



# 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](http://www.idem.IN.gov)

**Eric J. Holcomb**  
Governor

**Brian C. Rockensuess**  
Commissioner

To: Interested Parties

Date: June 28, 2024

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

Source Name: Spartech LLC The Jordan Company

Permit Level: Registration

Permit Number: 035-47764-00078

Source Location: 1401 East Memorial Drive, Muncie, Indiana 47302

Type of Action Taken: Initial Permit

## Notice of Decision: Approval - Registration

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the matter referenced above.

The final decision is available on the IDEM website at: <http://www.in.gov/apps/idem/caats/>  
To view the document, choose Search Option **by Permit Number**, then enter permit 47764. This search will also provide the application received date and **final** permit issuance date.

The final decision is also available via IDEM's Virtual File Cabinet (VFC). Please go to: <https://www.IN.gov/idem> and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria.

*(continues on next page)*

If you would like to request a paper copy of the permit document, please contact IDEM's Office of Records Management:

IDEM - Office of Records Management  
Indiana Government Center North, Room 1207  
100 North Senate Avenue  
Indianapolis, IN 46204  
Phone: (317) 232-8667  
Fax: (317) 233-6647  
Email: [IDEMFILEROOM@idem.in.gov](mailto:IDEMFILEROOM@idem.in.gov)

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

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Indiana Office of Administrative Law Proceedings, 100 N. Senate Avenue Suite N802, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Indiana Office of Administrative Law Proceedings (OALP); or
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OALP 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 OALP by private carrier.

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

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

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



# 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](http://www.idem.IN.gov)


**Eric J. Holcomb**  
Governor

**Brian C. Rockensuess**  
Commissioner

## REGISTRATION OFFICE OF AIR QUALITY

**Spartech LLC The Jordan Company**  
**1401 East Memorial Drive**  
**Muncie, Indiana 47302**

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

Registration No. R035-47764-00078 Master Agency Interest ID.: 15584	
Issued by:  Ghassan Shalabi, Section Chief Permits Branch Office of Air Quality	Issuance Date: June 28, 2024

## SECTION A

## SOURCE SUMMARY

This registration is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 and A.2 is descriptive information and does not constitute enforceable conditions. However, the Registrant should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Registrant to obtain additional permits pursuant to 326 IAC 2.

### A.1 General Information

---

The Registrant owns and operates a stationary plastic sheet and molded plastics plant.

Source Address:	1401 East Memorial Drive, Muncie, Indiana 47302
General Source Phone Number:	(765) 281-5120
SIC Code:	2821 (Plastics Material, Synthetic Resins, & Nonvulcanized Elastomers)
County Location:	Delaware County
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Registration

### A.2 Emission Units and Pollution Control Equipment Summary

---

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

- (a) One (1) railcar unloading operation, identified as RRUL1, constructed in 1984, approved in 2024 for modification, consisting of a pneumatic material transfer system, with a maximum throughput capacity of 20,000 pounds of plastic pellets per hour, and with plastic pellets conveyed pneumatically to silos.
- (b) One (1) railcar unloading operation, identified as RRUL2, consisting of a pneumatic material transfer system, constructed in 2017, with a maximum capacity of 11,883 pounds per hour.
- (c) One (1) railcar unloading operation, identified as RRUL3, approved for construction in 2024, consisting of a pneumatic material transfer system, with a maximum throughput capacity of 30,000 lbs of plastic pellets per hour, with plastic pellets conveyed pneumatically to silos.
- (d) One (1) railcar unloading operation, identified as RRUL4, approved for construction in 2024, consisting of a pneumatic material transfer system, with a maximum throughput capacity of 30,000 lbs of plastic pellets per hour, with plastic pellets conveyed pneumatically to silos.
- (e) Twelve (12) silos, identified as Silo A through Silo L, constructed in 1984, for storing plastic pellets, each with a maximum throughput of 0.5 tons per hour, using no controls, and venting outside the building.
- (f) Three (3) silos, identified as Silo M through Silo O, constructed in 2017, for storing plastic pellets, each with a maximum throughput of 0.5 tons per hour, using no controls, and venting outside the building.
- (g) One (1) silo, identified as Silo P, approved for construction in 2024, for storing plastic pellets, with a maximum throughput of 0.5 tons per hour, using no controls, and venting outside the building.
- (h) Twenty-three (23) pneumatic conveyors for transporting plastic pellets or regrind from the silos, surge bins or containers to the coextruder input feed for processing, with a maximum capacity of 1,000 pounds per hour, each, with particulate emissions controlled

with integral bin vent filters, and venting inside or outside the building.

- (i) Two (2) pneumatic conveyors for transporting plastic pellets or regrind from the silos, surge bins, or containers to the coextruder input feed for processing, constructed in 2017, with a maximum capacity of 1,000 pounds per hour, each, with particulate emissions controlled with bin vent filters, and venting inside or outside the building.
- (j) Six (6) pneumatic conveyors for transporting plastic pellets or regrind from the silos, surge bins, or containers to the coextruder input feed for processing, constructed in 2017, with a maximum capacity of 5,000 pounds per hour, each, with particulate emissions controlled with bin vent filters, and venting inside or outside the building.
- (k) Five (5) pneumatic conveyors for transporting plastic pellets or regrind from the silos, surge bins or containers to the coextruder input feed for processing, approved for construction in 2024, with a maximum capacity of 1,000 pound per hour, each, using bin vents as control, and venting outside the building.
- (l) Eight (8) coextruder lines for extruding multiple layers of plastic sheeting, with no particulate or VOC emission controls.

Emission Unit ID	Maximum Throughput Rate (lbs/hour)	Construction Date	Modified Date	Vent ID
COEX1	3,800	1984	2024	COEX1
COEX2	3,000	1987	2024	COEX2
COEX3	2,400	1994	2024	COEX3
COEX4	3,000	2011	2024	COEX4
COEX5	3,465	2005	2024	COEX5
COEX6	3,500	2018	2024	COEX6
COEX7	1,000	2024	-	COEX7
COEX8	2,300	2024	-	COEX8

- (m) Eight (8) granulators for grinding scrap plastic (regrind) from coextruder lines, with regrind pneumatically conveyed to surge bins, with particulate emissions controlled with bin vent filters, and venting inside or outside the building.

Emission Unit ID	Maximum Throughput Rate (lbs/hour)	Construction Date	Modified Date
COEXG1	380	1984	2024
COEXG2	300	1987	2024
COEXG3	240	1994	2024
COEXG4	300	2011	2024
COEXG5	480	2005	2024
COEXG6	360	2018	2024
COEXG7	100	2024	-
COEXG8	240	2024	-

- (n) Five (5) thermoformers, using electric heating elements to re-form plastic products, using no controls, and venting inside the building.

Emission Unit ID	Maximum Throughput Rate (lbs/hour)	Construction Date
F5	291	2007
F6	1,125	2010
F7	1,125	2011
F8	1,403	2017
F11	2,800	2017

- (o) Six (6) granulators for grinding scrap plastic from thermoformer lines, with regrind pneumatically conveyed to surge bins, with particulate emissions controlled with bin vent filters, and venting inside the building.

Emission Unit ID	Maximum Throughput Rate (lbs/hour)	Construction Date
FG5	250	2007
FG6A	502	2010
FG7	502	2011
FG8A	502	2017
FG11A	700	2017
FG11B	700	2017

- (p) One (1) Slitter/Trimmer/Rewinder, identified as SR1, constructed in 2023, with a maximum regrinding capacity of 2,000 pounds of plastic product per hour, with trimmings pneumatically conveyed to the granulators, and venting inside the building.
- (q) One enclosed granulator, identified as G1, constructed in 2010, with a maximum capacity of 2,500 pounds per hour, using no control and venting inside the building.
- (r) One (1) enclosed Granulator, identified G2, constructed in 1984, with a maximum regrinding capacity of 2,000 pounds of plastic waste per hour, with regrind pneumatically conveyed to surge bins, with particulate emissions controlled by a bin vent filter and venting inside the building.
- (s) Three (3) enclosed granulators, identified as G3 and G4, constructed in 2017, and G5, approved for construction in 2024, each with a maximum capacity of 2,500 pounder per hour, using no control and venting inside the building.
- (t) Indirect natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour, consisting of the following space heaters:

Facility	Construction Date	Operating Capacity (MMBtu/hr)
Natural Gas-Fired Heater AHU1, AHU3, AHU5, AHU6	Assumed 1984	0.40, each
18 Natural Gas-Fired Heaters, 1A, 4A-8A, 10A-13A, 1B-3B, 10B-14B		0.170, each
2 Natural Gas-Fired Heaters, 3A, 4B		0.060, each
3 Natural Gas-Fired Tube Heaters	2024	0.05, each
2 Natural Gas-Fired Heaters	2024	0.08, each
1 Natural Gas-Fired Heater	2024	0.12, each

- (u) Two (2) natural gas-fired crystallizer units, identified as CR1 and CR2, constructed in 2017 and 2018, respectively, with a maximum capacity of 0.597 MMBtu per hour and 0.895 MMBtu per hour, respectively,
- (v) Two (2) natural gas-fired dryer units, identified as DR1 and DR2, constructed in 2017 and 2018, respectively, each with a maximum capacity of 0.331 MMBtu per hour and a maximum throughput of 3,000 pounds per hour for both.
- (w) One (1) printer, identified as P4, constructed in 2007, with a maximum printing capacity of 25,200 parts (1,050 square feet of plastic) per hour, using a 0.078 MMBtu per hour direct natural gas flame preheater, applying UV inks and using a light cure process, using no controls and venting to stack P4.

- (x) One (1) printer ink roll hand-cleaning operation, identified as Roll Cleaner, using a maximum of 270 gallons of cleaner a year.
- (y) One (1) parts cleaning unit, identified as Aqueous Parts Tub 1, using aqueous cleaners containing less than 1% VOC.
- (z) One (1) parts cleaning unit, identified as Aqueous Parts Tub 2, using aqueous cleaners containing less than 1% VOC.
- (aa) One (1) stationary 208 hp, diesel-fired emergency fire pump engine, identified as Pump1, with a displacement of 5.9 liters, installed in 1984 and modified in 2004.  
  
Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.
- (bb) One (1) four stroke lean burn spark ignition natural gas-fired emergency backup electric generator engine, identified as Generator1, constructed in 1984, with a maximum capacity of 0.125 megawatts and 187 horsepower, and exhausting to stack Gen1.  
  
Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.
- (cc) Paved roads and parking lots with public access.
- (dd) Noncontact cooling tower systems with either of the following:
  - (1) Natural draft cooling towers not regulated under a NESHAP, or
  - (2) Forced and induced draft cooling tower systems not regulated under a NESHAP.
- (ee) Two (2) vacuum-sealed electric burnout units, identified as Burnout 1 and Burnout 2, for melting plastic off machine parts in a sealed chamber under vacuum, using no controls and exhausting inside the building, and having no emissions.
- (ff) VOC and HAP storage containers, consisting of vessels storing lubricating oils, hydraulic oils, machining oils, or machining fluids.
- (gg) Production related activities, including the application of oils, greases, lubricants, and/or nonvolatile material, as temporary protective coatings.
- (hh) Closed loop heating and cooling systems.
- (ii) Exposure chambers (towers or columns), for curing of ultraviolet inks and ultraviolet coatings where heat is the intended discharge.
- (jj) Replacement or repair of electrostatic precipitators, bags in baghouses, and filters in other air filtration equipment.
- (kk) Heat exchanger cleaning and repair.
- (ll) Routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process, including purging of gas lines and/or purging of vessels.
- (mm) Blowdown for the following: sight glass, boiler, cooling tower, compressors and/or pumps.

## **SECTION B GENERAL CONDITIONS**

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

---

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

### **B.2 Effective Date of Registration [IC 13-15-5-3]**

---

Pursuant to IC 13-15-5-3, this registration R035-47764-00078 is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

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

---

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

- (a) Violation of any conditions of this registration.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this registration.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this registration shall not require revocation of this registration.
- (d) For any cause which establishes in the judgment of IDEM the fact that continuance of this registration is not consistent with purposes of this article.

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

---

(a) All terms and conditions of permits established prior to Registration No. R035-47764-00078 and issued pursuant to permitting programs approved into the state implementation plan have been either:

- (1) incorporated as originally stated,
- (2) revised, or
- (3) deleted.

