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

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

TO: Interested Parties / Applicant

DATE: November 27, 2013

RE: Createc Corporation / 075-33287-00024

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, 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 4-21.5-3-7 and IC 13-15-6-1(b) or IC 13-15-6-1(a) 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.

For an **initial Title V Operating Permit**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **thirty (30)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(b).

For a **Title V Operating Permit renewal**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **fifteen (15)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(a).

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.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of an initial Title V operating permit, permit renewal, or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impractible to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency
401 M Street
Washington, D.C. 20406

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
FNTVOP.dot 6/13/2013

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Commissioner

Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

Createc Corporation
1619 N. Meridian St.
Portland, Indiana 47371

(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. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. 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 2-7 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.

Operation Permit No.: T 075-33287-00024	
Issued by: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: November 27, 2013 Expiration Date: November 27, 2018

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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 2-7-4(c)][326 IAC 2-7-5(14)][326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary foam packaging manufacturing plant.

Source Address:	1619 N. Meridian St., Portland, Indiana 47371
General Source Phone Number:	(260) 726-9333
SIC Code:	3086 (Plastics Foam Products)
County Location:	Jay
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 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 2-7-4(c)(3)][326 IAC 2-7-5(14)]

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

(a) Hirsch 6000 pre-expanders:

(1) One (1) Hirsch 6000 pre-expander, constructed in 2001, identified as PE2, with a capacity of 1,250 pounds per hour of EPS based beads or 800 pounds per hour of Arcel based beads, no control, exhausting to stack S-PE2.

(2) One (1) Hirsch 6000 pre-expander, identified as PE4, constructed in 2011, with a capacity of 1,250 pounds per hour of EPS based beads or 800 pounds per hour of Arcel based beads, no control, exhausting to stack S-PE4.

Note: EPS is referred to Expandable Polystyrene.

Arcel is referred to polyethylene and polystyrene blended polymer product.

(b) Kurtz 813 molding presses:

(1) One (1) Kurtz 813 molding press, identified as 813-1, constructed in 2011, with a capacity of 200 pounds per hour of EPS based beads or 160 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(2) One (1) Kurtz 813 molding press, identified as 813-2, constructed in 2011, with a capacity of 200 pounds per hour of EPS based beads or 160 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(3) One (1) Kurtz 813 molding press, identified as 813-3, constructed in 2011, with a capacity of 200 pounds per hour of EPS based beads or 160 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(4) One (1) Kurtz 813 molding press, identified as 813-4, constructed in 2011, with a capacity of 200 pounds per hour of EPS based beads or 160 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(5) One (1) Kurtz 813 molding press, identified as 813-5, constructed in 2011, with a capacity of 200 pounds per hour of EPS based beads or 160 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(c) Kurtz 68 molding presses:

(1) One (1) Kurtz 68 molding press, identified as 68-1, constructed in 2011, with a capacity of 175 pounds per hour of EPS based beads or 140 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(2) One (1) Kurtz 68 molding press, identified as 68-2, constructed in 2011, with a capacity of 175 pounds per hour of EPS based beads or 140 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(3) One (1) Kurtz 68 molding press, identified as 68-3, constructed in 2011, with a capacity of 175 pounds per hour of EPS based beads or 140 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(4) One (1) Kurtz 68 molding press, identified as 68-4, constructed in 2012, with a capacity of 175 pounds per hour of EPS based beads or 140 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(d) Kurtz 1014 molding presses:

(1) One (1) Kurtz 1014 molding press, identified as 1014-1, constructed in 2011, with a capacity of 250 pounds per hour of EPS based beads or 200 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(2) One (1) Kurtz 1014 molding press, identified as 1014-2, constructed in 2011, with a capacity of 250 pounds per hour of EPS based beads or 200 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(e) Kurtz 13517 molding presses:

(1) One (1) Kurtz 13517 molding press, identified as 13517, constructed in 2011, with a capacity of 300 pounds of EPS based beads or 240 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(2) One (1) Kurtz 13517 molding press, identified as 13517-2, constructed in 2012, with a capacity of 300 pounds of EPS based beads or 240 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(3) One (1) Kurtz 13517 molding press, identified as 13517-3, constructed in 2012, with a capacity of 300 pounds of EPS based beads or 240 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(4) One (1) Kurtz 13517 molding press, identified as 13517-4, constructed in 2012, with a capacity of 300 pounds of EPS based beads or 240 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(5) One (1) Kurtz 13517 molding press, identified as 13517-5, constructed in 2012, with a capacity of 300 pounds of EPS based beads or 240 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(6) One (1) Kurtz 13517 molding press, identified as 13517-6, constructed in 2012, with a capacity of 300 pounds of EPS based beads or 240 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(f) Pre-puff storage silos:

(1) Ten (10) pre-puff storage silos, identified as PPS1 – PPS10, constructed in 2011, with a maximum storage capacity of 1200 pounds each, no control, and exhausting to a common stack PPS.

(2) Twenty (20) pre-puff storage silos, identified as PPS11 – PPS30, constructed in 2012, with a maximum storage capacity of 2600 pounds each, no control, and exhausting to common stacks S-PPS1-PPS2.

Note: The maximum capacity of the pre-puff storage silos is bottleneck by the maximum capacity of the Hirsch 6000 pre-expanders.

(g) Finished goods storage, constructed prior to 1980**,** located inside the building, no control, exhausting indoors.

(h) One (1) natural gas-fired boiler with #2 fuel oil as backup, identified as B1, rated at 10.5 million British thermal units per hour (MMBtu/hr), constructed in 1979 exhausting through one (1) stack, identified as B1.

(i) One (1) natural gas-fired boiler with #2 fuel oil as backup, identified as B2, rated at 12.6 MMBtu/hr, constructed in 1981, exhausting through one (1) stack, identified as B2.

(j) One (1) natural gas-fired boiler, identified as B3, rated at 29.3 million British thermal units per hour (MMBtu/hr), permitted in 2011, exhausting through one (1) stack, identified as S-B3.

Under 40 CFR 60, Subpart Dc, the above boiler is considered an affected facility.

A.3 Specifically Regulated Insignificant Activities
[326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(14)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) Twenty-one (21) natural gas fired comfort heaters, each with a heat input capacity of 0.15 MMBtu/hr;

(b) Vessels storing lubricating oils, hydraulic oils, machining oils and machining fluids;

(c) Application of oils, greases, lubricants, or other nonvolatile materials applied as temporary protective coatings;

(d) Machining where an aqueous cutting coolant continuously floods the machining interface;

(e) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume;

(f) Water based adhesives that are less than or equal to 5% by volume of VOCs, excluding HAPs;

(g) Heat exchanger cleaning and repair;

(h) Process vessel degreasing and cleaning to prepare for internal repairs;

(i) Blow down for any of the following: sight glass; boiler; compressors; pumps; and cooling tower;

(j) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees C);

(k) A laboratory as defined in 326 IAC 2-7-1(21)(d);

(l) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu/hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 Btu/hour:

(1) Two (2) walk-behind gasoline fired vacuums each rated at 5.5 hp each;

(2) One (1) gasoline fired snow blower rated at 5.0 hp.

(m) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment;

(n) Closed loop heating and cooling systems;

(o) Any operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs;

(p) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;

(q) Conveyors as follows: enclosed systems for conveying plastics raw materials and plastic finished goods;

(r) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment;

(s) Other categories with emissions below insignificant thresholds:

(1) Polystyrene scrap grinding controlled by a filter bag vacuum system venting to the interior of the building with emissions less than 5 lbs/hr or 25 lb/day

(2) Application of hot-melt adhesive.

(t) One parts washer, constructed in 2010, using mineral spirits, having a vapor pressure less than 0.7 kPa; 5 mmHG: or 0.1 psi measured at 20^0C ($68\ ^0$F). [326 IAC 8-3-2]

(u) Paved and unpaved roads and parking lots.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

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 2-7-5(2)][326 IAC 2-1.1-9.5][326 IAC 2-7-4(a)(1)(D)][IC 13-15-3-6(a)]

(a) This permit, T 075-33287-00024, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, 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 2-7-7] [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 2-7-5(5)]

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 2-7-5(6)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-7-5(6)(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 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:

(1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(35), 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) A "responsible official" is defined at 326 IAC 2-7-1(35).

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

(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

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

(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 2-7-5(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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)][326 IAC 1-6-3]

(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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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.11 Emergency Provisions [326 IAC 2-7-16]

(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.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a 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 Office of Air Quality, 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 2-7-5(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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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 2-7-4(c)(8) 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 2-7 and any other applicable rules.

(g) 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.

B.12 Permit Shield [326 IAC 2-7-15][326 IAC 2-7-20][326 IAC 2-7-12]

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced 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 Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

(c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.

(d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:

(1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;

(2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;

(3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and

(4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.

(e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).

(f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]

(g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5][326 IAC 2-7-10.5]

(a) All terms and conditions of permits established prior to T 075-33287-00024 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised under 326 IAC 2-7-10.5, or

(3) deleted under 326 IAC 2-7-10.5.

(b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this Part 70 operating permit.

B.14 Termination of Right to Operate [326 IAC 2-7-10][326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)][326 IAC 2-7-8(a)][326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 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 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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 2-7-9(a)(3)]

(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 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(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 2-7-9(c)]

B.16 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]

(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 2-7-4. 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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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 have a permit is not a violation of 326 IAC 2-7 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 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)][326 IAC 2-7-12(b)(2)]

(a) No Part 70 permit revision or notice shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.19 Operational Flexibility [326 IAC 2-7-20][326 IAC 2-7-10.5]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b) or (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 preconstruction approval required by 326 IAC 2-7-10.5 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 2-7-20(b)(1) and (c)(1). 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 2-7-20(b)(1) and (c)(1).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) Emission Trades [326 IAC 2-7-20(c)]
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 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
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 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

(e) 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.20 Source Modification Requirement [326 IAC 2-7-10.5]

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

B.21 Inspection and Entry [326 IAC 2-7-6][IC 13-14-2-2][IC 13-30-3-1][IC 13-17-3-2]

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 Part 70 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 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 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 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.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. 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) Except as provided in 326 IAC 2-7-19(e), 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.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][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 2-7-5(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 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.3 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.4 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.5 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). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

(f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.7 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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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.8 Compliance Requirements [326 IAC 2-1.1-11]

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

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

C.9 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

C.10 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(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. The analog instrument shall be capable of measuring values outside of the normal range.

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

Corrective Actions and Response Steps [326 IAC 2-7-5][326 IAC 2-7-6]

C.11 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.12 Risk Management Plan [326 IAC 2-7-5(12)] [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.13 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

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

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

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

(1) initial inspection and evaluation;

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

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

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

(1) monitoring results;

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

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

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

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

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]

(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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.15 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

Pursuant to 326 IAC 2-6-3(b)(2), starting in 2005 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

(1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) (“Regulated pollutant, which is used only for purposes of Section 19 of this rule”) from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

C.16 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

(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, where applicable:

(AA) All calibration and maintenance records.
(BB) All original strip chart recordings for continuous monitoring instrumentation.
(CC) Copies of all reports required by the Part 70 permit.

Records of required monitoring information include the following, where applicable:

(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.17 General Reporting Requirements [326 IAC 2-7-5(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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). 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.18 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:

(a) Hirsch 6000 pre-expanders:

(1) One (1) Hirsch 6000 pre-expander, constructed in 2001, identified as PE2, with a capacity of 1,250 pounds per hour of EPS based beads or 800 pounds per hour of Arcel based beads, no control, exhausting to stack S-PE2.

(2) One (1) Hirsch 6000 pre-expander, identified as PE4, constructed in 2011, with a capacity of 1,250 pounds per hour of EPS based beads or 800 pounds per hour of Arcel based beads, no control, exhausting to stack S-PE4.

Note : EPS is referred to Expandable Polystyrene.

Arcel is referred to polyethylene and polystyrene blended polymer product.

(b) Kurtz 813 molding presses:

(1) One (1) Kurtz 813 molding press, identified as 813-1, constructed in 2011, with a capacity of 200 pounds per hour of EPS based beads or 160 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(2) One (1) Kurtz 813 molding press, identified as 813-2, constructed in 2011, with a capacity of 200 pounds per hour of EPS based beads or 160 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(3) One (1) Kurtz 813 molding press, identified as 813-3, constructed in 2011, with a capacity of 200 pounds per hour of EPS based beads or 160 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(4) One (1) Kurtz 813 molding press, identified as 813-4, constructed in 2011, with a capacity of 200 pounds per hour of EPS based beads or 160 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(5) One (1) Kurtz 813 molding press, identified as 813-5, constructed in 2011, with a capacity of 200 pounds per hour of EPS based beads or 160 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(c) Kurtz 68 molding presses:

(1) One (1) Kurtz 68 molding press, identified as 68-1, constructed in 2011, with a capacity of 175 pounds per hour of EPS based beads or 140 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(2) One (1) Kurtz 68 molding press, identified as 68-2, constructed in 2011, with a capacity of 175 pounds per hour of EPS based beads or 140 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(3) One (1) Kurtz 68 molding press, identified as 68-3, constructed in 2011, with a capacity of 175 pounds per hour of EPS based beads or 140 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(4) One (1) Kurtz 68 molding press, identified as 68-4, constructed in 2012, with a capacity of 175 pounds per hour of EPS based beads or 140 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(d) Kurtz 1014 molding presses:

(1) One (1) Kurtz 1014 molding press, identified as 1014-1, constructed in 2011, with a capacity of 250 pounds per hour of EPS based beads or 200 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(2) One (1) Kurtz 1014 molding press, identified as 1014-2, constructed in 2011, with a capacity of 250 pounds per hour of EPS based beads or 200 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(e) Kurtz 13517 molding presses:

(1) One (1) Kurtz 13517 molding press, identified as 13517, constructed in 2011, with a capacity of 300 pounds of EPS based beads or 240 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(2) One (1) Kurtz 13517 molding press, identified as 13517-2, constructed in 2012, with a capacity of 300 pounds of EPS based beads or 240 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(3) One (1) Kurtz 13517 molding press, identified as 13517-3, constructed in 2012, with a capacity of 300 pounds of EPS based beads or 240 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(4) One (1) Kurtz 13517 molding press, identified as 13517-4, constructed in 2012, with a capacity of 300 pounds of EPS based beads or 240 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(5) One (1) Kurtz 13517 molding press, identified as 13517-5, constructed in 2012, with a capacity of 300 pounds of EPS based beads or 240 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(6) One (1) Kurtz 13517 molding press, identified as 13517-6, constructed in 2012, with a capacity of 300 pounds of EPS based beads or 240 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(f) Pre-puff storage silos:

(1) Ten (10) pre-puff storage silos, identified as PPS1 – PPS10, constructed in 2011, with a maximum storage capacity of 1200 pounds each, no control, and exhausting to a common stack PPS.

(2) Twenty (20) pre-puff storage silos, identified as PPS11 – PPS30, constructed in 2012, with a maximum storage capacity of 2600 pounds each, no control, and exhausting to common stacks S-PPS1-PPS2.

Note: The maximum capacity of the pre-puff storage silos is bottleneck by the maximum capacity of the Hirsch 6000 pre-expanders.

(g) Finished goods storage, constructed prior to 1980, located inside the building, no control, exhausting indoors.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 PSD Minor Limit [326 IAC 2-2]

In order to render 326 IAC 2-2 not applicable, the total VOC emissions from the following operations:

(a) Hirsch 6000 pre-expanders,
(b) Kurtz 813 molding presses,
(c) Kurtz 68 molding presses,
(d) Kurtz 1014 molding presses,
(e) Kurtz 13517 molding presses,
(f) pre-puff storage silos, and
(g) finished goods storage,

shall not exceed 245 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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

D.1.2 Volatile Organic Compound (VOC) [326 IAC 8-1-6]

In order to render 326 IAC 8-1-6 not applicable:

The total VOC emissions from each of the two (2) Hirsch 6000 pre-expanders, identified as PE2, and PE4, shall be less than 25 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

D.1.3 Hazardous Air Pollutants (HAPs)

In order to render the requirements of HAPs major source not applicable, the Permittee shall comply with the following:

(a) The highest single HAP emissions from the following operations:
  (1) Hirsch 6000 pre-expanders,
  (2) Kurtz 813 molding presses,
  (3) Kurtz 68 molding presses,
  (4) Kurtz 1014 molding presses,
  (5) Kurtz 13517 molding presses, and
  (6) pre-puff storage silos,

  shall be less than 9 tons per twelve (12) consecutive month period with compliance determined at the end of each month; and

(b) The total HAPs emissions from the following operations:
  (1) Hirsch 6000 pre-expanders,
  (2) Kurtz 813 molding presses,
  (3) Kurtz 68 molding presses,
  (4) Kurtz 1014 molding presses,

(5) Kurtz 13517 molding presses, and
(6) pre-puff storage silos,

shall be less than 24 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits, combined with HAP emission from other emission units at this source, shall limit the single HAP to less than 10 tons per twelve (12) consecutive month period, and combined HAPs emissions to less than 25 tons per twelve (12) consecutive month period and shall render the requirements of Major Source of Hazardous Air Pollutants not applicable.

D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their 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.1.5 Volatile Organic Compound (VOC)

(a) In order to comply with Condition D.1.1, the VOC emissions shall be calculated by the following equation:

T_{ML} = VOC emissions from EPS based beads + VOC emissions from Arcel-based beads

$=(\sum (UE^* VE * LE) + \sum (UA * VA * LA)) / (2000 \text{ pounds/ ton})$

Where:

T_{ML} = Total VOC emissions from the manufacturing lines (tons/year)

UE = Pounds of EPS-based beads from lot x used during the 12 month period

V_E = VOC content of EPS-based beads from lot x, in percent by weight expressed as a decimal

L_E = Overall emission loss rate for EPS-based bead usage (98.7% of raw material VOC content)

U_A = Pounds of ARCEL-based beads from lot x used during the 12 month period

V_A = VOC content of ARCEL-based beads from lot x, in percent by weight expressed as a decimal

L_A = Overall emission loss rate for ARCEL-based bead usage (98.7% of raw material VOC content)

(b) In order to comply with Condition D.1.2, the VOC emissions shall be calculated by the following equation:

$T_{PL} = \sum (UE^* VE^* LEE) + \sum (UA^* VA^* L_{AE})/ (2{,}000 \text{ pounds/ton})$

Where:

T_{PL} = Total VOC emissions from each pre-expander (tons/year)

UE = Pounds of EPS-based beads from lot x used during the 12 month period

V_E = VOC content of EPS-based beads from lot x, in percent by weight expressed as a decimal

L_{EE} = Pre-expansion phase emission loss rate for EPS-based bead usage (25% of VOC content of raw material)

U_A = Pounds of ARCEL-based beads from lot x used during the 12 month period

V_A = VOC content of ARCEL-based beads from lot x in percent by weight expressed as a decimal

L_{AE} = Pre-expansion phase emission loss rate for ARCEL-based bead usage (41% of VOC content of raw material)

D.1.6 Hazardous Air Pollutants (HAPs)

(a) In order to comply with Condition D.1.3(a), the single HAP emissions shall be calculated by the following equations:

$$HAP_x = \sum_{x=1}^{z} \left(\sum_{i=1}^{n} U_i * W_i * L_i\right)/(2000 \text{ lb/ton})$$

Where:

HAP_x = amount of an single HAP emitted, in tons/12-month period

z = number of different single HAP in raw material i

n = number of different raw materials used during the 12-month period

U_i = amount of raw material i processed, in pounds/12-month period

W_i = fraction, by weight, of the single HAP in raw material i

L_i = fraction, by weight, of the single HAP emitted from raw material i during processing and pre-puff storage

(b) In order to comply with Condition D.1.3(b), the total HAPs emissions shall be calculated by the following equation:

$$HAP_{total} = \sum_{x=1}^{n} HAP_x$$

Where:

HAP_{total} = sum of all single HAP emitted, in tons/12-month period

HAP_x = amount of single HAP *x* emitted, in tons/12-month period

n = number of different HAPs emitted during the 12-month period

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.7 Record Keeping Requirements

(a) To document the compliance status with Conditions D.1.1, D.1.2, and D.1.5, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emissions limits established in Conditions D.1.1 and D.1.2. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) Weight average VOC content of EPS and Arcel beads used during the month;

(2) The total amount (pounds) of EPS and Arcel beads used each month;

(3) Records shall include:

(A) Material supplier "certificates of analysis" depicting the VOC content of each lot of material processed during the month;

(B) Pre-expander production logs depicting the quantity (pounds) and date of each batch of material processed during the month;

(4) The total amount (tons) of VOC emitted each month for the following unit:

(A) Manufacturing lines;

(B) Each of the two (2) pre-expanders.

(5) The total amount (tons) of VOC emitted since the last compliance determination period for the following unit.

(A) Manufacturing lines;

(B) Each of the two (2) pre-expanders.

(b) To document the compliance status with Conditions D.1.3, and D.1.6, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the HAPs emissions limits established in Condition D.1.3. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) HAPs content of EPS and Arcel beads used during the month;

(2) The total amount (pounds) of EPS and Arcel beads used each month;

(3) Records shall include:

Pre-expander production logs depicting the quantity (pounds) and date of each batch of material processed during the month.

(4) The total amount (tons) of the highest single and total HAPs emitted each month for the manufacturing lines; and

(5) The total amount (tons) of single and total HAPs emitted since the last compliance determination period for the manufacturing lines.

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

D.1.8 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.1.1, D.1.2, and D.1.3 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, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Boilers

(h) One (1) natural gas-fired boiler with #2 fuel oil as backup, identified as B1, rated at 10.5 million British thermal units per hour (MMBtu/hr), constructed in 1979 exhausting through one (1) stack, identified as B1.

(i) One (1) natural gas-fired boiler with #2 fuel oil as backup, identified as B2, rated at 12.6 MMBtu/hr, constructed in 1981, exhausting through one (1) stack, identified as B2.

(j) One (1) natural gas-fired boiler, identified as B3, rated at 29.3 million British thermal units per hour (MMBtu/hr), permitted in 2011, exhausting through one (1) stack, identified as S-B3.

Under 40 CFR 60, Subpart Dc, the above boiler is considered an affected facility.

(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 2-7-5(1)]

D.2.1 Particulate [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3(e) (Particulate emission limitations for sources of indirect heating: emission limitations for facilities specified in 326 IAC 6-2-1(b)), particulate emissions from boilers B1 and B2, which were constructed after June 8, 1972, shall not exceed 0.6 pounds of particulate matter per million British thermal units heat input each.

D.2.2 Particulate [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4, particulate emissions from boiler B3 shall not exceed 0.39 lb/mmBTU, using the following equation:

$$P_t = 1.09/Q^{0.26}$$

Where:

P_t=Pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input.

Q=Total source maximum operating capacity rating in million Btu per hour (mmBtu/hr) heat input = 52.4 mmBTU/hr.

D.2.3 Sulfur Dioxide (SO2) [326 IAC 7-1.1-1] [326 IAC 7-2-1]

Pursuant to 326 IAC 7-1.1 (SO2 Emissions Limitations), the SO2 emissions from boilers B1 and B2, shall not exceed five-tenths (0.5) pound per MMBtu heat input per boiler when burning #2 fuel oil and #2 fuel oil is considered distillate oil.

Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a thirty (30) day rolling weighted average.

D.2.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities. 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.2.5 Sulfur Dioxide Emissions and Sulfur Content

In order to comply with Condition D.2.3:

(a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate the sulfur dioxide emissions by:

(1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification, or;

(2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

(A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and

(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.

(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from boilers B1 and B2, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.6 Visible Emissions Notations

(a) Visible emission notations of boilers B1 and B2 stack exhausts shall be performed once per day during normal daylight operations when burning fuel oil. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. An abnormal visible emission notation is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.7 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.3, the Permittee shall maintain records in accordance with (1) through (6) below.

(1) Calendar dates covered in the compliance determination period;

(2) Actual fuel oil usage since last compliance determination period and equivalent sulfur dioxide emissions;

(3) To certify compliance when burning natural gas only, the Permittee shall maintain records of fuel used.

If the fuel supplier certification is used to demonstrate compliance, when burning alternate fuels and not determining compliance pursuant to 326 IAC 3-7-4, the following, as a minimum, shall be maintained:

(4) Fuel supplier certifications;

(5) The name of the fuel supplier; and

(6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

(b) To document the compliance status with Condition D.2.6, the Permittee shall maintain records of visible emission notations of the boilers B1 and B2 stack exhaust once per day when burning oil. The Permittee shall include in its 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) Section C - General Record Keeping Requirements, of this permit contains the Permittee's obligations with regard to the records required by this condition.

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Insignificant Activities:

(s) Other categories with emissions below insignificant thresholds:

(1) Polystyrene scrap grinding controlled by a filter bag vacuum system venting to the interior of the building with emissions less than 5 lbs/hr or 25 lb/day

(2) Application of hot-melt adhesive.

