements of 326 IAC 2-8-5(a)(1)**by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

***

C.10 Performance Testing [326 IAC 3-6]

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require **a** certification **that meets the requirements of 326 IAC 2-8-5(a)(1)** 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 **a** certification **that meets the requirements of 326 IAC 2-8-5(a)(1)** 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.

***

~~C.13 Reserved~~

***

C.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

***

C.16 Response to Excursions or Exceedances [326 IAC 2-8-4][326 IAC 2-8-5]

***

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

***

C.18 General Record Keeping Requirements [326 IAC 2-8-4(3)][326 IAC 2-8-5]

(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. **Support information includes the following:**

(AA) All calibration and maintenance records.

(BB) All original strip chart recordings for continuous monitoring instrumentation.

(CC) Copies of all reports required by the FESOP.

Records of required monitoring information include the following:

(AA) The date, place, as defined in this permit, and time of sampling or measurements.

(BB) The dates analyses were performed.

(CC) The company or entity that performed the analyses.

(DD) The analytical techniques or methods used.

(EE) The results of such analyses.

(FF) The operating conditions as existing at the time of sampling or measurement.

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.

***

C.19 General Reporting Requirements [326 IAC 2-8-4(3)(C)][326 IAC 2-1.1-11]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. **Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph.** Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-11(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

***

~~(d) Reserved~~

(**~~e~~d**) ***

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

***

Shot Blasting

(oo) One (1) shot blasting operation using aluminum oxide, identified as SB-01, constructed in 2011, with a maximum capacity of 0.21 tons per hour, with particulate emissions controlled by one (1) 3 process central vacuum, identified as Maint2000D, constructed in 1980, and exhausting through Stack 131.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Continued

Shot Blasting

(oo) One (1) shot blasting operation using aluminum oxide, identified as SB-01, constructed in 2011, with a maximum capacity of 0.21 tons per hour, with particulate emissions controlled by one (1) 3 process central vacuum, identified as Maint2000D, constructed in 1980, and exhausting through Stack 131.

***

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D.1.6 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the facilities listed in this section shall not exceed the allowable emission rates listed in the following table:

Operation/Stack ID	Process Weight Rate (pounds per hour)	326 IAC 6-3-2 Allowable Particulate Emission Rate (pounds per hour)
Grid casting operation (EU 0200A) Stack 196	5,197	7.77
Paste mixing system (EU 0300C) Stack 231	6,268	8.81
Pasted Plate Processing Machines (PA027 and PA028) Stack 230	17264	17.38
3PO-plate processing (EU 0700B) Stack 152	4000	6.52
3PO-plate processing (EU 0700C) Stack 151	4000	6.52
3PO-plate processing (EU 0700F) Stack 127	8,473	10.79
3PO-L plate assembly (EU 0800A) Stack 140	1,444	3.30
3PO-L plate assembly (EU 0800B) Stack 166	3,400	5.85

Operation/Stack ID	Process Weight Rate (pounds per hour)	326 IAC 6-3-2 Allowable Particulate Emission Rate (pounds per hour)
3PO-L plate assembly (EU 0800C) Stack 142	2,165	4.32
3PO-MP assembly (EU 0800D) Stack 127	2,404	4.64
3PO-MCT assembly (EU 0800F) Stack 188	4,000	6.52
LCT 1700 assembly with two jigs (EU 0800K) Stack 244	1,302	3.08
Central Vacuum (Maint2000A) Stack 113	0.375	0.551
Central Vacuum (Maint2000B) Stack 129	0.375	0.551
Central Vacuum (Maint2000C) Stack 130	0.375	0.551
Central Vacuum (Maint2000D) Stack 131	0.375	0.551
Central Vacuum (Maint2000E) Stack 224	0.375	0.551
Shot Blasting Operation (SB-01)	**420**	**1.44**

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

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

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

When the process weight rate is less than one hundred (100) pounds per hour, the allowable rate of emission is five hundred fifty-one thousandths (0.551) pound per hour.

D.1.7 PM ~~and PM2.5~~ Emission Limitations [326 IAC 2-2]

In order to render of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable, particulate matter (PM) ~~and particulate matter less than 2.5 microns in diameter (PM2.5)~~ emissions from the individual emissions units shall each not exceed the following:

Operation/Stack ID	Hourly PM ~~and PM2.5~~ Emission Limit (pounds per hour)
Small parts flaming (EU 0100 A and B) Stack 195	0.13601 total
Grid casting operation (EU 0200A) Stack 196	0.91562
Natural gas-fired grid curing ovens (EU 0200B through EU 0200D) Stacks 226 - 228	0.02510 0.02510 0.02510
Paste mixing system (EU 0300C) Stack 231	1.13783
Expander manufacturing (EU 0300D) Stack 159	0.02999

Operation/Stack ID	Hourly PM ~~and PM2.5~~ Emission Limit (pounds per hour)
Grid pasting (EU 0300E) and Pasted Plate Processing Machines (PA027 and PA028) Stack 230	16.83672 total
Flash dry oven (PA025) Stack 249	0.13746
Flash dry oven (PA026) Stack 250	0.13746
Humidity ovens (EU 0300 F, G, H, and I) Stacks 26 - 29	0.00382 0.00382 0.00382 0.00382
Natural gas-fired Universal curing ovens (EU 0300 J, K, L and M) Stacks 179, 180, 193, and 194	0.00382 0.00382 0.00382 0.00382
Natural gas-fired OSI Universal ovens (EU 0500E through EU 0500H) Stacks 234, 235, 237, and 238	0.00382 0.00382 0.00382 0.00382
Bone Dry Ovens (BDO-8 through BDO-10) Stacks 24, 165, and 25	0.00382 0.00382 0.00382
3PO-plate processing (EU 0700B) Stack 152	2.92575
3PO-plate processing (EU 0700C) Stack 151	2.92575
3PO-plate processing (EU 0700E) and 3PO-MP assembly (EU 0800D) Stack 127	1.64175 total
3PO-plate processing (EU 0700F) and 3PO-JC/D assembly (EU 0800E) Stack 247	6.19747 total
3PO-L plate assembly (EU 0800A) Stack 140	0.98614
3PO-L plate assembly (EU 0800B) Stack 166	2.32195
3PO-L plate assembly (EU 0800C) Stack 142	1.47853
3PO-MCT assembly (EU 0800F) Stack 188	2.73170
3PO-L cell cover insert (EU 0800H) Stack 141	0.00695
LCT 1700 assembly with two jigs (EU 0800K) Stack 244	0.88917
LCT 1700 Battery Curing Ovens Stack 246	0.04220
Tank dry formation (EU 0900A) Stack 178	11.34000
Central Vacuum (Maint2000A) Stack 113	0.18729

Operation/Stack ID	Hourly PM ~~and PM2.5~~ Emission Limit (pounds per hour)
Central Vacuum (Maint2000B) Stack 129	0.18729
Central Vacuum (Maint2000C) Stack 130	0.18729
Central Vacuum (Maint2000D) **& Shot Blasting Operation (SB-01)** Stack 131	~~0.18729~~ **0.22850**
Central Vacuum (Maint2000E) Stack 224	0.18729
Total	~~53.89~~ **53.93**

Compliance with these limits, combined with the potential PM ~~and PM2.5~~ emissions from all other emission units at this source, shall limit the source-wide total potential to emit PM ~~and PM2.5~~ to less than 250 tons per 12 consecutive month period~~, each,~~ and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

D.1.8 PM10 **and PM2.5** Limitations [326 IAC 2-8-4][326 IAC 2-2]

Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable, particulate matter less than 10 microns in diameter (PM10) **and particulate matter less than 2.5 microns in diameter (PM2.5)** emissions from the individual emissions units shall not exceed the following:

Operation/Stack ID	Hourly PM_{10} **/ $PM_{2.5}$** Emission Limit (pounds per hour)
Small parts flaming (EU 0100 A and B) Stack 195	0.05440 total
Grid casting operation (EU 0200A) Stack 196	0.36625
Natural gas-fired grid curing ovens (EU 0200B through EU 0200D) Stacks 226 - 228	0.01004 0.01004 0.01004
Paste mixing system (EU 0300C) Stack 231	0.45513
Expander manufacturing (EU 0300D) Stack 159	0.01200
Grid pasting (EU 0300E) and Pasted Plate Processing Machines (PA027 and PA028) Stack 230	6.73469 total
Flash dry oven (PA025) Stack 249	0.05498
Flash dry oven (PA026) Stack 250	0.05498
Humidity ovens (EU 0300 F, G, H, and I) Stacks 26 - 29	0.00153 0.00153 0.00153 0.00153
Natural gas-fired Universal curing ovens (EU 0300 J, K, L and M) Stacks 179, 180, 193, and 194	0.00153 0.00153 0.00153 0.00153

Operation/Stack ID	Hourly PM_{10} **/ PM 2.5** Emission Limit (pounds per hour)
Natural gas-fired OSI Universal ovens (EU 0500E through EU 0500H) Stacks 234, 235, 237, and 238	0.00153 0.00153 0.00153 0.00153
Bone Dry Ovens (BDO-8 through BDO-10) Stacks 24, 165, and 25	0.00153 0.00153 0.00153
3PO-plate processing (EU 0700B) Stack 152	1.17030
3PO-plate processing (EU 0700C) Stack 151	1.17030
3PO-plate processing (EU 0700E) and 3PO-MP assembly (EU 0800D) Stack 127	0.65670 total
3PO-plate processing (EU 0700F) and 3PO-JC/D assembly (EU 0800E) Stack 247	2.47899 total
3PO-L plate assembly (EU 0800A) Stack 140	0.39446
3PO-L plate assembly (EU 0800B) Stack 166	0.92878
3PO-L plate assembly (EU 0800C) Stack 142	0.59141
3PO-MCT assembly (EU 0800F) Stack 188	1.09268
3PO-L cell cover insert (EU 0800H) Stack 141	0.00278
LCT 1700 assembly with two jigs (EU 0800K) Stack 244	0.35567
LCT 1700 Battery Curing Ovens Stack 246	0.01688
Tank dry formation (EU 0900A) Stack 178	4.53600
Central Vacuum (Maint2000A) Stack 113	0.07491
Central Vacuum (Maint2000B) Stack 129	0.07491
Central Vacuum (Maint2000C) Stack 130	0.07491
Central Vacuum (Maint2000D) **& Shot Blasting Operation (SB-01)** Stack 131	~~0.07491~~**0.10376**
Central Vacuum (Maint2000E) Stack 224	0.07491
Total	~~21.56~~ **21.59**

Compliance with these limits, combined with the potential PM10 **and PM2.5** emissions from all other emission units at this source, shall limit the source-wide total potential to emit PM10 **and PM2.5** to less than 100 tons per 12 consecutive month period**, each,** and will render 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-7 (Part 70 Permits) not applicable.