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

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

---

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

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

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



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

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

---

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

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

---

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

**B.8 Preventive Maintenance Plan [326 IAC 1-6-3]**

---

- (a) If required by specific condition(s) in Section D of this registration, the Registrant shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this registration 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 Registrant's control, the PMPs cannot be prepared and maintained within the above time frame, the Registrant may extend the date an additional ninety (90) days provided the Registrant 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 Registrant shall implement the PMPs.

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Registrant to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions.
- (c) To the extent the Registrant is required by 40 CFR Part 60 or 40 CFR Part 63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such OMM Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

**SECTION C**

**SOURCE OPERATION CONDITIONS**

Entire Source

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

**C.1 Opacity [326 IAC 5-1]**

---

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

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

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

---

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

**SECTION D.1 EMISSION UNIT OPERATION CONDITIONS**

**Emission Unit Description:**

(t) Indirect natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour, consisting of the following space heaters:

Facility	Construction Date	Operating Capacity (MMBtu/hr)
Natural Gas-Fired Heater AHU1, AHU3, AHU5, AHU6	Assumed 1984	0.40, each
18 Natural Gas-Fired Heaters, 1A, 4A-8A, 10A-13A, 1B-3B, 10B-14B		0.170, each
2 Natural Gas-Fired Heaters, 3A, 4B		0.060, each
3 Natural Gas-Fired Tube Heaters	2024	0.05, each
2 Natural Gas-Fired Heaters	2024	0.08, each
1 Natural Gas-Fired Heater	2024	0.12, each

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

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

**D.1.1 Particulate Emissions [326 IAC 6-2-4]**

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), PM emissions from the thirty (30) natural gas-fired heaters shall be limited to 0.6 pounds per MMBtu heat input.

**D.1.2 Preventive Maintenance Plan [326 IAC 1-6-3]**

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

**SECTION E.1**

**NESHAP**

**Emission Unit Description:**

(aa) One (1) stationary 208 hp, diesel-fired emergency fire pump engine, identified as Pump1, with a displacement of 5.9 liters, installed in 1984 and modified in 2004.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(bb) One (1) four stroke lean burn spark ignition natural gas-fired emergency backup electric generator engine, identified as Generator1, constructed in 1984, with a maximum capacity of 0.125 megawatts and 187 horsepower, and exhausting to stack Gen1.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

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

**E.1.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]**

(a) Pursuant to 40 CFR 63.1 the Registrant shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 63, Subpart ZZZZ.

(b) Pursuant to 40 CFR 63.10, the Registrant shall submit all required notifications and reports 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 5  
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

**E.1.2 Stationary Reciprocating Internal Combustion Engines NESHAP [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]**

The Registrant shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment A to the registration), which are incorporated by reference as 326 IAC 20-82:

(a) The one (1) stationary 208 hp, diesel-fired emergency fire pump engine, identified as Pump1:

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585
- (3) 40 CFR 63.6590(a)(1)(iii) and (iv)
- (4) 40 CFR 63.6595(a)(1), (b), and (c)
- (5) 40 CFR 63.6603(a)
- (6) 40 CFR 63.6605

- (7) 40 CFR 63.6625(e)(3), (f), (h), and (i)
- (8) 40 CFR 63.6635
- (9) 40 CFR 63.6640(a), (b), (e), (f)(1), (f)(2)(i), and (f)(4)
- (10) 40 CFR 63.6645(a)(5)
- (11) 40 CFR 63.6650
- (12) 40 CFR 63.6655
- (13) 40 CFR 63.6660
- (14) 40 CFR 63.6665
- (15) 40 CFR 63.6670
- (16) 40 CFR 63.6675
- (17) Table 2d (item 4)
- (18) Table 6 (item 9)
- (19) Table 8

(b) The one (1) four stroke lean burn spark ignition natural gas-fired emergency backup electric generator engine, identified as Generator1:

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585
- (3) 40 CFR 63.6590(a)(1)(iii) and (iv)
- (4) 40 CFR 63.6595(a)(1), (b), and (c)
- (5) 40 CFR 63.6603(a)
- (6) 40 CFR 63.6605
- (7) 40 CFR 63.6625(e)(3), (f), (h), and (j)
- (8) 40 CFR 63.6635
- (9) 40 CFR 63.6640(a), (b), (e), (f)(1), (f)(2)(i), (f)(3), and (f)(4)
- (10) 40 CFR 63.6645(a)(5)
- (11) 40 CFR 63.6650
- (12) 40 CFR 63.6655
- (13) 40 CFR 63.6660
- (14) 40 CFR 63.6665
- (15) 40 CFR 63.6670
- (16) 40 CFR 63.6675
- (17) Table 2d (item 5)
- (18) Table 6 (item 9)
- (19) Table 8

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

**REGISTRATION  
ANNUAL NOTIFICATION**

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

<b>Company Name:</b>	Spartech LLC The Jordan Company
<b>Source Address:</b>	1401 East Memorial Drive
<b>City:</b>	Muncie, Indiana, 47302
<b>Phone Number:</b>	(765) 281-5120
<b>Registration No.:</b>	R035-47764-00078

I hereby certify that Spartech LLC The Jordan Company is:  still in operation.

I hereby certify that Spartech LLC The Jordan Company is:  no longer in operation.  
 in compliance with the requirements of Registration No. R035-47764-00078.  
 not in compliance with the requirements of Registration No. R035-47764-00078.

<b>Authorized Individual (typed):</b>	
<b>Title:</b>	
<b>Signature:</b>	<b>Date:</b>
<b>Email Address:</b>	<b>Phone:</b>

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

<b>Noncompliance:</b>

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

**Technical Support Document (TSD) for a MSOP Transitioning to a  
Registration**

**Source Description and Location**

<b>Source Name:</b>	<b>Spartech LLC The Jordan Company</b>
<b>Source Location:</b>	<b>1401 East Memorial Drive, Muncie, Indiana 47302</b>
<b>County:</b>	<b>Delaware</b>
<b>SIC Code:</b>	<b>2821 (Plastics Material, Synthetic Resins, &amp; Nonvulcanized Elastomers)</b>
<b>Registration No.:</b>	<b>R 035-47764-00078</b>
<b>Permit Reviewer:</b>	<b>Kristen Squillace</b>

On April 23, 2024, the Office of Air Quality (OAQ) received an application from Spartech LLC The Jordan Company related to the construction and operation of new emission units at an existing stationary plastic sheet and molded plastics plant and transition from a MSOP to a Registration.

**Existing Approvals**

The source has been operating under previous approvals including, but not limited to, the following:

- (a) MSOP Renewal No. 035-43766-00078, issued on July 13, 2021.

Due to this application, the source is transitioning from a MSOP to a Registration.

**County Attainment Status**

The source is located in Delaware County.

Pursuant to amendments to Indiana Code IC 13-17-3-14, effective July 1, 2023, a federal regulation that classifies or amends a designation of attainment, nonattainment, or unclassifiable for any area in Indiana under the federal Clean Air Act is effective and enforceable in Indiana on the effective date of the federal regulation.

<b>Pollutant</b>	<b>Designation</b>
SO <sub>2</sub>	Unclassifiable or attainment effective April 9, 2018, for the 2010 primary 1-hour SO <sub>2</sub> standard. Better than national secondary standards effective March 3, 1978.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Unclassifiable or attainment effective January 16, 2018, for the 2015 8-hour ozone standard.
PM <sub>2.5</sub>	Unclassifiable or attainment effective April 15, 2015, for the 2012 annual PM <sub>2.5</sub> standard.
PM <sub>2.5</sub>	Unclassifiable or attainment effective December 13, 2009, for the 2006 24-hour PM <sub>2.5</sub> standard.
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
NO <sub>2</sub>	Unclassifiable or attainment effective January 29, 2012, for the 2010 NO <sub>2</sub> standard.
Pb	Attainment effective May 15, 2020, for a portion of the city of Muncie, Indiana bounded to the north by West 26th Street/Hines Road, to the east by Cowan Road, to the south by West Fuson Road, and to the west by a line running south from the eastern edge of Victory Temple's driveway to South Hoyt Avenue and then along South Hoyt Avenue. Unclassifiable or attainment effective December 31, 2011, for the remainder of the county.

- (a) **Ozone Standards**  
Volatile organic compounds (VOC) and Nitrogen Oxides (NO<sub>x</sub>) 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<sub>x</sub> emissions are considered when evaluating the rule applicability relating to ozone. Delaware County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements of Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM<sub>2.5</sub>**  
Delaware County has been classified as attainment for PM<sub>2.5</sub>. Therefore, direct PM<sub>2.5</sub>, SO<sub>2</sub>, and NO<sub>x</sub> emissions were reviewed pursuant to the requirements of Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) **Other Criteria Pollutants**  
Delaware County has been classified as attainment or unclassifiable in Indiana for all the other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

### **Fugitive Emissions**

The fugitive emissions of regulated air pollutants and hazardous air pollutants (HAP) are counted toward the determination of Registration (326 IAC 2-5.1-5) applicability and source status under Section 112 of the Clean Air Act (CAA).

### **Greenhouse Gas (GHG) Emissions**

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at [http://www.supremecourt.gov/opinions/13pdf/12-1146\\_4g18.pdf](http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf)) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHG emissions to determine operating permit applicability or PSD applicability to a source or modification.

### **Background and Description of Emission Units and Pollution Control Equipment**

The Office of Air Quality (OAQ) has reviewed an application, submitted by Spartech LLC The Jordan Company on April 23, 2024, relating to the addition and removal of several emission units and the change in calculations for the coextruder lines which transitions the source from a MSOP to a Registration.

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

- (a) One (1) railcar unloading operation, identified as RRUL2, consisting of a pneumatic material transfer system, constructed in 2017, with a maximum capacity of 11,883 pounds per hour.
- (b) Twelve (12) silos, identified as Silo A through Silo L, constructed in 1984, for storing plastic pellets, each with a maximum throughput of 0.5 tons per hour, using no controls, and venting outside the building.
- (c) Three (3) silos, identified as Silo M through Silo O, constructed in 2017, for storing plastic pellets,



each with a maximum throughput of 0.5 tons per hour, using no controls, and venting outside the building.

- (d) Twenty-three (23) pneumatic conveyors for transporting plastic pellets or regrind from the silos, surge bins or containers to the coextruder input feed for processing, with a maximum capacity of 1,000 pounds per hour, each, with particulate emissions controlled with integral bin vent filters, and venting inside or outside the building.
- (e) Two (2) pneumatic conveyors for transporting plastic pellets or regrind from the silos, surge bins, or containers to the coextruder input feed for processing, constructed in 2017, with a maximum capacity of 1,000 pounds per hour, each, with particulate emissions controlled with bin vent filters, and venting inside or outside the building.
- (f) Six (6) pneumatic conveyors for transporting plastic pellets or regrind from the silos, surge bins, or containers to the coextruder input feed for processing, constructed in 2017, with a maximum capacity of 5,000 pounds per hour, each, with particulate emissions controlled with bin vent filters, and venting inside or outside the building.
- (g) Eight (8) coextruder lines for extruding multiple layers of plastic sheeting, with no particulate or VOC emission controls.

Emission Unit ID	Maximum Throughput Rate (lbs/hour)	Construction Date	Modified Date	Vent ID
COEX1	3,800	1984	2024	COEX1
COEX2	3,000	1987	2024	COEX2
COEX3	2,400	1994	2024	COEX3
COEX4	3,000	2011	2024	COEX4
COEX5	3,465	2005	2024	COEX5
COEX6	3,500	2018	2024	COEX6
COEX7	1,000	2024	-	COEX7
COEX8	2,300	2024	-	COEX8

- (h) Eight (8) granulators for grinding scrap plastic (regrind) from coextruder lines, with regrind pneumatically conveyed to surge bins, with particulate emissions controlled with bin vent filters, and venting inside or outside the building.

Emission Unit ID	Maximum Throughput Rate (lbs/hour)	Construction Date	Modified Date
COEXG1	380	1984	2024
COEXG2	300	1987	2024
COEXG3	240	1994	2024
COEXG4	300	2011	2024
COEXG5	480	2005	2024
COEXG6	360	2018	2024
COEXG7	100	2024	-
COEXG8	240	2024	-

- (i) Five (5) thermoformers, using electric heating elements to re-form plastic products, using no controls, and venting inside the building.