(t) One parts washer, constructed in 2010, using mineral spirits, having a vapor pressure less than 0.7 kPa; 5 mmHG: or 0.1 psi measured at 20^0C ($68\ ^0$F). [326 IAC 8-3-2]

(u) Paved and unpaved roads and parking lots.

(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 2-7-5(1)]

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

Pursuant to 326 IAC 6-3-2 (b)(14) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the polystyrene scrap grinding shall not exceed 0.551 pounds per hour when operating at a process weight rate of 2,100 pounds per hour.

D.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980:

(a) The Permittee of a cold cleaner degreaser shall ensure the following control equipment and operating requirements are met:

(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 closed containers.

(7) Prohibit the disposal 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) The Permittee of a cold cleaner degreaser subject to this subsection shall ensure 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.

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Boiler

(j) One (1) natural gas-fired boiler, identified as B3, rated at 29.3 million British thermal units per hour (MMBtu/hr), permitted in 2011, exhausting through one (1) stack, identified as S-B3.

Under 40 CFR 60, Subpart Dc, the above boiler is considered an affected facility.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 12-1)]

E.1.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR 60, Subpart A]

Pursuant to 40 CFR 60.1, 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, except as otherwise specified in 40 CFR 60, Subpart Dc.

E.1.2 New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR Part 60, Subpart Dc] [326 IAC 12-1]

Pursuant to CFR Part 60, Subpart Dc, the Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart Dc (included as Attachment A of this permit), which are incorporated by reference as 326 IAC 12, except as otherwise specified in 40 CFR Part 60, Subpart Dc for the one (1) boiler identified as B3:

(a) 40 CFR 60.40c
(b) 40 CFR 60.41c
(c) 40 CFR 60.48c(a)(1)
(d) 40 CFR 60.48c(g)(2)
(e) 40 CFR 60.48c(i)
(f) 40 CFR 60.48c(j)

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: Createc Corporation
Source Address: 1619 N. Meridian St., Portland, Indiana 47371
Part 70 Permit No.: T 075-33287-00024

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:
Phone:
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

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: Createc Corporation
Source Address: 1619 N. Meridian St., Portland, Indiana 47371
Part 70 Permit No.: T 075-33287-00024

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
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

Part 70 Quarterly Report

Source Name: Createc Corporation
Source Address: 1619 N. Meridian St., Portland, Indiana 47371
Part 70 Permit No.: T 075-33287-00024
Facility: Pre-expanders, molding presses, pre-puff storage silos, and finished goods storage
Parameter: VOC Emissions
Limit: The total emissions of volatile organic compounds (VOC) shall not exceed 245 tons per twelve (12) consecutive month period.

QUARTER : YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
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

Part 70 Quarterly Report

Source Name: Createc Corporation
Source Address: 1619 N. Meridian St., Portland, Indiana 47371
Part 70 Permit No.: T 075-33287-00024
Facility: PE2
Parameter: VOC Emissions
Limit: The VOC emissions shall be less than 25 tons per twelve (12) consecutive month period.

QUARTER : YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
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

Part 70 Quarterly Report

Source Name: Createc Corporation
Source Address: 1619 N. Meridian St., Portland, Indiana 47371
Part 70 Permit No.: T 075-33287-00024
Facility: PE4
Parameter: VOC Emissions
Limit: The VOC emissions shall be less than 25 tons per twelve (12) consecutive month period.

QUARTER : YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____

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

Part 70 Quarterly Report

Source Name: Createc Corporation
Source Address: 1619 N. Meridian St., Portland, Indiana 47371
Part 70 Permit No.: T 075-33287-00024
Facility: Pre-expanders, molding presses, and pre-puff storage silos
Parameter: Highest Single HAP Emissions
Limit: The single HAP shall be less than 9.0 tons per twelve (12) consecutive month period.

QUARTER : YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
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

Part 70 Quarterly Report

Source Name: Createc Corporation
Source Address: 1619 N. Meridian St., Portland, Indiana 47371
Part 70 Permit No.: T 075-33287-00024
Facility: Pre-expanders, molding presses, and pre-puff storage silos
Parameter: Total HAPs Emissions
Limit: The total HAPs shall be less than 24.0 tons per twelve (12) consecutive month period.

QUARTER : YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
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

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Createc Corporation
Source Address: 1619 N. Meridian St., Portland, Indiana 47371
Part 70 Permit No.: T 075-33287-00024

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 paragraph (a) of Section C-General Reporting. 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: _____

Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

Attachment A

Createc Corporation
1619 N. Meridian St.
Portland, Indiana 47371

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Source: 72 FR 32759, June 13, 2007, unless otherwise noted.

§ 60.40c Applicability and delegation of authority.

(a) Except as provided in paragraphs (d), (e), (f), and (g) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, §60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units that meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO_2) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in §60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under §60.14.

(e) Affected facilities (*i.e.* heat recovery steam generators and fuel heaters) that are associated with stationary combustion turbines and meet the applicability requirements of subpart KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators, fuel heaters, and other affected facilities that are capable of combusting more than or equal to 2.9 MW (10 MMBtu/h) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/h) heat input of fossil fuel. If the heat recovery steam generator, fuel heater, or other affected facility is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The stationary combustion turbine emissions are subject to subpart GG or KKKK, as applicable, of this part.)

(f) Any affected facility that meets the applicability requirements of and is subject to subpart AAAA or subpart CCCC of this part is not subject to this subpart.

(g) Any facility that meets the applicability requirements and is subject to an EPA approved State or Federal section 111(d)/129 plan implementing subpart BBBB of this part is not subject to this subpart.

(h) Affected facilities that also meet the applicability requirements under subpart J or subpart Ja of this part are subject to the PM and NO_Xstandards under this subpart and the SO_2standards under subpart J or subpart Ja of this part, as applicable.

(i) Temporary boilers are not subject to this subpart.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9461, Feb. 16, 2012]

§ 60.41c Definitions.

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

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see §60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels derived from coal for the purposes of creating useful heat, including but not limited to solvent refined coal, gasified coal not meeting the definition of natural gas, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

Coal refuse means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a dry basis.

Combined cycle system means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

Combustion research means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit (*i.e.* , the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

Conventional technology means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17), diesel fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see §60.17), kerosine, as defined by the American Society of Testing and Materials in ASTM D3699 (incorporated by reference, see §60.17), biodiesel as defined by the American Society of Testing and Materials in ASTM D6751 (incorporated by reference, see §60.17), or biodiesel blends as defined by the American Society of Testing and Materials in ASTM D7467 (incorporated by reference, see §60.17).

Dry flue gas desulfurization technology means a SO_2control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline reagent and water, whether introduced separately or as a premixed slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

Emerging technology means any SO_2control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under §60.48c(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 51.24.

Fluidized bed combustion technology means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

Heat transfer medium means any material that is used to transfer heat from one point to another point.

Maximum design heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

Natural gas means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

(2) Liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see §60.17); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 34 and 43 megajoules (MJ) per dry standard cubic meter (910 and 1,150 Btu per dry standard cubic foot).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

Potential sulfur dioxide emission rate means the theoretical SO_2emissions (nanograms per joule (ng/J) or lb/MMBtu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

Steam generating unit means a device that combusts any fuel and produces steam or heats water or heats any heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Temporary boiler means a steam generating unit that combusts natural gas or distillate oil with a potential SO_2emissions rate no greater than 26 ng/J (0.060 lb/MMBtu), and the unit is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A steam generating unit is not a temporary boiler if any one of the following conditions exists:

(1) The equipment is attached to a foundation.

(2) The steam generating unit or a replacement remains at a location for more than 180 consecutive days. Any temporary boiler that replaces a temporary boiler at a location and performs the same or similar function will be included in calculating the consecutive time period.

(3) The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.

(4) The equipment is moved from one location to another in an attempt to circumvent the residence time requirements of this definition.

Wet flue gas desulfurization technology means an SO_2control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of PM or SO_2.

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9461, Feb. 16, 2012]

§ 60.42c Standard for sulfur dioxide (SO_2).

(a) Except as provided in paragraphs (b), (c), and (e) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that combusts only coal shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO_2emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO_2emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2in excess of the emission limit is determined pursuant to paragraph (e)(2) of this section.

(b) Except as provided in paragraphs (c) and (e) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that:

(1) Combusts only coal refuse alone in a fluidized bed combustion steam generating unit shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 20 percent (0.20) of the potential SO_2emission rate (80 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2in excess of SO_2in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is fired with coal refuse, the affected facility subject to paragraph (a) of this section. If oil or any other fuel (except coal) is fired with coal refuse, the affected facility is subject to the 87 ng/J (0.20 lb/MMBtu) heat input SO_2emissions limit or the 90 percent SO_2reduction requirement specified in paragraph (a) of this section and the emission limit is determined pursuant to paragraph (e)(2) of this section.

(2) Combusts only coal and that uses an emerging technology for the control of SO_2emissions shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2in excess of 50 percent (0.50) of the potential SO_2emission rate (50 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2in excess of 260 ng/J (0.60 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 50 percent SO_2reduction requirement specified in this paragraph and the emission limit determined pursuant to paragraph (e)(2) of this section.

(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, alone or in combination with any other fuel, and is listed in paragraphs (c)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2in excess of the emission limit determined pursuant to paragraph (e)(2) of this section. Percent reduction requirements are not applicable to affected facilities under paragraphs (c)(1), (2), (3), or (4).

(1) Affected facilities that have a heat input capacity of 22 MW (75 MMBtu/h) or less;

(2) Affected facilities that have an annual capacity for coal of 55 percent (0.55) or less and are subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for coal of 55 percent (0.55) or less.

(3) Affected facilities located in a noncontinental area; or

(4) Affected facilities that combust coal in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from exhaust gases entering the duct burner.

(d) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2in excess of 215 ng/J (0.50 lb/MMBtu) heat input from oil; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

(e) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, or coal and oil with any other fuel shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2in excess of the following:

(1) The percent of potential SO_2emission rate or numerical SO_2emission rate required under paragraph (a) or (b)(2) of this section, as applicable, for any affected facility that

(i) Combusts coal in combination with any other fuel;

(ii) Has a heat input capacity greater than 22 MW (75 MMBtu/h); and

(iii) Has an annual capacity factor for coal greater than 55 percent (0.55); and

(2) The emission limit determined according to the following formula for any affected facility that combusts coal, oil, or coal and oil with any other fuel:

$$E_s = \frac{(K_a H_a + K_b H_b + K_c H_c)}{(H_a + H_b + H_c)}$$

Where:

E_s= SO_2emission limit, expressed in ng/J or lb/MMBtu heat input;

K_a= 520 ng/J (1.2 lb/MMBtu);

K_b= 260 ng/J (0.60 lb/MMBtu);

K_c= 215 ng/J (0.50 lb/MMBtu);

H_a= Heat input from the combustion of coal, except coal combusted in an affected facility subject to paragraph (b)(2) of this section, in Joules (J) [MMBtu];

H_b= Heat input from the combustion of coal in an affected facility subject to paragraph (b)(2) of this section, in J (MMBtu); and

H_c= Heat input from the combustion of oil, in J (MMBtu).

(f) Reduction in the potential SO_2emission rate through fuel pretreatment is not credited toward the percent reduction requirement under paragraph (b)(2) of this section unless:

(1) Fuel pretreatment results in a 50 percent (0.50) or greater reduction in the potential SO_2emission rate; and

(2) Emissions from the pretreated fuel (without either combustion or post-combustion SO_2control) are equal to or less than the emission limits specified under paragraph (b)(2) of this section.

(g) Except as provided in paragraph (h) of this section, compliance with the percent reduction requirements, fuel oil sulfur limits, and emission limits of this section shall be determined on a 30-day rolling average basis.

(h) For affected facilities listed under paragraphs (h)(1), (2), (3), or (4) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under §60.48c(f), as applicable.

(1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 MMBtu/hr).

(2) Residual oil-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).

(3) Coal-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/h).

(4) Other fuels-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/h).

(i) The SO_2emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(j) For affected facilities located in noncontinental areas and affected facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9462, Feb. 16, 2012]

§ 60.43c Standard for particulate matter (PM).

(a) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or combusts mixtures of coal with other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 22 ng/J (0.051 lb/MMBtu) heat input if the affected facility combusts only coal, or combusts coal with other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility combusts coal with other fuels, has an annual capacity factor for the other fuels greater than 10 percent (0.10), and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(b) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts wood or combusts mixtures of wood with other fuels (except coal) and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emissions limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood greater than 30 percent (0.30); or

(2) 130 ng/J (0.30 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood of 30 percent (0.30) or less and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for wood of 30 percent (0.30) or less.

(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. Owners and operators of an affected facility that elect to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart and are subject to a federally enforceable PM limit of 0.030 lb/MMBtu or less are exempt from the opacity standard specified in this paragraph (c).

(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.

(e)(1) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input, except as provided in paragraphs (e)(2), (e)(3), and (e)(4) of this section.

(2) As an alternative to meeting the requirements of paragraph (e)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

(i) 22 ng/J (0.051 lb/MMBtu) heat input derived from the combustion of coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels; and

(ii) 0.2 percent of the combustion concentration (99.8 percent reduction) when combusting coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels.

(3) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(4) An owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.50 weight percent sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a PM standard under §60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or SO_2emissions is not subject to the PM limit in this section.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009; 77 FR 9462, Feb. 16, 2012]

§ 60.44c Compliance and performance test methods and procedures for sulfur dioxide.

(a) Except as provided in paragraphs (g) and (h) of this section and §60.8(b), performance tests required under §60.8 shall be conducted following the procedures specified in paragraphs (b), (c), (d), (e), and (f) of this section, as applicable. Section 60.8(f) does not apply to this section. The 30-day notice required in §60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(b) The initial performance test required under §60.8 shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the percent reduction requirements and SO_2emission limits under §60.42c shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affect facility will be operated, but not later than 180 days after the initial startup of the facility. The steam generating unit load during the 30-day period does not have to be the maximum design heat input capacity, but must be representative of future operating conditions.

(c) After the initial performance test required under paragraph (b) of this section and §60.8, compliance with the percent reduction requirements and SO_2emission limits under §60.42c is based on the average percent reduction and the average SO_2emission rates for 30 consecutive steam generating unit operating days. A separate performance test is completed at the end of each steam generating unit operating day, and a new 30-day average percent reduction and SO_2emission rate are calculated to show compliance with the standard.

(d) If only coal, only oil, or a mixture of coal and oil is combusted in an affected facility, the procedures in Method 19 of appendix A of this part are used to determine the hourly SO_2emission rate (E_{ho}) and the 30-day average SO_2emission rate (E_{ao}). The hourly averages used to compute the 30-day averages are obtained from the CEMS. Method 19 of appendix A of this part shall be used to calculate $E_{ao}$when using daily fuel sampling or Method 6B of appendix A of this part.

(e) If coal, oil, or coal and oil are combusted with other fuels:

(1) An adjusted E_{ho}(E_{ho}o) is used in Equation 19–19 of Method 19 of appendix A of this part to compute the adjusted E_{ao}(E_{ao}o). The E_{ho}o is computed using the following formula:

$$E_{ho}o = \frac{E_{ho} - E_w(1 - X_1)}{X_1}$$

Where:

$E_{ho}o$ = Adjusted E_{ho}, ng/J (lb/MMBtu);

E_{ho}= Hourly SO_2emission rate, ng/J (lb/MMBtu);

E_w= SO_2concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9 of appendix A of this part, ng/J (lb/MMBtu). The value $E_w$for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure $E_w$if the owner or operator elects to assume E_w= 0.

X_k= Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(2) The owner or operator of an affected facility that qualifies under the provisions of §60.42c(c) or (d) (where percent reduction is not required) does not have to measure the parameters $E_w$or $X_k$if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19 of appendix A of this part.

(f) Affected facilities subject to the percent reduction requirements under §60.42c(a) or (b) shall determine compliance with the SO_2emission limits under §60.42c pursuant to paragraphs (d) or (e) of this section, and shall determine compliance with the percent reduction requirements using the following procedures:

(1) If only coal is combusted, the percent of potential SO_2emission rate is computed using the following formula:

$$\%P_s = 100\left(1 - \frac{\%R_g}{100}\right)\left(1 - \frac{\%R_f}{100}\right)$$

Where:

$\%P_s$= Potential SO_2emission rate, in percent;

$\%R_g$= SO_2removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and

$\%R_f$= SO_2removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

(2) If coal, oil, or coal and oil are combusted with other fuels, the same procedures required in paragraph (f)(1) of this section are used, except as provided for in the following:

(i) To compute the $\%P_s$, an adjusted $\%R_g$($\%R_g$o) is computed from E_{ao}o from paragraph (e)(1) of this section and an adjusted average SO_2inlet rate (E_{ai}o) using the following formula:

$$\%R_g o = 100\left(1 - \frac{E_{ao}^{\circ}}{E_{ai}^{\circ}}\right)$$

Where:

$\%R_g o$ = Adjusted $\%R_g$, in percent;

$E_{ao}o$ = Adjusted E_{ao}, ng/J (lb/MMBtu); and

$E_{ai}o$ = Adjusted average SO_2inlet rate, ng/J (lb/MMBtu).

(ii) To compute $E_{ai}o$, an adjusted hourly SO_2inlet rate ($E_{hi}o$) is used. The $E_{hi}o$ is computed using the following formula:

$$E_{hi}o = \frac{E_{hi} - E_w(1 - X_k)}{X_k}$$

Where:

$E_{hi}o$ = Adjusted E_{hi}, ng/J (lb/MMBtu);

E_{hi}= Hourly SO_2inlet rate, ng/J (lb/MMBtu);

E_w= SO_2concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value $E_w$for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure $E_w$if the owner or operator elects to assume E_w= 0; and

X_k= Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under §60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under §60.46c(d)(2).

(h) For affected facilities subject to §60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO_2standards based on fuel supplier certification, the performance test shall consist of the certification from the fuel supplier, as described in §60.48c(f), as applicable.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the SO_2standards under §60.42c(c)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(j) The owner or operator of an affected facility shall use all valid SO_2emissions data in calculating $\%P_s$and E_{ho}under paragraphs (d), (e), or (f) of this section, as applicable, whether or not the minimum emissions data requirements under §60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating $\%P_s$or E_{ho}pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

§ 60.45c Compliance and performance test methods and procedures for particulate matter.

(a) The owner or operator of an affected facility subject to the PM and/or opacity standards under §60.43c shall conduct an initial performance test as required under §60.8, and shall conduct subsequent performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods, except as specified in paragraph (c) of this section.

(1) Method 1 of appendix A of this part shall be used to select the sampling site and the number of traverse sampling points.

(2) Method 3A or 3B of appendix A–2 of this part shall be used for gas analysis when applying Method 5 or 5B of appendix A–3 of this part or 17 of appendix A–6 of this part.

(3) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows:

(i) Method 5 of appendix A of this part may be used only at affected facilities without wet scrubber systems.

(ii) Method 17 of appendix A of this part may be used at affected facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of Sections 8.1 and 11.1 of Method 5B of appendix A of this part may be used in Method 17 of appendix A of this part only if Method 17 of appendix A of this part is used in conjunction with a wet scrubber system. Method 17 of appendix A of this part shall not be used in conjunction with a wet scrubber system if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part may be used in conjunction with a wet scrubber system.

(4) The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry standard cubic meters (dscm) [60 dry standard cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(5) For Method 5 or 5B of appendix A of this part, the temperature of the sample gas in the probe and filter holder shall be monitored and maintained at 160 ±14 °C (320±25 °F).

(6) For determination of PM emissions, an oxygen (O_2) or carbon dioxide (CO_2) measurement shall be obtained simultaneously with each run of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location.

(7) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rates expressed in ng/J (lb/MMBtu) heat input shall be determined using:

(i) The O_2or CO_2measurements and PM measurements obtained under this section, (ii) The dry basis F factor, and

(iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part.

(8) Method 9 of appendix A–4 of this part shall be used for determining the opacity of stack emissions.

(b) The owner or operator of an affected facility seeking to demonstrate compliance with the PM standards under §60.43c(b)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(c) In place of PM testing with Method 5 or 5B of appendix A–3 of this part or Method 17 of appendix A–6 of this part, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring PM emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor PM emissions instead of conducting performance testing using Method 5 or 5B of appendix A–3 of this part or Method 17 of appendix A–6 of this part shall install, calibrate, maintain, and operate a CEMS and shall comply with the requirements specified in paragraphs (c)(1) through (c)(14) of this section.

(1) Notify the Administrator 1 month before starting use of the system.

(2) Notify the Administrator 1 month before stopping use of the system.

(3) The monitor shall be installed, evaluated, and operated in accordance with §60.13 of subpart A of this part.

(4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under §60.8 of subpart A of this part or within 180 days of notification to the Administrator of use of CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.

(5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under §60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (d) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.

(6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.

(7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraph (c)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.

(i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

(ii) [Reserved]

(8) The 1-hour arithmetic averages required under paragraph (c)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under §60.13(e)(2) of subpart A of this part.

(9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (c)(7) of this section are not met.

(10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.

(11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O_2(or CO_2) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and performance tests conducted using the following test methods.

(i) For PM, Method 5 or 5B of appendix A–3 of this part or Method 17 of appendix A–6 of this part shall be used; and

(ii) For O2 (or CO_2), Method 3A or 3B of appendix A–2 of this part, as applicable shall be used.

(12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.

(13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours on a 30-day rolling average.

(14) As of January 1, 2012, and within 90 days after the date of completing each performance test, as defined in §60.8, conducted to demonstrate compliance with this subpart, you must submit relative accuracy test audit (*i.e.,* reference method) data and performance test (*i.e.,* compliance test) data, except opacity data, electronically to EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see *http://www.epa.gov/ttn/chief/ert/ert tool.html/*) or other compatible electronic spreadsheet. Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFIRE database.

(d) The owner or operator of an affected facility seeking to demonstrate compliance under §60.43c(e)(4) shall follow the applicable procedures under §60.48c(f). For residual oil-fired affected facilities, fuel supplier certifications are only allowed for facilities with heat input capacities between 2.9 and 8.7 MW (10 to 30 MMBtu/h).

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011; 77 FR 9463, Feb. 16, 2012]

§ 60.46c Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (d) and (e) of this section, the owner or operator of an affected facility subject to the SO_2emission limits under §60.42c shall install, calibrate, maintain, and operate a CEMS for measuring SO_2concentrations and either O_2or CO_2concentrations at the outlet of the SO_2control device (or the outlet of the steam generating unit if no SO_2control device is used), and shall record the output of the system. The owner or operator of an affected facility subject to the percent reduction requirements under §60.42c shall measure SO_2concentrations and either O_2or CO_2concentrations at both the inlet and outlet of the SO_2control device.

(b) The 1-hour average SO_2emission rates measured by a CEMS shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under §60.42c. Each 1-hour average SO_2emission rate must be based on at least 30 minutes of operation, and shall be calculated using the data points required under §60.13(h)(2). Hourly SO_2emission rates are not calculated if the affected

facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

(c) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of appendix B of this part.

(2) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of appendix F of this part.

(3) For affected facilities subject to the percent reduction requirements under §60.42c, the span value of the SO_2CEMS at the inlet to the SO_2control device shall be 125 percent of the maximum estimated hourly potential SO_2emission rate of the fuel combusted, and the span value of the SO_2CEMS at the outlet from the SO_2control device shall be 50 percent of the maximum estimated hourly potential SO_2emission rate of the fuel combusted.

(4) For affected facilities that are not subject to the percent reduction requirements of §60.42c, the span value of the SO_2CEMS at the outlet from the SO_2control device (or outlet of the steam generating unit if no SO_2control device is used) shall be 125 percent of the maximum estimated hourly potential SO_2emission rate of the fuel combusted.

(d) As an alternative to operating a CEMS at the inlet to the SO_2control device (or outlet of the steam generating unit if no SO_2control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the SO_2control device (or outlet of the steam generating unit if no SO_2control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2emission rate by using Method 6B of appendix A of this part. Fuel sampling shall be conducted pursuant to either paragraph (d)(1) or (d)(2) of this section. Method 6B of appendix A of this part shall be conducted pursuant to paragraph (d)(3) of this section.

(1) For affected facilities combusting coal or oil, coal or oil samples shall be collected daily in an as-fired condition at the inlet to the steam generating unit and analyzed for sulfur content and heat content according the Method 19 of appendix A of this part. Method 19 of appendix A of this part provides procedures for converting these measurements into the format to be used in calculating the average SO_2input rate.

(2) As an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fuel tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur content of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.

(3) Method 6B of appendix A of this part may be used in lieu of CEMS to measure SO_2at the inlet or outlet of the SO_2control system. An initial stratification test is required to verify the adequacy of the Method 6B of appendix A of this part sampling location. The stratification test shall consist of three paired runs of a suitable $SO_2$and CO_2measurement train operated at the candidate location and a second similar train operated according to the procedures in §3.2 and the applicable procedures in section 7 of Performance

Specification 2 of appendix B of this part. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 of appendix A of this part or Methods 6C and 3A of appendix A of this part are suitable measurement techniques. If Method 6B of appendix A of this part is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B of appendix A of this part 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent (0.10).