Compliance Determination Requirements

***

D.1.12 Visible Emissions Notations

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(e) If abnormal emissions are observed, the Permittee shall take **a** reasonable response**.** ~~steps in accordance with Section C- Response to Excursions or Exceedances~~. Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to reasonable response steps required by this condition.

D.1.13 Parametric Monitoring

(a) The Permittee shall record the pressure drop across the baghouses used in conjunction with the pasting, three process, and Central Vac operations, at least once per day when the pasting, three process and Central Vac processes are in operation. When for any one reading, the pressure drop across a baghouse is outside the normal range ~~specified in the following table or a range established during the latest stack test~~, the Permittee shall take **a** reasonable response ~~steps~~. **The normal range for these units is specified in the table below unless a different upper-bound or lower-bound value for this range is determined during the latest stack test.** A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to reasonable response steps required by this condition.

Emission Unit	Stack/Vent ID	Pressure Drop (inches of water)
EU 0100A	195	1 - 6
EU 0200A	196	1 - 6
EU 0300A	232	1 - 7
EU 0300Bn	233	1 - 7
EU 0300D	159	2 - 7
EU 0700B	152	2 - 7
EU 0700C	151	2 - 7
EU 0700E and 0800D	127	2 - 8
EU 0700F and 0800E	247	1 - 7
EU 0800A	140	1 - 6
EU 0800B	166	1 - 6
EU 0800C	142	5 - 11
EU 0800F	188	1 - 6
EU 0800H	141	2 - 6 and 2 - 6
EU 0800K	244	1 - 6
MAINT2000A	113	2 - 10
MAINT2000B	129	0.5 - 8
MAINT2000C	130	1 - 9
MAINT2000D **/ SB-01**	131	2 - 10
MAINT2000E	224	2 - 10

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

(b) The Permittee shall record the pressure drop across the Tri Mer wet scrubbers (Stack 231) and the water flow rate and pressure drop across the Sly Manufacturing scrubber (Stack 230) at least once per day when the pasting and three process operations are in operation. When for any one reading, the pressure drop across a scrubber or a water flow rate of a scrubber is outside the normal range ~~specified in the following table or a range established during the latest stack test~~, the Permittee shall take **a** reasonable response ~~steps~~. **The normal range for these units is specified in the table below unless a different upper-bound or lower-bound value for this range is determined during the latest stack test.** A water flow rate reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to reasonable response steps required by this condition.

***

D.1.19 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.1.5(a) shall be submitted ~~to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent,~~ no**t** later than thirty (30) days after the end of the quarter being reported. **Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.** The report submitted by the Permittee does require ~~the~~ **a** certification **that meet the requirements of 326 IAC 2-8-5(a)(1)** by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

***

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: C&D Technologies, Inc.
Source Address: 200 West Main Street, Attica, Indiana 47918
FESOP Permit No.: F045-19413-00008

Months: _____ to _____ Year: _____

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. **Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph.** Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

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 December 14, 2012.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed FESOP Significant Permit Revision No. 045-32647-00008. The staff recommends to the Commissioner that this FESOP Significant Permit Revision be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Kristen Willoughby 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) 233-3031 or toll free at 1-800-451-6027 extension 3-3031.

(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.in.gov/idem

Appendix A: Emissions Calculations
Emission Summary

Company Name: C&D Technologies, Inc.
Address City IN Zip: 200 West Main Street, Attica, Indiana 47918
Permit Number: 045-32647-00008
Plt ID: 045-00008
Reviewer: Kristen Willoughby
Date: December 31, 2012

	Uncontrolled/Unlimited Potential Emissions (tons/year)											
		Emissions Generating Activity										
Category	Pollutant	Lead Oxide Pneumatic Conveying	Small Parts Casting	Grid Casting	Pasting/ Mixing	3PO Process	Formation Process	Central Vac	Shot Blasting	Adhesives and Degreasing	Ovens, Heaters, and Boilers	**TOTAL**
Criteria Pollutants	PM	1.99	1.19	8.03	11.99	344.10	1.42	8.20	18.05		0.60	395.58
	PM10	1.09	1.19	8.03	11.99	344.10	1.42	8.20	12.64		2.41	391.07
	PM2.5	1.09	1.19	8.03	11.99	344.10	1.42	8.20	12.64		2.41	391.07
	SO2										0.19	0.19
	NOx										31.65	31.65
	VOC									2.07	1.74	3.81
	CO										26.58	26.58
GHGs	CO_2e										38,208	38,208
Hazardous Air Pollutants	Benzene										6.6E-04	6.6E-04
	Dichlorobenzene										3.8E-04	3.8E-04
	Formaldehyde										0.02	0.02
	n-Hexane										0.57	0.57
	Toluene									2.1E-03	1.1E-03	3.1E-03
	Lead	1.84	0.63	2.31	6.91	54.25	0	0.94			1.6E-04	66.88
	Cadmium										3.5E-04	3.5E-04
	Chromium										4.4E-04	4.4E-04
	Manganese										1.2E-04	1.2E-04
	Nickel										6.6E-04	6.6E-04
	Antimony		0.01	0.02								0.02
	Totals	**1.84**	**0.64**	**2.33**	**6.91**	**54.25**	**0**	**0.94**	**0**	**2.1E-03**	**0.60**	**67.50**
											Worse Case HAP	**66.88**

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

	Potential to Emit After Issuance of Permit (tons/year)*											
		Emissions Generating Activity										
Category	Pollutant	Lead Oxide Pneumatic Conveying	Small Parts Casting	Grid Casting	Pasting/ Mixing	3PO Process	Formation Process	Central Vac	Shot Blasting	Adhesives and Degreasing	Ovens, Heaters, and Boilers	**TOTAL**
Criteria Pollutants	PM	1.99	0.60	4.34	6.57	170.75	49.67	4.10	0.18		0.601	238.80
	PM10	1.09	0.24	1.74	2.63	68.30	19.87	1.64	0.13		2.405	98.04
	PM2.5	1.09	0.24	1.74	2.63	68.30	19.87	1.64	0.13		2.405	98.04
	SO2										0.190	0.19
	NOx										31.648	31.65
	VOC									2.07	1.741	3.81
	CO										26.584	26.58
GHGs	CO_2e										38,208	38,208
Hazardous Air Pollutants	Benzene										6.6E-04	6.6E-04
	Dichlorobenzene										3.8E-04	3.8E-04
	Formaldehyde										0.02	0.02
	n-Hexane										0.57	0.57
	Toluene									2.1E-03	1.1E-03	3.1E-03
	Lead	1.84	0.16	0.27	0.30	3.63	0	0.041			1.6E-04	6.24
	Cadmium										3.5E-04	3.5E-04
	Chromium										4.4E-04	4.4E-04
	Manganese										1.2E-04	1.2E-04
	Nickel										6.6E-04	6.6E-04
	Antimony		2.1E-03	1.4E-03								3.5E-03
	Totals	**1.84**	**0.16**	**0.27**	**0.30**	**3.63**	**0**	**0.04**	**0**	**2.1E-03**	**0.60**	**6.84**
											Worse Case HAP	**6.24**

*Limited Potential Emissions after NSPS, Subpart KK, lead (Pb) limitations, PM10 FESOP limitations, and PM limitations under 326 IAC 6-3-2.

Appendix A: Emissions Calculations
Formation Bottleneck Throughput

Company Name: C&D Technologies, Inc.
Address City IN Zip: 200 West Main Street, Attica, Indiana 47918
Permit Number: 045-32647-00008
Plt ID: 045-00008
Reviewer: Kristen Willoughby

Charging/Formation Process

Quantity of Computer Controlled Chargers

Number of Chargers	Type	Charger Capacity (cells/charger)	Number of Cells Capable of
5	800 Amp 64 Cell (Jar Formation)	64	320
19	600 Amp 64 Cell (Jar Formation)	64	1216
81	600 Amp 72 Cell (Jar Formation)	72	5832
61	200 Amp 64 Cell (Jar Formation)	64	3904
38	100 Amp 66 Cell (Jar Formation)	66	2508
	Total Jar Formation Cell Capacity		**13780**

Maximum Anticipated Formation Throughput (based on typical battery assembly production mix)

Battery Type	Typical Production of Battery Cells from Assembly Process	Cell Mix	Cells On Charge in Jar Formation	lbsPb/Cell	Charging Cycle Time (hours)	lbsPb/hr	Cells/hr	Cells/Battery	Batteries/hr	Batteries/day
2XLT-17	102.2	64.68%	8913.4	117.2	194.32	5375.9	45.87	2	22.9	550.4
LCT1680	7.3	4.62%	636.7	217.1	292.7	472.3	2.18	1	2.2	52.2
KCR 11	10.5	6.65%	915.8	78.1	271.93	263.0	3.37	1	3.4	80.8
3XDJ-9	33	20.89%	2878.1	27.9	253	317.4	11.38	3	3.8	91.0
MCT4000	5	3.16%	436.1	373.5	295.03	552.1	1.48	1	1.5	35.5
					Total	**6980.7**			**33.7**	**809.9**

Worst Case Formation Throughput (based on only 1 type of battery produced)

Battery Type	Worst Case Cells On Charge in Jar Formation	Charging Cycle Time (hours)	Worst Case Cells/hr	Cells/Battery	Worst Case Batteries/hr	Worst Case Batteries/day
2XLT-17	13780.0	194.32	70.91	2	35.5	851.0
LCT1680	13780.0	292.7	47.08	1	47.1	1130.0
KCR 11	13780.0	271.93	50.67	1	50.7	1216.2
3XDJ-9	13780.0	253	54.47	3	18.2	435.7
MCT4000	13780.0	295.03	46.71	1	46.7	1121.0
		Worst Case Formation Throughput =			**50.7**	**1216.2**

Appendix A: Emissions Calculations
Emissions from Lead Oxide (PbO) Pneumatic Conveying

Company Name: C&D Technologies, Inc.
Address City IN Zip: 200 West Main Street, Attica, Indiana 47918
Permit Number: 045-32647-00008
Plt ID: 045-00008
Reviewer: Kristen Willoughby

The potential emissions of particulate from the pneumatic conveying of lead oxide to the silos and the mixing weigh hopper after integral controls are estimated using AP-42 Table 11.12-2 emission factors for the controlled truck unloading of cement supplement to elevated storage silo (pneumatic).