Emission Unit ID	Maximum Throughput Rate (lbs/hour)	Construction Date
F5	291	2007
F6	1,125	2010
F7	1,125	2011
F8	1,403	2017
F11	2,800	2017

- (j) Six (6) granulators for grinding scrap plastic from thermoformer lines, with regrind pneumatically conveyed to surge bins, with particulate emissions controlled with bin vent filters, and venting inside the building.

Emission Unit ID	Maximum Throughput Rate (lbs/hour)	Construction Date
FG5	250	2007
FG6A	502	2010
FG7	502	2011
FG8A	502	2017
FG11A	700	2017
FG11B	700	2017

- (k) One enclosed granulator, identified as G1, constructed in 2010, with a maximum capacity of 2,500 pounds per hour, using no control and venting inside the building.
- (l) One (1) enclosed Granulator, identified G2, constructed in 1984, with a maximum regrinding capacity of 2,000 pounds of plastic waste per hour, with regrind pneumatically conveyed to surge bins, with particulate emissions controlled by a bin vent filter and venting inside the building.
- (m) Two (2) enclosed granulators, identified as G3 and G4, constructed in 2017, each with a maximum capacity of 2,500 pounder per hour, using no control and venting inside the building.
- (n) Indirect natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour, consisting of the following space heaters:

Facility	Construction Date	Operating Capacity (MMBtu/hr)
Natural Gas-Fired Heater AHU1, AHU3, AHU5, AHU6	Assumed 1984	0.40, each
18 Natural Gas-Fired Heaters, 1A, 4A-8A, 10A-13A, 1B-3B, 10B-14B		0.170, each
2 Natural Gas-Fired Heaters, 3A, 4B		0.060, each

- (o) Two (2) natural gas-fired crystallizer units, identified as CR1 and CR2, constructed in 2017 and 2018, respectively, with a maximum capacity of 0.597 MMBtu per hour and 0.895 MMBtu per hour, respectively,
- (p) Two (2) natural gas-fired dryer units, identified as DR1 and DR2, constructed in 2017 and 2018, respectively, each with a maximum capacity of 0.331 MMBtu per hour and a maximum throughput of 3,000 pounds per hour for both.
- (q) One (1) printer, identified as P4, constructed in 2007, with a maximum printing capacity of 25,200 parts (1,050 square feet of plastic) per hour, using a 0.078 MMBtu per hour direct natural gas flame preheater, applying UV inks and using a light cure process, using no controls and venting to stack P4.
- (r) One (1) printer ink roll hand-cleaning operation, identified as Roll Cleaner, using a maximum of 270 gallons of cleaner a year.
- (s) One (1) parts cleaning unit, identified as Aqueous Parts Tub 1, using aqueous cleaners containing less than 1% VOC.
- (t) One (1) parts cleaning unit, identified as Aqueous Parts Tub 2, using aqueous cleaners containing less than 1% VOC.
- (u) One (1) stationary 208 hp, diesel-fired emergency fire pump engine, identified as Pump1, with a

displacement of 5.9 liters, installed in 1984 and modified in 2004.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

- (v) One (1) four stroke lean burn spark ignition natural gas-fired emergency backup electric generator engine, identified as Generator1, constructed in 1984, with a maximum capacity of 0.125 megawatts and 187 horsepower, and exhausting to stack Gen1.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

- (w) Paved roads and parking lots with public access.
- (x) Noncontact cooling tower systems with either of the following:
  - (1) Natural draft cooling towers not regulated under a NESHAP, or
  - (2) Forced and induced draft cooling tower systems not regulated under a NESHAP.
- (y) Two (2) vacuum-sealed electric burnout units, identified as Burnout 1 and Burnout 2, for melting plastic off machine parts in a sealed chamber under vacuum, using no controls and exhausting inside the building, and having no emissions.
- (z) VOC and HAP storage containers, consisting of vessels storing lubricating oils, hydraulic oils, machining oils, or machining fluids.
- (aa) Production related activities, including the application of oils, greases, lubricants, and/or nonvolatile material, as temporary protective coatings.
- (bb) Closed loop heating and cooling systems.
- (cc) Exposure chambers (towers or columns), for curing of ultraviolet inks and ultraviolet coatings where heat is the intended discharge.
- (dd) Replacement or repair of electrostatic precipitators, bags in baghouses, and filters in other air filtration equipment.
- (ee) Heat exchanger cleaning and repair.
- (ff) Routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process, including purging of gas lines and/or purging of vessels.
- (gg) Blowdown for the following: sight glass, boiler, cooling tower, compressors and/or pumps.

The following is a list of the new and modified emission units and pollution control device(s):

- (a) One (1) railcar unloading operation, identified as RRUL1, constructed in 1984, approved for modification in 2024, consisting of a pneumatic material transfer system, with a maximum throughput capacity of 20,000 pounds of plastic pellets per hour, and with plastic pellets conveyed pneumatically to silos.
- (b) One (1) railcar unloading operation, identified as RRUL3, approved for construction in 2024, consisting of a pneumatic material transfer system, with a maximum throughput capacity of 30,000 lbs of plastic pellets per hour, with plastic pellets conveyed pneumatically to silos.

- (c) One (1) railcar unloading operation, identified as RRUL4, approved for construction in 2024, consisting of a pneumatic material transfer system, with a maximum throughput capacity of 30,000 lbs of plastic pellets per hour, with plastic pellets conveyed pneumatically to silos.
- (d) One (1) silo, identified as Silo P, approved for construction in 2024, for storing plastic pellets, with a maximum throughput of 0.5 tons per hour, using no controls, and venting outside the building.
- (e) Five (5) pneumatic conveyors for transporting plastic pellets or regrind from the silos, surge bins or containers to the coextruder input feed for processing, approved for construction in 2024, with a maximum capacity of 1,000 pound per hour, each, using bin vents as control, and venting outside the building.
- (f) Indirect natural gas-fired combustion sources with heat input equal to or less than ten (10) MMBtu per hour, consisting of the following space heaters:

Facility	Construction Date	Operating Capacity (MMBtu/hr)
3 Natural Gas-Fired Tube Heaters	2024	0.05, each
2 Natural Gas-Fired Heaters	2024	0.08, each
1 Natural Gas-Fired Heater	2024	0.12, each

- (g) Eight (8) coextruder lines for extruding multiple layers of plastic sheeting, with no particulate or VOC emission controls.

Emission Unit ID	Maximum Throughput Rate (lbs/hour)	Construction Date	Modified Date	Vent ID
COEX1	3,800	1984	2024	COEX1
COEX2	3,000	1987	2024	COEX2
COEX3	2,400	1994	2024	COEX3
COEX4	3,000	2011	2024	COEX4
COEX5	3,465	2005	2024	COEX5
COEX6	3,500	2018	2024	COEX6
COEX7	1,000	2024	-	COEX7
COEX8	2,300	2024	-	COEX8

- (h) Eight (8) granulators for grinding scrap plastic (regrind) from coextruder lines, with regrind pneumatically conveyed to surge bins, with particulate emissions controlled with bin vent filters, and venting inside or outside the building.

Emission Unit ID	Maximum Throughput Rate (lbs/hour)	Construction Date	Modified Date
COEXG1	380	1984	2024
COEXG2	300	1987	2024
COEXG3	240	1994	2024
COEXG4	300	2011	2024
COEXG5	480	2005	2024
COEXG6	360	2018	2024
COEXG7	100	2024	-
COEXG8	240	2024	-

- (i) One (1) Slitter/Trimmer/Rewinder, identified as SR1, constructed in 2023, with a maximum regrinding capacity of 2,000 pounds of plastic product per hour, with trimmings pneumatically conveyed to the granulators, and venting inside the building.
- (j) One (1) enclosed granulator, identified as G5, approved for construction in 2024, each with a maximum capacity of 2,500 pounder per hour, using no control and venting inside the building.

As part of this permitting action, the following emission units are being removed from the permit:

- (a) Four (4) thermoformers, using electric heating elements to re-form plastic products, using no controls, and venting inside the building.

Emission Unit ID	Maximum Throughput Rate (lbs/hour)	Construction Date
F3	291	2007
F9	1,125	2017
F10	450	2017
F12	275	2017

- (b) Six (6) granulators for grinding scrap plastic from thermoformer lines, with regrind pneumatically conveyed to surge bins, with particulate emissions controlled with bin vent filters, and venting inside the building.

Emission Unit ID	Maximum Throughput Rate (lbs/hour)	Construction Date
FG3	247	2007
FG9A	700	2017
FG9B	700	2017
FG10	700	2017
FG12	700	2017
FG14	700	2017

- (c) One (1) Slitter/Trimmer/Rewinder, identified as SR1, constructed in 1985, with a maximum regrinding capacity of 1,000 pounds of plastic product per hour, with trimmings pneumatically conveyed to the granulators, and venting inside the building.

- (d) Indirect natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour, consisting of the following space heaters:

Facility	Construction Date	Operating Capacity (MMBtu/hr)
Natural Gas-Fired Heater MAM1	Assumed 1984	0.51
Natural Gas-Fired Heater MAM2-MAM4		0.56, each
6 Natural Gas-Fired Heaters, 9A, 5B-9B		0.30, each
6 Natural Gas-Fired HVAC Units, HVAC1, HVAC3, HVAC5-6, HAVC8, HVAC32		0.695, each
4 Natural Gas-Fired Heaters 15B-18B		0.20, each

- (e) Machining where an aqueous cutting coolant continuously floods the machining interface.

**Enforcement Issues**

There are no pending enforcement actions related to this source.

**Emission Calculations**

See Appendix A of this Technical Support Document for detailed emission calculations.

**Permit Level Determination –Registration**

This table reflects the unrestricted potential emissions of the source. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

	Unrestricted Source-Wide Emissions (ton/year)								
	PM <sup>1</sup>	PM <sub>10</sub> <sup>1</sup>	PM <sub>2.5</sub> <sup>1,2</sup>	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Single HAP <sup>3</sup>	Total HAPs
Total PTE of Entire Source Including Source-Wide Fugitives	15.64	15.08	14.94	0.13	6.14	18.28	3.14	0.47	0.56
Exemptions Levels	< 5	< 5	< 5	< 10	< 10	< 10	< 25	< 10	< 25
Registration Levels	< 25	< 25	< 25	< 25	< 25	< 25	< 100	< 10	< 25
<sup>1</sup> Under the Part 70 Permit program (40 CFR 70), PM <sub>10</sub> and PM <sub>2.5</sub> , not particulate matter (PM), are each considered as a "regulated air pollutant." <sup>2</sup> PM <sub>2.5</sub> listed is direct PM <sub>2.5</sub> . <sup>3</sup> Single highest source-wide HAP. The bin vent filters for the twenty-three (23) pneumatic conveyors are considered integral.									

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1) of PM, PM<sub>10</sub>, PM<sub>2.5</sub>, and VOC are each within the ranges listed in 326 IAC 2-5.5-1(b)(1). The potential to emit of all other regulated air pollutants are less than the ranges listed in 326 IAC 2-5.5-1(b)(1). Therefore, the source is subject to the provisions of 326 IAC 2-5.5 (Registrations). The source will be issued a Registration.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-1.1-1) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.

**Federal Rule Applicability Determination**

Federal rule applicability for this source has been reviewed as follows:

**New Source Performance Standards (NSPS):**

- (a) The requirements of the New Source Performance Standard for Incinerators, 40 CFR 60, Subpart E and 326 IAC 12, are not included in the registration for the two (2) vacuum-sealed electric burnout units, identified as Burnout 1 and Burnout 2, because they do not meet the definition of an incinerator as defined in 40 CFR 60.51(a). The burnout units melt plastic which does not meet the definition of a solid waste as defined in 40 CFR 60.51(b).
- (b) The requirements of the New Source Performance Standard for Commercial and Industrial Solid Waste Incineration Units, 40 CFR 60, Subpart CCCC and 326 IAC 12, are not included in the registration for the two (2) vacuum-sealed electric burnout units, identified as Burnout 1 and Burnout 2, because they do not burn commercial or industrial solid waste as defined in 40 CFR 241.2.
- (c) The requirements of the New Source Performance Standard for Other Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006, 40 CFR 60, Subpart EEEE and 326 IAC 12, are not included in the registration for the two (2) vacuum-sealed electric burnout units, identified as Burnout 1 and Burnout 2, because they are not very small municipal waste combustion units or institutional waste incineration units.