(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to §60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO_2standards based on fuel supplier certification, as described under §60.48c(f), as applicable.

(f) The owner or operator of an affected facility operating a CEMS pursuant to paragraph (a) of this section, or conducting as-fired fuel sampling pursuant to paragraph (d)(1) of this section, shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive steam generating unit operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator.

§ 60.47c Emission monitoring for particulate matter.

(a) Except as provided in paragraphs (c), (d), (e), and (f) of this section, the owner or operator of an affected facility combusting coal, oil, or wood that is subject to the opacity standards under §60.43c shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility subject to an opacity standard in §60.43c(c) that is not required to use a COMS due to paragraphs (c), (d), (e), or (f) of this section that elects not to use a COMS shall conduct a performance test using Method 9 of appendix A–4 of this part and the procedures in §60.11 to demonstrate compliance with the applicable limit in §60.43c by April 29, 2011, within 45 days of stopping use of an existing COMS, or within 180 days after initial startup of the facility, whichever is later, and shall comply with either paragraphs (a)(1), (a)(2), or (a)(3) of this section. The observation period for Method 9 of appendix A–4 of this part performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation.

(1) Except as provided in paragraph (a)(2) and (a)(3) of this section, the owner or operator shall conduct subsequent Method 9 of appendix A–4 of this part performance tests using the procedures in paragraph (a) of this section according to the applicable schedule in paragraphs (a)(1)(i) through (a)(1)(iv) of this section, as determined by the most recent Method 9 of appendix A–4 of this part performance test results.

(i) If no visible emissions are observed, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(ii) If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(iii) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within

3 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; or

(iv) If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 45 calendar days from the date that the most recent performance test was conducted.

(2) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A–4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A–4 of this part performance tests, elect to perform subsequent monitoring using Method 22 of appendix A–7 of this part according to the procedures specified in paragraphs (a)(2)(i) and (ii) of this section.

(i) The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of appendix A–7 of this part and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (*i.e.* , 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (*i.e.,* 90 seconds per 30 minute period), the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observation (*i.e.,* 90 seconds) or conduct a new Method 9 of appendix A–4 of this part performance test using the procedures in paragraph (a) of this section within 45 calendar days according to the requirements in §60.45c(a)(8).

(ii) If no visible emissions are observed for 10 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed.

(3) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A–4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A–4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in paragraph (a)(2) of this section. For reference purposes in preparing the monitoring plan, see OAQPS “Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems.” This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243–02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.

(b) All COMS shall be operated in accordance with the applicable procedures under Performance Specification 1 of appendix B of this part. The span value of the opacity COMS shall be between 60 and 80 percent.

(c) Owners and operators of an affected facilities that burn only distillate oil that contains no more than 0.5 weight percent sulfur and/or liquid or gaseous fuels with potential sulfur dioxide emission rates of 26 ng/J (0.060 lb/MMBtu) heat input or less and that do not use a post-combustion technology to reduce SO2 or PM emissions and that are subject to an opacity standard in §60.43c(c) are not required to operate a COMS if they follow the applicable procedures in §60.48c(f).

(d) Owners or operators complying with the PM emission limit by using a PM CEMS must calibrate, maintain, operate, and record the output of the system for PM emissions discharged to the atmosphere

as specified in §60.45c(c). The CEMS specified in paragraph §60.45c(c) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(e) Owners and operators of an affected facility that is subject to an opacity standard in §60.43c(c) and that does not use post-combustion technology (except a wet scrubber) for reducing PM, SO_2, or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur, and is operated such that emissions of CO discharged to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a boiler operating day average basis is not required to operate a COMS. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (e)(1) through (4) of this section; or

(1) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (e)(1)(i) through (iv) of this section.

(i) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in §60.58b(i)(3) of subpart Eb of this part.

(ii) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(iii) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. The 1-hour averages are calculated using the data points required in §60.13(h)(2).

(iv) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(2) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(3) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(4) You must record the CO measurements and calculations performed according to paragraph (e) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(f) An owner or operator of an affected facility that is subject to an opacity standard in §60.43c(c) is not required to operate a COMS provided that the affected facility meets the conditions in either paragraphs (f)(1), (2), or (3) of this section.

(1) The affected facility uses a fabric filter (baghouse) as the primary PM control device and, the owner or operator operates a bag leak detection system to monitor the performance of the fabric filter according to the requirements in section §60.48Da of this part.

(2) The affected facility uses an ESP as the primary PM control device, and the owner or operator uses an ESP predictive model to monitor the performance of the ESP developed in accordance and operated according to the requirements in section §60.48Da of this part.

(3) The affected facility burns only gaseous fuels and/or fuel oils that contain no greater than 0.5 weight percent sulfur, and the owner or operator operates the unit according to a written site-specific monitoring plan approved by the permitting authority. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard. For testing performed as part of this site-specific monitoring plan, the permitting authority may require as an alternative to the notification and reporting requirements specified in §§60.8 and 60.11 that the owner or operator submit any deviations with the excess emissions report required under §60.48c(c).

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011; 77 FR 9463, Feb. 16, 2012]

§ 60.48c Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §60.42c, or §60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(4) Notification if an emerging technology will be used for controlling SO_2emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO_2emission limits of §60.42c, or the PM or opacity limits of §60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of this part.

(c) In addition to the applicable requirements in §60.7, the owner or operator of an affected facility subject to the opacity limits in §60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period and maintain records according to the requirements specified in paragraphs (c)(1) through (3) of this section, as applicable to the visible emissions monitoring method used.

(1) For each performance test conducted using Method 9 of appendix A–4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(1)(i) through (iii) of this section.

(i) Dates and time intervals of all opacity observation periods;

(ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and

(iii) Copies of all visible emission observer opacity field data sheets;

(2) For each performance test conducted using Method 22 of appendix A–4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(2)(i) through (iv) of this section.

(i) Dates and time intervals of all visible emissions observation periods;

(ii) Name and affiliation for each visible emission observer participating in the performance test;

(iii) Copies of all visible emission observer opacity field data sheets; and

(iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.

(3) For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator

(d) The owner or operator of each affected facility subject to the SO_2emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall submit reports to the Administrator.

(e) The owner or operator of each affected facility subject to the SO_2emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable.

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average SO_2emission rate (ng/J or lb/MMBtu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent of potential SO_2emission rate calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of the corrective actions taken.

(4) Identification of any steam generating unit operating days for which SO_2or diluent (O_2or CO_2) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.

(5) Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have

been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of the F factor used in calculations, method of determination, and type of fuel combusted.

(7) Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.

(8) If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.

(9) If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 of appendix B of this part.

(10) If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier;

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c; and

(iii) The sulfur content or maximum sulfur content of the oil.

(2) For residual oil:

(i) The name of the oil supplier;

(ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;

(iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and

(iv) The method used to determine the sulfur content of the oil.

(3) For coal:

(i) The name of the coal supplier;

(ii) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether

the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected);

(iii) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and

(iv) The methods used to determine the properties of the coal.

(4) For other fuels:

(i) The name of the supplier of the fuel;

(ii) The potential sulfur emissions rate or maximum potential sulfur emissions rate of the fuel in ng/J heat input; and

(iii) The method used to determine the potential sulfur emissions rate of the fuel.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO_2standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in §60.42C to use fuel certification to demonstrate compliance with the SO_2standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

(h) The owner or operator of each affected facility subject to a federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under §60.42c or §60.43c shall calculate the annual capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document (ATSD) for a Part 70 Operating Permit Renewal

Source Background and Description

Source Name:	**Createc Corporation**
Source Location:	**1619 North Meridian, Portland, Indiana 47371**
County:	**Jay**
SIC Code:	**3086 (Plastics Foam Products)**
Permit Renewal No.:	**T075-33287-00024**
Permit Reviewer:	**Renee Traivaranon**

On September 13, 2013, the Office of Air Quality (OAQ) had a notice published in the Commercial Review in Portland, Indiana, stating that Createc Corporation had applied for a Part 70 Operating Permit Renewal. The notice also stated that the OAQ proposed to issue a Part 70 Operating Permit Renewal for this operation 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.

Comments and Responses

There is no comment from the U.S. EPA on the Part 70 Operating Permit Renewal. However, IDEM has made additional changes for typographical errors for Condition D.1.5(b) as described below, with deleted language as ~~strikeouts~~ and new language **bolded**.

D.1.5 Volatile Organic Compound (VOC)

.....

(b) In order to comply with Condition D.1.2, the VOC emissions shall be calculated by the following equation:

$$T_{PL} = \sum (UE^* VE^* LEE) + \sum (UA^* VA^* L_{AE}) / (2{,}000 \text{ pounds/ton})$$

Where:

T_{PL} = Total VOC emissions from each pre-expander (tons/year)

UE = Pounds of EPS-based beads **from lot x** used during the 12 month period

V_E = VOC content of EPS-based beads **from lot x, in percent by weight expressed as a decimal** ~~(6% VOC content)~~

L_{EE} = Pre-expansion phase emission loss rate for EPS-based bead usage (25% of VOC content of raw material)

U_A = Pounds of ARCEL-based beads **from lot x** used during the 12 month period

V_A = VOC content of ARCEL-based beads **from lot x, in percent by weight expressed as a decimal** ~~(12.5% VOC content)~~

L_{AE} = Pre-expansion phase emission loss rate for ARCEL-based bead usage (41% of VOC content of raw material)

IDEM Contact

(a) Questions regarding this proposed Part 70 Operating Permit Renewal can be directed to Ms. Renee Traivaranon 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) 324-5615 or toll free at 1-800-451-6027 extension 4-5615.

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

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document (ATSD) for a Part 70 Operating Permit Renewal

Source Background and Description

Source Name:	**Createc Corporation**
Source Location:	**1619 North Meridian, Portland, Indiana 47371**
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Comments and Responses

On October 11, 2003, Createc Corporation submitted comments to IDEM, OAQ on the draft Part 70 Operating Permit Renewal.

The Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM, OAQ does not make any changes to the original TSD, but the Permit will have the updated changes. The comments and revised permit language are provided below with deleted language as ~~strikeouts~~ and new language **bolded**.

Comment 1:

The company indicated that the Hirsch 6000 pre-expander, identified as PE5, has never been installed be removed from the permit. It was also recommended to remove the bottleneck statement because it is only accurate on a long term basis. The capacity of the molding presses is greater than the Hirsch 600 pre-expanders on an hourly basis.

Response to Comment 1:

The Hirsch 6000 pre-expander, identified as PE5, has been removed from the emissions unit description in Section A.2, and Section D.1. The requirements for this unit were also removed from Conditions D.1.2, D.1.7, record keeping requirements, and report form. The bottleneck statement was also removed per source's requests. The unlimited PTE of the source has also been updated due to the removal of this pre-expander (see Appendix A to this addendum). The permit has been revised as follows:

A.2 Emission Units and Pollution Control Equipment Summary
[326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(14)]

...

(a) Hirsch 6000 pre-expanders:

~~(3) One (1) Hirsch 6000 pre-expander, identified as PE5, constructed in 2011, with a capacity of 1,250 pounds per hour of EPS based beads or 800 pounds per hour of Arcel based beads, no control, and exhausting to stack S-PE5.~~

Note ~~1~~: EPS is referred to Expandable Polystyrene.

Arcel is referred to polyethylene and polystyrene blended polymer product.

~~Note 2: The maximum capacity of the molding presses is bottleneck by the maximum capacity of the Hirsch 6000 pre-expanders.~~

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) Hirsch 6000 pre-expanders:

~~(3) One (1) Hirsch 6000 pre-expander, identified as PE5, constructed in 2011, with a capacity of 1,250 pounds per hour of EPS based beads or 800 pounds per hour of Arcel based beads, no control, and exhausting to stack S-PE5.~~

…

Note ~~1~~: EPS is referred to Expandable Polystyrene.

Arcel is referred to polyethylene and polystyrene blended polymer product.

~~Note 2: The maximum capacity of the molding presses is bottleneck by the maximum capacity of the Hirsch 6000 pre-expanders.~~

(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 2-7-5(1)]

…..

D.1.2 Volatile Organic Compound (VOC) [326 IAC 8-1-6]

In order to render 326 IAC 8-1-6 not applicable:

(a) The total VOC emissions from each of the ~~three (3)~~ **two (2)** Hirsch 6000 pre-expanders, identified as PE2, **and** PE~~4~~, ~~and PE5,~~ shall be less than 25 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.7 Record Keeping Requirements

…

(4) The total amount (tons) of VOC emitted each month for the following unit:

(A) Manufacturing lines;

(B) Each of the ~~three~~ **two** (~~3~~**2**) pre-expanders~~;~~**.**

(5) The total amount (tons) of VOC emitted since the last compliance determination period for the following unit.

(A) Manufacturing lines;

(B) Each of the **two** (~~3~~**2**) pre-expanders;

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

~~Part 70 Quarterly Report~~

~~Source Name: Createc Corporation~~
~~Source Address: 1619 N. Meridian St., Portland, Indiana 47371~~
~~Part 70 Permit No.: T 075-33287-00024~~
~~Facility: PE5~~
~~Parameter: VOC Emissions~~
~~Limit: The VOC emissions shall be less than 25 tons per twelve (12) consecutive month period.~~

~~QUARTER : YEAR:~~

~~Month~~	~~Column 1~~	~~Column 2~~	~~Column 1 + Column 2~~
	~~This Month~~	~~Previous 11 Months~~	~~12 Month Total~~
~~Month 1~~			
~~Month 2~~			
~~Month 3~~			

~~☐ No deviation occurred in this quarter.~~

~~☐ Deviation/s occurred in this quarter.~~
~~Deviation has been reported on:~~

~~Submitted by:~~ _____
~~Title / Position:~~ _____
~~Signature:~~ _____
~~Date:~~ _____
~~Phone:~~ _____

Comment 2:

The company requested that IDEM revise Condition C.15 - Emission Statement to reflect that pursuant to 326 IAC 2-6-3(b)(2) the source is only required to submit an emission statement once every three years, rather than every year.

Response to Comment 2:

IDEM agrees with the recommended change, since 326 IAC 2-6-3(b)(2) specifies that sources located in Jay County may submit an emission statement every three years. Condition C.15 Emission Statement has been revised as follows:

C.15 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

~~Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year an emission statement covering the previous calendar year.~~ **Pursuant to 326 IAC 2-6-3(b)(2), starting in 2005 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year.** The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following ……

Comment 3:

The company requested to remove the 326 IAC 8-1-6 VOC avoidance limit of 25 tons per year from the finished good storage, since this facility was constructed prior to the 326 IAC 8-1-6 applicability date of January 1, 1980.

Response to Comment 3:

The construction date will be added to the description of the finished good storage, and the requirements related to this unit have been removed from Conditions D.1.2(b), D.1.5(c) and D.1.7.(4)(C) and D.1.7(5)(C) and report form as follows:

A.2 Emission Units and Pollution Control Equipment Summary
[326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(14)]

….

(g) Finished goods storage, **constructed prior to 1980,** located inside the building, no control, exhausting indoors.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

…

(g) Finished goods storage, **constructed prior to 1980,** located inside the building, no control, exhausting indoors.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.2 Volatile Organic Compound (VOC) [326 IAC 8-1-6]

In order to render 326 IAC 8-1-6 not applicable:

~~(a)~~ The total VOC emissions from each of the two (2) Hirsch 6000 pre-expanders, identified as PE2, and PE4, shall be less than 25 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

~~(b) The total VOC emissions from the finished goods storage shall be less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

...

Compliance Determination Requirements

D.1.5 Volatile Organic Compound (VOC)

…….

(b) In order to comply with Condition D.1.2~~(a),~~ the VOC emissions shall be calculated by the following equation:

……

~~(c) In order to comply with Condition D.1.2(b), the VOC emissions shall be calculated by the following equation:~~

~~$T_{GS} = \sum (U_E * V_E * L_{ES}) + \sum (U_A * V_A * L_{AS}) / (2{,}000 \text{ pounds/ton})$~~

~~Where:~~

~~T_{GS} =Total VOC emissions from the finished goods storage (tons/year)~~

~~U_E =Pounds of EPS-based beads used during the 12 month period~~

~~V_E =VOC content of EPS-based beads (6% VOC content)~~

~~L_{ES} = Finished Goods Storage phase emission loss rate for EPS based bead usage (41.7% of VOC content of raw material)~~

~~U_A = Pounds of ARCEL-based beads used during the 12 month period~~

~~V_A =VOC content of ARCEL-based beads (12.5% VOC content)~~

~~L_{AS} = Finished Goods Storage phase emission loss rate for ARCEL-based bead usage (29.7% of VOC content of raw material)~~

D.1.7 Record Keeping Requirements

…

(4) The total amount (tons) of VOC emitted each month for the following unit:

…

~~(C) Finished goods storage.~~

(5) The total amount (tons) of VOC emitted since the last compliance determination period for the following unit.

….

~~(C) Finished goods storage.~~

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

Part 70 Quarterly Report

Source Name: Createc Corporation
Source Address: 1619 N. Meridian St., Portland, Indiana 47371
Part 70 Permit No.: T 075-33287-00024
Facility: Finished goods storage
Parameter: VOC Emissions
Limit: The VOC emissions shall be less than 25 tons per twelve (12) consecutive month period.

QUARTER : YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

□ No deviation occurred in this quarter.

□ Deviation/s occurred in this quarter.
Deviation has been reported on:

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Comment 4:

The company preferred the current equations to calculate VOC emissions, since it is simpler and clearer to the source.

Response to Comment 4:

The new calculation equations are similar to the methods used in calculating the potential to emit in TSD Appendix A. However, the current calculations do not diminish the VOC emissions results; therefore, the equations to determine the VOC emissions have been revised to current equations as follows:

D.1.5 Volatile Organic Compound (VOC)

(a) In order to comply with Condition D.1.1, the VOC emissions shall be calculated by the following equation:

T_{ML} = VOC emissions from EPS based beads + VOC emissions from Arcel-based beads

$T_{ML} = \sum [U_E * V_E * (L_{EE} + L_{EM} + L_{EP} + L_{ES})] + \sum [U_A * V_A * (L_{AE} + L_{AM} + L_{AP} + L_{AS})] / (2{,}000 \text{ pounds /ton})$

Where:

T_{ML} =Total VOC emissions from the manufacturing lines (tons/year)

U_E = Pounds of EPS-based beads **from lot x** used during the 12 month period

V_E = VOC content of EPS-based beads ~~(6% VOC content)~~ **from lot x, in percent by weight expressed as a decimal**

~~L_{EE} = Pre-expansion phase emission loss rate for EPS-based bead usage (25% of VOC content of raw material)~~

~~L_{EM} = Molding phase emission loss rate for EPS-based bead usage (13% of VOC content of raw material)~~

~~L_{EP} = Pre-puff Storage phase emission loss rate for EPS-based bead usage (19% of VOC content of raw material)~~

~~L_{ES} = Finished Goods Storage phase emission loss rate for EPS-based bead usage (41.7% of VOC content of raw material)~~

L_E =Overall emission loss rate for EPS-based bead usage (98.7% of raw material VOC content)

U_A = Pounds of ARCEL-based beads **from lot x** used during the 12 month period

V_A = VOC content of ARCEL-based beads, ~~(12.5% VOC content)~~ **from lot x, in percent by weight expressed as a decimal**

~~L_{AE} = Pre-expansion phase emission loss rate for ARCEL-based bead usage (41% of VOC content of raw material)~~

~~L_{AM} = Molding phase emission loss rate for ARCEL-based bead usage (5% of VOC content of raw material)~~

~~L_{AP} = Pre-puff Storage phase emission loss rate for ARCEL-based bead usage (23% of VOC content of raw material)~~

~~L_{AS} = Finished Goods Storage phase emission loss rate for ARCEL-based bead usage (29.7% of VOC content of raw material)~~

L_A =Overall emission loss rate for ARCEL-based bead usage (98.7% of raw material VOC content)

Comment 5:

The company also requests to change the HAPs equations, for simplification.

Response to Comment 5:

IDEM has reviewed the HAPs equations provided by the source and the equations have been revised as follows:

D.1.6 Hazardous Air Pollutants (HAPs)

(a) In order to comply with Condition D.1.3(a), the single HAP emissions shall be calculated by the following equations:

~~$T_{Single} = T_{HSE} + T_{HSA}$~~

~~$T_{HSE} = [(U_E * H_E * R_{EE}) + (U_E * H_E * R_{EM}) + (U_E * H_E * R_{EP})] / (2{,}000 \text{ pounds/ton})$~~

~~$T_{HSA} = [(U_A * H_A * R_{AE}) + (U_A * H_A * R_{AM}) + (U_A * H_A * R_{AP})] / (2{,}000 \text{ pounds/ton})$~~

~~Where:~~

~~T_{Single} = The worst single HAP emissions from the manufacturing lines~~

~~T_{HSE} = Single HAP emissions from EPS-based beads~~

~~U_E = Pounds of EPS-based beads used during the 12-month period~~

~~H_E = Each HAP Content of EPS based beads~~
~~(Acetophenone =1,490 ppmw, Benzene=150 ppmw, Cumene=115 ppmw, Ethyl Benzene = 500 ppmw, Styrene monomer=800 ppmw, Xylenes =150 ppmw)~~

~~R_{EE} = Pre-expansion phase emission loss rate for EPS-based bead usage~~

~~(45% times following % rate loss by weight of HAP: Acetophenone = 16%, Benzene = 83%, Cumene = 23%, Ethyl Benzene = 33%, Styrene monomer = 69%, Xylenes = 67%)~~

~~R_{EM} = Molding phase emission loss rate for EPS-based bead usage~~

~~(45% times following %rate loss by weight of HAP: Acetophenone = 16%, Benzene = 83%, Cumene = 23%, Ethyl Benzene = 33%, Styrene monomer = 69%, Xylenes = 67%)~~

~~R_{EP} = Pre-puff Storage phase emission loss rate for EPS-based bead usage~~

~~(10% times following %rate loss by weight of HAP: Acetophenone = 16%, Benzene = 83%, Cumene = 23%, Ethyl Benzene = 33%, Styrene monomer = 69%, Xylenes = 67%)~~

~~T_{HSA} = Single HAP emissions from ARCEL-based beads~~

~~U_A = Pounds of ARCEL-based beads used during the 12-month period~~

~~H_A = HAP Content of ARCEL-based beads~~
~~(Acetophenone = 800 ppmw, Benzene = 25 ppmw, Cumene = 50 ppmw, Ethyl Benzene = 5,000 ppmw, Styrene monomer = 50 ppmw, Xylenes = 100 ppmw)~~

~~R_{AE} = Pre-expansion phase emission loss rate for ARCEL-based bead usage~~

~~(45% times following %rate loss by weight of HAP: Acetophenone = 70%, Benzene = 70%, Cumene = 70%, Ethyl Benzene = 70%, Styrene monomer = 70%, Xylenes = 70%)~~

~~R_{AM} = Molding phase emission loss rate for ARCEL-based bead usage~~

~~(45% times following %rate loss by weight of HAP: Acetophenone = 70%, Benzene = 70%, Cumene = 70%, Ethyl Benzene = 70%, Styrene monomer = 70%, Xylenes = 70%)~~

~~R_{AP} = Pre-puff Storage phase emission loss rate for ARCEL-based bead usage~~

~~(10% times following % rate loss by weight of HAP: Acetophenone = 70%, Benzene = 70%, Cumene = 70%, Ethyl Benzene = 70%, Styrene monomer = 70%, Xylenes = 70%)~~

~~(1) If the worst single HAP emissions from EPS based beads > the worst single HAP from Arcel-based beads, then:~~

~~T_{Single} = The worst single HAP emissions from the manufacturing lines~~

~~= The worst single HAP emissions from EPS based beads + the same single HAP from Arcel based beads~~

~~(2) If the worst single HAP emissions from EPS based beads < the worst single HAP from Arcel-based beads, then:~~

~~T_{Single} = The worst single HAP emissions from the manufacturing lines~~

~~= The worst single HAP emissions from Arcel based beads + the same single HAP from EPS -based beads~~

$$\mathbf{HAP_x = \sum_{x=1}^{z} \left(\sum_{i=1}^{n} U_i * W_i * L_i \right) / (2000\ lb/ton)}$$

Where:

HAP_x = amount of an single HAP emitted, in tons/12-month period

z = number of different single HAP in raw material i

n = number of different raw materials used during the 12-month period

U_i = amount of raw material i processed, in pounds/12-month period

W_i = fraction, by weight, of the single HAP in raw material i

L_i = fraction, by weight, of the single HAP emitted from raw material i during processing and pre-puff storage

(b) In order to comply with Condition D.1.3(b), the total HAPs emissions shall be calculated by the following equation:

~~$T_{combined}$ = Combination of all single HAPs emissions from EPS based beads + all single HAPs emissions from Arcel-based beads above in Condition D.1.6(a) or~~

~~$$T_{combined} = \sum_{i=1}^{n}[(U_E*H_E*R_{EE})+(U_E*H_E*R_{EM})+(U_E*H_E*R_{EP})]+\sum_{i=1}^{n}[(U_A*H_A*R_{AE})+(U_A*H_A*R_{AM})+(U_A*H_A*R_{AP})]/(2{,}000\ pounds/ton)$$~~

~~Where:~~

~~$T_{combined}$ = Total HAPs emissions from manufacturing lines~~

~~U_E = Pounds of EPS-based beads used during the 12 month period~~

~~H_E = HAP Content of EPS-based beads~~
~~(Acetophenone =1,490 ppmw, Benzene=150 ppmw, Cumene=115 ppmw, Ethyl Benzene = 500 ppmw, Styrene monomer=800 ppmw, Xylenes =150 ppmw)~~

~~R_{EE} = Pre-expansion phase emission loss rate for EPS-based bead usage~~

~~(45% times following % rate loss by weight of HAP: Acetophenone = 16%, Benzene = 83%, Cumene = 23%, Ethyl Benzene = 33%, Styrene monomer = 69%, Xylenes = 67%)~~

~~R_{EM} = Molding phase emission loss rate for EPS-based bead usage~~

~~(45% times following %rate loss by weight of HAP: Acetophenone = 16%, Benzene = 83%, Cumene = 23%, Ethyl Benzene = 33%, Styrene monomer = 69%, Xylenes = 67%)~~

~~R_{EP} = Pre-puff Storage phase emission loss rate for EPS-based bead usage~~

~~(10% times following %rate loss by weight of HAP: Acetophenone = 16%, Benzene = 83%, Cumene = 23%, Ethyl Benzene = 33%, Styrene monomer = 69%, Xylenes = 67%)~~

~~U_A = Pounds of ARCEL-based beads used during the 12 month period~~

~~H_A = HAP Content of ARCEL-based beads~~
~~(Acetophenone = 800 ppmw, Benzene = 25 ppmw, Cumene = 50 ppmw, Ethyl Benzene = 5,000 ppmw, Styrene monomer = 50 ppmw, Xylenes = 100 ppmw)~~

~~R_{AE} = Pre-expansion phase emission loss rate for ARCEL-based bead usage~~

~~(45% times following %rate loss by weight of HAP: Acetophenone = 70%, Benzene = 70%, Cumene = 70%, Ethyl Benzene = 70%, Styrene monomer = 70%, Xylenes = 70%)~~

~~R_{AM} = Molding phase emission loss rate for ARCEL-based bead usage~~

~~(45% times following %rate loss by weight of HAP: Acetophenone = 70%, Benzene = 70%, Cumene = 70%, Ethyl Benzene = 70%, Styrene monomer = 70%, Xylenes = 70%)~~

~~R_{AP} = Pre-puff Storage phase emission loss rate for ARCEL-based bead usage~~

~~(10% times following % rate loss by weight of HAP: Acetophenone = 70%, Benzene = 70%, Cumene = 70%, Ethyl Benzene = 70%, Styrene monomer = 70%, Xylenes = 70%)~~

$$\mathbf{HAP_{total}} = \sum_{x=1}^{n} \mathbf{HAP_x}$$

Where:

HAP_{total} = sum of all single HAP emitted, in tons/12-month period

HAP_x = amount of single HAP *x* emitted, in tons/12-month period

n = number of different HAPs emitted during the 12-month period

Comment 6:

The company indicated that the Part Washer was installed in 2010. The company also requested to remove the PSD minor limit for the Part Washer, since the company only tracks the solvent usage every quarter. In lieu of this limit the company has requested to reduce the PSD minor limit in Condition D.1.1 from 247 tons of VOC per year to 245 tons of VOC per year. Compliance with this limit combined with the unlimited potential to emit VOC from the Part Washer and all other emission units shall limit the source-wide potential to emit VOC to less than 250 tons per year and render the requirements of 326 IAC 2-2 (PSD) not applicable.

Response to Comment 6:

The construction date does not affect the requirements applicable to this Part Washer. Therefore, the construction date has been revised as requested.

The VOC limited reduction from the process is sufficient to account for the amount used at this source (see Appendix A to this addendum); therefore, the limit to render 326 IAC 2-2 is not required for this solvent usage (see revised table below - PTE of the Source after Issuance of the Renewal.)

Therefore, the two tons per year will be reduced from the process operation in Condition D.1.1 and reporting form, in addition to removing the PSD limit, record keeping and reporting form this insignificant unit. The 326 IAC 8-3-5 was removed for typographical error. The permit has been revised as follows:

A.3 Specifically Regulated Insignificant Activities
[326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(14)]

….

(t) One parts washer, constructed in ~~2012~~**2010**, using mineral spirits, having a vapor pressure less than 0.7 kPa; 5 mmHG: or 0.1 psi measured at 20^{0}C (68 ^{0}F); ~~the use of which does not exceed 108 gallons per 12 months.~~ [326 IAC 8-3-2] ~~[326 IAC 8-3-5]~~

…..

D.1.1 PSD Minor Limit [326 IAC 2-2]

In order to render 326 IAC 2-2 not applicable, the total VOC emissions from the following operations:

(a) Hirsch 6000 pre-expanders,
(b) Kurtz 813 molding presses,
(c) Kurtz 68 molding presses,
(d) Kurtz 1014 molding presses,
(e) Kurtz 13517 molding presses,
(f) pre-puff storage silos, and
(g) finished goods storage,

shall not exceed ~~247~~ **245** tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits, combined with VOC emissions from ~~Condition D.3.1 and~~ all other emissions units at the source, shall limit the VOC emissions to less than 250 tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

….

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Insignificant Activities:

…….

(t) One parts washer, constructed in ~~2012~~**2010**, using mineral spirits, having a vapor pressure less than 0.7 kPa; 5 mmHG: or 0.1 psi measured at 20^{0}C (68 ^{0}F)~~; the use of which does not exceed 108 gallons per 12 months~~. [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 2-7-5(1)]

~~D.3.1 PSD Minor Limit [326 IAC 2-2]~~

~~In order to render 326 IAC 2-2 not applicable, the Permittee shall comply with the following:~~

~~(a) The density of the parts washer solvent shall not exceed 6.7 pounds per gallon.~~

~~(b) The total solvent usage of the parts washer, and amount of the waste solvent shipped offsite for recycling or disposal deducted, shall not exceed 108 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.~~

~~Compliance with the above limit, combined with the potential to emit VOC from Condition D.1.1 and from other emission units at the source, shall limit the VOC from the entire source to less than 250 tons per twelve (12) consecutive month period and render 326 IAC 2-2 not applicable.~~

D.3.~~2~~**1** Particulate [326 IAC 6-3-2]

…

D.3.~~3~~**2** Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

….

~~Compliance Determination Requirements [326 IAC 2-1.1-][326 IAC 2-7-6(1)]~~

~~D.3.4 Volatile Organic Compounds (VOC)~~

~~(a) Compliance with the VOC content and input limitations contained in Condition D.3.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.~~

~~(b) If the amount of the waste solvent shipped offsite for recycling or disposal is deducted from the monthly usage reported, the Permittee shall also determine the VOC content of the waste shipped offsite using one or a combination of the following methods:~~

~~(1) On-Site Sampling~~

~~(A) VOC content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by~~

~~EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.~~

~~(B) A representative sample of the VOC containing waste to be shipped offsite shall be analyzed within 90 days of the issuance of this permit T075-33287-00024.~~

~~(2) Certified Waste Report: The VOC reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of VOC in the waste.~~

~~(3) Minimum Assumed VOC content: The VOC content of the waste shipped offsite may be assumed to be equal to the VOC content of the material with the lowest VOC content that could be present in the waste, as determined using the as supplied" and "as applied" VOC data sheets, for each month.~~

~~(Note: This is to take credit for VOC emissions only.)~~

~~(c) IDEM reserves the right to request a representative sample of the VOC containing waste stream and conduct an analysis for VOC content.~~

~~Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]~~

~~D.3.5 Record Keeping Requirements~~

~~(a) To document compliance with Condition D.3.1, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits established in Condition D.3.1. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.~~

~~(1) The VOC content of each solvent used.~~

~~(2) The amount of solvent used on a monthly basis.~~

~~(3) The total amount of solvent usage since the last compliance determination period.~~

~~(4) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.~~

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

~~D.3.6 Reporting Requirements~~

~~A quarterly summary of the information to document the compliance status with Condition D.3.1(b) 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, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).~~

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)									
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	GHGs	Total HAPs	Worst Single HAP
Hirsch 6000 pre-expanders	-	-	-	-	-	~~247.0~~ **245**	-	-	24.0	9.0
Kurtz 813 molding presses	-	-	-	-	-		-	-		
Kurtz 68 molding presses	-	-	-	-	-		-	-		
Kurtz 1014 molding presses	-	-	-	-	-		-	-		
Kurtz 13517 molding presses	-	-	-	-	-		-	-		
Pre-puff storage silos	-	-	-	-	-		-	-		
Finished goods storage	-	-	-	-	-		-	-	-	-
Gas Boilers with backup fuel oil (B1-B2)	1.45	1.72	1.54	51	14	0.25	3.61	15,592	0.19	negl
Combustion (B3+heaters))	0.26	1.06	1.06	0.1	14	0.77	12	16,823	0	negl
Adhesives	-	-	-	-	-	0.90	-	-	-	-
Gasoline engines	0.01	0.01	0.01	0	0	0.01	0	5	negl	negl
Thermal Cutting	0.16	0.16	0.16	-	-	-	-	-	-	-
Scrap grinders	0.08	0.08	0.08	-	-	-	-	-	-	-
Parts Washer	-	-	-	-	-	~~0.36~~ **1.52**	-	-	-	-
Paved/unpaved road	1.70	0.43	0.04	-	-	-	-	-	-	-
Total PTE of Entire Source	3.66	3.46	2.89	51.04	28.51	~~249.28~~ **248.44**	15.35	32,420.02	<25	<10
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000 CO_2e	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000 CO_2e	NA	NA

negl. = negligible
*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
**$PM_{2.5}$ listed is direct $PM_{2.5}$.

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

Part 70 Quarterly Report

Source Name: Createc Corporation
Source Address: 1619 N. Meridian St., Portland, Indiana 47371
Part 70 Permit No.: T 075-33287-00024
Facility: Pre-expanders, molding presses, pre-puff storage silos, and finished goods storage
Parameter: VOC Emissions
Limit: The total emissions of volatile organic compounds (VOC) shall not exceed 24~~7~~ **5** tons per twelve (12) consecutive month period.

…..

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

~~Part 70 Quarterly Report~~

~~Source Name: Createc Corporation~~
~~Source Address: 1619 N. Meridian St., Portland, Indiana 47371~~
~~Part 70 Permit No.: T 075-33287-00024~~
~~Facility: Parts Washer~~
~~Parameter: Total Solvent Usage.~~
~~Limit: The total solvent usage of the parts washer shall not exceed 108 gallons per twelve (12) consecutive month period.~~

~~QUARTER : YEAR:~~

~~Month~~	~~Column 1~~	~~Column 2~~	~~Column 1 + Column 2~~
	~~This Month~~	~~Previous 11 Months~~	~~12 Month Total~~
~~Month 1~~			
~~Month 2~~			
~~Month 3~~			

~~☐ No deviation occurred in this quarter.~~

~~□ Deviation/s occurred in this quarter.~~
~~Deviation has been reported on:~~

~~Submitted by:~~ _____
~~Title / Position:~~ _____
~~Signature:~~ _____
~~Date:~~ _____
~~Phone:~~ _____

Comment 7:

The company preferred the following terms:

"Worst" to " Highest", for the single HAP
"Single" to "Individual" for the single HAP
"Polystyrene beads compound" to "EPS and Arcel beads compound"

Response to Comment 7:

The following terms have been revised as "Worst" to "Highest", and "Polystyrene beads compound" to "EPS and Arcel beads compound", but the "Single HAP" will remain as this word (Single) is used in 326 IAC 2.

D.1.3 Hazardous Air Pollutants (HAPs)

In order to render the requirements of HAPs major source not applicable, the Permittee shall comply with the following:

(a) The ~~worst~~ highest single HAP emissions from the following operations:
(1) Hirsch 6000 pre-expanders,

D.1.7 Record Keeping Requirements

(a) To document the compliance status with Conditions D.1.1, D.1.2, and D.1.5, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emissions limits established in Conditions D.1.1 and D.1.2. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

…

(1) VOC content of ~~polystyrene~~ **EPS and Arcel** beads ~~compound~~ used during the month;

(2) The total amount (pounds) of ~~polystyrene~~ **EPS and Arcel** beads ~~compound~~ used each month;

(b) To document the compliance status with Conditions D.1.3, and D.1.6, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the HAPs emissions limits established in Condition D.1.3. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) HAPs content of ~~polystyrene~~ **EPS and Arcel** beads ~~compound~~ used during the month;

(2) The total amount (pounds) of ~~polystyrene~~ **EPS and Arcel** beads ~~compound~~ used each month;

....

(4) The total amount (tons) of the ~~worst~~ **highest** single and total HAPs emitted each month for the manufacturing lines; and

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

Part 70 Quarterly Report

Source Name:	Createc Corporation
Source Address:	1619 N. Meridian St., Portland, Indiana 47371
Part 70 Permit No.:	T 075-33287-00024
Facility:	Pre-expanders, molding presses, and pre-puff storage silos
Parameter:	~~Worst~~ **Highest** Single HAP Emissions
Limit:	The single HAP shall be less than 9.0 tons per twelve (12) consecutive month period.

Comment 8:

The company also requested to revise record of VOC and HAP since there is no "Certificate of analysis" of HAPs, add the weight average to VOC content, and change "the molding compound used" to "lots of material processed" in Condition D.1.7.

Response to Comment 8:

The weight average has been added for clarification and "certificate of analysis" is not required not required for HAPs; therefore the Condition D1.7 has been revised as follows:

D.1.7 Record Keeping Requirements

(a) To document the compliance status with Conditions D.1.1, D.1.2, and D.1.5, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emissions limits established in Conditions D.1.1 and D.1.2. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) **Weight average** VOC content of …..

….

(3) Records shall include:

(A) Material supplier "certificates of analysis" depicting the VOC content of each ~~molding compound used~~**lot of material processed** during the month;

(B) Pre-expander production logs depicting the quantity (pounds) and date of each batch of material processed during the month;

(b) To document the compliance status with Conditions D.1.3, and D.1.6, the Permittee ……

(3) Records shall include:

~~(A) Material supplier "certificates of analysis" depicting the HAPs content of each molding compound used during the month;~~

~~(B)~~ Pre-expander production logs depicting the quantity (pounds) and date of each batch of material processed during the month~~;~~**.**

Comment 9:

The company requested to delete the highest single HAP form, with reliance instead on monthly and 12-month rolling HAP reports generated from plant's Production and Emission Tracking Program.

Response to Comment 9:

The company can submit a report using the attached report form or any equivalent form. Therefore, no changes were made as a result of this comment.

Additional Changes

IDEM, OAQ has decided to make additional revisions to the permit as described below, with deleted language as ~~strikeouts~~ and new language **bolded**.

(a) The word "status" has been added to Section D.2 - Record Keeping Requirements. The Permittee has the obligation to document the compliance status. The wording has been revised to properly reflect this in Condition D.2.7(b).

.....
Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.7 Record Keeping Requirements

.....

(b) To document **the** compliance **status** with Condition D.2.6, the Permittee shall maintain records of visible emission notations of the boilers B1 and B2 stack exhaust once per day when burning oil. The Permittee shall include in its 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).

.....

IDEM Contact

(a) Questions regarding this proposed Part 70 Operating Permit Renewal can be directed to Ms. Renee Traivaranon 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) 324-5615 or toll free at 1-800-451-6027 extension 4-5615.

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

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Appendix A.: Emissions Summary

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: November 1, 2013

Process Description	Unlimited/Uncontrolled Potential to Emit (tons/year)										
	Criteria Pollutants							Greenhouse Gas Pollutants	Hazardous Air Pollutants		
	PM	PM10	PM2.5	SO2	NOx	VOC*	CO	CO_2e	Total HAPs	Worst Case HAP	
Hirsch 6000 pre-expanders	-	-	-	-	-	359.16	-	-	16.8	11.0	Ethyl Benzene
Kurtz 813 molding presses	-	-	-	-	-	85.41	-	-	8.0	5.5	Ethyl Benzene
Kurtz 68 molding presses	-	-	-	-	-		-	-	5.6	3.9	Ethyl Benzene
Kurtz 1014 molding presses	-	-	-	-	-		-	-	4.0	2.8	Ethyl Benzene
Kurtz 13517 molding presses	-	-	-	-	-		-	-	14.4	9.9	Ethyl Benzene
Pre-puff storage silos	-	-	-	-	-	201.48	-	-	5.6	3.7	Ethyl Benzene
Finished goods storage	-	-	-	-	-	136.98	-	-	-	-	-
Gas Boilers with backup fuel oil (B1-B2)	1.45	1.72	1.54	50.95	14.45	0.25	3.61	15592.35	0.2	negl	-
Combustion (B3+heaters))	0.26	1.06	1.06	0.08	13.93	0.77	11.70	16823.06	0.3	negl	-
Hot melt Adhesives	-	-	-	-	-	0.90	-	-	-	-	-
Gasoline engines	0.01	0.01	0.01	0.01	0.12	0.01	0.03	4.62	negl	negl	-
Thermal Cutting	0.16	0.16	0.16	-	-	-	-	-	-	-	-
Scrap grinders	0.08	0.08	0.08	-	-	-	-	-	-	-	-
Degreaser	-	-	-	-	-	1.52	-	-	-	-	-
Paved/unpaved road	3.40	0.87	0.09	-	-	-	-	-	-	-	-
Totals Unlimited Emissions	**5.36**	**3.89**	**2.93**	**51.04**	**28.51**	**786.48**	**15.35**	**32,420.02**	**>25**	**>10**	Ethyl Benzene

negl = negligible

Note: * PTE VOC of the following units are from the worst case of EPS VOC or ARCEL VOC

Pre-expansion
Pre-puff Storage
Molding
Finished Goods Storage

Appendix A.: Emissions Summary

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: November 1, 2013

Process Description	Limited Potential Emissions (tons/year)										
	Criteria Pollutants							Greenhouse Gas Pollutants	Hazardous Air Pollutants		
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	CO_2e	Total HAPs	Worst Case HAP	
Hirsch 6000 pre-expanders	-	-	-	-	-	245.0	-	-	24.00	9.00	-
Kurtz 813 molding presses	-	-	-	-	-		-	-			
Kurtz 68 molding presses	-	-	-	-	-		-	-			
Kurtz 1014 molding presses	-	-	-	-	-		-	-			
Kurtz 13517 molding presses	-	-	-	-	-		-	-			
Pre-puff storage silos	-	-	-	-	-		-	-			
Finished goods storage	-	-	-	-	-		-	-	-	-	-
Gas Boilers with backup fuel oil (B1-B2)	1.45	1.72	1.54	51	14	0.25	3.61	15,592	0.19	negl	-
Combustion (B3+heaters))	0.26	1.06	1.06	0.1	14	0.77	12	16,823	0	negl	-
Hot melt Adhesives	-	-	-	-	-	0.90	-	-	-	-	-
Gasoline engines	0.01	0.01	0.01	0	0	0.01	0	5	negl	negl	-
Thermal Cutting	0.16	0.16	0.16	-	-	-	-	-	-	-	-
Scrap grinders	0.08	0.08	0.08	-	-	-	-	-	-	-	-
Degreaser	-	-	-	-	-	1.52	-	-	-	-	-
Paved/unpaved road	1.70	0.43	0.04	-	-	-	-	-	-	-	-
Totals Limited/Controlled Emissions	**3.66**	**3.46**	**2.89**	**51.04**	**28.51**	**248.44**	**15.35**	**32,420.02**	**>25**	**>10**	-

negl = negligible

Appendix A: Emissions Calculations
VOC EMISSION FROM EPS MATERIAL PROCESSING

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: November 1, 2013

	Equipment Type:	Molding	Molding	Molding	Molding	Pre-puff Storage	Pre-puff Storage	Pre-expansion	Goods Storage
	Make/Model:	Kurtz 13517	Kurtz 1014	Kurtz 813	Kurtz 68	N/A	N/A	Hirsch 6000	NA
	Number of Units:	6	2	5	4	10	20	2	1
	Maximum Raw Bead VOC Content	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
	*VOC Loss Rate (%)	13.0%	13.0%	13.0%	13.0%	19%	19%	25%	42%
One Unit	Maximum Capacity (lbs/hr)	300	250	200	175	1200.00	2600.00	1,250	1,250
One Unit	Potential to Emit VOC (lbs/hr)	2.34	1.95	1.56	1.37	13.68	29.64	18.75	31.28
One Unit	**Potential to Emit VOC (tons/yr)**	**10.25**	**8.54**	**6.83**	**5.98**	59.92	129.82	**82.13**	**136.98**
All Units	Potential to Emit VOC (lbs/hr)	14.04	3.90	7.80	5.46	262.44	568.63	37.50	31.28
All Units	**Potential to Emit VOC (tons/yr)**	**61.50**	**17.08**	**34.16**	**23.91**	1,149.50	2,490.58	**164.25**	**136.98**
****Total Potential to Emit VOC (tons/yr)**		**85.41**				**124.83**			

Methodology

PTE for each unit:

PTE VOC (lbs/hr) for each process for each unit = Maximum ESP processed (lbs/hr) x VOC Content Wt. (%) x VOC loss rate of that process (%)

PTE VOC (tons/yr) = PTE VOC (lbs/hr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)

PTE for All Units:
Total PTE VOC (tons/yr) = PTE VOC (tons/yr) for each unit * numbers of the units

*Note: The following VOC loss rate (%) of each process was provided by the source. The source indicated that they were derived from sampling and analysis information.

Pre-expansion	25%	
Pre-puff Storage	19%	
Molding	13%	
Finished Goods Storage	41.7%	
Total	98.7%	(this means that 1.3% is not emitted)

**Note: The Molding and Pre-puff storage throughput is restricted by the pre-expansion, therefore, the PTE VOC was calculated using pre-expansion maximum capacity.

Appendix A: Emissions Calculations
VOC EMISSION FROM ARCEL MATERIAL PROCESSING

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: November 1, 2013

	Equipment Type:	Molding	Molding	Molding	Molding	Pre-puff Storage	Pre-puff Storage	Pre-expansion	Goods Storage
	Make/Model:	Kurtz 13517	Kurtz 1014	Kurtz 813	Kurtz 68	N/A	N/A	Hirsch 6000	NA
	Number of Units:	6	2	5	4	10	20	2	1
	Maximum Raw Bead VOC Content	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
	*VOC loss rate (%)	5.0%	5.0%	5.0%	5.0%	23.0%	23.0%	41.0%	29.7%
One Unit	Maximum Capacity (lbs/hr)	240	200	160	140	1,200	2,600	800	800
	Potential to Emit VOC (lbs/hr)	1.50	1.25	1.00	0.88	34.50	74.75	41.00	29.70
	Potential to Emit VOC (tons/yr)	**6.6**	**5.5**	**4.4**	**3.8**	151.11	327.41	**179.6**	**130.1**
All Units	Potential to Emit VOC (lbs/hr)	9	3	5	4	345.00	1,495.00	82	30
	Potential to Emit VOC (tons/yr)	**39.4**	**11.0**	**21.9**	**15.3**	1,511.10	6,548.10	**359.2**	**130.1**
	****Total Potential to Emit VOC (tons/yr)**	**43.80**				**201.48**			

Methodology

PTE for each unit:
PTE VOC (lbs/hr) for each process for each unit = Maximum ESP processed (lbs/hr) x VOC Content Wt. (%) x VOC loss rate of that process (%)
PTE VOC (tons/yr) = PTE VOC (lbs/hr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)

PTE for All Units:

Total PTE VOC (tons/yr) = PTE VOC (tons/yr) for each unit * numbers of the units

*Note: The following VOC loss rate (%) of each process was provided by the source. The source indicated that they were derived from sampling and analysis information.

Pre-expansion	41.0%	
Pre-puff Storage	23%	
Molding	5.0%	
Finished Goods Storage	30%	
Total	98.7%	(this means that 1.3% is not emitted)

**Note: The Molding and Pre-puff storage throughput is restricted by the pre-expansion, therefore, the PTE VOC was calculated using pre-expansion maximum capacity.