Lead Oxide Powder Type	Molecular Weight (lbs/lb-mole)	Lead Content of Powder (% Pb by weight)
Positive Lead Oxide (Red Lead Oxide) (Pb304)	685.5976	90.67%
Negative Lead Oxide (Grey Oxide) (75% PbO + 25%Pb)	219.19955	94.53%

Controlled Emission Factor (lbs/ton)*	
PM	PM10/PM2.5
0.0089	0.0049

Potential to Emit (PTE) of Particulate (PM/PM10/PM2.5) and Lead (Pb)

Emission Unit	Maximum Lead Oxide Throughput (lbs/hr)	PTE of PM (after integral controls) (lbs/hr)	PTE of PM (after integral controls) (tons/yr)	PTE of PM10 (after integral controls) (tons/yr)	PTE of PM2.5 (after integral controls) (tons/yr)	Lead Content of Powder (% Pb by weight)	PTE of Lead (Pb) (after integral controls) (tons/yr)
Positive Lead Oxide Silos (EU 0300A) (Bin Vent 232)	45,000	0.200	0.877	0.483	0.483	90.67%	0.795
Negative Lead Oxide Silos (EU 0300Bn) (Bin Vent 233)	45,000	0.200	0.877	0.483	0.483	94.53%	0.829
Positive Lead Oxide Weigh Hopper (EU 0300C) controlled by a Tri Mer wet scrubber (Stack 231)	6,000	0.027	0.117	0.064	0.064	90.67%	0.106
Negative Lead Oxide Weigh Hopper (EU 0300C) controlled by a Tri Mer wet scrubber (Stack 231)	6,000	0.027	0.117	0.064	0.064	94.53%	0.111
	Totals		**1.988**	**1.095**	**1.095**		**1.841**

Emissions of Particulate (PM/PM10/PM2.5) and Lead (Pb) After Formation Bottleneck

Emission Unit	Bottleneck Lead Oxide Throughput (lbs/month)	Bottleneck PM Emissions (after integral controls) (tons/yr)	Bottleneck PM10 Emissions (after integral controls) (tons/yr)	Bottleneck PM2.5 Emissions (after integral controls) (tons/yr)	Lead Content of Powder (% Pb by weight)	Bottleneck PM Lead (Pb) Emissions (after integral controls) (tons/yr)
Positive Lead Oxide Silos (EU 0300A) (Bin Vent 232)	1,191,581	0.032	0.018	0.018	90.67%	0.029
Negative Lead Oxide Silos (EU 0300Bn) (Bin Vent 233)	973,728	0.026	0.014	0.014	94.53%	0.025
Positive Lead Oxide Weigh Hopper (EU 0300C) controlled by a Tri Mer wet scrubber (Stack 231)	1,191,581	0.032	0.018	0.018	90.67%	0.029
Negative Lead Oxide Weigh Hopper (EU 0300C) controlled by a Tri Mer wet scrubber (Stack 231)	973,728	0.026	0.014	0.014	94.53%	0.025
	Totals	**0.116**	**0.064**	**0.064**		**0.107**

Methodology

* Emission Factors from AP-42 Table 11.12-2 for controlled truck unloading of cement supplement to elevated storage silo (pneumatic

PTE of PM (lbs/hour) = [Maximum Lead Oxide Throughput (lbs lead oxide/hour)] * [Emission Factor (lbs PM/ton of lead oxide)] / (2000 lbs lead oxide/ton lead oxid

PTE of PM/PM10/PM2.5 (tons/year) = [Maximum Lead Oxide Throughput (lbs lead oxide/hour)] * [Emission Factor (lbs PM/ton of lead oxide)] * [8760 hours/year)] / [(2000 lbs lead oxide/ton lead oxide) * (2000 lb

PTE of Lead (Pb) (tons/year) = [PTE of PM (tons/year)] * [Lead Content (% Pb by weight)

Bottleneck PM/PM10/PM2.5 Emissions (tons/year) = [Bottleneck Lead Oxide Throughput (lbs lead oxide/month)] * [Emission Factor (lbs PM/ton of lead oxide)] * [12 months/year)] / [(2000 lbs/ton lead oxide) * (2

Bottleneck Lead (Pb) Emissions (tons/year) = [Bottleneck PM Emissions (tons/year)] * [Lead Content (% Pb by weight)

Appendix A: Emissions Calculations
Battery Manufacturing Processes - PM/PM10/PM2.5 Emissions

Company Name: C&D Technologies, Inc.
Address City IN Zip: 200 West Main Street, Attica, Indiana 47918
Permit Number: 045-32647-00008
Plt ID: 045-00008
Reviewer: Kristen Willoughby

To calculate particulate (PM/PM10/PM2.5) emissions from the battery manufacturing processes, AP-42 Chapter 12.15 (1/95) emission factors were utilized. Based on AP-42, the calculations were performed assuming that the batteries produced at this source were an average "AP-42 Battery" (battery equivalent, Beq) containing an average of about 20 lbs of lead, of which about 44.37% is present in the lead grids, 5.05% is present in the lead connectors/small parts, and 50.57% is present in the lead oxide paste and expander.