- (d) The requirements of the New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart IIII and 326 IAC 12, are not included in the registration for the one (1) diesel-fired fire pump engine, identified as Pump 1, because it was constructed and modified before July 11, 2005.
- (e) The requirements of the New Source Performance Standard for Stationary Spark Ignition Internal Combustion Engines, 40 CFR 60, Subpart JJJJ and 326 IAC 12, are not included in the registration for the one (1) four stroke lean burn spark ignition natural gas-fired emergency backup electric generator engine, identified as Generator1, because it was constructed prior to January 1, 2009.
- (f) The requirements of the New Source Performance Standard for the Graphic Arts Industry: Publication Rotogravure Printing, 40 CFR 60, Subpart QQ and 326 IAC 12, are not included in the registration for the one (1) printer, identified as P4, because it is not a rotogravure printing press as defined in 40 CFR 60.431(a).
- (g) The requirements of the New Source Performance Standard for Flexible Vinyl and Urethane Coating and Printing, 40 CFR 60, Subpart FFFF and 326 IAC 12, are not included in the registration for the one (1) printer, identified as P4, because it is not a rotogravure print station as defined in 40 CFR 60.581(a).
- (h) There are no other New Source Performance Standards (40 CFR Part 60) and 326 IAC 12 included in the registration.

**National Emission Standards for Hazardous Air Pollutants (NESHAP):**

- (i) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for the Printing and Publishing Industry, 40 CFR 63, Subpart KK and 326 IAC 20-18, are not included in the registration for the one (1) printer, identified as P4, since it does not meet the definition of a publication rotogravure press, product and packaging rotogravure press, or wide-web flexographic printing press as defined in 40 CFR 63.822(a).
- (j) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Paper and Other Web Coating, 40 CFR 63, Subpart JJJJ and 326 IAC 20-65, are not included in the registration for the one (1) printer, identified as P4, since it does not meet the definition of a web coating line as defined in 40 CFR 63.3310.
- (k) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Halogenated Solvent Cleaning, 40 CFR 63, Subpart T and 326 IAC 20-6, are not included in the registration for the two (2) parts cleaning units, identified as Aqueous Parts Tub 1 and Aqueous Parts Tub 2, and the one (1) printer ink roll hand-cleaning operation, identified as Roll Cleaner, since they do not use a solvent that contains methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride or chloroform, or any combination of these halogenated HAP solvents, in a total concentration greater than 5 percent by weight, as a cleaning and/or drying agent.
- (l) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Plastic Parts and Products, 40 CFR 63, Subpart PPPP and 326 IAC 20-81, are not included in the registration for the one (1) printer, identified as P4, since it does not use a coating that contains hazardous air pollutants (HAP) in the surface coating of plastic parts and products.
- (m) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial Process Cooling Towers, 40 CFR 63, Subpart Q and 326 IAC 20-4, are not included in the registration for the noncontact cooling tower systems, since they are not operated with chromium-based water treatment chemicals.

- (n) The one (1) stationary 208 hp, diesel-fired emergency fire pump engine, identified as Pump1, and one (1) four stroke lean burn spark ignition natural gas-fired emergency backup electric generator engine, identified as Generator1, (187 HP) is subject the requirements of the 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (326 IAC 20-82), because they are considered an existing stationary reciprocating internal combustion engine (RICE) (construction commenced before June 12, 2006) at an area source of hazardous air pollutants (HAP). Construction of the one (1) stationary 208 hp, diesel-fired fire pump engine, identified as Pump1, commenced in 1984. Construction and modification of the one (1) four stroke lean burn spark ignition natural gas-fired emergency backup electric generator engine, identified as Generator1, commenced in 1984 and 2004.

The one (1) stationary 208 hp, diesel-fired emergency fire pump engine, identified as Pump1, is subject to the following portions of Subpart ZZZZ:

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585
- (3) 40 CFR 63.6590(a)(1)(iii) and (iv)
- (4) 40 CFR 63.6595(a)(1), (b), and (c)
- (5) 40 CFR 63.6603(a)
- (6) 40 CFR 63.6605
- (7) 40 CFR 63.6625(e)(3), (f), (h), and (i)
- (8) 40 CFR 63.6635
- (9) 40 CFR 63.6640(a), (b), (e), (f)(1), (f)(2)(i), and (f)(4)
- (10) 40 CFR 63.6645(a)(5)
- (11) 40 CFR 63.6650
- (12) 40 CFR 63.6655
- (13) 40 CFR 63.6660
- (14) 40 CFR 63.6665
- (15) 40 CFR 63.6670
- (16) 40 CFR 63.6675
- (17) Table 2d (item 4)
- (18) Table 6 (item 9)
- (19) Table 8

Note: Existing non-emergency compression ignition (CI) stationary RICE that have a site rating less than or equal to 300 brake horsepower (HP) and are located at an area source of HAP are not subject to numerical CO or formaldehyde emission limitations, but are only subject to work and management practices under Table 2d and Table 6.

The one (1) four stroke lean burn spark ignition natural gas-fired emergency backup electric generator engine, identified as Generator1, is subject to the following portions of Subpart ZZZZ:

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585
- (3) 40 CFR 63.6590(a)(1)(iii) and (iv)
- (4) 40 CFR 63.6595(a)(1), (b), and (c)
- (5) 40 CFR 63.6603(a)
- (6) 40 CFR 63.6605
- (7) 40 CFR 63.6625(e)(3), (f), (h), and (j)
- (8) 40 CFR 63.6635
- (9) 40 CFR 63.6640(a), (b), (e), (f)(1), (f)(2)(i), (f)(3), and (f)(4)
- (10) 40 CFR 63.6645(a)(5)
- (11) 40 CFR 63.6650
- (12) 40 CFR 63.6655
- (13) 40 CFR 63.6660
- (14) 40 CFR 63.6665



- (15) 40 CFR 63.6670
- (16) 40 CFR 63.6675
- (17) Table 2d (item 5)
- (18) Table 6 (item 9)
- (19) Table 8

Note: Existing emergency spark ignition (SI) stationary RICE located at an area source of HAP are not subject to numerical CO or formaldehyde emission limitations, but are only subject to work and management practices under Table 2d and Table 6.

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to the one (1) stationary 208 hp, diesel-fired fire pump engine, identified as Pump1, and the one (1) four stroke lean burn spark ignition natural gas-fired emergency backup electric generator engine, identified as Generator1, except as otherwise specified in 40 CFR 63, Subpart ZZZZ.

- (o) There are no other National Emission Standards for Hazardous Air Pollutants under 40 CFR 63, 326 IAC 14 and 326 IAC 20 included in the registration.

#### **Compliance Assurance Monitoring (CAM):**

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

<b>State Rule Applicability - Entire Source</b>
---

State rule applicability for this source has been reviewed as follows:

#### **326 IAC 2-5.5 (Registrations)**

Registration applicability is discussed under the Permit Level Determination – Registration section above.

#### **326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))**

The operation of this source will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

#### **326 IAC 2-6 (Emission Reporting)**

This source is not subject to 326 IAC 2-6 (Emission Reporting), because it is not required to have an operating permit pursuant to 326 IAC 2-7 (Part 70), it is not located in Lake or Porter County, and its potential to emit lead is less than 5 tons per year. Therefore, this rule does not apply.

#### **326 IAC 5-1 (Opacity Limitations)**

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

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

#### **326 IAC 6-4 (Fugitive Dust Emissions Limitations)**

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

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

**326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)**

This source is not subject to the requirements of 326 IAC 6-5, because the source has potential fugitive particulate emissions of less than twenty-five (25) tons per year.

**326 IAC 6.5 (Particulate Matter Limitations Except Lake County)**

Pursuant to 326 IAC 6.5-1-1(a), this source (located in Delaware County) is not subject to the requirements of 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.

**326 IAC 6.8 (Particulate Matter Limitations for Lake County)**

Pursuant to 326 IAC 6.8-1-1(a), this source (located in Delaware County) is not subject to the requirements of 326 IAC 6.8 because it is not located in Lake County.

**326 IAC 6.8 (Lake County: Fugitive Particulate Matter)**

Pursuant to 326 IAC 6.8-10-1, this source (located in Delaware County) is not subject to the requirements of 326 IAC 6.8-10 because it is not located in Lake County.

<b>State Rule Applicability – Individual Facilities</b>
---

State rule applicability for this source has been reviewed as follows:

Railcar Unloading Operations (RRUL1 to RRUL4), Silos (A through P) and 36 Pneumatic Conveyors

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

Pursuant to 326 IAC 6-3-1(b)(14), the Railcar Unloading Operations (RRUL1 to RRUL4), Silos (A through P) and 36 Pneumatic Conveyors are not subject to the requirements of 326 IAC 6-3, since they each are a manufacturing process with potential emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

Coextruders (COEX1 to COEX8)

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

Pursuant to 326 IAC 6-3-1(b)(14), the coextruders, identified as COEX1 to COEX8, are not subject to the requirements of 326 IAC 6-3, since they each are a manufacturing process with potential emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

**326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)**

Even though, the coextruders, identified as COEX1 to COEX8, were constructed after January 1, 1980, they are not subject to the requirements of 326 IAC 8-1-6 because their unlimited VOC potential emissions are less than twenty-five (25) tons per year.

Granulators (COEXG1 to COEXG8 and G1 to G5)

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

Pursuant to 326 IAC 6-3-1(b)(14), the granulators, identified as COEXG1 to COEXG8 and G1 to G5, are not subject to the requirements of 326 IAC 6-3, since they each are a manufacturing process with potential emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

Thermoformers (F5 to F8 and F11)

**326 IAC 6-2-1 (Particulate Emission Limitations for Sources of Indirect Heating)**

The requirements of 326 IAC 6-2 do not apply to the thermoformers, identified as F5 to F8 and F11, since they do not meet the definition of an indirect heating unit.

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

Pursuant to 326 IAC 6-3-1(b)(14), the thermoformers, identified as F5 to F8 and F11, are not subject to the requirements of 326 IAC 6-3, since they each are a manufacturing process with potential emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

**326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)**

Even though, the thermoformers, identified as F5 to F8 and F11, were constructed after January 1, 1980, they are not subject to the requirements of 326 IAC 8-1-6, because their unlimited VOC potential emissions are less than twenty-five (25) tons per year.

Thermoformer Granulators (FG5 to FG8, FG11A, and FG11B)

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

Pursuant to 326 IAC 6-3-1(b)(14), the thermoformer granulators, identified as FG5 to FG8, FG11A, and FG11B, are not subject to the requirements of 326 IAC 6-3, since they each are a manufacturing process with potential emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

Slitter/Trimmer/Rewinder (SR1)

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

Pursuant to 326 IAC 6-3-1(b)(14), the slitter/trimmer/rewinder, identified as SR1, is not subject to the requirements of 326 IAC 6-3, since it is a manufacturing process with potential emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

Natural Gas Combustion

**326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating)**

Pursuant to 326 IAC 6-2-1(d), indirect heating facilities which received permit to construct after September 21, 1983 are subject to the requirements of 326 IAC 6-2-4.

The particulate matter emissions (Pt) shall be limited by the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu).

Q = Total source maximum operating capacity rating in 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.

Pursuant to 326 IAC 6-2-4(a), for Q less than 10 MMBtu/hr, Pt shall not exceed 0.6 lb/MMBtu.