Appendix A: Emissions Calculations
HAPs Emissions from Molding 13517

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: November 1, 2013

WORST-CASE HAPS PER MATERIAL

		EPS Materials		Arcel Materials		Potential to Emit For One Molding Press		
HAP	CAS	Conc.	Loss rate	Conc.	Loss rate			
Compounds:	Number	ppmw	% by wt.	ppmw	% by wt.	(Lbs/hr)	(Lbs/yr)	(tons/yr)
Acetophenone	98-86-2	1,490	16	800	70	0.060	529.8	0.265
Benzene	71-43-2	150	83	25	70	0.017	147.2	0.074
Cumene	98-82-8	115	23	50	70	0.004	33.1	0.017
Ethyl Benzene	100-41-4	500	33	5,000	70	0.378	3,311.3	1.656
Styrene monomer	100-42-5	800	69	50	70	0.075	652.8	0.326
Xylenes	1330-20-7	150	67	100	70	0.014	118.9	0.059
					TOTALS HAPs:	**0.547**	**4,793**	**2.397**

Worst case PTE of single HAP for 6 units **9.9**
Worst case PTE of total HAPs for 6 units **14.4**

	EPS throughput		Arcel throughput	
Period	**per press**		**per press**	
Unlimited Annual:	2,628,000	lbs	2,102,400	lbs
Hourly maximum:	300	lbs	240	lbs

Methodology
PTE for each unit:

PTE Single HAP (lbs/hr) (Worst case of ESP or ARCEL) = Maximum materials processed (lbs/hr) x HAP Concentration (ppm) x HAP loss rate (%) x Loss attributed to Molding (%)
PTE Single HAP (tons/yr) (Worst case of ESP or ARCEL) = PTE HAP (lbs/hr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)
PTE Total HAPs (lbs/hr) = Combination of PTE Single HAP (lbs/hr) for each unit
PTE Total HAP (tons/yr) = Combined of PTE Single HAP (lbs/yr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)

PTE for All molding presses:
PTE Single (Worst case) (tons/yr) for 6 units = PTE Single(Worst case) (tons/yr) for each unit * 6 units
PTE Total HAPs (tons/yr) for 6 units = PTE Total HAPs (tons/yr) for each unit * 6 units

Process phase losses, as a percent of total loss, are:
Pre-Expansion (PX) loss = 45%
Pre-Puff Storage (PPS) loss = 10%,
Molding Press (MP) loss = 45%
Total = 100%

PPMW= Parts per million (1/1,000,000) (Wt./Wt.)
% by Wt. = Weight Percent (1/100) (Wt./Wt.)

Appendix A: Emissions Calculations

HAPs Emissions from Molding 1014
Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: November 1, 2013

WORST-CASE HAPs PER MATERIAL

		EPS Materials		Arcel Materials		Potential to Emit		
HAPs	CAS	Conc.	Loss rate	Conc.	Loss rate	For One Molding Press		
Compounds:	Number	ppmw	% by wt.	ppmw	% by wt.	(Lbs/hr)	(Lbs/yr)	(tons/yr)
Acetophenone	98-86-2	1,490	16	800	70	0.050	441.5	0.221
Benzene	71-43-2	150	83	25	70	0.014	122.7	0.061
Cumene	98-82-8	115	23	50	70	0.003	27.6	0.014
Ethyl Benzene	100-41-4	500	33	5,000	70	0.315	2,759.4	1.380
Styrene monomer	100-42-5	800	69	50	70	0.062	544.0	0.272
Xylenes	1330-20-7	150	67	100	70	0.011	99.0	0.050
			TOTALS:			**0.456**	**3,994**	**1.997**
			Worst case PTE of single HAP for 2 units					**2.8**
			Worst case PTE of total HAPs for 2 units					**4.0**

	EPS throughput		Arcel throughput	
Period	**per press**		**per press**	
Unlimited Annual:	2,190,000	lbs	1,752,000	lbs
Hourly maximum:	250	lbs	200	lbs

Methodology

PTE for each unit:

PTE Single HAP (lbs/hr) (Worst case of ESP or ARCEL) = Maximum materials processed (lbs/hr) x HAP Concentration (ppm) x HAP loss rate (%) x Loss attributed to Molding (%)
PTE Single HAP (tons/yr) (Worst case of ESP or ARCEL) = PTE HAP (lbs/hr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)
PTE Total HAPs (lbs/hr) = Combination of PTE Single HAP (lbs/hr) for each unit
PTE Total HAP (tons/yr) = Combined of PTE Single HAP (lbs/yr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)

PTE for All molding presses:
PTE Single (Worst case) (tons/yr) for 2 units = PTE Single(Worst case) (tons/yr) for each unit * 2 units
PTE Total HAPs (tons/yr) for 2 units = PTE Total HAPs (tons/yr) for each unit * 2 units

Process phase losses, as a percent of total loss, are:
Pre-Expansion (PX) loss = 45%
Pre-Puff Storage (PPS) loss = 10%,
Molding Press (MP) loss = 45%
Total = 100%

PPMW= Parts per million (1/1,000,000) (Wt./Wt.)
% by Wt. = Weight Percent (1/100) (Wt./Wt.)

Appendix A: Emissions Calculations
HAPs Emissions from Molding 813

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: November 1, 2013

WORST-CASE HAPS PER MATERIAL

		EPS Materials		Arcel Materials		Potential to Emit For One Molding Press		
HAP Compounds:	CAS Number	Conc. ppmw	Loss rate % by wt.	Conc. ppmw	Loss rate % by wt.	(Lbs/hr)	(Lbs/yr)	(tons/yr)
Acetophenone	98-86-2	1,490	16	800	70	0.040	353.2	0.177
Benzene	71-43-2	150	83	25	70	0.011	98.2	0.049
Cumene	98-82-8	115	23	50	70	0.003	22.1	0.011
Ethyl Benzene	100-41-4	500	33	5,000	70	0.252	2,207.5	1.104
Styrene monomer	100-42-5	800	69	50	70	0.050	435.2	0.218
Xylenes	1330-20-7	150	67	100	70	0.009	79.2	0.040
			TOTALS:			**0.365**	**3,195**	**1.598**
			Worst case PTE of single HAP for 5 units					**5.5**
			Worst case PTE of total HAPs for 5 units					**8.0**

	EPS throughput		Arcel throughput	
Period	**per press**		**per press**	
Unlimited Annual:	1,752,000	lbs	1,401,600	lbs
Hourly maximum:	200	lbs	160	lbs

Methodology

PTE for each unit:
PTE Single HAP (lbs/hr) (Worst case of ESP or ARCEL) = Maximum materials processed (lbs/hr) x HAP Concentration (ppm) x HAP loss rate (%) x Loss attributed to Molding (%)
PTE Single HAP (tons/yr) (Worst case of ESP or ARCEL) = PTE HAP (lbs/hr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)
PTE Total HAPs (lbs/hr) = Combination of PTE Single HAP (lbs/hr) for each unit
PTE Total HAP (tons/yr) = Combined of PTE Single HAP (lbs/yr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)

PTE for All molding presses:
PTE Single (Worst case) (tons/yr) for 5 units = PTE Single(Worst case) (tons/yr) for each unit * 5 units
PTE Total HAPs (tons/yr) for 5 units = PTE Total HAPs (tons/yr) for each unit * 5 units

Process phase losses, as a percent of total loss, are:
Pre-Expansion (PX) loss = 45%
Pre-Puff Storage (PPS) loss = 10%,
Molding Press (MP) loss = 45%
Total = 100%

PPMW= Parts per million (1/1,000,000) (Wt./Wt.)
% by Wt. = Weight Percent (1/100) (Wt./Wt.)

Appendix A: Emissions Calculations
HAPs Emissions from Molding 68

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: November 1, 2013

WORST-CASE HAPS PER MATERIAL

		EPS Materials		Arcel Materials		Potential to Emit		
HAP	CAS	Conc.	Loss rate	Conc.	Loss rate	For One Molding Press		
Compounds:	Number	ppmw	% by wt.	ppmw	% by wt.	(Lbs/hr)	(Lbs/yr)	(tons/yr)
Acetophenone	98-86-2	1,490	16	800	70	0.035	309.1	0.155
Benzene	71-43-2	150	83	25	70	0.010	85.9	0.043
Cumene	98-82-8	115	23	50	70	0.002	19.3	0.010
Ethyl Benzene	100-41-4	500	33	5,000	70	0.221	1,931.6	0.966
Styrene monomer	100-42-5	800	69	50	70	0.043	380.8	0.190
Xylenes	1330-20-7	150	67	100	70	0.008	69.3	0.035
			TOTALS:			**0.319**	**2,796**	**1.398**
			Worst case PTE of single HAP for 4 units					**3.9**
			Worst case PTE of total HAPs for 4 units					**5.6**

	EPS throughput		Arcel throughput	
Period	**per press**		**per press**	
Unlimited Annual:	1,533,000	lbs	1,226,400	lbs
Hourly maximum:	175	lbs	140	lbs

Methodology

PTE for each unit:
PTE Single HAP (lbs/hr) (Worst case of ESP or ARCEL) = Maximum materials processed (lbs/hr) x HAP Concentration (ppm) x HAP loss rate (%) x Loss attributed to Molding (%)
PTE Single HAP (tons/yr) (Worst case of ESP or ARCEL) = PTE HAP (lbs/hr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)
PTE Total HAPs (lbs/hr) = Combination of PTE Single HAP (lbs/hr) for each unit
PTE Total HAP (tons/yr) = Combined of PTE Single HAP (lbs/yr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)

PTE for All molding presses:
PTE Single (Worst case) (tons/yr) for 4 units = PTE Single(Worst case) (tons/yr) for each unit * 4 units
PTE Total HAPs (tons/yr) for 4 units = PTE Total HAPs (tons/yr) for each unit * 4 units

Process phase losses, as a percent of total loss, are:
Pre-Expansion (PX) loss = 45%
Pre-Puff Storage (PPS) loss = 10%,
Molding Press (MP) loss = 45%
Total = 100%

PPMW= Parts per million (1/1,000,000) (Wt./Wt.)
% by Wt. = Weight Percent (1/100) (Wt./Wt.)

Appendix A: Emissions Calculations
HAPs Emissions from Prepuff Storage Silos

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: November 1, 2013

WORST-CASE HAPS PER MATERIAL

		EPS Materials		Arcel Materials		Potential to Emit	
HAP	CAS	Conc.	Loss rate	Conc.	Loss rate	For Prepuff Storage Bags	
Compounds:	Number	ppmw	% by wt.	ppmw	% by wt.	(Lbs/yr)	(tons/yr)
Acetophenone	98-86-2	1,490	16	800	70	392.448	0.2
Benzene	71-43-2	150	83	25	70	136.328	0.1
Cumene	98-82-8	115	23	50	70	28.963	0.0
Ethyl Benzene	100-41-4	500	33	5,000	70	2452.800	1.2
Styrene monomer	100-42-5	800	69	50	70	604.440	0.3
Xylenes	1330-20-7	150	67	100	70	110.048	0.1
		Worst case PTE of single HAP					**3.68**
		Worst case PTE of total HAPs					**5.59**

Methodology

	EPS throughput		Arcel throughput	
Period	Prepuff Storage		Prepuff Storage	
Unlimited Annual:	10,950,000	lbs	7,008,000	lbs
Hourly maximum:	1,250	lbs	800	lbs

Note: Per source, the above throughput is restricted by pre-expanders, therefore, annual amount is from pre expanders capacities

Methodology

PTE for each unit:

PTE Single HAP (lbs/yr) (Worst case of ESP or ARCEL) = Maximum materials processed (lbs/yr) x HAP Concentration (ppm) x HAP loss rate (%) x Loss attributed to Pre-Puff Storage (%)
PTE Single HAP (tons/yr) (Worst case of ESP or ARCEL) = PTE HAP (yr/hr) /2000 (ton/lbs)

PTE Total HAP (tons/yr) = Combined of PTE Single HAP (tons/yr)

PTE for All Pre-puff Storage Bags:
PTE Single (Worst case) (tons/yr) = PTE Single(Worst case) (tons/yr) * 3
(Note: Since the capacities are restricted by 3 pre-explanders)
PTE Total HAPs (tons/yr) = PTE Total HAPs (tons/yr) * 3 units

Process phase losses, as a percent of total loss, are:
Pre-Expansion (PX) loss = 45%
Pre-Puff Storage (PPS) loss = 10%,
Molding Press (MP) loss = 45%
Total = 100%

PPMW= Parts per million (1/1,000,000) (Wt./Wt.)
% by Wt. = Weight Percent (1/100) (Wt./Wt.)

Appendix A: Emissions Calculations
HAPs Emissions from pre-expander

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: November 1, 2013

WORST-CASE HAPS PER MATERIAL

		EPS Materials		Arcel Materials		Potential to Emit		
HAP	CAS	Conc.	Loss rate	Conc.	Loss rate	For One Pre-expander		
Compounds:	Number	ppmw	% by wt.	ppmw	% by wt.	(Lbs/hr)	(Lbs/yr)	(tons/yr)
Acetophenone	98-86-2	1,490	16	800	70	0.202	1,766.0	0.883
Benzene	71-43-2	150	83	25	70	0.070	613.5	0.307
Cumene	98-82-8	115	23	50	70	0.015	130.3	0.065
Ethyl Benzene	100-41-4	500	33	5,000	70	1.260	11,037.6	5.519
Styrene monomer	100-42-5	800	69	50	70	0.311	2,720.0	1.360
Xylenes	1330-20-7	150	67	100	70	0.057	495.2	0.248
			TOTALS:			**1.914**	**16,763**	**8.381**
			Worst case PTE of single HAP for 2 units					**11.04**
			Worst case PTE of total HAPs for 2 units					**16.8**

Methodology

	EPS throughput		Arcel throughput	
Period	**per expander**		**per expander**	
Unlimited Annual:	10,950,000	lbs	7,008,000	lbs
Hourly maximum:	1,250	lbs	800	lbs

Methodology

PTE for each unit:

PTE Single HAP (lbs/hr) (Worst case of ESP or ARCEL) = Maximum materials processed (lbs/hr) x HAP Concentration (ppm) x HAP loss rate (%) x Loss attributed to Pre-expander (%)

PTE Single HAP (tons/yr) (Worst case of ESP or ARCEL) = PTE HAP (lbs/hr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)

PTE Total HAPs (lbs/hr) = Combination of PTE Single HAP (lbs/hr) for each unit

PTE Total HAP (tons/yr) = Combined of PTE Single HAP (lbs/yr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)

PTE for All Pre-expanders:

PTE Single (Worst case) (tons/yr) for 2 units = PTE Single(Worst case) (tons/yr) for each unit * 2 units

PTE Total HAPs (tons/yr) for 2 units = PTE Total HAPs (tons/yr) for each unit * 2 units

Process phase losses, as a percent of total loss, are:

Pre-Expansion (PX) loss = 45%
Pre-Puff Storage (PPS) loss = 10%,
Molding Press (MP) loss = 45%
Total = 100%

PPMW= Parts per million (1/1,000,000) (Wt./Wt.)
% by Wt. = Weight Percent (1/100) (Wt./Wt.)

Appendix A: Emissions Calculations
Boilers
#2 Fuel Oil

Company Name: **Createc Corporation**
Address City IN Zip: **1619 North Meridian, Portland, Indiana 47371**
Operating Permit Renewal Number: **T075-33287-00024**
Plant I.D. Number: **075-00024**
Reviewer: **Renee Traivaranon**
Date: **November 1, 2013**

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur
23.1	1445.4	0.5

	Pollutant						
	PM*	PM10	direct PM2.5	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	2.0	2.4	2.1	70.5 *(141.0S)*	20.0	0.34	5.0
Potential Emission in tons/yr	1.45	1.7	1.5	51.0	14.5	0.2	3.6

1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu

Emission Factors are from AP 41, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-03-005-01/02/03) Supplement E 9/98 (see erata file)

*PM emission factor is filterable PM only. Condensable PM emission factor is 1.3 lb/kgal.
Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton

HAPS Calculations

	HAPs - Metals					**Total - Organics**
	Arsenic	Beryllium	Cadmium	Chromium	Lead	
Emission Factor in lb/mmBtu	4.0E-06	3.0E-06	3.0E-06	3.0E-06	9.0E-06	
Potential Emission in tons/yr	4.05E-04	3.04E-04	3.04E-04	3.04E-04	9.11E-04	2.23E-03

	HAPs - Metals (continued)					
	Mercury	Manganese	Nickel	Selenium		
Emission Factor in lb/mmBtu	3.0E-06	6.0E-06	3.0E-06	1.5E-05		
Potential Emission in tons/yr	3.04E-04	6.07E-04	3.04E-04	1.52E-03		2.73E-03
					Total HAPs	**4.958E-03**
					Worst HAP	**1.518E-03**

Methodology

No data was available in AP-41 for organic HAPs.
Potential Emissions (tons/year) = Throughput (mmBtu/hr)*Emission Factor (lb/mmBtu)*8,760 hrs/yr / 2,000 lb/ton

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/kgal	21,490	0.216	0.26
Potential Emission in tons/yr	15,531	0.2	0.2
Summed Potential Emissions in tons/yr	15,531		
CO2e Total in tons/yr	15,592		

Methodology
The CO2 Emission Factor for #1 Fuel Oil is 21490. The CO2 Emission Factor for #2 Fuel Oil is 22300.
Emission Factors are from AP 41, Tables 1.3-3, 1.3-8, and 1.3-12 (SCC 1-03-005-01/02/03) Supplement E 9/99 (see erata file)
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/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).

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

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: November 1, 2013

Heat Input Capacity MMBtu/hr	HHV mmBtu/mmscf	Potential Throughput MMCF/yr
23.1	1020	198.4

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.2	0.8	0.8	0.1	9.9	0.5	8.3

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

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

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	2.083E-04	1.190E-04	7.440E-03	1.785E-01	3.373E-04	**1.867E-01**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	4.960E-05	1.091E-04	1.389E-04	3.769E-05	2.083E-04	**5.436E-04**
					Total HAPs	**1.872E-01**
					Worst HAP	**1.785E-01**

Methodology is the same as above.

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

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	11,903	0.2	0.2
Summed Potential Emissions in tons/yr	11,904		
CO2e Total in tons/yr	11,976		

Methodology
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors 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.
Global 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).

Appendix A: Emissions Calculations
Natural Gas Combustion Only

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: November 1, 2013

Heat Input Capacity MMBtu/hr	HHV mmBtu/mmscf	Potential Throughput MMCF/yr
32.5	1020	278.7

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.3	1.1	1.1	0.1	13.9	0.8	11.7

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

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

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	2.926E-04	1.672E-04	1.045E-02	2.508E-01	4.738E-04	**2.622E-01**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	6.967E-05	1.533E-04	1.951E-04	5.295E-05	2.926E-04	**7.636E-04**
					Total HAPs	**2.630E-01**
					Worst HAP	**2.508E-01**

Methodology is the same as above.

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

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	16,721	0.3	0.3
Summed Potential Emissions in tons/yr	16,722		
CO2e Total in tons/yr	16,823		

Methodology
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors 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.
Global 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).

Appendix A: Emission Calculations
Gasoline Engines

Company Name: **Createc Corporation**
Address City IN Zip: **1619 North Meridian, Portland, Indiana 47371**
Operating Permit Renewal Number: **T075-33287-00024**
Plant I.D. Number: **075-00024**
Reviewer: **Renee Traivaranon**
Date: **November 1, 2013**

B. Emissions calculated based on output rating (hp)

Output Horsepower Rating (hp)	16.0
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	8,000

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Potential Emission in tons/yr	0.01	0.01	0.01	0.01	0.12	0.01	0.03

*PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
Potential Emission in tons/yr	2.61E-05	1.15E-05	7.98E-06	1.09E-06	3.30E-05	2.15E-05	2.59E-06	4.70E-06

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)
****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Potential Emission of Total HAPs (tons/yr)	**1.08E-04**

Green House Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/hp-hr	########	4.63E-05	9.26E-06
Potential Emission in tons/yr	########	1.85E-04	3.70E-05

Summed Potential Emissions in tons/yr	**4.60E+00**
CO2e Total in tons/yr	**4.62E+00**

Methodology
Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2
CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [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).

Appendix A: Emission Calculations
Adhesive

Company Name: **Createc Corporation**
Address City IN Zip: **1619 North Meridian, Portland, Indiana 47371**
Operating Permit Renewal Number: **T075-33287-00024**
Plant I.D. Number: **075-00024**
Reviewer: **Renee Traivaranon**
Date: **November 1, 2013**

Potential Emissions:

Material (as applied)	Process	Gal of Mat (gal/day)	VOC Content % solids (by volume)	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year
HM-2707	Hot melt adhesive	16.430	30.00%	0.21	4.93	0.90
				0.21	**4.93**	**0.90**

Methodology:
Potential VOC Pounds per Hour = Density (lb/gal) * Gal of Material (gal/day) / 24 hrs/day
Potential VOC Pounds per Day = Density (lb/gal) * Gal of Material (gal/day)
Potential VOC Tons per Year = Density (lb/gal) * Gal of Material (gal/day) * (365 days/yr) * (1 ton/2000 lbs)

Note: The above calculations are from T075-28002-00024, issued on March 9, 2009.

Appendix A: Emissions Calculations
Thermal Cutting

Company Name: **Createc Corporation**
Address City IN Zip: **1619 North Meridian, Portland, Indiana 47371**
Operating Permit Renewal Number: **T075-33287-00024**
Plant I.D. Number: **075-00024**
Reviewer: **Renee Traivaranon**
Date: **November 1, 2013**

PROCESS	Number of Stations	Max. Metal Thickness Cut (in.)	Max. Metal Cutting Rate (in./minute)	EMISSION FACTORS (lb pollutant/1,000 inches cut, 1" thick)**				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
FLAME CUTTING				PM = PM10=PM2.5	Mn	Ni	Cr	PM = PM10=PM2.5	Mn	Ni	Cr	
Oxymethane	1	1.5	5	0.0815	0.0002		0.0002	0.037	0.000	0.000	0.000	0.000
EMISSION TOTALS												
Potential Emissions lbs/hr								0.04				0.00
Potential Emissions lbs/day								0.88				0.00
								0.16				0.00

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

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

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

Plasma cutting emissions, lb/hr: (# of stations)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 8 mm thick)
Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" thick)
Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)
Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day
Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lbs

Appendix A: Emission Calculations
Grinders

Company Name: **Createc Corporation**
Address City IN Zip: **1619 North Meridian, Portland, Indiana 47371**
Operating Permit Renewal Number: **T075-33287-00024**
Plant I.D. Number: **075-00024**
Reviewer: **Renee Traivaranon**
Date: **November 1, 2013**

Insignificant Activity: Scrap Grinder

Process	% of bead product used as Scrap	Emission** Factor (lb/ton)	Max. Process Weight Rate* (lb/hr)	Control Efficiency (%)	PTE Before Control PM (lb/hr)	PTE Before Control PM/PM10/PM2.5 (ton/yr)	PTE After Control PM/PM10/PM2.5 (ton/yr)
Scrap Grinding	3.00%	1.00	1210.00	99.00%	0.018	0.079	0.00079

Potential PM Emissions (ton/hr) = Max. Process Rate (lb/hr) x (1 ton/ 2000 lb) x (% Scrap) x Emission Factor (lb/ton) * 4.38 (ton/yr / lb/hr)

Note: Above information is form permit No. 075-28002-00024, issued on March 9, 2009.

Appendix A: Emissions Calculations

Parts Washer

Company Name: **Createc Corporation**
Address City IN Zip: **1619 North Meridian, Portland, Indiana 47371**
Part 70 Renewal No.: **T075-33287-00024**
Reviewer: **Renee Traivaranon**
Date: **November 1, 2013**

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Gal of Mat. (gal/yr)	Potential VOC tons per year
Degreaser							
Mineral Spirits	6.70	100.0%	0.0%	100.0%	0.0%	453.60	1.52

METHODOLOGY

Potential VOC Tons per Year = Density (lbs/gal) x Weight % Organics x Gal of mat. (gal/yr) x 1 ton/2,000 lbs
Annual usage provided by source is 108 gallons per year, for 1 shift per day and 5 days per week

Appendix A: Emission Calculations
Fugitive Dust Emissions - Unpaved Roads

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: November 1, 2013

Unpaved Roads at Industrial Site
The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (11/2006).