Process	Comment	EU #	Stack/ Vent ID	Description	Maximum Capacity (Pb lbs/hr)	%Pb of Total Battery Pb	Maximum Capacity of Equivalent AP-42 Batteries (Beq/hr)	AP-42 Emission Factor* (lb PM/Beq)	Estimated Percent of AP-42 Process Emission Factor	Maximum AP-42 Emissions (uncontrolled) (tons/year)	% Control Efficiency	Maximum AP-42 Emissions (controlled) (tons/year)	Bottleneck Production Throughput (lbs/month)	Bottleneck Equivalent AP-42 Battery Production (Beq/month)	Bottleneck Emissions (uncontrolled) (tons/year)	Bottleneck Emissions (controlled) (tons/year)	Equivalent NSPS Limited PTE of Lead (Pb) (tons/year)	Equivalent NSPS Limited PTE of PM ** (tons/year)	Minor Source of HAPs Limit (tons/year)	Equivalent Limited PTE of PM ** (tons/year)	PSD Minor Source of PM Limit (lbs/hr)	PSD Minor Source of PM Limit (tons/year)	FESOP Minor Source of PM2.5 Limit (lbs/hr)	FESOP Minor Source of PM2.5 Limit (tons/year)	FESOP Minor Source of PM10 Limit (lbs/hr)	FESOP Minor Source of PM10 Limit (tons/year)	Maximum AP-42 Emissions (uncontrolled) (lbs/hour)	Subject to 326 IAC 6-3?	Process Weight Rate (lbs/hr)	Allowable Particulate Emission Rate (lbs/hour)	Maximum AP-42 Emissions (controlled) (lbs/hour)
Small Parts Casting		0100A/B	195	Small Parts Casting	1446	5.05	1432	0.00019	100.0	1.191	99.00	1.2E-02	214851	212724	0.243	2.43E-03	0.158	1.378	0.347	3.032	0.13601	0.5957	0.05440	0.2383	0.05440	0.2383	0.2720	No	NA	NA	NA
TOTAL EMISSION FROM SMALL PARTS CASTING PROCESS										**1.191**		**1.2E-02**			**0.243**	**2.4E-03**	**0.158**	**1.378**	**0.347**	**3.032**		**0.596**		**0.238**		**0.238**					
Grid Casting		0200A	196	Grid Casting	5197	44.37	586	0.00313	99.90	8.021	99.00	0.080	1886883	212631	3.989	3.99E-02	0.197	1.723	0.434	3.790	0.91562	4.0104	0.36625	1.6042	0.36625	1.6042	1.8312	Yes	5197	7.77	0.01831
		0200B	226	Grid Curing Oven	2033	44.37	229	0.00313	0.1	0.003	0	0.003	471721	53158	0.001	9.98E-04	0.025	0.215	0.054	0.473	0.02510	0.1099	0.01004	0.0440	0.01004	0.0440	0.0007	No	NA	NA	NA
		0200C	227	Grid Curing Oven	2033	44.37	229	0.00313	0.1	0.003	0	0.003	471721	53158	0.001	9.98E-04	0.025	0.215	0.054	0.473	0.02510	0.1099	0.01004	0.0440	0.01004	0.0440	0.0007	No	NA	NA	NA
		0200D	228	Grid Curing Oven	2033	44.37	229	0.00313	0.1	0.003	0	0.003	471721	53158	0.001	9.98E-04	0.025	0.215	0.054	0.473	0.02510	0.1099	0.01004	0.0440	0.01004	0.0440	0.0007	No	NA	NA	NA
TOTAL EMISSION FROM GRID CASTING PROCESS										**8.030**		**0.090**			**3.992**	**0.043**	**0.271**	**2.368**	**0.596**	**5.209**		**4.340**		**1.736**		**1.736**					
Pasting		0300C	231	Paste Mixing	6268	50.57	620	0.00432	85.0	9.967	99.90	0.010	2150545	212631	4.685	4.68E-03	0.069	0.602	0.152	1.325	1.13783	4.9837	0.45513	1.9935	0.45513	1.9935	2.2757	Yes	6268	8.81	0.00228
		0300D	159	Expander Manufacturing	312	5.37	291	0.00432	4.78	0.263	99.50	0.001	227760	212067	0.263	1.31E-03	0.121	1.061	0.267	2.334	0.02999	0.1314	0.01200	0.0525	0.01200	0.0525	0.0600	No	NA	NA	NA
		0300E	230	Pasting	17264	94.95	909	0.00432	10.0	1.720	98.00	0.034	4037854	212631	0.551	1.10E-02	combined stack with Pasted Plate Processing Machines										0.3927	No	NA	NA	NA
		PA025	249	Flash Dry Oven	8632	94.95	455	0.00432	0.20	0.017	0	0.017	2018927	106315	0.006	5.51E-03	0.015	0.129	0.032	0.284	0.13746	0.6021	0.05498	0.2408	0.05498	0.2408	0.0039	No	NA	NA	NA
		PA026	250	Flash Dry Oven	8632	94.95	455	0.00432	0.20	0.017	0	0.017	2018927	106315	0.006	5.51E-03	0.015	0.129	0.032	0.284	0.13746	0.6021	0.05498	0.2408	0.05498	0.2408	0.0039	No	NA	NA	NA
		0300F	26	Humidity Oven	2400	94.95	126	0.00432	0.02	4.8E-04	0	0.000	313872	16528	8.6E-05	8.57E-05	0.007	0.061	0.015	0.133	0.00382	0.0167	0.00153	0.0067	0.00153	0.0067	0.0001	No	NA	NA	NA
		0300G	27	Humidity Oven	2400	94.95	126	0.00432	0.02	4.8E-04	0	0.000	313872	16528	8.6E-05	8.57E-05	0.007	0.061	0.015	0.133	0.00382	0.0167	0.00153	0.0067	0.00153	0.0067	0.0001	No	NA	NA	NA
		0300H	28	Humidity Oven	2400	94.95	126	0.00432	0.02	4.8E-04	0	4.8E-04	313872	16528	8.6E-05	8.57E-05	0.007	0.061	0.015	0.133	0.00382	0.0167	0.00153	0.0067	0.00153	0.0067	0.0001	No	NA	NA	NA
		0300I	29	Humidity Oven	2400	94.95	126	0.00432	0.02	4.8E-04	0	4.8E-04	313872	16528	8.6E-05	8.57E-05	0.007	0.061	0.015	0.133	0.00382	0.0167	0.00153	0.0067	0.00153	0.0067	0.0001	No	NA	NA	NA
		0300J	179	OSI Universal Curing Oven	2400	94.95	126	0.00432	0.02	4.8E-04	0	4.8E-04	313872	16528	8.6E-05	8.57E-05	0.005	0.040	0.010	0.087	0.00382	0.0167	0.00153	0.0067	0.00153	0.0067	0.0001	No	NA	NA	NA
		0300K	180	OSI Universal Curing Oven	2400	94.95	126	0.00432	0.02	4.8E-04	0	4.8E-04	313872	16528	8.6E-05	8.57E-05	0.005	0.040	0.010	0.087	0.00382	0.0167	0.00153	0.0067	0.00153	0.0067	0.0001	No	NA	NA	NA
		0300L	193	OSI Universal Curing Oven	2400	94.95	126	0.00432	0.02	4.8E-04	0	4.8E-04	313872	16528	8.6E-05	8.57E-05	0.005	0.040	0.010	0.087	0.00382	0.0167	0.00153	0.0067	0.00153	0.0067	0.0001	No	NA	NA	NA
		0300M	194	OSI Universal Curing Oven	2400	94.95	126	0.00432	0.02	4.8E-04	0	4.8E-04	313872	16528	8.6E-05	8.57E-05	0.005	0.040	0.010	0.087	0.00382	0.0167	0.00153	0.0067	0.00153	0.0067	0.0001	No	NA	NA	NA
		0500E	234	OSI Universal Curing Oven	2400	94.95	126	0.00432	0.02	4.8E-04	0	4.8E-04	383136	20176	1.0E-04	1.05E-04	0.005	0.040	0.010	0.087	0.00382	0.0167	0.00153	0.0067	0.00153	0.0067	0.0001	No	NA	NA	NA
		0500F	235	OSI Universal Curing Oven	2400	94.95	126	0.00432	0.02	4.8E-04	0	4.8E-04	383136	20176	1.0E-04	1.05E-04	0.005	0.040	0.010	0.087	0.00382	0.0167	0.00153	0.0067	0.00153	0.0067	0.0001	No	NA	NA	NA
		0500G	237	OSI Universal Curing Oven	2400	94.95	126	0.00432	0.02	4.8E-04	0	4.8E-04	383136	20176	1.0E-04	1.05E-04	0.005	0.040	0.010	0.087	0.00382	0.0167	0.00153	0.0067	0.00153	0.0067	0.0001	No	NA	NA	NA
		0500H	238	OSI Universal Curing Oven	2400	94.95	126	0.00432	0.02	4.8E-04	0	4.8E-04	383136	20176	1.0E-04	1.05E-04	0.005	0.040	0.010	0.087	0.00382	0.0167	0.00153	0.0067	0.00153	0.0067	0.0001	No	NA	NA	NA
		BDO-8	24	Bone Dry Curing Oven	2400	94.95	126	0.00432	0.02	4.8E-04	0	4.8E-04	313872	16528	8.6E-05	8.57E-05	0.005	0.040	0.010	0.087	0.00382	0.0167	0.00153	0.0067	0.00153	0.0067	0.0001	No	NA	NA	NA
		BDO-9	165	Bone Dry Curing Oven	2400	94.95	126	0.00432	0.02	4.8E-04	0	4.8E-04	313872	16528	8.6E-05	8.57E-05	0.005	0.040	0.010	0.087	0.00382	0.0167	0.00153	0.0067	0.00153	0.0067	0.0001	No	NA	NA	NA
		BDO-10	25	Bone Dry Curing Oven	2400	94.95	126	0.00432	0.02	4.8E-04	0	4.8E-04	313872	16528	8.6E-05	8.57E-05	0.005	0.040	0.010	0.087	0.00382	0.0167	0.00153	0.0067	0.00153	0.0067	0.0001	No	NA	NA	NA
TOTAL EMISSION FROM PASTING/MIXING PROCESS										**11.992**		**0.087**			**5.511**	**0.029**	**0.297**	**2.599**	**0.654**	**5.717**		**6.570**		**2.628**		**2.628**					
3PO Process	Combined Stack	PA027	230	Pasted Plate Processing Machine	17264	94.95	909	0.09260	40.0	147.490	98.00	2.950	4037854	212631	47.255	9.45E-01	0.625	5.467	1.376	12.027	16.83672	73.7448	6.73469	29.4979	6.73469	29.4979	33.6734	Yes	17264	17.38	0.67347
		PA028	230	Pasted Plate Processing Machine																											
		0700B	152	Plate Processing 2	4000	94.95	211	0.09260	30.0	25.630	99.00	0.256	1010672	53221	8.871	8.87E-02	0.328	2.868	0.722	6.309	2.92575	12.8148	1.17030	5.1259	1.17030	5.1259	5.8515	Yes	4000	6.52	0.05852
		0700C	151	Plate Processing 3	4000	94.95	211	0.09260	30.0	25.630	99.00	0.256	1010672	53221	8.871	8.87E-02	0.328	2.868	0.722	6.309	2.92575	12.8148	1.17030	5.1259	1.17030	5.1259	5.8515	Yes	4000	6.52	0.05852
	Combined Stack	0700E	127	Plate Processing 4a	300	94.95	16	0.09260	30.0	1.922	99.00	0.019	55573	2926	0.488	4.88E-03	0.213	1.864	0.469	4.101	combined stack						0.4389	No	NA	NA	NA
		0800D	127	MP Battery Assembly	2404	100	120	0.09260	29.5	14.382	99.00	0.144	67122	3356	0.550	5.50E-03					1.64175	7.1909	0.65670	2.8763	0.65670	2.8763	3.2835	Yes	2404	4.64	0.03284
	Combined Stack	0700F	247	Plate Processing 5	8473	94.95	446	0.09260	30.0	54.290	99.00	0.543	3809664	200614	33.438	3.34E-01	0.820	7.170	1.805	15.773	6.19747	27.1449	2.47899	10.8580	2.47899	10.8580	12.3949	Yes	8473	10.79	0.12395
		0800E	247	JC/D Assembly	174	100	9	0.09260	29.5	1.041	99.00	0.010	56550	2828	0.463	4.63E-03					combined stack						0.2377	No	NA	NA	NA
		0800A	140	L Battery Assembly 1	1444	100	72	0.09260	29.5	8.639	99.00	0.086	548720	27436	4.497	4.50E-02	0.171	1.491	0.375	3.281	0.98614	4.3193	0.39446	1.7277	0.39446	1.7277	1.9723	Yes	1444	3.30	0.01972
		0800B	166	L Battery Assembly 2	3400	100	170	0.09260	29.5	20.340	99.00	0.203	822700	41135	6.742	6.74E-02	0.171	1.491	0.375	3.281	2.32195	10.1701	0.92878	4.0680	0.92878	4.0680	4.6439	Yes	3400	5.85	0.04644
		0800C	142	L Battery Assembly 3	2165	100	108	0.09260	29.5	12.952	99.00	0.130	822700	41135	6.742	6.74E-02	0.141	1.233	0.310	2.713	1.47853	6.4760	0.59141	2.5904	0.59141	2.5904	2.9571	Yes	2165	4.32	0.02957
		0800F	188	MCT Battery Assembly	4000	100	200	0.09260	29.5	23.930	99.00	0.239	1652300	82615	13.541	1.35E-01	0.410	3.585	0.902	7.886	2.73170	11.9648	1.09268	4.7859	1.09268	4.7859	5.4634	Yes	4000	6.52	0.05463
		0800G	167	L-cell Cover Adhesive Station	NA	100	NA	voc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	No	NA	NA	NA
		0800H	141	Repair	600	100	30	0.09260	0.5	0.061	99.00	0.001	153600	7680	0.021	2.13E-04	0.039	0.344	0.087	0.757	0.00695	0.0304	0.00278	0.0122	0.00278	0.0122	0.0139	No	NA	NA	NA
		0800K	244	LCT 1700 Battery Assembly	1302	100	65	0.09260	29.5	7.789	99.00	0.078	282100	14105	2.312	2.31E-02	0.361	3.155	0.794	6.940	0.88917	3.8946	0.35567	1.5578	0.35567	1.5578	1.7783	Yes	1302	3.08	0.01778
		Insig	246	LCT 1700 Battery Curing Ovens	1302	100	65	0.09260	0.02	0.005	0	0.005	282100	14105	0.002	1.57E-03	0.020	0.172	0.043	0.279	0.04220	0.1848	0.01688	0.0739	0.01688	0.0739	0.0012	No	NA	NA	NA
TOTAL EMISSION FROM 3PO PROCESS										**344.099**		**4.921**			**133.793**	**1.812**	**3.628**	**31.707**	**7.981**	**69.756**		**170.750**		**68.300**		**68.300**					
Formation		0900A	178	Dry Formation	200	100	10	0.0324	100	1.419	0	1.419	139050	6953	1.352	1.35E+00	none	1.419	none	1.419	11.34000	49.6692	4.53600	19.8677	4.53600	19.8677	0.3240	No	NA	NA	NA
		0900B	FUG	Wet Formation	3420	100	171	none	NA	NA	0	NA	2496600	124830	NA	NA	NA	NA	none	NA	none	none	none	none	none	none	NA	No	NA	NA	NA
		0900C	FUG	Wet Formation	2215	100	111	none	NA	NA	0	NA	1616950	80848	NA	NA	NA	NA	none	NA	none	none	none	none	none	none	NA	No	NA	NA	NA
TOTAL EMISSION FROM FORMATION PROCESS										**1.419**		**1.419**			**1.352**	**1.352**	**0**	**1.419**	**0**	**1.419**		**49.669**		**19.868**		**19.868**					
MAINT		2000A	113	Central Vac	500 cfm * 0.0001 gr/cf * 8.74 PM/Pb / (1- control eff) ***					1.641	99.00	0.016	NA	NA	1.641	0.016	0.008	0.016	0.018	0.016	0.18729	0.8203	0.07491	0.3281	0.07491	0.3281	1.6369	Yes	0.4	0.551	0.00375
MAINT		2000B	129	Central Vac	500 cfm * 0.0001 gr/cf * 8.74 PM/Pb / (1- control eff) ***					1.641	99.00	0.016	NA	NA	1.641	0.016	0.008	0.016	0.018	0.016	0.18729	0.8203	0.07491	0.3281	0.07491	0.3281	1.6369	Yes	0.4	0.551	0.00375
MAINT		2000C	130	Central Vac	500 cfm * 0.0001 gr/cf * 8.74 PM/Pb / (1- control eff) ***					1.641	99.00	0.016	NA	NA	1.641	0.016	0.008	0.016	0.018	0.016	0.18729	0.8203	0.07491	0.3281	0.07491	0.3281	1.6369	Yes	0.4	0.551	0.00375
MAINT		2000D	131	Central Vac	500 cfm * 0.0001 gr/cf * 8.74 PM/Pb / (1- control eff) ***					1.641	99.00	0.016	NA	NA	1.641	0.016	0.008	0.016	0.018	0.016	0.18729	0.8203	0.07491	0.3281	0.07491	0.3281	1.6369	Yes	0.4	0.551	0.00375
MAINT		2000E	224	Central Vac	500 cfm * 0.0001 gr/cf * 8.74 PM/Pb / (1- control eff) ***					1.641	99.00	0.016	NA	NA	1.641	0.016	0.008	0.016	0.018	0.016	0.18729	0.8203	0.07491	0.3281	0.07491	0.3281	1.6369	Yes	0.4	0.551	0.00375
MISC			160	Toppling	NA	NA	NA	voc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL EMISSION FROM CENTRAL VAC & MISC										**8.203**		**0.082**			**8.203**	**0.082**	**0.041**	**0.082**	**0.090**	**0.082**		**4.102**		**1.641**		**1.641**					
TOTAL PROCESS EMISSION of Particulate Matter (PM/PM10/PM2.5) (tons/year)										**374.94**		**6.61**			**153.09**	**3.32**	**4.395**	**39.553**	**9.669**	**85.216**	**53.9**	**236.03**	**21.6**	**94.41**	**21.6**	**94.41**					