Indirect Heating Units Which Began Operation After September 21, 1983						
Facility	Construction Date (Removal Date)	Operating Capacity (MMBtu/hr)	Q (MMBtu/hr)	Calculated Pt (lb/MMBtu)	Particulate Limitation, (Pt) (lb/MMBtu)	PM PTE based on AP-42 (lb/MMBtu)
Natural Gas-Fired Heater MAM1	Assumed 1984 (2024)	0.51	13.74	0.55	0.55	0.002
Natural Gas-Fired Heater MAM2-MAM4	Assumed 1984 (2024)	0.56, each	13.74	0.55	0.55	0.002
Natural Gas-Fired Heater AHU1, AHU3, AHU5, AHU6	Assumed 1984	0.40, each	13.74	0.55	0.55	0.002
18 Natural Gas-Fired Heaters, 1A, 4A-8A, 10A-13A, 1B-3B, 10B-14B	Assumed 1984	0.170, each	13.74	0.55	0.55	0.002
6 Natural Gas-Fired Heaters, 9A, 5B-9B	Assumed 1984 (2024)	0.30, each	13.74	0.55	0.55	0.002
2 Natural Gas-Fired Heaters, 3A, 4B	Assumed 1984	0.06, each	13.74	0.55	0.55	0.002
6 Natural Gas-Fired HVAC Units, HVAC1, HVAC3, HVAC5-6, HAVC8, HVAC32	Assumed 1984 (2024)	0.695, each	13.74	0.55	0.55	0.002
4 Natural Gas-Fired Heaters 15B-18B4 Natural Gas-Fired Heaters 15B-18B	Assumed 1984 (2024)	0.20, each	13.74	0.55	0.55	0.002

Indirect Heating Units Which Began Operation After September 21, 1983						
Facility	Construction Date (Removal Date)	Operating Capacity (MMBtu/hr)	Q (MMBtu/hr)	Calculated Pt (lb/MMBtu)	Particulate Limitation, (Pt) (lb/MMBtu)	PM PTE based on AP-42 (lb/MMBtu)
3 Natural Gas-Fired Tube Heaters	2024	0.05, each	5.21	0.71	0.6	0.002
2 Natural Gas-Fired Heaters	2024	0.08, each	5.21	0.71	0.6	0.002
1 Natural Gas-Fired Heater	2024	0.12	5.21	0.71	0.6	0.002
Where: Q = Includes the capacity (MMBtu/hr) of the new unit(s) and the capacities for those unit(s) which were in operation at the source at the time the new unit(s) was constructed.						
Note: Emission units shown in strikethrough were subsequently removed from the source. The effect of removing these units on "Q" is shown in the year the boiler was removed.						

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

Pursuant to 326 IAC 6-3-1(b)(1), the thirty (30) natural gas-fired combustion units are not subject to the requirements of 326 IAC 6-3, since they are combustion units for indirect heat.

**326 IAC 7-1.1 Sulfur Dioxide Emission Limitations**

These emission unit are not subject to 326 IAC 326 IAC 7-1.1, because they have a potential to emit sulfur dioxide (SO2) of less than 25 tons per year or 10 pounds per hour.

**326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)**

Even though, the thirty (30) natural gas-fired combustion units were constructed after January 1, 1980, they are not subject to the requirements of 326 IAC 8-1-6, because their unlimited VOC potential emissions are less than twenty-five (25) tons per year.

**326 IAC 9-1 (Carbon Monoxide Emission Limits)**

The requirements of 326 IAC 9-1 do not apply to the thirty (30) natural gas-fired combustion units, because this source does not operate a catalyst regeneration petroleum cracking system or a petroleum fluid coker, grey iron cupola, blast furnace, basic oxygen steel furnace, or other ferrous metal smelting equipment.

**326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Categories)**

The requirements of 326 IAC 10-3 do not apply to the thirty (30) natural gas-fired combustion units, since these units are not a blast furnace gas-fired boiler, a Portland cement kiln, or a facility specifically listed under 326 IAC 10-3-1(a)(2).

Natural Gas-fired Crystallizer Units (CR1 and CR2) and Natural Gas-fired Dryers (DR1 and DR2)

**326 IAC 6-2-1 (Particulate Emission Limitations for Sources of Indirect Heating)**

The requirements of 326 IAC 6-2 do not apply to the natural gas-fired crystallizer units, identified as CR1 and CR2, and natural gas-fired dryers, identified as DR1 and DR2, since they are not sources of indirect heating.

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

Pursuant to 326 IAC 6-3-1(b)(12), the natural gas-fired crystallizer units, identified as CR1 and CR2, and natural gas-fired dryers, identified as DR1 and DR2, are not subject to the requirements of 326 IAC 6-3, since they each are a manufacturing process with potential emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

### **326 IAC 7-1.1 Sulfur Dioxide Emission Limitations**

These emission units are not subject to 326 IAC 326 IAC 7-1.1, because they have a potential to emit sulfur dioxide (SO<sub>2</sub>) of less than 25 tons per year or 10 pounds per hour.

### **326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)**

Even though, the natural gas-fired crystallizer units, identified as CR1 and CR2, and natural gas-fired dryers, identified as DR1 and DR2, were constructed after January 1, 1980, they are not subject to the requirements of 326 IAC 8-1-6, because their unlimited VOC potential emissions are less than twenty-five (25) tons per year.

### **326 IAC 9-1 (Carbon Monoxide Emission Limits)**

The requirements of 326 IAC 9-1 do not apply to the natural gas-fired crystallizer units, identified as CR1 and CR2, and natural gas-fired dryers, identified as DR1 and DR2, because this source does not operate a catalyst regeneration petroleum cracking system or a petroleum fluid coker, grey iron cupola, blast furnace, basic oxygen steel furnace, or other ferrous metal smelting equipment.

### **326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Categories)**

The requirements of 326 IAC 10-3 do not apply to the natural gas-fired crystallizer units, identified as CR1 and CR2, and natural gas-fired dryers, identified as DR1 and DR2, since these units are not a blast furnace gas-fired boiler, a Portland cement kiln, or a facility specifically listed under 326 IAC 10-3-1(a)(2).

#### Printer (P4)

### **326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)**

Even though, the printer, identified as P4, was constructed after January 1, 1980, it is not subject to the requirements of 326 IAC 8-1-6 because its unlimited VOC potential emissions are less than twenty-five (25) tons per year.

### **326 IAC 8-5-5 (Graphic Arts Operations)**

The requirements of 326 IAC 8-5-5 do not apply to the printer, identified as P4, since this unit is not a packaging rotogravure, publication rotogravure, or flexographic printing source.

### **326 IAC 8-2-5 (Paper Coating)**

Pursuant to 326 IAC 8-2-1(a)(4), the printer, identified as P4, is not subject to the requirements of 326 IAC 8-2-5, because it has actual emissions less than fifteen (15) pounds of VOC per day before add-on controls.

### **326 IAC 8-2-9 (Miscellaneous Metal and Plastic Parts Coating Operations)**

Pursuant to 326 IAC 8-2-1(a)(4), the printer, identified as P4, is not subject to the requirements of 326 IAC 8-2-9, because it has actual emissions less than fifteen (15) pounds of VOC per day before add-on controls.

#### Ink Roll Cleaner (Roll Cleaner)

### **326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)**

Even though, the ink roll cleaner, identified as Roll Cleaner, was constructed after January 1, 1980, it is not subject to the requirements of 326 IAC 8-1-6, because its unlimited VOC potential emissions are less than twenty-five (25) tons per year.

**326 IAC 8-3-2 (Cold Cleaner Degreasers)**

The requirements of 326 IAC 8-3-2 Cold Cleaner Degreasers do not apply to the ink roll cleaner, identified as Roll Cleaner, as it does not meet the definition of a cold cleaner degreaser since the ink rolls are cleaned by hand wiping.

Diesel-fired emergency fire pump and natural gas-fired emergency engine

**326 IAC 6-2-1 (Particulate Emission Limitations for Sources of Indirect Heating)**

The requirements of 326 IAC 6-2-1 do not apply to the diesel-fired emergency fire pump, identified as Pump1, and the natural gas-fired emergency engine, identified as Generator 1, since they are not sources of indirect heating.

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

Pursuant to 326 IAC 6-3-1.5(2), the diesel-fired emergency fire pump, identified as Pump1, and the natural gas-fired emergency engine, identified as Generator 1, are not subject to the requirements of 326 IAC 6-3, since they are not a manufacturing process.

**326 IAC 7-1.1 Sulfur Dioxide Emission Limitations**

These emissions unit are not subject to 326 IAC 326 IAC 7-1.1, because they have a potential to emit sulfur dioxide (SO<sub>2</sub>) of less than 25 tons per year or 10 pounds per hour.

**326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)**

Even though, the diesel-fired emergency fire pump, identified as Pump1, and the natural gas-fired emergency engine, identified as Generator 1, were constructed after January 1, 1980, they are not subject to the requirements of 326 IAC 8-1-6 because their unlimited VOC potential emissions are less than twenty-five (25) tons per year.

**326 IAC 9-1 (Carbon Monoxide Emission Limits)**

The requirements of 326 IAC 9-1 do not apply to the diesel-fired emergency fire pump, identified as Pump1, and the natural gas-fired emergency engine, identified as Generator 1, because this source does not operate a catalyst regeneration petroleum cracking system or a petroleum fluid coker, grey iron cupola, blast furnace, basic oxygen steel furnace, or other ferrous metal smelting equipment.

**326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Categories)**

The requirements of 326 IAC 10-3 do not apply to the diesel-fired emergency fire pump, identified as Pump1, and the natural gas-fired emergency engine, identified as Generator 1, since these units are not a blast furnace gas-fired boiler, a Portland cement kiln, or a facility specifically listed under 326 IAC 10-3-1(a)(2).

Two (2) Parts Cleaning Units (Aqueous Parts Tub1 and Aqueous Parts Tub2)

**326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)**

Even though, the two (2) parts cleaning units, identified as Aqueous Parts Tub1 and Aqueous Parts Tub2, were constructed after January 1, 1980, they are not subject to the requirements of 326 IAC 8-1-6 because their unlimited VOC potential emissions are less than twenty-five (25) tons per year.

**326 IAC 8-3-2 (Cold Cleaner Degreasers)**

Pursuant to 326 IAC 8-3-1(d)(1)(B), the two (2) parts cleaning units, identified as Aqueous Parts Tub1 and Aqueous Parts Tub2, are not subject to the requirements of 326 IAC 8-3-2, since they use a solvent that contains less than one percent (1%) of VOC by weight.

**Conclusion and Recommendation**

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on April 23, 2024. Additional information was received on May 30, 2024.

The construction and operation of this source shall be subject to the conditions of the attached proposed Registration No. 035-47764-00078. The staff recommends to the Commissioner that the Registration be approved.

<b>IDEM Contact</b>
---------------------

- (a) If you have any questions regarding this permit, please contact Kristen Squillace, Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251, or by telephone at (317) 233-9327 or (800) 451-6027, and ask for Kristen Squillace or (317) 233-9327.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: <https://www.in.gov/idem/airpermit/public-participation/>; and the Citizens' Guide to IDEM on the Internet at: <https://www.in.gov/idem/resources/citizens-guide-to-idem/>.



**Appendix A: Emission Calculations  
Potential to Emit (PTE) Summary**

Company Name: Spartech, LLC The Jordan Company  
Address: 1401 East Memorial Drive, Muncie, Indiana 47302  
Permit No.: M035-47764-00078  
Reviewer: Kristen Squillace

Potential to Emit Before Controls (tons/year)											
Emission Unit	Emission Unit ID	PM	PM10	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Total HAPs	Single HAP	
Railcar Unloading	RRUL1 to RRUL4	5.15	5.15	5.15	--	--	--	--	--	--	--
Silos	A through P	1.02	1.02	1.02	--	--	--	--	--	--	--
36 Pneumatic Conveyors	--	1.43	1.43	1.43	--	--	--	--	--	--	--
Coextruders	COEX1 to COEX8	4.94	4.94	4.94	--	--	16.2	--	0.00	0.00	--
Granulators	COEXG1 to COEXG8 and G1 to G5	0.28	0.28	0.28	--	--	--	--	--	--	--
Thermoformer	F5 to F8, and F11	1.51	1.51	1.51	--	--	0.71	--	0.47	0.47	Styrene
Thermoformer Granulators/Conveyors	FG5 to FG8, FG11A, and FG11B	0.20	0.20	0.20	--	--	--	--	--	--	--
Slitter/Trimmer/Rewinder	SR1	0.003	0.003	0.003	--	--	--	--	--	--	--
Natural Gas Combustion	--	0.06	0.24	0.24	0.02	3.20	0.18	2.68	0.06	0.058	Hexane
Printers	P4	--	--	--	--	--	7.50E-05	--	--	--	--
Ink Roll Cleaner	Roll Cleaner	--	--	--	--	--	1.03	-	0.01	0.007	Methyl Alcohol
Diesel-fired Fire Pump Engine	Pump1	0.11	0.11	0.11	0.11	1.61	0.13	0.35	0.001	4.30E-04	Formaldehyde
NG Emergency Generator	Generator1	2.52E-05	3.27E-03	3.27E-03	1.92E-04	1.34	0.04	0.10	0.023	0.0172788	Formaldehyde
Parts Cleaning Units	Aqueous Parts Tub1 and Aqueous Parts Tub2	--	--	--	--	--	0.66	--	--	--	--
<b>Total Excluding Fugitives</b>		<b>14.71</b>	<b>14.89</b>	<b>14.89</b>	<b>0.13</b>	<b>6.14</b>	<b>18.28</b>	<b>3.14</b>	<b>0.56</b>	<b>0.47</b>	<b>Styrene</b>
Paved Roads (fugitive)	--	0.93	0.19	0.05	--	--	--	--	--	--	--
Cooling Tower (fugitive)	--	2.33E-03	2.33E-03	2.33E-03	--	--	--	--	--	--	--
<b>Total Including Fugitives</b>		<b>15.64</b>	<b>15.08</b>	<b>14.94</b>	<b>0.13</b>	<b>6.14</b>	<b>18.28</b>	<b>3.14</b>	<b>0.56</b>	<b>0.47</b>	<b>Styrene</b>