Vehicle Information (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Vehicle (entering plant) (one-way trip)	3.0	60.0	180.0	1.0	180.0	264	0.050	9.0	3285.0
Vehicle (leaving plant) (one-way trip)	3.0	60.0	180.0	1.0	180.0	264	0.050	9.0	3285.0
		Totals	**360.0**		**360.0**			**18.0**	**6570.0**

Average Vehicle Weight Per Trip = 1.0 tons/trip
Average Miles Per Trip = 0.05 miles/trip

Unmitigated Emission Factor, Ef = k*[(s/12)^a]*[(W/3)^b] (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-1 Sand/Gravel Processing Plant)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)
W =	1.0	1.0	1.0	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [(365 - P)/365] (Equation 2 from AP-42 13.2.2)
Mitigated Emission Factor, Eext = E * [(365 - P)/365]
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	1.57	0.40	0.04	lb/mile
Mitigated Emission Factor, Eext =	1.03	0.26	0.03	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Vehicle (entering plant) (one-way trip)	2.58	0.66	0.07	1.70	0.43	0.04	0.85	0.22	0.02
Vehicle (leaving plant) (one-way trip)	2.58	0.66	0.07	1.70	0.43	0.04	0.85	0.22	0.02
Totals	**5.17**	**1.32**	**0.13**	**3.40**	**0.87**	**0.09**	**1.70**	**0.43**	**0.04**

Methodology

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

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Operating Permit Renewal

Source Background and Description

Source Name:	**Createc Corporation**
Source Location:	**1619 North Meridian, Portland, Indiana 47371**
County:	**Jay**
SIC Code:	**3086 (Plastics Foam Products)**
Permit Renewal No.:	**T075-33287-00024**
Permit Reviewer:	**Renee Traivaranon**

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Createc Corporation relating to the operation of a stationary foam packaging manufacturing plant. On June 7, 2013, Createc Corporation submitted an application to the OAQ requesting to renew its operating permit. Createc Corporation was issued its first Part 70 Operating Permit Renewal T075-28002-00024 on March 9, 2009.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

(a) Hirsch 6000 pre-expanders:

(1) One (1) Hirsch 6000 pre-expander, constructed in 2001, identified as PE2, with a capacity of 1,250 pounds per hour of EPS based beads or 800 pounds per hour of Arcel based beads, no control, exhausting to stack S-PE2.

(2) One (1) Hirsch 6000 pre-expander, identified as PE4, constructed in 2011, with a capacity of 1,250 pounds per hour of EPS based beads or 800 pounds per hour of Arcel based beads, no control, exhausting to stack S-PE4.

(3) One (1) Hirsch 6000 pre-expander, identified as PE5, constructed in 2011, with a capacity of 1,250 pounds per hour of EPS based beads or 800 pounds per hour of Arcel based beads, no control, and exhausting to stack S-PE5.

Note 1: EPS is referred to Expandable Polystyrene.

Arcel is referred to polyethylene and polystyrene blended polymer product.

Note 2: The maximum capacity of the molding presses is bottleneck by the maximum capacity of the Hirsch 6000 pre-expanders.

(b) Kurtz 813 molding presses:

(1) One (1) Kurtz 813 molding press, identified as 813-1, constructed in 2011, with a capacity of 200 pounds per hour of EPS based beads or 160 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(2) One (1) Kurtz 813 molding press, identified as 813-2, constructed in 2011, with a

capacity of 200 pounds per hour of EPS based beads or 160 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(3) One (1) Kurtz 813 molding press, identified as 813-3, constructed in 2011, with a capacity of 200 pounds per hour of EPS based beads or 160 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(4) One (1) Kurtz 813 molding press, identified as 813-4, constructed in 2011, with a capacity of 200 pounds per hour of EPS based beads or 160 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(5) One (1) Kurtz 813 molding press, identified as 813-5, constructed in 2011, with a capacity of 200 pounds per hour of EPS based beads or 160 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(c) Kurtz 68 molding presses:

(1) One (1) Kurtz 68 molding press, identified as 68-1, constructed in 2011, with a capacity of 175 pounds per hour of EPS based beads or 140 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(2) One (1) Kurtz 68 molding press, identified as 68-2, constructed in 2011, with a capacity of 175 pounds per hour of EPS based beads or 140 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(3) One (1) Kurtz 68 molding press, identified as 68-3, constructed in 2011, with a capacity of 175 pounds per hour of EPS based beads or 140 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(4) One (1) Kurtz 68 molding press, identified as 68-4, constructed in 2012, with a capacity of 175 pounds per hour of EPS based beads or 140 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(d) Kurtz 1014 molding presses:

(1) One (1) Kurtz 1014 molding press, identified as 1014-1, constructed in 2011, with a capacity of 250 pounds per hour of EPS based beads or 200 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(2) One (1) Kurtz 1014 molding press, identified as 1014-2, constructed in 2011, with a capacity of 250 pounds per hour of EPS based beads or 200 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(e) Kurtz 13517 molding presses:

(1) One (1) Kurtz 13517 molding press, identified as 13517, constructed in 2011, with a capacity of 300 pounds of EPS based beads or 240 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(2) One (1) Kurtz 13517 molding press, identified as 13517-2, constructed in 2012, with a capacity of 300 pounds of EPS based beads or 240 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(3) One (1) Kurtz 13517 molding press, identified as 13517-3, constructed in 2012, with a capacity of 300 pounds of EPS based beads or 240 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(4) One (1) Kurtz 13517 molding press, identified as 13517-4, constructed in 2012, with a capacity of 300 pounds of EPS based beads or 240 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(5) One (1) Kurtz 13517 molding press, identified as 13517-5, constructed in 2012, with a capacity of 300 pounds of EPS based beads or 240 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(6) One (1) Kurtz 13517 molding press, identified as 13517-6, constructed in 2012, with a capacity of 300 pounds of EPS based beads or 240 pounds per hour of Arcel based beads, no control, and exhausting indoors.

(f) Pre-puff storage silos:

(1) Ten (10) pre-puff storage silos, identified as PPS1 – PPS10, constructed in 2011, with a maximum storage capacity of 1200 pounds each, no control, and exhausting to a common stack PPS.

(2) Twenty (20) pre-puff storage silos, identified as PPS11 – PPS30, constructed in 2012, with a maximum storage capacity of 2600 pounds each, no control, and exhausting to common stacks S-PPS1-PPS2.

Note: The maximum capacity of the pre-puff storage silos is bottleneck by the maximum capacity of the Hirsch 6000 pre-expanders.

(g) Finished goods storage, located inside the building, no control, exhausting indoors.

(h) One (1) natural gas-fired boiler with #2 fuel oil as backup, identified as B1, rated at 10.5 million British thermal units per hour (MMBtu/hr), constructed in 1979 exhausting through one (1) stack, identified as B1.

(i) One (1) natural gas-fired boiler with #2 fuel oil as backup, identified as B2, rated at 12.6 MMBtu/hr, constructed in 1981, exhausting through one (1) stack, identified as B2.

(j) One (1) natural gas-fired boiler, identified as B3, rated at 29.3 million British thermal units per hour (MMBtu/hr), permitted in 2011, exhausting through one (1) stack, identified as S-B3.

Under 40 CFR 60, Subpart Dc, the above boiler is considered an affected facility.

Emission Units and Pollution Control Equipment Removed at the Source

The source has removed the following emission units:

(a) One (1) manufacturing line, Line 1:

Eight (8) molding machines, identified as one (1) Carcano H-90 and six (6) Carcano H-150 presses, constructed prior to 2001, and one (1) Alessio molding machine constructed in 2007, with a combined capacity of 1,220 pounds per hour of expanded polystyrene beads, exhausting to stacks F-1 through F-5;

(b) One parts washer, constructed in 2006, using mineral spirits, having a vapor pressure equal to or less than 0.7 kPa; 5 mmHG: or 0.1 psi measured at 20^0C (68 ^{0}F); the use of which does not exceed 145 gallons per 12 months.

Emission Units and Pollution Control Equipment Added at the Source

The source has also added the following Insignificant Activities:

(a) One parts washer, constructed in 2012, using mineral spirits, having a vapor pressure less than 0.7 kPa; 5 mmHG: or 0.1 psi measured at 20^0C (68 ^{0}F); the use of which does not exceed 108 gallons per 12 months. [326 IAC 8-3-2] [326 IAC 8-3-5]

Insignificant Activities

The source also consists of the following insignificant activities:

(a) Twenty-one (21) natural gas fired comfort heaters, each with a heat input capacity of 0.15 MMBtu/hr;

(b) Vessels storing lubricating oils, hydraulic oils, machining oils and machining fluids;

(c) Application of oils, greases, lubricants, or other nonvolatile materials applied as temporary protective coatings;

(d) Machining where an aqueous cutting coolant continuously floods the machining interface;

(e) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume;

(f) Water based adhesives that are less than or equal to 5% by volume of VOCs, excluding HAPs;

(g) Heat exchanger cleaning and repair;

(h) Process vessel degreasing and cleaning to prepare for internal repairs;

(i) Blow down for any of the following: sight glass; boiler; compressors; pumps; and cooling tower;

(j) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees C);

(k) A laboratory as defined in 326 IAC 2-7-1(21)(d);

(l) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu/hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 Btu/hour:

(1) Two (2) walk-behind gasoline fired vacuums each rated at 5.5 hp each;

(2) One (1) gasoline fired snow blower rated at 5.0 hp.

(m) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment;

(n) Closed loop heating and cooling systems;

(o) Any operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs;

(p) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;

(q) Conveyors as follows: enclosed systems for conveying plastics raw materials and plastic finished goods;

(r) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment;

(s) Other categories with emissions below insignificant thresholds:

(1) Polystyrene scrap grinding controlled by a filter bag vacuum system venting to the interior of the building with emissions less than 5 lbs/hr or 25 lb/day

(2) Application of hot-melt adhesive.

(t) One parts washer, constructed in 2012, using mineral spirits, having a vapor pressure less than 0.7 kPa; 5 mmHG: or 0.1 psi measured at 20^0C (68 ^{0}F); the use of which does not exceed 108 gallons per 12 months. [326 IAC 8-3-2] [326 IAC 8-3-5]

(u) Paved and unpaved roads and parking lots.

Existing Approvals

The source was issued Part 70 Operating Permit (Renewal) No. T075-28002-00024 on March 9, 2009. The source has since received the following approvals:

(a) Administrative Amendment No. 075-31923-00024, issued on June 6, 2012;

(b) Significant Permit Modification No.: 075-31869-00024, issued on August 20, 2012;

(c) Significant Source Modification No.: 075-31841-00024, issued on August 2, 2012;

(d) Interim Significant Source Modification No. 075-30372I-00024, issued on July 8, 2011.

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

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Jay 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 (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Jay County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
Jay 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 NOx 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
Jay County has been classified as attainment or unclassifiable in Indiana for all other pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, and Part 70 Permit applicability.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Unrestricted Potential Emissions	
Pollutant	Tons/year
PM	<100
PM_{10}	<100
$PM_{2.5}$	<100
SO_2	<100
VOC	>250
CO	<100
NO_x	<100
GHGs as CO_2e	<100,000
Single HAP	>10
Total HAP	>25

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

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of VOC is greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit Renewal.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of GHGs is less than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year.

(c) The potential to emit of other criteria pollutants is less than 100 tons per year, each. The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is limited to less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is limited to less than twenty-five (25) tons per year.

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, because the source met the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any new control equipment is considered federally enforceable only after issuance of this Part 70 permit renewal, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)									
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	GHGs	Total HAPs	Worst Single HAP
Hirsch 6000 pre-expanders	-	-	-	-	-	247.0	-	-	24.0	9.0
Kurtz 813 molding presses	-	-	-	-	-		-	-		
Kurtz 68 molding presses	-	-	-	-	-		-	-		
Kurtz 1014 molding presses	-	-	-	-	-		-	-		
Kurtz 13517 molding presses	-	-	-	-	-		-	-		
Pre-puff storage silos	-	-	-	-	-		-	-		
Finished goods storage	-	-	-	-	-		-	-	-	-
Gas Boilers with backup fuel oil (B1-B2)	1.45	1.72	1.54	51	14	0.25	3.61	15,592	0.19	negl
Combustion (B3+heaters))	0.26	1.06	1.06	0.1	14	0.77	12	16,823	0	negl
Adhesives	-	-	-	-	-	0.90	-	-	-	-
Gasoline engines	0.01	0.01	0.01	0	0	0.01	0	5	negl	negl
Thermal Cutting	0.16	0.16	0.16	-	-	-	-	-	-	-
Scrap grinders	0.08	0.08	0.08	-	-	-	-	-	-	-
Parts Washer	-	-	-	-	-	0.36	-	-	-	-
Paved/unpaved road	1.70	0.43	0.04	-	-	-	-	-	-	-
Total PTE of Entire Source	**3.66**	**3.46**	**2.89**	**51.04**	**28.51**	**249.28**	**15.35**	**32,420.02**	**<25**	**<10**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000 CO_2e	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000 CO_2e	NA	NA

negl. = negligible
*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
**$PM_{2.5}$ listed is direct $PM_{2.5}$.

This existing stationary source is not major for PSD because the VOC emissions are limited to less than two hundred fifty (<250) tons per year, emissions of each other regulated pollutant, excluding GHGs, are less than two hundred fifty (<250) tons per year, emissions of GHGs are less than one hundred thousand (<100,000) tons of CO_2 equivalent emissions (CO_2e) per year, and it is not in one of the twenty-eight (28) listed source categories.

In order to render 326 IAC 2-2 (PSD) not applicable:

(a) The total VOC emissions from the manufacture lines; pre-expanders, molding presses, pre-puff storage silos, and finished goods storage shall not exceed 247 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance shall be determined using the following equation:

T_{ML} = VOC emissions from EPS based beads + VOC emissions from Arcel-based beads

$T_{ML} = \sum [U_E * V_E * (L_{EE}+L_{EM}+L_{EP}+L_{ES})]+\sum[U_A * V_A * (L_{AE}+L_{AM}+L_{AP} + L_{AS})]/(2{,}000 \text{ pounds /ton})$

Where:

T_{ML} = Total VOC emissions from the manufacturing lines (tons/year)

U_E = Pounds of EPS-based beads used during the 12 month period

V_E = VOC content of EPS-based beads (6% VOC content)

L_{EE} = Pre-expansion phase emission loss rate for EPS-based bead usage (25% of VOC content of raw material)

L_{EM} = Molding phase emission loss rate for EPS-based bead usage (13% of VOC content of raw material)

L_{EP} = Pre-puff Storage phase emission loss rate for EPS-based bead usage (19% of VOC content of raw material)

L_{ES} = Finished Goods Storage phase emission loss rate for EPS-based bead usage (41.7% of VOC content of raw material)

U_A = Pounds of ARCEL-based beads used during the 12 month period

V_A = VOC content of ARCEL-based beads, (12.5% VOC content)

L_{AE} = Pre-expansion phase emission loss rate for ARCEL-based bead usage (41% of VOC content of raw material)

L_{AM}= Molding phase emission loss rate for ARCEL-based bead usage (5% of VOC content of raw material)

L_{AP} = Pre-puff Storage phase emission loss rate for ARCEL-based bead usage (23% of VOC content of raw material)

L_{AS} = Finished Goods Storage phase emission loss rate for ARCEL-based bead usage (29.7% of VOC content of raw material)

The above mentioned limits are existing limits for the source. However, the equations have been revised for clarity.

(b) The total solvent usage of the parts washer shall not exceed 108 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month, and the solvent density shall not exceed 6.7 pounds per gallon. This is equal to VOC emissions of 0.36 tons per twelve (12) consecutive month period, without considering the amount recycled.

If the Permittee wants to take credit for amount of VOC in the waste shipped offsite for recycling or disposal, the Permittee shall determine the VOC content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) VOC content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the VOC containing waste to be shipped offsite shall be analyzed within 90 days of the issuance of this permit T075-33287-00024.

(2) Certified Waste Report: The VOC reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of VOC in the waste.

(3) Minimum Assumed VOC content: The VOC content of the waste shipped offsite may be assumed to be equal to the VOC content of the material with the lowest VOC content that could be present in the waste, as determined using the as supplied" and "as applied" VOC data sheets, for each month.

The above are new limited requirements for the source.

Compliance with all above limits, combined with VOC emissions from all other emissions units at the source, shall limit the VOC emissions to less than 250 tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

This existing stationary source is not major for HAPs because the single HAP emissions are limited to less than ten (10) tons per year and a combination of HAPs emissions are limited to less than twenty-five (25) tons per year:

In order to render this source a minor source for HAPs:

(a) Any single HAP emissions from manufacturing lines, which include Hirsch 6000 pre-expanders, Kurtz 813 molding presses, Kurtz 68 molding presses, Kurtz 1014 molding presses, Kurtz 13517 molding presses, and pre-puff storage silos, shall be less than 9 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

The single HAP emissions shall be calculated by the following equations:

$$T_{Single} = T_{HSE} + T_{HSA}$$

Where:

T_{Single} = The worst single HAP emissions from the manufacturing lines

T_{HSE} = Single HAP emissions from EPS-based beads

T_{HSA} = Single HAP emissions from ARCEL- based beads

Note:

(1) If the worst single HAP emissions from EPS based beads > the worst single HAP from Arcel-based beads, then:

T_{Single} = The worst single HAP emissions from the manufacturing lines = The worst single HAP emissions from EPS based beads + the same single HAP from Arcel-based beads

(2) If the worst single HAP emissions from EPS based beads < the worst single HAP from Arcel-based beads, then:

T_{Single} = The worst single HAP emissions from the manufacturing lines = The worst single HAP emissions from Arcel based beads + the same single HAP from EPS -based beads

Single HAP emissions from EPS-based beads shall be calculated by the following equations:

$$T_{HSE} = [(U_E * H_E * R_{EE}) + (U_E * H_E * R_{EM}) + (U_E * H_E * R_{EP})] / (2{,}000 \text{ pounds /ton})$$

T_{HSE} = Single HAP emissions from EPS-based beads

U_E = Pounds of EPS-based beads used during the 12 month period

H_E = Each HAP Content of EPS-based beads
(Acetophenone =1,490 ppmw, Benzene=150 ppmw, Cumene=115 ppmw, Ethyl Benzene = 500 ppmw, Styrene monomer=800 ppmw, Xylenes =150 ppmw)

R_{EE} = Pre-expansion phase emission loss rate for EPS-based bead usage

(45% times following % rate loss by weight of HAP: Acetophenone = 16%, Benzene = 83%, Cumene = 23%, Ethyl Benzene = 33%, Styrene monomer = 69%, Xylenes = 67%)

R_{EM} = Molding phase emission loss rate for EPS-based bead usage

(45% times following %rate loss by weight of HAP: Acetophenone = 16%, Benzene = 83%, Cumene = 23%, Ethyl Benzene = 33%, Styrene monomer = 69%, Xylenes = 67%)

R_{EP} = Pre-puff Storage phase emission loss rate for EPS-based bead usage

(10% times following %rate loss by weight of HAP: Acetophenone = 16%, Benzene = 83%, Cumene = 23%, Ethyl Benzene = 33%, Styrene monomer = 69%, Xylenes = 67%)

Single HAP emissions from ARCEL- based beads shall be calculated by the following equations:

$$T_{HSA} = [(U_A * H_A * R_{AE}) + (U_A * H_A * R_{AM}) + (U_A * H_A * R_{AP})] / (2{,}000 \text{ pounds /ton})$$

Where:

T_{HSA} = Single HAP emissions from ARCEL-based beads

U_A = Pounds of ARCEL-based beads used during the 12 month period

H_A = HAP Content of ARCEL-based beads
(Acetophenone = 800 ppmw, Benzene = 25 ppmw, Cumene = 50 ppmw, Ethyl Benzene = 5,000 ppmw, Styrene monomer = 50 ppmw, Xylenes = 100 ppmw)

R_{AE} = Pre-expansion phase emission loss rate for ARCEL-based bead usage

(45% times following %rate loss by weight of HAP: Acetophenone = 70%, Benzene = 70%, Cumene = 70%, Ethyl Benzene = 70%, Styrene monomer = 70%, Xylenes = 70%)

R_{AM} = Molding phase emission loss rate for ARCEL-based bead usage

(45% times following %rate loss by weight of HAP: Acetophenone = 70%, Benzene = 70%, Cumene = 70%, Ethyl Benzene = 70%, Styrene monomer = 70%, Xylenes = 70%)

R_{AP} = Pre-puff Storage phase emission loss rate for ARCEL-based bead usage

(10% times following % rate loss by weight of HAP: Acetophenone = 70%, Benzene = 70%, Cumene = 70%, Ethyl Benzene = 70%, Styrene monomer = 70%, Xylenes = 70%)

(b) The total HAPs emissions from manufacturing lines, which include Hirsch 6000 pre-expanders, Kurtz 813 molding presses, Kurtz 68 molding presses, Kurtz 1014 molding presses, Kurtz 13517 molding presses, and pre-puff storage silos, shall be less than 24 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

The total HAPs emissions shall be calculated by the following equation:

$T_{combined}$ = Combination of all single HAPs emissions from EPS based beads + all single HAPs emissions from Arcel-based beads (add all above single HAP)

or

$$T_{combined} = \sum_{i=1}^{n}[(U_E*H_E*R_{EE})+(U_E*H_E*R_{EM})+(U_E*H_E*R_{EP})]+\sum_{i=1}^{n}[(U_A*H_A*R_{AE})+(U_A*H_A*R_{AM})+(U_A*H_A*R_{AP})]/(2{,}000 \text{ pounds/ton})$$

Where:

$T_{combined}$ = Total HAPs emissions from manufacturing lines

U_E = Pounds of EPS-based beads used during the 12 month period

H_E = HAP Content of EPS-based beads
(Acetophenone =1,490 ppmw, Benzene=150 ppmw, Cumene=115 ppmw, Ethyl Benzene = 500 ppmw, Styrene monomer=800 ppmw, Xylenes =150 ppmw)

R_{EE} = Pre-expansion phase emission loss rate for EPS-based bead usage

(45% times following % rate loss by weight of HAP: Acetophenone = 16%, Benzene = 83%, Cumene = 23%, Ethyl Benzene = 33%, Styrene monomer = 69%, Xylenes = 67%)

R_{EM} = Molding phase emission loss rate for EPS-based bead usage

(45% times following %rate loss by weight of HAP: Acetophenone = 16%, Benzene = 83%, Cumene = 23%, Ethyl Benzene = 33%, Styrene monomer = 69%, Xylenes = 67%)

R_{EP} = Pre-puff Storage phase emission loss rate for EPS-based bead usage

(10% times following %rate loss by weight of HAP: Acetophenone = 16%, Benzene = 83%, Cumene = 23%, Ethyl Benzene = 33%, Styrene monomer = 69%, Xylenes = 67%)

U_A = Pounds of ARCEL-based beads used during the 12 month period

H_A = HAP Content of ARCEL-based beads
(Acetophenone = 800 ppmw, Benzene = 25 ppmw, Cumene = 50 ppmw, Ethyl Benzene = 5,000 ppmw, Styrene monomer = 50 ppmw, Xylenes = 100 ppmw)

R_{AE} = Pre-expansion phase emission loss rate for ARCEL-based bead usage

(45% times following %rate loss by weight of HAP: Acetophenone = 70%, Benzene = 70%, Cumene = 70%, Ethyl Benzene = 70%, Styrene monomer = 70%, Xylenes = 70%)

R_{AM}= Molding phase emission loss rate for ARCEL-based bead usage

(45% times following %rate loss by weight of HAP: Acetophenone = 70%, Benzene = 70%, Cumene = 70%, Ethyl Benzene = 70%, Styrene monomer = 70%, Xylenes = 70%)

R_{AP} = Pre-puff Storage phase emission loss rate for ARCEL-based bead usage

(10% times following % rate loss by weight of HAP: Acetophenone = 70%, Benzene = 70%, Cumene = 70%, Ethyl Benzene = 70%, Styrene monomer = 70%, Xylenes = 70%)

The above are new limited requirements for the source.

Federal Rule Applicability

NSPS:

(a) The requirements of the New Source Performance Standards for small industrial-commercial-institutional generating units, 40 CFR 60, Subpart Dc apply to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989, and that has a maximum design heat input capacity of greater than 10 MMBtu/hr:

(1) The two (2) boilers, (B1 and B2), each constructed in 1979 and 1981, and rated at 11.0 and 11.9 MMBtu per hour, respectively, are not subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.40c, Subpart Dc) because both were constructed prior to the rule applicability date of June 9, 1989.

(2) The one (1) natural gas-fired boiler, identified as B3, rated at 29.3 million British thermal units per hour (MMBtu/hr), constructed in 2011, is subject to the New Source Performance Standards for small industrial-commercial-institutional generating units, (40 CFR 60, Subpart Dc), which is incorporated by reference as 326 IAC 12.

Nonapplicable portions of the NSPS will not be included in the permit. Boiler B3 is subject to the following portions of Subpart Dc.

(1) 40 CFR 60.40c
(2) 40 CFR 60.41c
(3) 40 CFR 60.48c(a)(1)
(4) 40 CFR 60.48c(g)(2)
(5) 40 CFR 60.48c(i)
(6) 40 CFR 60.48c(j)

These are existing requirements for this source.

(b) The following internal combustion engines are not subject to the New Source Performance Standard (40 CFR 60.4200, Subpart IIII) because they are not stationary CI and ICE and they constructed prior to the rule applicability date of July 11, 2005.

Two (2) walk-behind gasoline fired vacuums each rated at 5.5 hp each;
One (1) gasoline fired snow blower rated at 5.0 hp.

(c) The above internal combustion engines are not subject to the New Source Performance Standard (40 CFR 60.4230, Subpart JJJJ) because they were constructed prior to the rule applicability date of June 12, 2006.