METHODOLOGY

* AP-42 Chapter 12.15 (1/95) emission factors were utilized. Based on AP-42, the calculations were performed assuming that the batteries produced at this source were an average "AP-42 Battery" (battery equivalent, Beq) containing an average of about 20 lbs of lead, of which about 44.37% is present in the lead grids, 5.05% is present in the lead connectors/small parts, and 50.57% is present in the lead oxide paste and expander.
** Based on AP-42 Chapter 12.15 (1/95) emission factors for the 3-Process Operation (3PO) (SCC 3-04-005-09), a worse case PM/Pb ratio is (0.0926 lbs-PM/Beq) / (0.0106 lbs-Pb/Beq) = 8.74 lbs-PM/ lbs-Pb
*** Maximum Emissions (uncontrolled) from the Central Vac (MAINT 2000A through 2000E) were conservatively estimated to be 0.0001 grains Pb/acf.

Maximum Capacity of Equivalent AP-42 Batteries (Beq/hr) = [Maximum Capacity (lbs Pb in lead parts/hr)] * [Beq/20 lb Total Battery Pb] / [%Pb of Total Battery Pb (lbs Pb in lead parts/Pb Total Battery Pb]
Maximum AP-42 Emissions (uncontrolled) (tons/year) = [Maximum Capacity of Equivalent AP-42 Batteries (Beq/hr)] * [AP-42 Emission Factor (lb PM/Beq)] * [Estimated Percent of AP-42 Process Emission Factor/100] * [8760 hours/year] / [2000 lbs/ton]
Maximum AP-42 Emissions (controlled) (tons/year) = [Maximum AP-42 Emissions (uncontrolled) (tons/year)] * [1 - control efficiency]
Bottleneck Equivalent AP-42 Battery Production (Beq/month) = [Bottleneck Production Throughput (lbs Pb/month of lead parts)] * [Beq/20 lb Pb Total] / [%Pb of battery (lbs Pb in lead parts/Pb Total]
Bottleneck Emissions (uncontrolled) (tons/year) = [Bottleneck Equivalent AP-42 Battery Production (Beq/month)] * [AP-42 Emission Factor (lb PM/Beq)] * [Estimated Percent of AP-42 Process Emission Factor/100] * [12 months/year] / [2000 lbs/ton]
Bottleneck Emissions (controlled) (tons/year) = [Bottleneck Emissions (uncontrolled) (tons/year)] * [1 - control efficiency]
Equivalent NSPS Limited PTE of PM (tons/year) = [Equivalent NSPS Limited PTE of Lead (Pb) (tons/year)] * [8.74 lbs-PM/ lbs-Pb]
Equivalent Limited PTE of PM (tons/year) = [Minor Source of HAPs Limit (tons/year)] * [8.74 lbs-PM/ lbs-Pb]
For process weight rates less than 60,000 lbs/hr, 326 IAC 6-3-2 Allowable Particulate Emission Rate (lbs/hour) = 4.1 * [Maximum Capacity (Pb lbs/hr) / (2000 lbs/ton)]^(0.67)
For process weight rates less than 100 lbs/hr, the 326 IAC 6-3-2 Allowable Particulate Emission Rate is 0.551 lbs/hour
Maximum AP-42 Emissions (controlled) (lbs/hour) = [Maximum AP-42 Emissions (uncontrolled) (tons/year)] * [1 - control efficiency] * [2000 lbs/ton] / [8760 hours/year]

Appendix A: Emissions Calculations
Battery Manufacturing Processes - Lead (Pb) Emissions

Company Name: C&D Technologies, Inc.
Address City IN Zip: 200 West Main Street, Attica, Indiana 47918
Permit Number: 045-32647-00008
Plt ID: 045-00008
Reviewer: Kristen Willoughby

To calculate lead (Pb) emissions from the battery manufacturing processes, AP-42 Chapter 12.15 (1/95) emission factors were utilized. Based on AP-42, the calculations were performed assuming that the batteries produced at this source were an average "AP-42 Battery" (battery equivalent, Beq) containing an average of about 20 lbs of lead, of which about 44.37% is present in the lead grids, 5.05% is present in the lead connectors/small parts, and 50.57% is present in the lead oxide paste and expander.