**Appendix A: Emissions Calculations  
Modification Summary**

Company Name: Spartech, LLC The Jordan Company  
Address: 1401 East Memorial Drive, Muncie, Indiana 47302  
Permit No.: M035-47764-00078  
Reviewer: Kristen Squillace

Uncontrolled Potential Emissions of the New Emission Units (tons per year)									
Emission Unit	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Single HAP
RRUL3	1.89	1.89	1.89	--	--	--	--	--	--
RRUL4	1.26	1.26	1.26	--	--	--	--	--	--
Silo P	0.06	0.06	0.06	--	--	--	--	--	--
Five New (5) Pneumatic Conveyors	0.79	0.79	0.79	--	--	--	--	--	--
COEX7	0.30	0.30	0.30	--	--	0.78	--	0.00	0.00
COEX8	0.54	0.54	0.54	--	--	1.66	--	0.00	0.00 Styrene
Coextruder Granulators/Conveyors (COEXG7)	0.01	0.01	0.01	--	--	--	--	--	--
Coextruder Granulators/Conveyors (COEXG8)	0.02	0.02	0.02	--	--	--	--	--	--
Six (6) New N.G Heaters	0.00	0.01	0.01	0.00	0.18	0.01	0.16	0.003	0.003 Hexane
Slitter/Trimmer/Rewinder (SR1)	0.01	0.01	0.01	--	--	--	--	--	--
<b>Total</b>	<b>4.86</b>	<b>4.88</b>	<b>4.88</b>	<b>0.00</b>	<b>0.18</b>	<b>2.45</b>	<b>0.16</b>	<b>0.00</b>	<b>0.00</b> Styrene

PTE Increase of the Modified Emission Units (tons per year)									
Emission Unit	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Single HAP
PTE Before Modification (RRUL1)	2.24	2.24	2.24	--	--	0.00	--	0.00	0.00
PTE After Modification (RRUL1)	1.26	1.26	1.26	--	--	0.00	--	0.00	0.00
<i>PTE Increase (RRUL1)</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>--</i>	<i>--</i>	<i>0.00</i>	<i>--</i>	<i>0.00</i>	<i>0.00</i>
PTE Before Modification (COEX1)	9.35	9.35	9.35	--	--	7.44	--	0.00	0.00
PTE After Modification (COEX1)	0.92	0.92	0.92	--	--	3.24	--	0.00	0.00 Styrene
<i>PTE Increase (COEX1)</i>	<i>-8.43</i>	<i>-8.43</i>	<i>-8.43</i>	<i>--</i>	<i>--</i>	<i>-4.20</i>	<i>--</i>	<i>0.00</i>	<i>0.00</i> Styrene
PTE Before Modification (COEX2)	10.02	10.02	10.02	--	--	8.02	--	0.00	0.00
PTE After Modification (COEX2)	0.84	0.84	0.84	--	--	2.50	--	0.00	0.00 Styrene
<i>PTE Increase (COEX2)</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>--</i>	<i>--</i>	<i>0.00</i>	<i>--</i>	<i>0.00</i>	<i>0.00</i>
PTE Before Modification (COEX3)	2.54	2.54	2.54	--	--	1.65	--	0.47	0.47 Styrene
PTE After Modification (COEX3)	0.68	0.68	0.68	--	--	2.09	--	0.00	0.00 Styrene
<i>PTE Increase (COEX3)</i>	<i>-1.86</i>	<i>-1.86</i>	<i>-1.86</i>	<i>--</i>	<i>--</i>	<i>0.44</i>	<i>--</i>	<i>-0.47</i>	<i>-0.47</i> Styrene
PTE Before Modification (COEX4)	0.00	0.00	0.00	--	--	0.70	--	0.66	0.58 Styrene
PTE After Modification (COEX4)	0.81	0.81	0.81	--	--	2.50	--	0.00	0.00 Styrene
<i>PTE Increase (COEX4)</i>	<i>0.81</i>	<i>0.81</i>	<i>0.81</i>	<i>--</i>	<i>--</i>	<i>1.80</i>	<i>--</i>	<i>-0.66</i>	<i>-0.58</i> Styrene
PTE Before Modification (COEX5)	0.96	0.96	0.96	--	--	1.47	--	0.16	0.16 Styrene
PTE After Modification (COEX5)	0.86	0.86	0.86	--	--	3.42	--	0.00	0.00 Styrene
<i>PTE Increase (COEX5)</i>	<i>-0.10</i>	<i>-0.10</i>	<i>-0.10</i>	<i>--</i>	<i>--</i>	<i>1.95</i>	<i>--</i>	<i>-0.16</i>	<i>-0.16</i> Styrene
PTE Before Modification (COEX6)	3.71	3.71	3.71	--	--	2.41	--	0.68	0.68 Styrene
PTE After Modification (COEX6)	0.00	0.00	0.00	--	--	0.00	--	0.00	0.00 Styrene
<i>PTE Increase (COEX6)</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>--</i>	<i>--</i>	<i>0.00</i>	<i>--</i>	<i>0.00</i>	<i>0.00</i> Styrene
PTE Before Modification (Granulator COEX1)	0.002	0.002	0.002	--	--	0.00	--	0.00	0.00
PTE After Modification (Granulator COEX1)	0.02	0.02	0.02	--	--	0.00	--	0.00	0.00
<i>PTE Increase (Granulator COEX1)</i>	<i>0.02</i>	<i>0.02</i>	<i>0.02</i>	<i>--</i>	<i>--</i>	<i>0.00</i>	<i>--</i>	<i>0.00</i>	<i>0.00</i>
PTE Before Modification (Granulator COEX4)	0.002	0.002	0.002	--	--	0.00	--	0.00	0.00
PTE After Modification (Granulator COEX4)	0.019	0.019	0.019	--	--	0.00	--	0.00	0.00
<i>PTE Increase (Granulator COEX4)</i>	<i>0.02</i>	<i>0.02</i>	<i>0.02</i>	<i>--</i>	<i>--</i>	<i>0.00</i>	<i>--</i>	<i>0.00</i>	<i>0.00</i>
PTE Before Modification (Granulator COEX5)	0.003	0.003	0.003	--	--	0.00	--	0.00	0.00
PTE After Modification (Granulator COEX5)	0.030	0.030	0.030	--	--	0.00	--	0.00	0.00
<i>PTE Increase (Granulator COEX5)</i>	<i>0.03</i>	<i>0.03</i>	<i>0.03</i>	<i>--</i>	<i>--</i>	<i>0.00</i>	<i>--</i>	<i>0.00</i>	<i>0.00</i>
PTE Before Modification (Granulator COEX6)	0.008	0.008	0.008	--	--	0.00	--	0.00	0.00
PTE After Modification (Granulator COEX6)	0.023	0.023	0.023	--	--	0.00	--	0.00	0.00
<i>PTE Increase (Granulator COEX6)</i>	<i>0.01</i>	<i>0.01</i>	<i>0.01</i>	<i>--</i>	<i>--</i>	<i>0.00</i>	<i>--</i>	<i>0.00</i>	<i>0.00</i>
<b>Total</b>	<b>-9.50</b>	<b>-9.50</b>	<b>-9.50</b>	<b>--</b>	<b>--</b>	<b>-0.01</b>	<b>--</b>	<b>-1.29</b>	<b>-1.21</b> Styrene

PTE Increase Due to the Transition (ton/year)									
Emission Unit	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Total PTE Before Controls of the New Emission Units	4.86	4.88	4.88	0.00	0.18	2.45	0.16	0.00	0.00 Styrene
Total PTE Increase of the Modified Emission Units	0.00	0.00	0.00	--	--	0.00	--	0.00	0.00 Styrene
<b>Total PTE of the Revision</b>	<b>4.86</b>	<b>4.88</b>	<b>4.88</b>	<b>0.00</b>	<b>0.18</b>	<b>2.45</b>	<b>0.16</b>	<b>0.00</b>	<b>0.00</b> Styrene

**Appendix A: Emission Calculations**  
**Particulate Emissions From Railcar unloading RRUL1 to RRUL4, and Silos**

**Company Name: Spartech, LLC The Jordan Company**  
**Address: 1401 East Memorial Drive, Muncie, Indiana 47302**  
**Permit No.: M035-47764-00078**  
**Reviewer: Kristen Squillace**

Emission Unit ID	Maximum Throughput (tons/hour)	PM/PM10/PM2.5 Emission Factor (controlled) (lbs/ton) <sup>1</sup>	Assumed Control Device for Emission Factor	PTE of PM/PM10/PM2.5 before Control (lbs/hr)	PTE of PM/PM10/PM2.5 before Control (ton/yr)
Railcar Unloading (RRUL1)	10.00	2.90E-05	99.90%	0.29	<b>1.26</b>
Railcar Unloading (RRUL2)	5.94	2.90E-05	99.90%	0.17	<b>0.75</b>
Railcar Unloading (RRUL3)	15.00	2.90E-05	99.90%	0.44	<b>1.89</b>
Railcar Unloading (RRUL4)	10.00	2.90E-05	99.90%	0.29	<b>1.26</b>
<b>Total</b>				<b>1.19</b>	<b>5.15</b>
Silos (A through P)	8.00	2.90E-05	99.90%	0.23	<b>1.02</b>
<b>Total:</b>				<b>0.23</b>	<b>1.02</b>

Emission units are uncontrolled.

1. Emission factor for plastic pellets is from AP 42, Chapter 11.6, Table 11.6-4 "Limestone Transfer with Fabric Filter" (SCC 3-05-006-12)(1/95).

Assume all PM is equal to PM10 and PM2.5

Even though the RRUL is bottleneck by the Coextruders, PTE was still based on the maximum capacity of the RRUL.

**METHODOLOGY**

Before Controls PM/PM10/PM2.5 PTE (lb/hour) = Maximum Process Rate (ton/hour) x Controlled Emission Factor (lbs/ton) / (1 - Control Efficiency (%))

Before Controls PM/PM10/PM2.5 PTE (ton/year) = (lbs/hour PTE) x (8760 hours/1 year) x (1 ton/2000 lbs)

Controlled PM/PM10/PM2.5 PTE (ton/year) = Maximum Process Rate (ton/hour) x Controlled Emission Factor (lbs/ton) x (8760 hours/1 year) x (1 ton/2000 lbs)

**Appendix A: Emission Calculations  
Particulate Emissions From Pneumatic Conveyors**

**Company Name: Spartech, LLC The Jordan Company  
Address: 1401 East Memorial Drive, Muncie, Indiana 47302  
Permit No.: M035-47764-00078  
Reviewer: Kristen Squillace**

<b>Emission Unit (ID#)</b>	<b>Number of Units</b>	<b>Maximum Throughput per Single Unit (tons/hour)</b>	<b>PM/PM10/PM2.5 Emission Factor (controlled) (lbs/ton)<sup>1</sup></b>	<b>Control Efficiency (%)</b>	<b>PTE of PM/PM10/PM2.5 Before Control of per Unit (tons/year)</b>	<b>PTE of PM/PM10/PM2.5 After Control of per Unit (tons/year)</b>
<b>Pneumatic Conveyors</b> (Integral bin vent filters)	23	1.25	2.9E-05	99.9%	3.652	<b>0.0037</b>
<b>Pneumatic Conveyors</b> (bin vent filters)	5	1.25	2.9E-05	99.9%	<b>0.794</b>	0.0008
<b>Pneumatic Conveyors</b> (bin vent filters Not Integral)	2	1.25	2.9E-05	99.9%	<b>0.318</b>	0.0003
<b>Six (6) Pneumatic Conveyors</b> (bin vent filters Not Integral)	6	2.50	2.9E-05	99.9%	<b>0.318</b>	0.0003
<b>Twenty-three (23) Pneumatic Conveyors (with intergral control):</b>						0.004
<b>Five (5) Pneumatic Conveyors (with bin vent filters)</b>						0.794
<b>Two (2) Pneumatic Conveyors (without control):</b>						0.318
<b>Six (6) Pneumatic Conveyors (without control):</b>						0.318
<b>Total PTE for all Pneumatic Conveyors:</b>						<b>1.43</b>

(1)Controlled emission factor for plastic pellets and scrap is from AP 42, Chapter 11.6, Table 11.6-4 "Limestone Transfer with Fabric Filter" (SCC 3-05-006-12)(1/95).