(d) There are no other New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

NESHAP:

(a) This source is not subject to the National Emission Standards for Hazardous Air Pollutants, (40 CFR 63 Subpart III (National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production), because expanded polystyrene beads are used and not polyurethane.

(b) This source is not subject to the National Emission Standards for Hazardous Air Pollutants, (40 CFR 63 Subpart MMMMM (National Emission Standards for Hazardous Air Pollutants: Flexible Polyurethane Foam Fabrication Operations), because expanded polystyrene beads are used and not polyurethane.

(c) This source is not subject to the National Emission Standards for Hazardous Air Pollutants, (40 CFR 63 Subpart OOOOOO (National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production and Fabrication Area Sources)) because expanded polystyrene beads are used and not polyurethane.

(d) National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heater, 40 CFR 63, Subpart DDDDD requirements do not apply to this source, since this source is not a major source for HAPs.

(e) National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63, Subpart JJJJJJ:

(1) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63, Subpart JJJJJJ, do not apply to the boiler (B3) because it is considered a gas-fired boiler as defined in 40 CFR 63.11237.

(2) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63, Subpart JJJJJJ, do not apply to the boilers (B1-B2), because the # 2 fuel oil will be used only during period of gas curtailment, gas supply interruption, or periodic testing.

(f) The requirements of National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ] do not apply to the following units since each unit is a Portable Reciprocating Internal Combustion Engines:

Two (2) walk-behind gasoline fired vacuums each rated at 5.5 hp each;
One (1) gasoline fired snow blower rated at 5.0 hp.

(g) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) applicable to this proposed modification.

CAM

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each existing pollutant-specific emission unit that meets the following criteria:

(1) has a potential to emit before controls equal to or greater than the major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each existing emission unit and specified pollutant subject to CAM:

Emission Unit / Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Hirsch 6000 pre-expander (VOC)	N	-	-	-	100	N	-
Kurtz 813 molding press (VOC)	N	-	-	-	100	N	-
Kurtz 68 molding press (VOC)	N	-	-	-	100	N	-
Kurtz 1014 molding press (VOC)	N	-	-	-	100	N	-
Kurtz 13517 molding press (VOC)	N	-	-	-	100	N	-
Pre-puff storage silo (VOC)	N	-	-	-	100	N	-
Finished Goods Storage (VOC)	N	-	-	-	100	N	-
Hirsch 6000 pre-expander (HAPS)	N	-	-	-	10 (Single HAP) 25 (Combined HAPs)	N	-
Kurtz 813 molding press (HAPS)	N	-	-	-	10 (Single HAP) 25 (Combined HAPs)	N	-
Kurtz 68 molding press (HAPS)	N	-	-	-	10 (Single HAP) 25 (Combined HAPs)	N	-
Kurtz 1014 molding press (HAPS)	N	-	-	-	10 (Single HAP) 25 (Combined HAPs)	N	-
Kurtz 13517 molding press (HAPS)	N	-	-	-	10 (Single HAP) 25 (Combined HAPs)	N	-
Pre-puff storage silo (HAPS)	N	-	-	-	10 (Single HAP) 25 (Combined HAPs)	N	-
Finished Goods Storage (HAPS)	N	-	-	-	10 (Single HAP) 25 (Combined HAPs)	N	-

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to any of the existing units as part of this Part 70 permit renewal.

Note: There are no PM emissions from the above units.

State Rule Applicability – Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)
The unrestricted potential to emit of VOC from this operation is greater than 250 tons per year. However, the VOC usage shall be limited such that the source wide emissions of VOCs per twelve consecutive month period are below 250 tons, with compliance determined at the end of each month. (See PSD after Issuance above)

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The source has limited PTE of single HAP to less than ten (10) tons per year and for a combination of HAPs to less than twenty-five (25) tons per year. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-6 (Emission Reporting)
This source is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit pursuant to 326 IAC 2-7 (Part 70). The potential to emit of VOC is greater than 250 tons per year, Therefore, pursuant to 326 IAC 2-6-3(a)(1), annual reporting is required. An emission statement shall be submitted by July 1 of each year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

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

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

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

326 IAC 6.5 PM Limitations Except Lake County
This source is not subject to 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

State Rule Applicability – Individual Facilities

Hirsch 6000 Pre-expanders (3 units)

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The three (3) pre-expanders are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these units do not emit any particulate.

326 IAC 8-1-6 (New Facilities, General Reduction Requirements)
326 IAC 8-1-6 applies to facilities located in any county constructed after January 1, 1980, which are not otherwise regulated by any other provisions of 326 IAC 8, and have potential VOC emissions of 25 tons per year or greater.

The potential VOC emissions of each Hirsch 6000 pre-expander, whether it is EPS or Arcel based beads, are greater than 25 tons per year, therefore, in order to render 326 IAC 8-1-6 not applicable for each pre-expander:

(1) The total VOC emissions from each of three (3) Hirsch 6000 pre-expanders, identified as PE2, PE4 and PE5, shall be less than 25 tons per twelve (12) consecutive month period.

Compliance shall be determined using the following equation:

$$T_{PL} = \sum (U_E * V_E * L_{EE}) + \sum (U_A * V_A * L_{AE}) / (2{,}000 \text{ pounds/ton})$$

Where:

T_{PL} = Total VOC emissions from each pre-expander (tons/year)

U_E = Pounds of EPS-based beads used during the 12 month period

V_E = VOC content of EPS-based beads (6% VOC content)

L_{EE} = Pre-expansion phase emission loss rate for EPS-based bead usage (25% of VOC content of raw material)

U_A = Pounds of ARCEL-based beads used during the 12 month period

V_A = VOC content of ARCEL-based beads (12.5% VOC content)

L_{AE} = Pre-expansion phase emission loss rate for ARCEL-based bead usage (41% of VOC content of raw material)

(2) VOC emissions from PE3, PE4 and PE5, from the usage of EPS-based beads, shall not exceed 0.25 pound per pound of the VOC content in the EPS-based beads used;

(3) VOC emissions from PE3, PE4 and PE5, from the usage of ARCEL-based beads, shall not exceed 0.41 pound per pound of VOC content in the ARCEL-based beads used.

The above are existing limits for the source.

All molding presses: (17 presses)

(a) Kurtz 813 molding presses (5 units):
(c) Kurtz 68 molding presses (4 units):
(d) Kurtz 1014 molding presses (2 units)
(e) Kurtz 13517 molding presses (6 units):

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Each molding press is not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because each unit does not emit any particulate.

326 IAC 8-1-6 (New Facilities, General Reduction Requirements)
326 IAC 8-1-6 applies to facilities located in any county constructed after January 1, 1980, which are not otherwise regulated by any other provisions of 326 IAC 8, and have potential VOC emissions of 25 tons per year or greater.

The uncontrolled potential VOC emissions from each molding press are less than 25 tons of VOC per year. Therefore, the requirements of 326 IAC 8-1-6 do not apply.

Pre-puff storage silos (30 silos):

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Each pre-puff storage silo is not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because each unit does not emit any particulate.

326 IAC 8-1-6 (New Facilities, General Reduction Requirements)
326 IAC 8-1-6 applies to facilities located in any county constructed after January 1, 1980, which are not otherwise regulated by any other provisions of 326 IAC 8, and have potential VOC emissions of 25 tons per year or greater.

The uncontrolled potential VOC emissions from each pre-puff storage silo are less than 25 tons of VOC per year. Therefore, the requirements of 326 IAC 8-1-6 do not apply.

Finished goods storage:

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The finished goods storage is not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because this area does not emit any particulate.

326 IAC 8-1-6 (New Facilities, General Reduction Requirements)
326 IAC 8-1-6 applies to facilities located in any county constructed after January 1, 1980, which are not otherwise regulated by any other provisions of 326 IAC 8, and have potential VOC emissions of 25 tons per year or greater.

The VOC emissions from the finished goods storage is greater than 25 tons per year, therefore, in order to render 326 IAC 8-1-6 not applicable for the finished goods storage:

(1) The total VOC emissions from the finished goods storage shall be less than 25 tons per twelve (12) consecutive month period.

Compliance shall be determined using the following equation:

$T_{GS} = \sum (U_E * V_E * L_{ES}) + \sum (U_A * V_A * L_{AS}) / (2{,}000 \text{ pounds/ton})$

Where:

T_{GS} = Total VOC emissions from the finished goods storage (tons/year)

U_E = Pounds of EPS-based beads used during the 12 month period

V_E = VOC content of EPS-based beads (6% VOC content)

L_{ES} = Finished Goods Storage phase emission loss rate for EPS-based bead usage (41.7% of VOC content of raw material)

U_A = Pounds of ARCEL-based beads used during the 12 month period

V_A = VOC content of ARCEL-based beads (12.5% VOC content)

L_{AS} = Finished Goods Storage phase emission loss rate for ARCEL-based bead usage (29.7% of VOC content of raw material)

(2) VOC emissions from finished goods storage, from the usage of EPS-based beads, shall not exceed 0.417 pound per pound of VOC content in the EPS -based bead used;

(3) VOC emissions from finished goods storage, from the usage of ARCEL-based beads, shall not exceed 0.297 pound per pound of VOC content in the ARCEL-based beads used.

These are new limits for the source.

Boilers:

326 IAC 6-2-3 (Particulate Emission Limitations for Sources of Indirect Heating)
The two (2) boilers, (B1 and B2), firing natural gas or No. 2 distillate fuel oil, constructed in 1979 and 1981 and rated at 10.5 and 12.6 MMBtu/hr, respectively, are subject to 326 IAC 6-2-3. Pursuant to this rule, particulate emissions from indirect heating facilities constructed prior to September 21, 1983, shall be limited by the following equation:

$$Pt = \frac{C \times a \times h}{76.5 \times Q^{0.75} \times N^{0.25}}$$

where

C = 50 u/m^3
Pt = emission rate limit (lbs/MMBtu)
Q = total source heat input capacity (MMBtu/hr)
N = number of stacks
a = plume rise factor (0.67)
h = stack height in feet. If a number of stacks of different heights exist, average stack height to represent "N" stacks shall be calculated by weighing each stack height with its particulate matter emission rate as follows:

$$h = \frac{\sum_{i=1}^{N} H_i \times pa_i \times Q}{\sum_{i=1}^{N} pa_i \times Q}$$

where: Pa = the actual controlled emissions rate in lb/MMBtu using the emission factor from AP-42 or stack test data. Stacks constructed after January 1, 1971, shall be credited with GEP stack height only. GEP stack height shall be calculated as specified in 326 IAC 1-7.

For boiler B1, constructed in 1979, (Q = 10.5 MMBtu/hr):
$Pt = (50*0.67*22)/(76.5*10.5^{0.75}*1^{0.25}) = 1.65$ lbs PM/MMBtu

For boiler B2, constructed in 1981, (Q = 10.5 + 12.6 = 23.1 MMBtu/hr):
$Pt = (50*0.67*22)/(76.5*23.1^{0.75}*2^{0.25}) = 0.77$ lbs PM/MMBtu

However, pursuant to 326 IAC 6-2-3(e), Pt for indirect heating facilities constructed after June 8, 1972 shall not exceed 0.6 lbs PM/MMBtu, therefore PM emissions from each boiler is limited to 0.6 lbs PM/MMBtu.

These boilers can comply with this limit, see Calculations in Appendix A.

326 IAC 6-2-4 (Emission limitations for Sources of Indirect Heating)
The boiler B3, with heat input rated at 29.3 MMBtu/hr, constructed in 2011, is subjected to 326 IAC 6-2-4 since it is considered source of indirect heating and was constructed after September 21, 1983.

Pursuant to 326 IAC 6-2-4, particulate emissions from the boiler B3 shall be limited by the following equation:

$$P_t = 1.09/Q^{0.26}$$

Where:
P_t=Pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input.

Q=Total source maximum operating capacity rating in million Btu per hour (mmBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

Q = 10.5+12.6+29.3 mmBTU/hr (for existing boilers B1, B2, and B3) = 52.4 mmBTU/hr

The particulate emissions from boiler B3 is as follows:

$P_t = 1.09/52.4^{0.26}$

P_t = 0.389 lb/mmBTU

This boiler can comply with this limit, see Calculations in Appendix A.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

(1) The two (2) natural gas-fired boilers (B1 and B2) using No. 2 fuel oil as back-up fuel are subject to 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations) because each boiler has PTE of SO2 greater than 25 tons/year when burning No. 2 fuel oil.

Pursuant to 326 IAC 7-1.1-2, sulfur dioxide emissions from the two (2) boilers B1 and B2 shall be limited to 0.5 pounds per million BTU heat input when using No. 2 fuel oil. This equates to a fuel oil sulfur content limit of 0.5%. The facility will comply with this rule by limiting distillate oil sulfur content to 0.5% or less.

(2) The potential to emit of SO2 from B3 is less than twenty-five (25) tons per year, therefore, the 326 IAC 7-1.1 does not apply.

326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements)

Pursuant to this rule, the source shall submit reports of calendar month average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate (pounds SO2 per MMBtu), for boilers B1 and B2 to the OAQ upon request.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

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

Emission Unit/Control	Operating Parameters	Frequency
Boilers (B1 and B2)/None	V.E. Observation	Daily observation (when burning fuel oil)

(b) Testing is not required for this source.

Recommendation

The staff recommends to the Commissioner that the Part 70 Operating Permit Renewal be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on June 7, 2013. Additional information was received on August 1, 2013.

Conclusion

The operation of this Createc Corporation shall be subject to the conditions of the attached Part 70 Operating Permit Renewal No. T 075-33287-00024.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Ms. Renee Traivaranon at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5615 or toll free at 1-800-451-6027 extension 4-5615.

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

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Appendix A.: Emissions Summary

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: July 26, 2013

Process Description	Unlimited/Uncontrolled Potential to Emit (tons/year)										
	Criteria Pollutants							Greenhouse Gas Pollutants	Hazardous Air Pollutants		
	PM	PM10	PM2.5	SO2	NOx	VOC*	CO	CO_2e	Total HAPs	Worst Case HAP	
Hirsch 6000 pre-expanders	-	-	-	-	-	538.74	-	-	25.1	16.6	Ethyl Benzene
Kurtz 813 molding presses	-	-	-	-	-	128.12	-	-	8.0	5.5	Ethyl Benzene
Kurtz 68 molding presses	-	-	-	-	-		-	-	5.6	3.9	Ethyl Benzene
Kurtz 1014 molding presses	-	-	-	-	-		-	-	4.0	2.8	Ethyl Benzene
Kurtz 13517 molding presses	-	-	-	-	-		-	-	14.4	9.9	Ethyl Benzene
Pre-puff storage silos	-	-	-	-	-	302.22	-	-	5.6	3.7	Ethyl Benzene
Finished goods storage	-	-	-	-	-	136.98	-	-	-	-	-
Gas Boilers with backup fuel oil (B1-B2)	1.45	1.72	1.54	50.95	14.45	0.25	3.61	15592.35	0.2	negl	-
Combustion (B3+heaters))	0.26	1.06	1.06	0.08	13.93	0.77	11.70	16823.06	0.3	negl	-
Hot melt Adhesives	-	-	-	-	-	0.90	-	-	-	-	-
Gasoline engines	0.01	0.01	0.01	0.01	0.12	0.01	0.03	4.62	negl	negl	-
Thermal Cutting	0.16	0.16	0.16	-	-	-	-	-	-	-	-
Scrap grinders	0.08	0.08	0.08	-	-	-	-	-	-	-	-
Degreaser	-	-	-	-	-	1.52	-	-	-	-	-
Paved/unpaved road	3.40	0.87	0.09	-	-	-	-	-	-	-	-
Totals Unlimited Emissions	**5.36**	**3.89**	**2.93**	**51.04**	**28.51**	**1109.50**	**15.35**	**32,420.02**	**>25**	**>10**	Ethyl Benzene

negl = negligible

Note: * PTE VOC of the following units are from the worst case of EPS VOC or ARCEL VOC

Pre-expansion
Pre-puff Storage
Molding
Finished Goods Storage

Appendix A.: Emissions Summary

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: July 26, 2013

Process Description	Limited Potential Emissions (tons/year)										
	Criteria Pollutants							Greenhouse Gas Pollutants	Hazardous Air Pollutants		
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	CO_2e	Total HAPs	Worst Case HAP	
Hirsch 6000 pre-expanders	-	-	-	-	-	247.0	-	-	24.00	9.00	-
Kurtz 813 molding presses	-	-	-	-	-		-	-			
Kurtz 68 molding presses	-	-	-	-	-		-	-			
Kurtz 1014 molding presses	-	-	-	-	-		-	-			
Kurtz 13517 molding presses	-	-	-	-	-		-	-			
Pre-puff storage silos	-	-	-	-	-		-	-			
Finished goods storage	-	-	-	-	-		-	-	-	-	-
Gas Boilers with backup fuel oil (B1-B2)	1.45	1.72	1.54	51	14	0.25	3.61	15,592	0.19	negl	-
Combustion (B3+heaters))	0.26	1.06	1.06	0.1	14	0.77	12	16,823	0	negl	-
Hot melt Adhesives	-	-	-	-	-	0.90	-	-	-	-	-
Gasoline engines	0.01	0.01	0.01	0	0	0.01	0	5	negl	negl	-
Thermal Cutting	0.16	0.16	0.16	-	-	-	-	-	-	-	-
Scrap grinders	0.08	0.08	0.08	-	-	-	-	-	-	-	-
Degreaser	-	-	-	-	-	0.36	-	-	-	-	-
Paved/unpaved road	1.70	0.43	0.04	-	-	-	-	-	-	-	-
Totals Limited/Controlled Emissions	**3.66**	**3.46**	**2.89**	**51.04**	**28.51**	**249.28**	**15.35**	**32,420.02**	**>25**	**>10**	-

negl = negligible

Appendix A: Emissions Calculations
VOC EMISSION FROM EPS MATERIAL PROCESSING

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: July 26, 2013

	Equipment Type:	Molding	Molding	Molding	Molding	Pre-puff Storage	Pre-puff Storage	Pre-expansion	Goods Storage
	Make/Model:	**Kurtz 13517**	**Kurtz 1014**	**Kurtz 813**	**Kurtz 68**	**N/A**	**N/A**	**Hirsch 6000**	**NA**
	Number of Units:	**6**	**2**	**5**	**4**	**10**	**20**	**3**	**1**
	Maximum Raw Bead VOC Content	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
	*VOC Loss Rate (%)	13.0%	13.0%	13.0%	13.0%	19%	19%	25%	42%
One Unit	Maximum Capacity (lbs/hr)	300	250	200	175	1200.00	2600.00	1,250	1,250
	Potential to Emit VOC (lbs/hr)	2.34	1.95	1.56	1.37	13.68	29.64	18.75	31.28
	Potential to Emit VOC (tons/yr)	**10.25**	**8.54**	**6.83**	**5.98**	59.92	129.82	**82.13**	**136.98**
All Units	Potential to Emit VOC (lbs/hr)	14.04	3.90	7.80	5.46	262.44	568.63	56.25	31.28
	Potential to Emit VOC (tons/yr)	**61.50**	**17.08**	**34.16**	**23.91**	1,149.50	2,490.58	**246.38**	**136.98**
****Total Potential to Emit VOC (tons/yr)**		**128.12**				**187.25**			

Methodology

PTE for each unit:

PTE VOC (lbs/hr) for each process for each unit = Maximum ESP processed (lbs/hr) x VOC Content Wt. (%) x VOC loss rate of that process (%)

PTE VOC (tons/yr) = PTE VOC (lbs/hr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)

PTE for All Units:
Total PTE VOC (tons/yr) = PTE VOC (tons/yr) for each unit * numbers of the units

*Note: The following VOC loss rate (%) of each process was provided by the source. The source indicated that they were derived from sampling and analysis information.

Pre-expansion	25%	
Pre-puff Storage	19%	
Molding	13%	
Finished Goods Storage	41.7%	
Total	98.7%	(this means that 1.3% is not emitted)

**Note: The Molding and Pre-puff storage throughput is restricted by the pre-expansion, therefore, the PTE VOC was calculated using pre-expansion maximum capacity.

Appendix A: Emissions Calculations
VOC EMISSION FROM ARCEL MATERIAL PROCESSING

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: July 26, 2013

	Equipment Type:	Molding	Molding	Molding	Molding	Pre-puff Storage	Pre-puff Storage	Pre-expansion	Goods Storage
	Make/Model:	Kurtz 13517	Kurtz 1014	Kurtz 813	Kurtz 68	N/A	N/A	Hirsch 6000	NA
	Number of Units:	6	2	5	4	10	20	3	1
	Maximum Raw Bead VOC Content	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
	*VOC loss rate (%)	5.0%	5.0%	5.0%	5.0%	23.0%	23.0%	41.0%	29.7%
One Unit	Maximum Capacity (lbs/hr)	240	200	160	140	1,200	2,600	800	800
	Potential to Emit VOC (lbs/hr)	1.50	1.25	1.00	0.88	34.50	74.75	41.00	29.70
	Potential to Emit VOC (tons/yr)	**6.6**	**5.5**	**4.4**	**3.8**	151.11	327.41	**179.6**	**130.1**
All Units	Potential to Emit VOC (lbs/hr)	9	3	5	4	345.00	1,495.00	123	30
	Potential to Emit VOC (tons/yr)	**39.4**	**11.0**	**21.9**	**15.3**	1,511.10	6,548.10	**538.7**	**130.1**
	****Total Potential to Emit VOC (tons/yr)**	**65.70**				**302.22**			

Methodology

PTE for each unit:
PTE VOC (lbs/hr) for each process for each unit = Maximum ESP processed (lbs/hr) x VOC Content Wt. (%) x VOC loss rate of that process (%)
PTE VOC (tons/yr) = PTE VOC (lbs/hr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)

PTE for All Units:

Total PTE VOC (tons/yr) = PTE VOC (tons/yr) for each unit * numbers of the units

*Note: The following VOC loss rate (%) of each process was provided by the source. The source indicated that they were derived from sampling and analysis information.

Pre-expansion	41.0%	
Pre-puff Storage	23%	
Molding	5.0%	
Finished Goods Storage	30%	
Total	98.7%	(this means that 1.3% is not emitted)

**Note: The Molding and Pre-puff storage throughput is restricted by the pre-expansion, therefore, the PTE VOC was calculated using pre-expansion maximum capacity.

Appendix A: Emissions Calculations
HAPs Emissions from Molding 13517

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: July 26, 2013

WORST-CASE HAPS PER MATERIAL

		EPS Materials		Arcel Materials		Potential to Emit For One Molding Press		
HAP	CAS	Conc.	Loss rate	Conc.	Loss rate			
Compounds:	Number	ppmw	% by wt.	ppmw	% by wt.	(Lbs/hr)	(Lbs/yr)	(tons/yr)
Acetophenone	98-86-2	1,490	16	800	70	0.060	529.8	0.265
Benzene	71-43-2	150	83	25	70	0.017	147.2	0.074
Cumene	98-82-8	115	23	50	70	0.004	33.1	0.017
Ethyl Benzene	100-41-4	500	33	5,000	70	0.378	3,311.3	1.656
Styrene monomer	100-42-5	800	69	50	70	0.075	652.8	0.326
Xylenes	1330-20-7	150	67	100	70	0.014	118.9	0.059
					TOTALS HAPs:	**0.547**	**4,793**	**2.397**

Worst case PTE of single HAP for 6 units **9.9**
Worst case PTE of total HAPs for 6 units **14.4**

	EPS throughput		Arcel throughput	
Period	**per press**		**per press**	
Unlimited Annual:	2,628,000	lbs	2,102,400	lbs
Hourly maximum:	300	lbs	240	lbs

Methodology
PTE for each unit:

PTE Single HAP (lbs/hr) (Worst case of ESP or ARCEL) = Maximum materials processed (lbs/hr) x HAP Concentration (ppm) x HAP loss rate (%) x Loss attributed to Molding (%)
PTE Single HAP (tons/yr) (Worst case of ESP or ARCEL) = PTE HAP (lbs/hr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)
PTE Total HAPs (lbs/hr) = Combination of PTE Single HAP (lbs/hr) for each unit
PTE Total HAP (tons/yr) = Combined of PTE Single HAP (lbs/yr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)

PTE for All molding presses:
PTE Single (Worst case) (tons/yr) for 6 units = PTE Single(Worst case) (tons/yr) for each unit * 6 units
PTE Total HAPs (tons/yr) for 6 units = PTE Total HAPs (tons/yr) for each unit * 6 units

Process phase losses, as a percent of total loss, are:
Pre-Expansion (PX) loss = 45%
Pre-Puff Storage (PPS) loss = 10%,
Molding Press (MP) loss = 45%
Total = 100%

PPMW= Parts per million (1/1,000,000) (Wt./Wt.)
% by Wt. = Weight Percent (1/100) (Wt./Wt.)