Process	Comment	EU #	Stack/ Vent ID	Description	Maximum Capacity (Pb lbs/hr)	%Pb of Total Battery Pb	Maximum Capacity of Equivalent AP-42 Batteries (Beq/hr)	AP-42 Emission Factor* (lb Pb/Beq)	Estimated Percent of AP-42 Process Emission Factor**	Maximum AP 42 Emissions (uncontrolled) (tons/year)	% Control Efficiency**	Maximum AP-42 Emissions (controlled) (tons/year)	Outlet air flow rate (acfm)	Maximum AP-42 Outlet Grain Loading (uncontrolled) (grains/cu ft)	Maximum AP-42 Outlet Grain Loading (controlled) (grains/cu ft)	Bottleneck Production Throughput (lbs/month)	Bottleneck Equivalent AP-42 Battery Production (Beq/month)	Bottleneck Emissions (uncontrolled) (tons/year)	Bottleneck Emissions (controlled) (tons/year)	NSPS Limited Grain Loading (grains/cu ft)	Equivalent NSPS Limited PTE of Lead (Pb) (tons/year)	Minor Source of HAPs Limit (lbs/hr)	Minor Source of HAPs Limit (tons/year)
Small Parts Casting		0100A/B	195	Small Parts Casting	1446	5.05	1432	0.00010	100.0	0.627	99.00	6.3E-03	24000	7.0E-04	7.0E-06	214851	212724	0.128	1.3E-03	0.000175	0.158	0.0792	0.3469
TOTAL EMISSION FROM SMALL PARTS CASTING PROCESS										**0.627**		**6.3E-03**						**0.128**	**1.3E-03**		**0.158**		
Grid Casting		0200A	196	Grid Casting	5197	44.37	586	0.00090	99.90	2.306	99.00	0.023	30000	2.0E-03	2.0E-05	1886883	212631	1.147	1.1E-02	0.000175	0.197	0.0990	0.4336
		0200B	226	Grid Curing Oven	2033	44.37	229	0.00090	0.1	9.0E-04	0	9.0E-04	1500	1.6E-05	1.6E-05	471721	53158	2.9E-04	2.9E-04	0.000437	0.025	0.0124	0.0541
		0200C	227	Grid Curing Oven	2033	44.37	229	0.00090	0.1	9.0E-04	0	9.0E-04	1500	1.6E-05	1.6E-05	471721	53158	2.9E-04	2.9E-04	0.000437	0.025	0.0124	0.0541
		0200D	228	Grid Curing Oven	2033	44.37	229	0.00090	0.1	9.0E-04	0	9.0E-04	1500	1.6E-05	1.6E-05	471721	53158	2.9E-04	2.9E-04	0.000437	0.025	0.0124	0.0541
TOTAL EMISSION FROM GRID CASTING PROCESS										**2.309**		**0.026**						**1.148**	**0.012**		**0.271**		
Pasting		0300C	231	Paste Mixing	6268	50.57	620	0.00249	85.0	5.745	99.90	0.006	4200	3.6E-02	3.6E-05	2150545	212631	2.700	2.7E-03	0.000437	0.069	0.0346	0.1516
		0300D	159	Expander Manufacturing	312	5.37	291	0.00249	4.78	0.151	99.50	0.001	7400	5.5E-04	2.7E-06	227760	212067	0.151	7.6E-04	0.000437	0.121	0.0610	0.2671
		0300E	230	Pasting	17264	94.95	909	0.00249	10.0	0.991	98.00	0.020	38125	6.9E-04	1.4E-05	4037854	212631	0.318	6.4E-03	combined stack with Pasted Plate Processing Machines			
		PA025	249	Flash Dry Oven	8632	94.95	455	0.00249	0.20	9.9E-03	0	9.9E-03	900	2.9E-04	2.9E-04	2018927	106315	0.003	3.2E-03	0.000437	0.015	0.0074	0.0325
		PA026	250	Flash Dry Oven	8632	94.95	455	0.00249	0.20	9.9E-03	0	9.9E-03	900	2.9E-04	2.9E-04	2018927	106315	0.003	3.2E-03	0.000437	0.015	0.0074	0.0325
		0300F	26	Humidity Oven	2400	94.95	126	0.00249	0.02	2.8E-04	0	2.8E-04	422	1.7E-05	1.7E-05	313872	16528	4.9E-05	4.9E-05	0.000437	0.007	0.0035	0.0152
		0300G	27	Humidity Oven	2400	94.95	126	0.00249	0.02	2.8E-04	0	2.8E-04	422	1.7E-05	1.7E-05	313872	16528	4.9E-05	4.9E-05	0.000437	0.007	0.0035	0.0152
		0300H	28	Humidity Oven	2400	94.95	126	0.00249	0.02	2.8E-04	0	2.8E-04	422	1.7E-05	1.7E-05	313872	16528	4.9E-05	4.9E-05	0.000437	0.007	0.0035	0.0152
		0300I	29	Humidity Oven	2400	94.95	126	0.00249	0.02	2.8E-04	0	2.8E-04	422	1.7E-05	1.7E-05	313872	16528	4.9E-05	4.9E-05	0.000437	0.007	0.0035	0.0152
		0300J	179	OSI Universal Curing Oven	2400	94.95	126	0.00249	0.02	2.8E-04	0	2.8E-04	276	2.7E-05	2.7E-05	313872	16528	4.9E-05	4.9E-05	0.000437	0.005	0.0023	0.0100
		0300K	180	OSI Universal Curing Oven	2400	94.95	126	0.00249	0.02	2.8E-04	0	2.8E-04	276	2.7E-05	2.7E-05	313872	16528	4.9E-05	4.9E-05	0.000437	0.005	0.0023	0.0100
		0300L	193	OSI Universal Curing Oven	2400	94.95	126	0.00249	0.02	2.8E-04	0	2.8E-04	276	2.7E-05	2.7E-05	313872	16528	4.9E-05	4.9E-05	0.000437	0.005	0.0023	0.0100
		0300M	194	OSI Universal Curing Oven	2400	94.95	126	0.00249	0.02	2.8E-04	0	2.8E-04	276	2.7E-05	2.7E-05	313872	16528	4.9E-05	4.9E-05	0.000437	0.005	0.0023	0.0100
		0500E	234	OSI Universal Curing Oven	2400	94.95	126	0.00249	0.02	2.8E-04	0	2.8E-04	276	2.7E-05	2.7E-05	383136	20176	6.0E-05	6.0E-05	0.000437	0.005	0.0023	0.0100
		0500F	235	OSI Universal Curing Oven	2400	94.95	126	0.00249	0.02	2.8E-04	0	2.8E-04	276	2.7E-05	2.7E-05	383136	20176	6.0E-05	6.0E-05	0.000437	0.005	0.0023	0.0100
		0500G	237	OSI Universal Curing Oven	2400	94.95	126	0.00249	0.02	2.8E-04	0	2.8E-04	276	2.7E-05	2.7E-05	383136	20176	6.0E-05	6.0E-05	0.000437	0.005	0.0023	0.0100
		0500H	238	OSI Universal Curing Oven	2400	94.95	126	0.00249	0.02	2.8E-04	0	2.8E-04	276	2.7E-05	2.7E-05	383136	20176	6.0E-05	6.0E-05	0.000437	0.005	0.0023	0.0100
		BDO-8	24	Bone Dry Curing Oven	2400	94.95	126	0.00249	0.02	2.8E-04	0	2.8E-04	276	2.7E-05	2.7E-05	313872	16528	4.9E-05	4.9E-05	0.000437	0.005	0.0023	0.0100
		BDO-9	165	Bone Dry Curing Oven	2400	94.95	126	0.00249	0.02	2.8E-04	0	2.8E-04	276	2.7E-05	2.7E-05	313872	16528	4.9E-05	4.9E-05	0.000437	0.005	0.0023	0.0100
		BDO-10	25	Bone Dry Curing Oven	2400	94.95	126	0.00249	0.02	2.8E-04	0	2.8E-04	276	2.7E-05	2.7E-05	313872	16528	4.9E-05	4.9E-05	0.000437	0.005	0.0023	0.0100
TOTAL EMISSION FROM PASTING/MIXING PROCESS										**6.912**		**0.050**						**3.176**	**0.017**		**0.297**		
3PO Process	Combined Stack	PA027	230	Pasted Plate Processing Machine	17264	94.95	909	0.0146	40.0	23.254	98.00	0.465	38125	1.6E-02	3.2E-04	4037854	212631	7.451	1.5E-01	0.000437	0.625	0.3142	1.3761
		PA028	230	Pasted Plate Processing Machine																			
		0700B	152	Plate Processing 2	4000	94.95	211	0.0146	30.0	4.041	99.00	0.040	20000	5.4E-03	5.4E-05	1010672	53221	1.399	1.4E-02	0.000437	0.328	0.1648	0.7219
		0700C	151	Plate Processing 3	4000	94.95	211	0.0146	30.0	4.041	99.00	0.040	20000	5.4E-03	5.4E-05	1010672	53221	1.399	1.4E-02	0.000437	0.328	0.1648	0.7219
	Combined Stack	0700E	127	Plate Processing 4a	300	94.95	16	0.0146	30.0	0.303	99.00	3.0E-03	13000	6.2E-04	6.2E-06	55573	2926	0.077	7.7E-04	0.000437	0.213	0.1071	0.4692
		0800D		MP Battery Assembly	2404	100	120	0.0146	29.5	2.268	99.00	0.023	13000	4.6E-03	4.6E-05	67122	3356	0.087	8.7E-04				
	Combined Stack	0700F	247	Plate Processing 5	8473	94.95	446	0.0146	30.0	8.560	99.00	0.086	50000	4.6E-03	4.6E-05	3809664	200614	5.272	5.3E-02	0.000437	0.820	0.4120	1.8047
		0800E		JC/D Assembly	174	100	9	0.0146	29.5	0.164	99.00	0.002	50000	8.7E-05	8.7E-07	56550	2828	0.073	7.3E-04				
		0800A	140	L Battery Assembly 1	1444	100	72	0.0146	29.5	1.362	99.00	0.014	10400	3.5E-03	3.5E-05	548720	27436	0.709	7.1E-03	0.000437	0.171	0.0857	0.3754
		0800B	166	L Battery Assembly 2	3400	100	170	0.0146	29.5	3.207	99.00	0.032	10400	8.2E-03	8.2E-05	822700	41135	1.063	1.1E-02	0.000437	0.171	0.0857	0.3754
		0800C	142	L Battery Assembly 3	2165	100	108	0.0146	29.5	2.042	99.00	0.020	8600	6.3E-03	6.3E-05	822700	41135	1.063	1.1E-02	0.000437	0.141	0.0709	0.3104
		0800F	188	MCT Battery Assembly	4000	100	200	0.0146	29.5	3.773	99.00	0.038	25000	4.0E-03	4.0E-05	1652300	82615	2.135	2.1E-02	0.000437	0.410	0.2060	0.9023
		0800G	167	L-cell Cover Adhesive Station	NA	100	NA	voc	NA	NA	NA	NA	3000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		0800H	141	Repair	600	100	30	0.0146	0.5	0.010	99.00	9.6E-05	2400	1.1E-04	1.1E-06	153600	7680	3.4E-03	3.4E-05	0.000437	0.039	0.0198	0.0866
		0800K	244	LCT 1700 Battery Assembly	1302	100	65	0.0146	29.5	1.228	99.00	0.012	22000	1.5E-03	1.5E-05	282100	14105	0.365	3.6E-03	0.000437	0.361	0.1813	0.7941
		Insig	246	LCT 1700 Battery Curing Ovens	1302	100	65	0.0146	0.02	0.001	0	0.001	1200	1.8E-05	1.8E-05	282100	14105	2.5E-04	2.5E-04	0.000437	0.020	0.0099	0.0433
TOTAL EMISSION FROM 3PO PROCESS										**54.253**		**0.776**						**21.095**	**0.286**		**3.628**		
Formation		0900A	178	Dry Formation	200	100	10	none	100	NA	0	NA	6000	NA	NA	139050	6953	NA	NA	NA	NA	none	none
		0900B	FUG	Wet Formation	3420	100	171	none	NA	NA	0	NA	0	NA	NA	2496600	124830	NA	NA	NA	NA	none	none
		0900C	FUG	Wet Formation	2215	100	111	none	NA	NA	0	NA	0	NA	NA	1616950	80848	NA	NA	NA	NA	none	none
TOTAL EMISSION FROM FORMATION PROCESS										**0**		**0**						**0**	**0**		**0**		
MAINT		2000A	113	Central Vac	500 cfm * 0.0001 gr/cf (outlet) / (1- control eff) ***					0.188	99.00	0.002	500	1.00E-02	1.00E-04	NA	NA	0.188	0.002	0.000437	0.008	0.0041	0.0180
MAINT		2000B	129	Central Vac	500 cfm * 0.0001 gr/cf (outlet) / (1- control eff) ***					0.188	99.00	0.002	500	1.00E-02	1.00E-04	NA	NA	0.188	0.002	0.000437	0.008	0.0041	0.0180
MAINT		2000C	130	Central Vac	500 cfm * 0.0001 gr/cf (outlet) / (1- control eff) ***					0.188	99.00	0.002	500	1.00E-02	1.00E-04	NA	NA	0.188	0.002	0.000437	0.008	0.0041	0.0180
MAINT		2000D	131	Central Vac	500 cfm * 0.0001 gr/cf (outlet) / (1- control eff) ***					0.188	99.00	0.002	500	1.00E-02	1.00E-04	NA	NA	0.188	0.002	0.000437	0.008	0.0041	0.0180
MAINT		2000E	224	Central Vac	500 cfm * 0.0001 gr/cf (outlet) / (1- control eff) ***					0.188	99.00	0.002	500	1.00E-02	1.00E-04	NA	NA	0.188	0.002	0.000437	0.008	0.0041	0.0180
MISC			160	Topping	NA	NA	NA	voc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL EMISSION FROM CENTRAL VAC & MISC										**0.939**		**0.009**						**0.939**	**0.009**		**0.041**		
TOTAL PROCESS EMISSION of Lead (Pb)										**65.040**		**0.868**						**26.485**	**0.326**		**4.395**	**2.207**	**9.669**

METHODOLOGY

* AP-42 Chapter 12.15 (1/95) emission factors were utilized. Based on AP-42, the calculations were performed assuming that the batteries produced at this source were an average "AP-42 Battery" (battery equivalent, Beq) containing an average of about 20 lbs of lead, of which about 44.37% is present in the lead grids, 5.05% is present in the lead connectors/small parts, and 50.57% is present in the lead oxide paste and expander. Emission factors include lead and its compounds, expressed as elemental lead.
** Estimated Percent of AP-42 Process Emission Factor and % Control Efficiency were estimated based on stack testing results between 2001 and 2008 and process knowle
*** Maximum Emissions (uncontrolled) from the Central Vac (MAINT 2000A through 2000E) were conservatively estimated to be 0.0001 grains Pb/

Maximum Capacity of Equivalent AP-42 Batteries (Beq/hr) = [Maximum Capacity (lbs Pb/hr of lead parts)] * [Beq/20 lb Pb Total] / [%Pb of battery (lbs Pb in lead parts/Pb T
Maximum AP-42 Emissions (uncontrolled) (tons/year) = [Maximum Capacity of Equivalent AP-42 Batteries (Beq/hr)] * [AP-42 Emission Factor (lb Pb/Beq)] * [Estimated Percent of AP-42 Process Emission Factor/100] * [8760 hours/year] / [2000 lb
Maximum AP-42 Emissions (controlled) (tons/year) = [Maximum AP-42 Emissions (uncontrolled) (tons/year)] * [1 - control efficien
Maximum AP-42 Outlet Grain Loading (uncontrolled) (grains/cu ft) = [Maximum Capacity of Equivalent AP-42 Batteries (Beq/hr)] * [AP-42 Emission Factor (lb Pb/Beq)] * [Estimated Percent of AP-42 Process Emission Factor/100] * [7000 grains/lb] * [hr/60 min] * / [Outlet air flow rate (cu f
Maximum AP-42 Outlet Grain Loading (controlled) (grains/cu ft) = [Maximum AP-42 Outlet Grain Loading (uncontrolled) (grains/cu ft)] * [1 - control efficier
Bottleneck Equivalent AP-42 Battery Production (Beq/month) = [Bottleneck Production Throughput (lbs Pb/month of lead parts)] * [Beq/20 lb Pb Total] / [%Pb of battery (lbs Pb in lead parts/Pb T
Bottleneck Emissions (uncontrolled) (tons/year) = [Bottleneck Equivalent AP-42 Battery Production (Beq/month)] * [AP-42 Emission Factor (lb Pb/Beq)] * [Estimated Percent of AP-42 Process Emission Factor/100] * [12 months/year] / [2000 lb
Bottleneck Emissions (controlled) (tons/year) = [Bottleneck Emissions (uncontrolled) (tons/year)] * [1 - control efficien
Equivalent NSPS Limited PTE of Lead (Pb) (tons/year) = [NSPS Limited Grain Loading (grains/cu ft)] * [Outlet air flow rate (cu ft/min)] * [60 min/hr] * [8760 hours/year] / [7000 grains/lb] / [2000 lbs
Minor Source of HAPs Limit scaled up from Equivalent NSPS Limited PTE of Lead (Pb) (tons/yea