Assume all PM is equal to PM10 and PM2.5.

Even though these conveyors are bottleneck by the Coextruders, the PTE for the conveyors was still based on the maximum capacity of the conveyors.

**METHODOLOGY**

Before Controls PM/PM10/PM2.5 PTE (ton/yr) = Max Throughput (ton/hour) x Controlled Emission Factor (lbs/ton) / (1- Control Efficiency (%)) x 8760 hrs/year x 1 ton/2000 lbs

Controlled PTE of PM/PM10/PM2.5 (tons/year) = Max Throughput (ton/hour) x Emission Factor (lbs/ton) x 8760 hrs/year x 1 ton/2000 lbs

Since the bin vents on the twenty-three conveyors are considered integral, permit level is based on the PTE after control. Control on other conveyors is not considered integral.

**Appendix A: Emission Calculations**  
**VOC and HAP Emissions From the CoExtrusion Lines**

Company Name: Spartech, LLC The Jordan Company  
 Address: 1401 East Memorial Drive, Muncie, Indiana 47302  
 Permit No.: M035-47764-00078  
 Reviewer: Kristen Squillace

Emissions Unit ID	Recipe / Structure	Material Type	Maximum Throughput Rate (lbs/hour)	VOC Emission Factor (lbs/MMlb)	PM/PM10 Emission Factor (lbs/MMlb)	Ethylbenzene Emission Factor (lbs/MMlb)	Styrene Emission Factor (lbs/MMlb)	PTE of VOC (tons/year)	PTE of PM/PM10 (tons/year)	PTE of Ethylbenzene (tons/year)	PTE of Styrene (tons/year)
COEX1	1	Polypropylene	2,600	177.0	68.4	0.00	0.00	2.02	0.78	0.00	0.00
		EVOH/HDPE	250	30.7	26.6	0.00	0.00	0.03	0.03	0.00	0.00
		Glue/EVA	87.0	128.2	1.0	0.00	0.00	0.05	0.00	0.00	0.00
COEX1	2	EVOH/HDPE	2,200	30.7	26.6	0.00	0.00	0.30	0.26	0.00	0.00
COEX1	3	Polystyrene	3,800	190.0	53.3	0.00	0.00	3.16	0.89	0.00	0.00
		EVOH	250	30.7	26.6	0.00	0.00	0.03	0.03	0.00	0.00
		Glue/EVA	87	128.2	1.0	0.00	0.00	0.05	0.00	0.00	0.00
<b>COEX1 Max*</b>								<b>3.24</b>	<b>0.92</b>	<b>0.00</b>	<b>0.00</b>
COEX2	1	Polypropylene	2,700	177.0	68.4	0.00	0.00	2.09	0.81	0.00	0.00
		EVOH/HDPE	250	30.7	26.6	0.00	0.00	0.03	0.03	0.00	0.00
		Glue/EVA	87.0	128.2	1.0	0.00	0.00	0.05	0.00	0.00	0.00
COEX2	2	HIPS	3000.0	190.0	53.3	0.00	0.00	2.50	0.70	0.00	0.00
COEX3	3	HDPE	2500.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00
COEX2		LDPE	400.0	35.3	30.9	0.00	0.00	0.06	0.05	0.00	0.00
<b>COEX2 Max*</b>								<b>2.50</b>	<b>0.84</b>	<b>0.00</b>	<b>0.00</b>
COEX3	1	Polypropylene	2,200	177.0	68.4	0.00	0.00	1.71	0.66	0.00	0.00
		EVOH	150	30.7	26.6	0.00	0.00	0.02	0.02	0.00	0.00
		Glue/EVA	90	128.2	1.0	0.00	0.00	0.05	0.00	0.00	0.00
COEX3	2	PET	2,400	0.3	0.0	0.00	0.00	0.00	0.00	0.00	0.00
COEX3	3	HIPS	2,400	190.0	53.3	0.00	0.00	2.00	0.56	0.00	0.00
		EVOH	150	30.7	26.6	0.00	0.00	0.02	0.02	0.00	0.00
		Glue/EVA	90	128.2	1.0	0.00	0.00	0.05	0.00	0.00	0.00
		HDPE	150	35.3	30.9	0.00	0.00	0.02	0.02	0.00	0.00
<b>COEX3 Max*</b>								<b>2.09</b>	<b>0.68</b>	<b>0.00</b>	<b>0.00</b>
COEX4	1	Polypropylene	2700	177.0	68.4	0.00	0.00	2.09	0.81	0.00	0.00
COEX4	2	HIPS	3000	190.0	53.3	0.00	0.00	2.50	0.70	0.00	0.00
COEX4	3	HDPE	2500	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00
COEX4	4	PET	3000	0.3	0.0	0.00	0.00	0.00	0.00	0.00	0.00
<b>COEX4 Max*</b>								<b>2.50</b>	<b>0.81</b>	<b>0.00</b>	<b>0.00</b>
COEX5	1	Polypropylene	2,700	177.0	68.4	0.00	0.00	2.09	0.81	0.00	0.00
		EVOH	150	30.7	26.6	0.00	0.00	0.02	0.02	0.00	0.00
		Glue/EVA	90	128.2	1.0	0.00	0.00	0.05	0.00	0.00	0.00
COEX5	2	HIPS	3,465	190.0	53.3	0.00	0.00	2.88	0.81	0.00	0.00
		EVOH	200	30.7	26.6	0.00	0.00	0.03	0.02	0.00	0.00
		LDPE	846	128.2	1.0	0.00	0.00	0.48	0.00	0.00	0.00
		Glue/EVA	194	35.3	30.9	0.00	0.00	0.03	0.03	0.00	0.00
<b>COEX5 Max*</b>								<b>3.42</b>	<b>0.86</b>	<b>0.00</b>	<b>0.00</b>
COEX6		PET	3500	0.3	0.0	0.00	0.00	0.005	0.00	0.00	0.00
<b>COEX6 Max*</b>								<b>0.005</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
COEX7	1	Polypropylene	1000	177.0	68.4	0.00	0.00	0.78	0.30	0.00	0.00
	2	HDPE	1000	30.7	26.6	0.00	0.00	0.13	0.12	0.00	0.00
<b>COEX7 Max*</b>								<b>0.78</b>	<b>0.30</b>	<b>0.00</b>	<b>0.00</b>
COEX8	1	Polypropylene	1800	177.0	68.4	0.00	0.00	1.40	0.54	0.00	0.00
	2	HIPS	2000	190.0	53.3	0.00	0.00	1.66	0.47	0.00	0.00
	3	PET	2300	0.3	0.0	0.00	0.00	0.00	0.00	0.00	0.00
	4	HDPE	1800	30.7	26.6	0.00	0.00	0.24	0.21	0.00	0.00
<b>COEX8 Max*</b>								<b>1.66</b>	<b>0.54</b>	<b>0.00</b>	<b>0.00</b>
<b>Total</b>								<b>16.18</b>	<b>4.94</b>	<b>0.00</b>	<b>0.00</b>
										<b>Total HAPs</b>	<b>0.00</b>
										<b>Single HAP</b>	<b>0.00</b>

\*The Max is calculated taking the highest sum of the materials of one recipe.  
 Emission factors represent emissions before controls. VOC and particulate emissions are uncontrolled.

**METHODOLOGY**

PTE (tons/year) = Maximum Process Rate (lbs/hour) x Emission Factor (lbs/1,000,000 lb) x 8760 hours/year x 1 ton/2000 lbs

Emission Factors and source	VOC (lbs/MMlb)	PM/PM10 (lbs/MMlb)	Ethylbenzene (lbs/MMlb)	Styrene (lbs/MMlb)	Emission Factor Source
Polypropylene	177	68.4	0	0	"Development of Emission Factors for Polypropylene Processing", Journal of Air and Waste Management Association, January 1999. Table 5 - Avg Die Melt Temp @510 deg F.
EVOH	30.7	26.6	0	0	Emission factors for EVOH are from "Development of Emission Factors for Polyethylene Processing", Journal of Air and Waste Management Association, June, 1996.
Glue/EVA	128.2	1	0	0	"Development of Emission Factors for Ethylene-Vinyl Acetate & Ethylene-Methyl Acrylate Copolymer", Journal of Air and Waste Management Association, October 1997. Table 6 EVA 18% VA - Melt temp @340 deg F.
HIPS	190	53.3	0	0	"Sampling and Analysis of Fumes Evolved During Thermal Processing of Polystyrene Resins", Dow Chemical, et al.
LDPE	35.3	30.9	0	0	"Development of Emission Factors for Polyethylene Processing", Journal of Air and Waste Management Association, June, 1996. Table 7 - LDPE Avg Melt Temp @500 deg F.
HDPE	30.7	26.6	0	0	"Development of Emission Factors for Polyethylene Processing", Journal of Air and Waste Management Association, June, 1996. Table 7 - HDPE Avg Melt Temp @430 deg F.
PET	0.3	0	0	0	"EASTAR PETG Copolyester 6763 TGA Experiments"; Eastman Chemical Company

**METHODOLOGY**

PTE (tons/year) = Maximum Process Rate (lbs/hour) x Emission Factor (lbs/1,000,000 lb) x 8760 hours/year x 1 ton/2000 lbs

**Appendix A: Emission Calculations**  
**Particulate Emissions From Granulators, Pneumatic Conveyors, and Surge Bins**

**Company Name: Spartech, LLC The Jordan Company**  
**Address: 1401 East Memorial Drive, Muncie, Indiana 47302**  
**Permit No.: M035-47764-00078**  
**Reviewer: Kristen Squillace**

<b>Emission Unit (ID#)</b> <i>(Control Device)</i>	<b>Maximum Throughput</b> <i>(tons/hour)</i>	<b>PM/PM10/PM2.5 Emission Factor (controlled)</b> <i>(lbs/ton)<sup>1</sup></i>	<b>Control Device</b>	<b>Control Efficiency (%)</b>	<b>PTE of PM/PM10/PM2.5 before Control</b> <i>(lbs/hr)</i>	<b>PTE of PM/PM10/PM2.5 After Control</b> <i>(lbs/hr)</i>	<b>PTE of PM/PM10/PM2.5 Before Control</b> <i>(tons/year)</i>	<b>PTE of PM/PM10/PM2.5 After Control</b> <i>(tons/year)</i>
<b>Coextruder Granulators/Conveyors (COEXG1)</b> <i>(Bin Vent Filters)</i>	0.19	2.9E-05	Fabric filter	99.9%	5.51E-03	5.5E-06	0.024	2.41E-05
<b>Coextruder Granulators/Conveyors (COEXG2)</b> <i>(Bin Vent Filters)</i>	0.15	2.9E-05	Fabric filter	99.9%	4.35E-03	4.4E-06	0.019	1.91E-05
<b>Coextruder Granulators/Conveyors (COEXG3)</b> <i>(Bin Vent Filters)</i>	0.12	2.9E-05	Fabric filter	99.9%	3.48E-03	3.5E-06	0.015	1.52E-05
<b>Coextruder Granulators/Conveyors (COEXG4)</b> <i>(Bin Vent Filters)</i>	0.15	2.9E-05	Fabric filter	99.9%	4.35E-03	4.4E-06	0.019	1.91E-05
<b>Coextruder Granulators/Conveyors (COEXG5)</b> <i>(Bin Vent Filters)</i>	0.24	2.9E-05	Fabric filter	99.9%	6.96E-03	7.0E-06	0.030	3.05E-05
<b>Coextruder Granulators/Conveyors (COEXG6)</b> <i>(Bin Vent Filters)</i>	0.18	2.9E-05	Fabric filter	99.9%	5.22E-03	5.2E-06	0.023	2.29E-05
<b>Coextruder Granulators/Conveyors (COEXG7)</b> <i>(Bin Vent Filters)</i>	0.05	2.9E-05	Fabric filter	99.9%	1.45E-03	1.5E-06	0.006	6.35E-06
<b>Coextruder Granulators/Conveyors (COEXG8)</b> <i>(Bin Vent Filters)</i>	0.12	2.9E-05	Fabric filter	99.9%	3.48E-03	3.5E-06	0.015	1.52E-05
<b>Roll Granulator (G1)</b> <i>(No Controls)</i>	1.25	2.9E-05	No control	0.0%	3.63E-05	3.6E-05	0.000	1.59E-04
<b>Roll Granulator (G2)</b> <i>(Bin Vent Filters)</i>	1.00	2.9E-05	Fabric filter	99.9%	2.90E-02	2.9E-05	0.127	1.27E-04
<b>Roll Granulator (G3)</b> <i>(No Controls)</i>	1.25	2.9E-05	No control	0.0%	3.63E-05	3.6E-05	0.000	1.59E-04
<b>Roll Granulator (G4)</b> <i>(No Controls)</i>	1.25	2.9E-05	No control	0.0%	3.63E-05	3.6E-05	0.000	1.59E-04
<b>Roll Granulator (G5)</b> <i>(No Controls)</i>	0.50	2.9E-05	No control	0.0%	1.45E-05	1.5E-05	0.000	6.35E-05
<b>Totals</b>					<b>0.064</b>	<b>0.000</b>	<b>0.280</b>	<b>0.001</b>