Appendix A: Emissions Calculations

HAPs Emissions from Molding 1014

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: July 26, 2013

WORST-CASE HAPs PER MATERIAL

		EPS Materials		Arcel Materials		Potential to Emit		
HAPs	CAS	Conc.	Loss rate	Conc.	Loss rate	For One Molding Press		
Compounds:	Number	ppmw	% by wt.	ppmw	% by wt.	(Lbs/hr)	(Lbs/yr)	(tons/yr)
Acetophenone	98-86-2	1,490	16	800	70	0.050	441.5	0.221
Benzene	71-43-2	150	83	25	70	0.014	122.7	0.061
Cumene	98-82-8	115	23	50	70	0.003	27.6	0.014
Ethyl Benzene	100-41-4	500	33	5,000	70	0.315	2,759.4	1.380
Styrene monomer	100-42-5	800	69	50	70	0.062	544.0	0.272
Xylenes	1330-20-7	150	67	100	70	0.011	99.0	0.050
			TOTALS:			**0.456**	**3,994**	**1.997**
			Worst case PTE of single HAP for 2 units					**2.8**
			Worst case PTE of total HAPs for 2 units					**4.0**

	EPS throughput		Arcel throughput	
Period	**per press**		**per press**	
Unlimited Annual:	2,190,000	lbs	1,752,000	lbs
Hourly maximum:	250	lbs	200	lbs

Methodology

PTE for each unit:

PTE Single HAP (lbs/hr) (Worst case of ESP or ARCEL) = Maximum materials processed (lbs/hr) x HAP Concentration (ppm) x HAP loss rate (%) x Loss attributed to Molding (%)
PTE Single HAP (tons/yr) (Worst case of ESP or ARCEL) = PTE HAP (lbs/hr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)
PTE Total HAPs (lbs/hr) = Combination of PTE Single HAP (lbs/hr) for each unit
PTE Total HAP (tons/yr) = Combined of PTE Single HAP (lbs/yr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)

PTE for All molding presses:
PTE Single (Worst case) (tons/yr) for 2 units = PTE Single(Worst case) (tons/yr) for each unit * 2 units
PTE Total HAPs (tons/yr) for 2 units = PTE Total HAPs (tons/yr) for each unit * 2 units

Process phase losses, as a percent of total loss, are:
Pre-Expansion (PX) loss = 45%
Pre-Puff Storage (PPS) loss = 10%,
Molding Press (MP) loss = 45%
Total = 100%

PPMW= Parts per million (1/1,000,000) (Wt./Wt.)
% by Wt. = Weight Percent (1/100) (Wt./Wt.)

Appendix A: Emissions Calculations
HAPs Emissions from Molding 813

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: July 26, 2013

WORST-CASE HAPS PER MATERIAL

		EPS Materials		Arcel Materials		Potential to Emit For One Molding Press		
HAP Compounds:	CAS Number	Conc. ppmw	Loss rate % by wt.	Conc. ppmw	Loss rate % by wt.	(Lbs/hr)	(Lbs/yr)	(tons/yr)
Acetophenone	98-86-2	1,490	16	800	70	0.040	353.2	0.177
Benzene	71-43-2	150	83	25	70	0.011	98.2	0.049
Cumene	98-82-8	115	23	50	70	0.003	22.1	0.011
Ethyl Benzene	100-41-4	500	33	5,000	70	0.252	2,207.5	1.104
Styrene monomer	100-42-5	800	69	50	70	0.050	435.2	0.218
Xylenes	1330-20-7	150	67	100	70	0.009	79.2	0.040
			TOTALS:			**0.365**	**3,195**	**1.598**
			Worst case PTE of single HAP for 5 units					**5.5**
			Worst case PTE of total HAPs for 5 units					**8.0**

	EPS throughput		Arcel throughput	
Period	**per press**		**per press**	
Unlimited Annual:	1,752,000	lbs	1,401,600	lbs
Hourly maximum:	200	lbs	160	lbs

Methodology

PTE for each unit:
PTE Single HAP (lbs/hr) (Worst case of ESP or ARCEL) = Maximum materials processed (lbs/hr) x HAP Concentration (ppm) x HAP loss rate (%) x Loss attributed to Molding (%)
PTE Single HAP (tons/yr) (Worst case of ESP or ARCEL) = PTE HAP (lbs/hr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)
PTE Total HAPs (lbs/hr) = Combination of PTE Single HAP (lbs/hr) for each unit
PTE Total HAP (tons/yr) = Combined of PTE Single HAP (lbs/yr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)

PTE for All molding presses:
PTE Single (Worst case) (tons/yr) for 5 units = PTE Single(Worst case) (tons/yr) for each unit * 5 units
PTE Total HAPs (tons/yr) for 5 units = PTE Total HAPs (tons/yr) for each unit * 5 units

Process phase losses, as a percent of total loss, are:
Pre-Expansion (PX) loss = 45%
Pre-Puff Storage (PPS) loss = 10%,
Molding Press (MP) loss = 45%
Total = 100%

PPMW= Parts per million (1/1,000,000) (Wt./Wt.)
% by Wt. = Weight Percent (1/100) (Wt./Wt.)

Appendix A: Emissions Calculations
HAPs Emissions from Molding 68

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: July 26, 2013

WORST-CASE HAPS PER MATERIAL

		EPS Materials		Arcel Materials		Potential to Emit		
HAP	CAS	Conc.	Loss rate	Conc.	Loss rate	For One Molding Press		
Compounds:	Number	ppmw	% by wt.	ppmw	% by wt.	(Lbs/hr)	(Lbs/yr)	(tons/yr)
Acetophenone	98-86-2	1,490	16	800	70	0.035	309.1	0.155
Benzene	71-43-2	150	83	25	70	0.010	85.9	0.043
Cumene	98-82-8	115	23	50	70	0.002	19.3	0.010
Ethyl Benzene	100-41-4	500	33	5,000	70	0.221	1,931.6	0.966
Styrene monomer	100-42-5	800	69	50	70	0.043	380.8	0.190
Xylenes	1330-20-7	150	67	100	70	0.008	69.3	0.035
			TOTALS:			**0.319**	**2,796**	**1.398**
			Worst case PTE of single HAP for 4 units					**3.9**
			Worst case PTE of total HAPs for 4 units					**5.6**

	EPS throughput		Arcel throughput	
Period	**per press**		**per press**	
Unlimited Annual:	1,533,000	lbs	1,226,400	lbs
Hourly maximum:	175	lbs	140	lbs

Methodology

PTE for each unit:
PTE Single HAP (lbs/hr) (Worst case of ESP or ARCEL) = Maximum materials processed (lbs/hr) x HAP Concentration (ppm) x HAP loss rate (%) x Loss attributed to Molding (%)
PTE Single HAP (tons/yr) (Worst case of ESP or ARCEL) = PTE HAP (lbs/hr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)
PTE Total HAPs (lbs/hr) = Combination of PTE Single HAP (lbs/hr) for each unit
PTE Total HAP (tons/yr) = Combined of PTE Single HAP (lbs/yr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)

PTE for All molding presses:
PTE Single (Worst case) (tons/yr) for 4 units = PTE Single(Worst case) (tons/yr) for each unit * 4 units
PTE Total HAPs (tons/yr) for 4 units = PTE Total HAPs (tons/yr) for each unit * 4 units

Process phase losses, as a percent of total loss, are:
Pre-Expansion (PX) loss = 45%
Pre-Puff Storage (PPS) loss = 10%,
Molding Press (MP) loss = 45%
Total = 100%

PPMW= Parts per million (1/1,000,000) (Wt./Wt.)
% by Wt. = Weight Percent (1/100) (Wt./Wt.)

Appendix A: Emissions Calculations
HAPs Emissions from Prepuff Storage Silos

Company Name: **Createc Corporation**
Address City IN Zip: **1619 North Meridian, Portland, Indiana 47371**
Operating Permit Renewal Number: **T075-33287-00024**
Plant I.D. Number: **075-00024**
Reviewer: **Renee Traivaranon**
Date: **July 26, 2013**

WORST-CASE HAPS PER MATERIAL

		EPS Materials		Arcel Materials		Potential to Emit	
HAP	CAS	Conc.	Loss rate	Conc.	Loss rate	For Prepuff Storage Bags	
Compounds:	Number	ppmw	% by wt.	ppmw	% by wt.	(Lbs/yr)	(tons/yr)
Acetophenone	98-86-2	1,490	16	800	70	392.448	0.2
Benzene	71-43-2	150	83	25	70	136.328	0.1
Cumene	98-82-8	115	23	50	70	28.963	0.0
Ethyl Benzene	100-41-4	500	33	5,000	70	2452.800	1.2
Styrene monomer	100-42-5	800	69	50	70	604.440	0.3
Xylenes	1330-20-7	150	67	100	70	110.048	0.1
		Worst case PTE of single HAP					**3.68**
		Worst case PTE of total HAPs					**5.59**

Methodology

	EPS throughput		Arcel throughput	
Period	Prepuff Storage		Prepuff Storage	
Unlimited Annual:	10,950,000	lbs	7,008,000	lbs
Hourly maximum:	1,250	lbs	800	lbs

Note: Per source, the above throughput is restricted by pre-expanders, therefore, annual amount is from pre expanders capacities

Methodology

PTE for each unit:

PTE Single HAP (lbs/yr) (Worst case of ESP or ARCEL) = Maximum materials processed (lbs/yr) x HAP Concentration (ppm) x HAP loss rate (%) x Loss attributed to Pre-Puff Storage (%)
PTE Single HAP (tons/yr) (Worst case of ESP or ARCEL) = PTE HAP (yr/hr) /2000 (ton/lbs)

PTE Total HAP (tons/yr) = Combined of PTE Single HAP (tons/yr)

PTE for All Pre-puff Storage Bags:
PTE Single (Worst case) (tons/yr) = PTE Single(Worst case) (tons/yr) * 3
(Note: Since the capacities are restricted by 3 pre-explanders)
PTE Total HAPs (tons/yr) = PTE Total HAPs (tons/yr) * 3 units

Process phase losses, as a percent of total loss, are:
Pre-Expansion (PX) loss = 45%
Pre-Puff Storage (PPS) loss = 10%,
Molding Press (MP) loss = 45%
Total = 100%

PPMW= Parts per million (1/1,000,000) (Wt./Wt.)
% by Wt. = Weight Percent (1/100) (Wt./Wt.)

Appendix A: Emissions Calculations
HAPs Emissions from pre-expander

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: July 26, 2013

WORST-CASE HAPS PER MATERIAL

		EPS Materials		Arcel Materials		Potential to Emit		
HAP	CAS	Conc.	Loss rate	Conc.	Loss rate	For One Pre-expander		
Compounds:	Number	ppmw	% by wt.	ppmw	% by wt.	(Lbs/hr)	(Lbs/yr)	(tons/yr)
Acetophenone	98-86-2	1,490	16	800	70	0.202	1,766.0	0.883
Benzene	71-43-2	150	83	25	70	0.070	613.5	0.307
Cumene	98-82-8	115	23	50	70	0.015	130.3	0.065
Ethyl Benzene	100-41-4	500	33	5,000	70	1.260	11,037.6	5.519
Styrene monomer	100-42-5	800	69	50	70	0.311	2,720.0	1.360
Xylenes	1330-20-7	150	67	100	70	0.057	495.2	0.248
			TOTALS:			**1.914**	**16,763**	**8.381**
			Worst case PTE of single HAP for 3 units					**16.56**
			Worst case PTE of total HAPs for 3 units					**25.1**

Methodology

	EPS throughput		Arcel throughput	
Period	**per expander**		**per expander**	
Unlimited Annual:	10,950,000	lbs	7,008,000	lbs
Hourly maximum:	1,250	lbs	800	lbs

Methodology

PTE for each unit:

PTE Single HAP (lbs/hr) (Worst case of ESP or ARCEL) = Maximum materials processed (lbs/hr) x HAP Concentration (ppm) x HAP loss rate (%) x Loss attributed to Pre-expander (%)

PTE Single HAP (tons/yr) (Worst case of ESP or ARCEL) = PTE HAP (lbs/hr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)

PTE Total HAPs (lbs/hr) = Combination of PTE Single HAP (lbs/hr) for each unit

PTE Total HAP (tons/yr) = Combined of PTE Single HAP (lbs/yr) * 8760 (hrs/yr) * 1/2000 (ton/lbs)

PTE for All Pre-expanders:

PTE Single (Worst case) (tons/yr) for 3 units = PTE Single(Worst case) (tons/yr) for each unit * 3 units

PTE Total HAPs (tons/yr) for 3 units = PTE Total HAPs (tons/yr) for each unit * 3 units

Process phase losses, as a percent of total loss, are:

Pre-Expansion (PX) loss = 45%
Pre-Puff Storage (PPS) loss = 10%,
Molding Press (MP) loss = 45%
Total = 100%

PPMW= Parts per million (1/1,000,000) (Wt./Wt.)
% by Wt. = Weight Percent (1/100) (Wt./Wt.)

Appendix A: Emissions Calculations
Boilers
#2 Fuel Oil

Company Name: **Createc Corporation**
Address City IN Zip: **1619 North Meridian, Portland, Indiana 47371**
Operating Permit Renewal Number: **T075-33287-00024**
Plant I.D. Number: **075-00024**
Reviewer: **Renee Traivaranon**
Date: **July 26, 2013**

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur
		0.5
23.1	1445.4	

	Pollutant						
	PM*	PM10	direct PM2.5	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	2.0	2.4	2.1	70.5 *(141.0S)*	20.0	0.34	5.0
Potential Emission in tons/yr	1.45	1.7	1.5	51.0	14.5	0.2	3.6

1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu

Emission Factors are from AP 41, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-03-005-01/02/03) Supplement E 9/98 (see erata file)

*PM emission factor is filterable PM only. Condensable PM emission factor is 1.3 lb/kgal.
Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton

HAPS Calculations

	HAPs - Metals					**Total - Organics**
	Arsenic	Beryllium	Cadmium	Chromium	Lead	
Emission Factor in lb/mmBtu	4.0E-06	3.0E-06	3.0E-06	3.0E-06	9.0E-06	
Potential Emission in tons/yr	4.05E-04	3.04E-04	3.04E-04	3.04E-04	9.11E-04	2.23E-03

	HAPs - Metals (continued)					
	Mercury	Manganese	Nickel	Selenium		
Emission Factor in lb/mmBtu	3.0E-06	6.0E-06	3.0E-06	1.5E-05		
Potential Emission in tons/yr	3.04E-04	6.07E-04	3.04E-04	1.52E-03		2.73E-03
					Total HAPs	**4.958E-03**
					Worst HAP	**1.518E-03**

Methodology

No data was available in AP-41 for organic HAPs.
Potential Emissions (tons/year) = Throughput (mmBtu/hr)*Emission Factor (lb/mmBtu)*8,760 hrs/yr / 2,000 lb/ton

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/kgal	21,490	0.216	0.26
Potential Emission in tons/yr	15,531	0.2	0.2
Summed Potential Emissions in tons/yr	15,531		
CO2e Total in tons/yr	15,592		

Methodology

The CO2 Emission Factor for #1 Fuel Oil is 21490. The CO2 Emission Factor for #2 Fuel Oil is 22300.

Emission Factors are from AP 41, Tables 1.3-3, 1.3-8, and 1.3-12 (SCC 1-03-005-01/02/03) Supplement E 9/99 (see erata file)

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/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).

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: July 26, 2013

Heat Input Capacity MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr
23.1	1020	198.4

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.2	0.8	0.8	0.1	9.9	0.5	8.3

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

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

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	2.083E-04	1.190E-04	7.440E-03	1.785E-01	3.373E-04	**1.867E-01**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	4.960E-05	1.091E-04	1.389E-04	3.769E-05	2.083E-04	**5.436E-04**
					Total HAPs	**1.872E-01**
					Worst HAP	**1.785E-01**

Methodology is the same as above.

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

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	11,903	0.2	0.2
Summed Potential Emissions in tons/yr	11,904		
CO2e Total in tons/yr	11,976		

Methodology
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors 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.
Global 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).

Appendix A: Emissions Calculations
Natural Gas Combustion Only

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: July 26, 2013

Heat Input Capacity MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr
32.5	1020	278.7

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.3	1.1	1.1	0.1	13.9	0.8	11.7

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

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

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	2.926E-04	1.672E-04	1.045E-02	2.508E-01	4.738E-04	**2.622E-01**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	6.967E-05	1.533E-04	1.951E-04	5.295E-05	2.926E-04	**7.636E-04**
					Total HAPs	**2.630E-01**
					Worst HAP	**2.508E-01**

Methodology is the same as above.

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

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	16,721	0.3	0.3
Summed Potential Emissions in tons/yr	16,722		
CO2e Total in tons/yr	16,823		

Methodology
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors 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.
Global 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).

Appendix A: Emission Calculations
Gasoline Engines

Company Name: **Createc Corporation**
Address City IN Zip: **1619 North Meridian, Portland, Indiana 47371**
Operating Permit Renewal Number: **T075-33287-00024**
Plant I.D. Number: **075-00024**
Reviewer: **Renee Traivaranon**
Date: **July 26, 2013**

B. Emissions calculated based on output rating (hp)

Output Horsepower Rating (hp)	16.0
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	8,000

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Potential Emission in tons/yr	0.01	0.01	0.01	0.01	0.12	0.01	0.03

*PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
Potential Emission in tons/yr	2.61E-05	1.15E-05	7.98E-06	1.09E-06	3.30E-05	2.15E-05	2.59E-06	4.70E-06

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)
****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Potential Emission of Total HAPs (tons/yr)	**1.08E-04**

Green House Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/hp-hr	#######	4.63E-05	9.26E-06
Potential Emission in tons/yr	#######	1.85E-04	3.70E-05

Summed Potential Emissions in tons/yr	**4.60E+00**
CO2e Total in tons/yr	**4.62E+00**

Methodology
Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2
CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [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).

Appendix A: Emission Calculations
Adhesive

Company Name: **Createc Corporation**
Address City IN Zip: **1619 North Meridian, Portland, Indiana 47371**
Operating Permit Renewal Number: **T075-33287-00024**
Plant I.D. Number: **075-00024**
Reviewer: **Renee Traivaranon**
Date: **July 26, 2013**

Potential Emissions:

Material (as applied)	Process	Gal of Mat (gal/day)	VOC Content % solids (by volume)	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year
HM-2707	Hot melt adhesive	16.430	30.00%	0.21	4.93	0.90
				0.21	**4.93**	**0.90**

Methodology:
Potential VOC Pounds per Hour = Density (lb/gal) * Gal of Material (gal/day) / 24 hrs/day
Potential VOC Pounds per Day = Density (lb/gal) * Gal of Material (gal/day)
Potential VOC Tons per Year = Density (lb/gal) * Gal of Material (gal/day) * (365 days/yr) * (1 ton/2000 lbs)

Note: The above calculations are from T075-28002-00024, issued on March 9, 2009.

Appendix A: Emissions Calculations
Thermal Cutting

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: July 26, 2013

PROCESS	Number of Stations	Max. Metal Thickness	Max. Metal Cutting Rate	EMISSION FACTORS (lb pollutant/1,000 inches cut, 1" thick)**				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
FLAME CUTTING		Cut (in.)	(in./minute)	PM = PM10=PM2.5	Mn	Ni	Cr	PM = PM10=PM2.5	Mn	Ni	Cr	
Oxymethane	1	1.5	5	0.0815	0.0002		0.0002	0.037	0.000	0.000	0.000	0.000
EMISSION TOTALS												
Potential Emissions lbs/hr								0.04				0.00
Potential Emissions lbs/day								0.88				0.00
								0.16				0.00

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

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

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

Plasma cutting emissions, lb/hr: (# of stations)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 8 mm thick)
Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" thick)
Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)
Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day
Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lbs.

Appendix A: Emission Calculations
Grinders

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: July 26, 2013

Insignificant Activity: Scrap Grinder

	% of bead product	Emission**	Max. Process Weight Rate*	Control	PTE Before Control	PTE Before Control	PTE After Control
Process	used as Scrap	Factor (lb/ton)	(lb/hr)	Efficiency (%)	PM	PM/PM10/PM2.5	PM/PM10/PM2.5
					(lb/hr)	(ton/yr)	(ton/yr)
Scrap Grinding	3.00%	1.00	1210.00	99.00%	0.018	0.079	0.00079

Potential PM Emissions (ton/hr) = Max. Process Rate (lb/hr) x (1 ton/ 2000 lb) x (% Scrap) x Emission Factor (lb/ton) * 4.38 (ton/yr / lb/hr)

Note: Above information is form permit No. 075-28002-00024, issued on March 9, 2009.

Appendix A: Emissions Calculations

Parts Washer

Company Name: **Createc Corporation**
Address City IN Zip: **1619 North Meridian, Portland, Indiana 47371**
Part 70 Renewal No.: **T075-33287-00024**
Reviewer: **Renee Traivaranon**
Date: **July 26, 2013**

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Gal of Mat. (gal/yr)	Potential VOC tons per year
Degreaser							
Mineral Spirits	6.70	100.0%	0.0%	100.0%	0.0%	453.60	1.52
Mineral Spirits Usage Limits (Without considering the recycle)	6.70	100.0%	0.0%	100.0%	0.0%	108.00	0.36

METHODOLOGY

Potential VOC Tons per Year = Density (lbs/gal) x Weight % Organics x Gal of mat. (gal/yr) x 1 ton/2,000 lbs
Annual usage provided by source is 108 gallons per year, for 1 shift per day and 5 days per week
PTE usage (without considering recycle) = 108 gallons/yr-shift * 3 (shifts/day) * 7/5 days = 108*3*7/5 = 453.6 gallons/yr

Appendix A: Emission Calculations
Fugitive Dust Emissions - Unpaved Roads

Company Name: Createc Corporation
Address City IN Zip: 1619 North Meridian, Portland, Indiana 47371
Operating Permit Renewal Number: T075-33287-00024
Plant I.D. Number: 075-00024
Reviewer: Renee Traivaranon
Date: July 26, 2013

Unpaved Roads at Industrial Site
The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (11/2006).

Vehicle Information (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Vehicle (entering plant) (one-way trip)	3.0	60.0	180.0	1.0	180.0	264	0.050	9.0	3285.0
Vehicle (leaving plant) (one-way trip)	3.0	60.0	180.0	1.0	180.0	264	0.050	9.0	3285.0
		Totals	**360.0**		**360.0**			**18.0**	**6570.0**

Average Vehicle Weight Per Trip = 1.0 tons/trip
Average Miles Per Trip = 0.05 miles/trip

Unmitigated Emission Factor, Ef = k*[(s/12)^a]*[(W/3)^b] (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-1 Sand/Gravel Processing Plant)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)
W =	1.0	1.0	1.0	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [(365 - P)/365] (Equation 2 from AP-42 13.2.2)
Mitigated Emission Factor, Eext = E * [(365 - P)/365]
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	1.57	0.40	0.04	lb/mile
Mitigated Emission Factor, Eext =	1.03	0.26	0.03	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Vehicle (entering plant) (one-way trip)	2.58	0.66	0.07	1.70	0.43	0.04	0.85	0.22	0.02
Vehicle (leaving plant) (one-way trip)	2.58	0.66	0.07	1.70	0.43	0.04	0.85	0.22	0.02
Totals	**5.17**	**1.32**	**0.13**	**3.40**	**0.87**	**0.09**	**1.70**	**0.43**	**0.04**

Methodology

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: John Trease
Createc Corporation
1619 North Meridian Street
Portland, IN 47371

DATE: November 27, 2013

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

SUBJECT: Final Decision
Renewal of a Part 70 Operating Permit
075-33287-00024

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:
Thomas Wallace, Director of Manufacturing
Mark Schooley, Air Compliance Consultants
Victoria BrindAmour, Sonoco Protective Solutions
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.

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

November 27, 2013

TO: Jay County Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Createc Corporation
Permit Number: 075-33287-00024

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 6/13/2013

Mail Code 61-53

IDEM Staff	VHAUN 11/27/2013 Createc Corporation 075-33287-00024 FINAL		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**

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1		John Trease Createc Corporation 1619 N Meridian St Portland IN 47371 (Source CAATS) Confirmed Delivery									
2		Thomas Wallace Director of Mfg Createc Corporation c/o Sonoco EHS Dept,PO Box 448 New Brighton PA 15066 *(RO CAATS)*									
3		Jay County Commissioners Jay County Courthouse Portland IN 47371 *(Local Official)*									
4		Portland City Council and Mayors Office 321 N. Meridian Portland IN 47371 *(Local Official)*									
5		Jay County Public Library 315 N. Ship Street Portland IN 47371 *(Library)*									
6		Jay County Health Department 504 West Arch Street Portland IN 47371 *(Health Department)*									
7		Mark Schooley Air Compliance Consultants 1950 William Pitt Way Pittsburgh PA 15238 *(Consultant)*									
8		Victoria BrindAmour Sonoco Protective Solutions 850 Fourth Avenue PO box 448 New Brighton PA 15066 *(Source – addl contact)*									
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