Appendix A: Emissions Calculations
Battery Manufacturing Processes
Antimony (Sb)

Company Name: C&D Technologies, Inc.
Address City IN Zip: 200 West Main Street, Attica, Indiana 47918
Permit Number: 045-32647-00008
Plt ID: 045-00008
Reviewer: Kristen Willoughby

				Lead (Pb) Emission Summary				Antimony (Sb) Emission Summary				
Process	EU #	Stack/ Vent ID	Description	Maximum AP-42 Pb Emissions (uncontrolled) (tons/year)	Bottleneck Pb Emissions (uncontrolled) (tons/year)	Bottleneck Emissions Pb (controlled) (tons/year)	NSPS Limited PTE of Pb (tons/year)	Antimony (Sb) Content in Lead (lbs Sb/ton Pb)	Maximum Emissions (uncontrolled) (tons/year)	Bottleneck Emissions (uncontrolled) (tons/year)	Bottleneck Emissions (controlled) (tons/year)	NSPS Limited PTE (tons/year)
Small Parts Casting	0100A/B	195	Small Parts Casting	0.627	0.128	1.3E-03	0.158	26.8	0.0084	0.0017	1.71E-05	0.0021
Grid Casting	0200A	196	Grid Casting	2.306	1.147	1.1E-02	0.197	14.0	0.0161	0.0080	8.03E-05	0.0014
							Totals	**40.8**	**0.0245**	**0.0097**	**9.74E-05**	**0.0035**

METHODOLOGY

PTE of Antimony (Sb) (tons/year) = [PTE of Lead (Pb) (tons/year)] * [Antimony (Sb) Content in Lead (lbs Sb/ton Pb)] * [1 ton/2000 lbs]

Appendix A: Emissions Calculations
Adhesive and Degreasing Operations

Company Name: C&D Technologies, Inc.
Address City IN Zip: 200 West Main Street, Attica, Indiana 47918
Permit Number: 045-32647-00008
Plt ID: 045-00008
Reviewer: Kristen Willoughby

Volatile Organic Comounds (VOC)

Operation and Material	Density (lb/gal)	Weight % Volatile (H20 & Organics)	Weight % Water + Non-VOCs	Weight % Solids	Weight % VOCs	Water + Non-VOCs	Volume % Solids	Maximum Usage (gal/year)	Maximum Usage (lb/hr)	VOC Content (lbs/gal)	PTE VOC (lb/hr)	PTE VOC (lb/day)	PTE VOC (tons/yr)
Cover Adhesive (EU 0800D, E, F, G, and LCT 1700)*	9.36	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	95.05	0.102	0	0	0	0
Polyurethane Battery Topping (Misc) (Crystal Clean)	8.20	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	360.0	0.337	8.20	0.337	8.088	1.476
Degreasing Operations (Crystal Clean)	8.20	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	145.0	0.136	8.20	0.136	3.258	0.595
										Totals	**0.47**	**11.35**	**2.07**

Hazardous Air Pollutants (HAPs)

Operation and Material	Density (lb/gal)	Maximum Usage (gal/year)	Weight % Toluene**	PTE Toluene (tons/yr)
Polyurethane Battery Topping (Misc) (Crystal Clean)	8.20	360.0	0.10%	1.5E-03
Degreasing Operations (Crystal Clean)	8.20	145.0	0.10%	5.9E-04
		Totals		**2.1E-03**

*The cover adhesive used in EU 0800D, E, F, G, and LCT 1700 is a two part acrylic adhesive (methyl methacrylate monomer initiator (Part A) and N,N-Dimethylaniline accelerator/curing agent (Part B)). When Part A and Part B are mixed together, N,N-Dimethylaniline (DMA) initiates the polymerization of methyl methacrylate (MMA) and the components react quickly to form acrylic adhesive, with minimal emission of

**Pursuant to 40 CFR 63, it is assumed that the aliphatic distillate in Crystal Clean has a typical organic HAP composition (% by mass) of 0.1% Toluene.

METHODOLOGY

Maximum Usage (lbs/hr) = [Maximum Usage (gal/year)] * [Density (lb/gal)] / [8760 hour/year]
VOC Content (lbs/gal) = [Density (lb/gal)] * [Weight % VOCs]
PTE of VOCs (lbs/hour) = [Maximum Usage (lbs/hr)] * [Weight % VOCs]
PTE of VOCs (lbs/day) = [PTE of VOC (lbs/hr)] * [24 hours/day]
PTE of VOCs (tons/year) = [PTE of VOCs (lbs/day)] * [365 days/yr] * [1 ton/2000 lbs]
PTE of HAPS (tons/yr) = [Density (lb/gal)] * [Maximum Usage (gal/year)] * [Weight % HAP] * [1 ton/2000 lbs]

Appendix A: Emissions Calculations
Ovens, Heaters, and Boilers
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: C&D Technologies, Inc.
Address City IN Zip: 200 West Main Street, Attica, Indiana 47918
Permit Number: 045-32647-00008
Plt ID: 045-00008
Reviewer: Kristen Willoughby

				Pollutant	PM*	PM10*	PM2.5*	SO2	NOx**	VOC	CO
				Emission Factor (lb/MMCF)	1.9	7.6	7.6	0.6	100	5.5	84.0
Emission Unit	Number of Units	Unit Heat Input Capacity MMBtu/hr	Combined Total Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Potential Emission tons/yr PM*	PM10*	PM2.5*	SO2	NOx**	VOC	CO
Grid Curing Ovens (EU 0200B, C, and D) (Stacks 226 to 228)	3	0.250	0.750	6.44	6.1E-03	0.024	0.024	1.9E-03	0.322	0.018	0.271
Flash Dry Ovens (PA025 and PA026) (Stacks 249 and 250)	2	1.600	3.200	27.48	2.6E-02	0.104	0.104	8.2E-03	1.374	0.076	1.154
Humidity Ovens (EU 0300F, G, H and I) (Stacks 26, 27, 28, and 29)	4	0.840	3.360	28.86	2.7E-02	0.110	0.110	8.7E-03	1.443	0.079	1.212
Universal Curing Ovens (EU 0300J, K, L and M) (Stacks 179, 180, 193, and 194)	4	0.840	3.360	28.86	2.7E-02	0.110	0.110	8.7E-03	1.443	0.079	1.212
OSI Universal Ovens (EU 0500E, F, G, and H) (Stacks 234, 235, 237, and 238)	4	0.840	3.360	28.86	2.7E-02	0.110	0.110	8.7E-03	1.443	0.079	1.212
Bone Dry Curing Ovens (BDO-8, -9, and -10 (Stacks 24, 165 and 25)	3	0.050	0.150	1.29	1.2E-03	0.005	0.005	3.9E-04	0.064	0.004	0.054
Miscellaneous combustion sources	NA	NA	54.360	466.86	4.4E-01	1.774	1.774	1.4E-01	23.343	1.284	19.608
Pasting Boiler (Stack 163)	1	0.690	0.690	5.93	5.6E-03	0.023	0.023	1.8E-03	0.296	0.016	0.249
Pasting Boiler (Stack 164)	1	1.050	1.050	9.02	8.6E-03	0.034	0.034	2.7E-03	0.451	0.025	0.379
Casting Boiler (Stack 236)	1	0.340	0.340	2.92	2.8E-03	0.011	0.011	8.8E-04	0.146	0.008	0.123
Pasting Boiler (Stack 239)	1	0.340	0.340	2.92	2.8E-03	0.011	0.011	8.8E-04	0.146	0.008	0.123
LCT Assembly Rapid Air Heater (Stack 245)	1	1.650	1.650	14.17	1.3E-02	0.054	0.054	4.3E-03	0.709	0.039	0.595
Plate Storage Area Universal Oven Boiler (Stack 225)	1	0.340	0.340	2.92	2.8E-03	0.011	0.011	8.8E-04	0.146	0.008	0.123
Charging Rapid Air Heater (Stack 243)	1	0.750	0.750	6.44	6.1E-03	0.024	0.024	1.9E-03	0.322	0.018	0.271
Totals	**27**		**73.70**		**0.60**	**2.41**	**2.41**	**0.19**	**31.65**	**1.74**	**26.58**

Pollutant	Benzene	DCB	Formaldehyde	Hexane	Toluene	Pb	Cd	Cr	Mn	Ni
Emission Factor (lb/MMCF)	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Emission Unit	Potential Emission tons/yr Benzene	DCB	Formaldehyde	Hexane	Toluene	Pb	Cd	Cr	Mn	Ni
Grid Curing Ovens (EU 0200B, C, and D) (Stacks 226 to 228)	6.8E-06	3.9E-06	2.4E-04	5.8E-03	1.1E-05	1.6E-06	3.5E-06	4.5E-06	1.2E-06	6.8E-06
Flash Dry Ovens (PA025 and PA026) (Stacks 249 and 250)	2.9E-05	1.6E-05	1.0E-03	2.5E-02	4.7E-05	6.9E-06	1.5E-05	1.9E-05	5.2E-06	2.9E-05
Humidity Ovens (EU 0300F, G, H and I) (Stacks 26, 27, 28, and 29)	3.0E-05	1.7E-05	1.1E-03	2.6E-02	4.9E-05	7.2E-06	1.6E-05	2.0E-05	5.5E-06	3.0E-05
Universal Curing Ovens (EU 0300J, K, L and M) (Stacks 179, 180, 193, and 194)	3.0E-05	1.7E-05	1.1E-03	2.6E-02	4.9E-05	7.2E-06	1.6E-05	2.0E-05	5.5E-06	3.0E-05
OSI Universal Ovens (EU 0500E, F, G, and H) (Stacks 234, 235, 237, and 238)	3.0E-05	1.7E-05	1.1E-03	2.6E-02	4.9E-05	7.2E-06	1.6E-05	2.0E-05	5.5E-06	3.0E-05
Bone Dry Curing Ovens (BDO-8, -9, and -10 (Stacks 24, 165 and 25)	1.4E-06	7.7E-07	4.8E-05	1.2E-03	2.2E-06	3.2E-07	7.1E-07	9.0E-07	2.4E-07	1.4E-06
Miscellaneous combustion sources	4.9E-04	2.8E-04	1.8E-02	4.2E-01	7.9E-04	1.2E-04	2.6E-04	3.3E-04	8.9E-05	4.9E-04
Pasting Boiler (Stack 163)	6.2E-06	3.6E-06	2.2E-04	5.3E-03	1.0E-05	1.5E-06	3.3E-06	4.1E-06	1.1E-06	6.2E-06
Pasting Boiler (Stack 164)	9.5E-06	5.4E-06	3.4E-04	8.1E-03	1.5E-05	2.3E-06	5.0E-06	6.3E-06	1.7E-06	9.5E-06
Casting Boiler (Stack 236)	3.1E-06	1.8E-06	1.1E-04	2.6E-03	5.0E-06	7.3E-07	1.6E-06	2.0E-06	5.5E-07	3.1E-06
Pasting Boiler (Stack 239)	3.1E-06	1.8E-06	1.1E-04	2.6E-03	5.0E-06	7.3E-07	1.6E-06	2.0E-06	5.5E-07	3.1E-06
LCT Assembly Rapid Air Heater (Stack 245)	1.5E-05	8.5E-06	5.3E-04	1.3E-02	2.4E-05	3.5E-06	7.8E-06	9.9E-06	2.7E-06	1.5E-05
Plate Storage Area Universal Oven Boiler (Stack 225)	3.1E-06	1.8E-06	1.1E-04	2.6E-03	5.0E-06	7.3E-07	1.6E-06	2.0E-06	5.5E-07	3.1E-06
Charging Rapid Air Heater (Stack 243)	6.8E-06	3.9E-06	2.4E-04	5.8E-03	1.1E-05	1.6E-06	3.5E-06	4.5E-06	1.2E-06	6.8E-06
Totals	**6.6E-04**	**3.8E-04**	**2.4E-02**	**0.570**	**1.1E-03**	**1.6E-04**	**3.5E-04**	**4.4E-04**	**1.2E-04**	**6.6E-04**

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

Methodology
Potential Throughput (MMCF) = Combined Total Heat Input Capacity (MMBtu/hr) * 8,760 hrs/yr * 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) * Emission Factor (lb/MMCF) / 2,000 lb/ton
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
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
PM10 = Particulate Matter (<10 um)
SO2 = Sulfur Dioxide
NOx = Nitrous Oxides
VOC - Volatile Organic Compounds
CO = Carbon Monoxide
DCB = Dichlorobenzene
Pb = Lead
Cd = Cadmium
Cr = Chromium
Mn = Manganese
Ni = Nickel

Greenhouse Gas Emissions

Company Name: C&D Technologies, Inc.
Address City IN Zip: 200 West Main Street, Attica, Indiana 47918
Permit Number: 045-32647-00008
Plt ID: 045-00008
Reviewer: Kristen Willoughby

			Greenhouse Gas			
			CO2	**CH4**	**N2O**	**CO2e**
Emission Factors for Natural Gas Combustion	lb/MMcf		120,000	2.3	2.2	
	Total MMBtu/hr	MMCF/yr*	tons/yr	tons/yr	tons/yr	tons/yr
Grid Curing Ovens (EU 0200B, C, and D) (Stacks 226 to 228)	0.75	6.44	386.47	0.0074	7.1E-03	388.82
Flash Dry Ovens (PA025 and PA026) (Stacks 249 and 250)	3.20	27.48	1,649	0.0316	3.0E-02	1,659
Humidity Ovens (EU 0300F, G, H and I) (Stacks 26, 27, 28, and 29)	3.36	28.86	1,731	0.033	3.2E-02	1,742
Universal Curing Ovens (EU 0300J, K, L and M) (Stacks 179, 180, 193, and 194)	3.36	28.86	1,731	0.033	3.2E-02	1,742
OSI Universal Ovens (EU 0500E, F, G, and H) (Stacks 234, 235, 237, and 238)	3.36	28.86	1,731	0.033	3.2E-02	1,742
Bone Dry Curing Ovens (BDO-8, -9, and -10 (Stacks 24, 165 and 25)	0.15	1.29	77.29	0.0015	1.4E-03	77.76
Miscellaneous combustion sources	54.36	466.86	28,011	0.54	5.1E-01	28,182
Pasting Boiler (Stack 163)	0.69	5.93	355.55	0.0068	6.5E-03	357.72
Pasting Boiler (Stack 164)	1.05	9.02	541.06	0.0104	9.9E-03	544.35
Casting Boiler (Stack 236)	0.34	2.92	175.20	0.0034	3.2E-03	176.27
Pasting Boiler (Stack 239)	0.34	2.92	175.20	0.0034	3.2E-03	176.27
LCT Assembly Rapid Air Heater (Stack 245)	1.65	14.17	850.24	0.016	1.6E-02	855.41
Plate Storage Area Universal Oven Boiler (Stack 225)	0.34	2.92	175.20	0.0034	3.2E-03	176.27
Charging Rapid Air Heater (Stack 243)	0.75	6.44	386.47	0.0074	7.1E-03	388.82
Potential Emission (tons/yr)	73.7	633	**37,977**	**0.73**	**0.70**	38,208

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

*Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors for Natural Gas Combustion are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

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

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Emission Calculations
Abrasive Blasting - Confined

Company Name: C&D Technologies, Inc.
Address City IN Zip: 200 West Main Street, Attica, Indiana 47918
Permit Number: 045-32647-00008
Plt ID: 045-00008
Reviewer: Kristen Willoughby

Table 1 - Emission Factors for Abrasives*

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

Table 2 - Density of Abrasives (lb/ft^3)

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

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr
Flow rate of Sand Through a Blasting Nozzle as a Function of Nozzle pressure and Internal Diameter

	Nozzle Pressure (psig)							
Internal diameter (in)	30	40	50	60	70	**80**	90	100
1/8	28	35	42	49	55	63	70	77
3/16	65	80	94	107	122	135	149	165
1/4	109	138	168	195	221	**255**	280	309
5/16	205	247	292	354	377	420	462	507
3/8	285	355	417	477	540	600	657	720
7/16	385	472	560	645	755	820	905	940
1/2	503	615	725	835	945	1,050	1,160	1,265
5/8	820	990	1,170	1,336	1,510	1,680	1,850	2,030
3/4	1,140	1,420	1,670	1,915	2,160	2,400	2,630	2,880
1	2,030	2,460	2,900	3,340	3,780	4,200	4,640	5,060

Calculations

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters

Flow Rate (FR) = Abrasive flow rate (lb/hr) with internal nozzle diameter (ID)	
FR1 = Sand flow rate (lb/hr) with internal nozzle diameter (ID1) From Table 3 =	255
D = Density of abrasive (lb/ft3) From Table 2 =	160
D1 = Density of sand (lb/ft3) =	99
ID = Actual nozzle internal diameter (in) =	0.25
ID1 = Nozzle internal diameter (in) from Table 3 =	0.25

Abrasive Flow Rate (FR) (lb/hr) = 412.121 per nozzle

Uncontrolled Emissions (E, lb/hr)

	PM	PM10*	PM2.5**	
EF = emission factor (lb PM/ lb abrasive) From Table 1 =	0.010	0.007	0.007	
FR = Flow Rate (lb/hr) =	412.12	412.12	412.12	
w = fraction of time of wet blasting =	0	0	0	%
N = number of nozzles =	1	1	1	
Uncontrolled Emissions =	4.12	2.88	2.88	lb/hr
	18.05	12.64	12.64	ton/yr
Controlled Emissions*** =	0.041	0.029	0.029	lb/hr
	0.18	0.13	0.13	ton/yr

Emission Calculations
Abrasive Blasting - Confined

Company Name: C&D Technologies, Inc.
Address City IN Zip: 200 West Main Street, Attica, Indiana 47918
Permit Number: 045-32647-00008
Plt ID: 045-00008
Reviewer: Kristen Willoughby

NOTES

*Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition).

PM10 emissions derived from STAPPA/ALAPCO PM10 factors which were based on the amount of PM generated:
sand = 0.7 lbs PM10 per lb of PM; grit= 0.7 lb PM10 per lb of PM; Steel shot = 0.86 lb PM10 per lb of PM.
For "Other", assume PM10=PM.

**PM2.5 assumed to equal PM10.

***Based on 99% control for Central Vac Unit, Maint2000D, Stack 131.

METHODOLOGY

Ton/yr = lb/hr x 8760 hr/yr x ton/2000 lbs

Flow Rate (FR) (lb/hr) = FR1 x $(ID/ID1)^2$ x (D/D1)

E = EF x FR x (1-w/200) x N (w should be entered as a whole number [e.g., if w is 50%, enter 50])

326 IAC 6-3-2 Compliance Summary

Process	Maximum Process Weight (tons/hr)	326 IAC 6-3-2 Allowable Particulate Emission Rate (lbs/hr)	Maximum Allowable (ton/yr)	Uncontrolled PTE of PM (lbs/hr)	Is a Control Device Needed to Comply with 326 IAC 6-3-2?	Required Control Efficiency
Aluminum oxide blasting	0.21	1.44	6.31	4.12	YES	65.06%

Allowable emissions under 326 IAC 6-3-2 are calculated using the equation where the process weight rate is up to sixty thousand (60,000) pounds per hour:

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

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

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Jon P Kapellusch
C&D Technologies, Inc.
PO Box 279, 200 W Main St
Attica, IN 47918-0279

DATE: April 16, 2013

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

SUBJECT: Final Decision
FESOP - Significant Permit Revision
045 - 32647 - 00008

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Jason Young, Plant Mgr
Julie Delp Wilcox Environmental Engineering
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

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

April 16, 2013

TO: Attica Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: **C&D Technologies, Inc.**
Permit Number: **045 - 32647 - 00008**

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 11/30/07

Mail Code 61-53

IDEM Staff	LPOGOST 4/16/2013 C&D Technologies, Inc. 045 - 32647 - 00008 final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
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2		Jason Young Plant Mgr C&D Technologies, Inc. PO Box 279, 200 W Main St Attica IN 47918-0279 *(RO CAATS)*									
3		Fountain-Warren County Health Department 210 S. Perry St Attica IN 47918-1352 *(Health Department)*									
4		Attica Public Library 304 S Perry Attica IN 47918-1494 *(Library)*									
5		Fountain County Commissioners 301 Fourth Street Covington IN 47932 *(Local Official)*									
6		Mr. Robert Kelley 2555 S 30th Street Lafayette IN 44909 *(Affected Party)*									
7		Attica City Council and Mayors Office 305 E Main Street Attica IN 47918 *(Local Official)*									
8		Julie Delp Wilcox Environmental Engineering 5757 West 74th Street Indianapolis IN 46278 *(Consultant)*									
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