1. Controlled emission factor for plastic pellets and scrap is from AP 42, Chapter 11.6, Table 11.6-4 "Limestone Transfer with Fabric Filter" (SCC 3-05-006-12)(1/95). Assume all PM is equal to PM10 and PM2.5

**METHODOLOGY**

Controlled PTE of PM/PM10/PM2.5 (lbs/hour) = Maximum Process Rate (lbs/hour) x Emission Factor (lbs/ton)

Controlled PTE of PM/PM10/PM2.5 (tons/year) = Maximum Process Rate (lbs/hour) \* Emission Factor (lbs/ton) \* 8760 hrs/year \* 1 ton/2000 lbs

Uncontrolled PTE PM/PM10/PM2.5 (lb/hour) = Maximum Process Rate (lbs/hour) x Emission Factor (lbs/ton)/(1-Control Eff. (%))

Uncontrolled PTE PM/PM10/PM2.5 (ton/year) = Maximum Process Rate (lbs/hour) \* Emission Factor (lbs/ton) \* 8760 hrs/year \* 1 ton/2000 lbs / (1-Control Eff. (%))

**Appendix A: Emission Calculations  
Emissions From Thermoformers**

**Company Name: Spartech, LLC The Jordan Company**  
**Address: 1401 East Memorial Drive, Muncie, Indiana 47302**  
**Permit No.: M035-47764-00078**  
**Reviewer: Kristen Squillace**

<b>Emission Unit (ID#)</b> <i>(Uses electric heating elements to soften and re-form plastic products, using no controls and venting inside the building.)</i>	<b>Material(s) Processed on Former</b>	<b>EF For Worst Case Material VOC (lbs/ton)</b>	<b>EF For Worst Case Material PM (lbs/ton)</b>	<b>EF For Worst Case Material HAP (lbs/ton)</b>	<b>Maximum Throughput (tons/hour)</b>	<b>Maximum Throughput (tons/yr)</b>	<b>Usage (%)</b>	<b>PTE VOC (ton/yr)</b>	<b>PTE PM (ton/yr)</b>	<b>PTE HAP (ton/yr)</b>
Thermoformer 5 (F5)	Polypropylene	0.0614	0.13	0.0028	0.15	1274.58	1.00	0.04	0.08	0.00
Thermoformer 6 (F6)	Polypropylene	0.0614	0.13	0.0028	0.56	4927.50	0.80	0.12	0.26	0.01
Thermoformer 7 (F7)	Polypropylene	0.0614	0.13	0.0028	0.56	4927.50	0.85	0.13	0.27	0.01
Thermoformer 8 (F8)	RPET	0.0614	0.13	0.0052	0.70	6145.14	0.85	0.16	0.34	0.01
Thermoformer 11 (F11)	Polystyrene	0.0614	0.13	0.1029	1.40	12264.00	0.70	0.26	0.56	0.44
<b>Total</b>								<b>0.71</b>	<b>1.51</b>	<b>0.47</b>

Styrene

Assume all PM is equal to PM10 and PM2.5  
Usage % = Percentage of time formers are running.

**METHODOLOGY**

Potential Emission (ton/yr) = Emission Factor (lbs/ton) \* Material Throughput (ton/yr)/2000 \* Usage (%)

**Sources for Plastics Emission Factors:**

<b>Resin Type</b>	<b>Citation</b>
Polypropylene (PP)	"Development of Emission Factors for Polypropylene Processing", Adams et al, J. Journal of Air and Waste Management Association, 49:49-56, 1999
Polyethylene, Polypropylene, Polyvinyl Chloride, Polystyrene (PE/PP/PVC/PS)	Patel, S.H. and Xanthos, M., Advances in Polymer Technology, Vol 14, No 1, 67-77 (1995).
Ethylene Vinyl Acetate (EVA), Ethylene-Methyl Acrylate (EMA), Polyethylene - low density	Barlow et al, J. Air & Waste Manage. Assoc., 47:1111-1118, 1997
Polyamide(PA) (Nylon)	Kriek et al, J. Air & Waste Manage. Assoc., 51:1001-1008, 2001
Polycarbonate (PC)	Rhodes et al, J. Air & Waste Manage. Assoc., 52:781-788, 2002
Acrylonitrile Butadiene Styrene (ABS)	Contos et al, J. Air & Waste Manage. Assoc., 45:686-694, 1995
Polyvinyl Chloride (PVC)	Ernes, D.A. and Griffin, J.P, J. Vinyl & Additive Technology, Sept 1996, Vol 2, No. 3, 180-183.

**Appendix A: Emission Calculations**  
**Particulate Emissions From Thermoformer Granulators/Conveyors**

**Company Name: Spartech, LLC The Jordan Company**  
**Address: 1401 East Memorial Drive, Muncie, Indiana 47302**  
**Permit No.: M035-47764-00078**  
**Reviewer: Kristen Squillace**

Emission Unit (ID#) (Control Device)	Maximum Throughput (tons/hour)	PM/PM10/PM2.5 Controlled Emission Factor (lbs/ton) <sup>1</sup>	Control Device	Control Efficiency (%)	PTE of PM/PM10/PM2.5 before Control (lbs/hr)	PTE of PM/PM10/PM2.5 After Control (lbs/hr)	PTE of PM/PM10/PM2.5 Before Control (tons/year)	PTE of PM/PM10/PM2.5 After Control (tons/year)
Thermoformer Granulators/Conveyors (FG5) (Bin Vent Filters)	0.13	2.9E-05	Fabric filter	99.9%	3.63E-03	3.6E-06	0.016	1.59E-05
Thermoformer Granulators/Conveyors (FG6) (Bin Vent Filters)*	0.25	2.9E-05	Fabric filter	99.9%	7.28E-03	7.3E-06	0.032	3.19E-05
Thermoformer Granulators/Conveyors (FG7) (Bin Vent Filters)	0.25	2.9E-05	Fabric filter	99.9%	7.28E-03	7.3E-06	0.032	3.19E-05
Thermoformer Granulators/Conveyors (FG8) (Bin Vent Filters)	0.25	2.9E-05	Fabric filter	99.9%	7.28E-03	7.3E-06	0.032	3.19E-05
Thermoformer Granulators/Conveyors (FG11A) (Bin Vent Filters)	0.35	2.9E-05	Fabric filter	99.9%	1.02E-02	1.0E-05	0.044	4.45E-05
Thermoformer Granulators/Conveyors (FG11B) (Bin Vent Filters)	0.35	2.9E-05	Fabric filter	99.9%	1.02E-02	1.0E-05	0.044	4.45E-05
<b>Total</b>							<b>0.20</b>	<b>2.00E-04</b>

\* Thermoformer Granulators/Conveyors FG6A and FG6B do not operate simultaneously, one or the other is used depending on the product produced by Thermoformer F6  
1. Emission factor for plastic pellets and scrap is from AP 42, Chapter 11.6, Table 11.6-4 "Limestone Transfer with Fabric Filter" (SCC 3-05-006-12)(1/95).  
Assume all PM is equal to PM10 and PM2.5

**METHODOLOGY**

Controlled PTE of PM/PM10/PM2.5 (lbs/hour) = Maximum Process Rate (lbs/hour) x Emission Factor (lbs/ton)

Controlled PTE of PM/PM10/PM2.5 (tons/year) = Maximum Process Rate (lbs/hour) \* Emission Factor (lbs/ton) \* 8760 hrs/year \* 1 ton/2000 lbs

Uncontrolled PTE PM/PM10/PM2.5 (lb/hour) = Maximum Process Rate (lbs/hour) x Emission Factor (lbs/ton)/(1-Control Eff. (%))

Uncontrolled PTE PM/PM10/PM2.5 (ton/year) = Maximum Process Rate (lbs/hour) \* Emission Factor (lbs/ton) \* 8760 hrs/year \* 1 ton/2000 lbs / (1-Control Eff. (%))



**Appendix A: Emission Calculations  
Particulate Emissions From Slitter (SR1)**

**Company Name: Spartech, LLC The Jordan Company  
Address: 1401 East Memorial Drive, Muncie, Indiana 47302  
Permit No.: M035-47764-00078  
Reviewer: Kristen Squillace**

<b>Emission Unit (ID#) (Control Device)</b>	<b>Maximum Throughput (tons/hour)</b>	<b>PM/PM10/PM2.5 Emission Factor (controlled) (lbs/ton)<sup>1</sup></b>	<b>Control Device</b>	<b>Control Efficiency (%)</b>	<b>PTE of PM/PM10/PM2.5 before Control (lbs/hr)</b>	<b>PTE of PM/PM10/PM2.5 Before Control (tons/year)</b>
Slitter/Trimmer/Rewinder/Conveyor (SR1) (Bin Vent Filters)	1.00	2.9E-05	Fabric filter	99.9%	2.90E-03	0.013
<b>Total</b>					<b>0.003</b>	<b>0.013</b>

1. Controlled emission factor for plastic pellets and scrap is from AP 42, Chapter 11.6, Table 11.6-4 "Limestone Transfer with Fabric Filter" (SCC 3-05-006-12)(1/95). Assume all PM is equal to PM10 and PM2.5.

**METHODOLOGY**

Uncontrolled PTE PM/PM10/PM2.5 (lb/hour) = Maximum Process Rate (lbs/hour) x Emission Factor (lbs/ton)/(1-Control Eff. (%))

Uncontrolled PTE PM/PM10/PM2.5 (ton/year) = Maximum Process Rate (lbs/hour) \* Emission Factor (lbs/ton) \* 8760 hrs/year \* 1 ton/2000 lbs / (1-Control Eff. (%))

**Appendix A: Emissions Calculations  
 Natural Gas Combustion Emission Unit List  
 MM BTU/HR <100**

**Company Name: Spartech, LLC The Jordan Company**  
**Address: 1401 East Memorial Drive, Muncie, Indiana 47302**  
**Permit No.: M035-47764-00078**  
**Reviewer: Kristen Squillace**

1.60	4 Natural Gas-Fired Heaters, AHU1, AHU3, AHU5, AHU6 @ 0.40 MMBtu/hr, each
3.06	18 Natural Gas-Fired Heaters, 1A, 4A-8A, 10A-13A, 1B-3B, 10B-14B @ 0.170 MMBtu/hr, each
0.12	2 Natural Gas-Fired Heaters, 3A, 4B @ 0.060 MMBtu/hr, each
0.15	3 Natural Gas-Fired tube heaters with heat input capacity 0.05 MMBtu/hr each
0.16	2 Natural Gas-Fired Heaters with heat input capacity of 0.08 MMBtu each
0.12	1 Natural Gas-Fired Heaters with heat input capacity of 0.12 MMBtu
0.597	CR1 natural gas-fired crystallizer unit with a maximum capacity of 0.597 MMBtu/hr
0.895	CR2 natural gas-fired crystallizer unit maximum capacity of 0.895 MMBtu/hr
0.331	DR1 natural gas-fired dryer unit with a maximum capacity of 0.331 MMBtu/hr
0.331	DR2 natural gas-fired dryer unit with a maximum capacity of 0.331 MMBtu/hr
0.078	Printer P4 Natural Gas-Fired heater @ 0.078 MMBtu/hr (direct fired)
<b>7.4</b>	<b>Total (MMBtu/hr)</b>

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

**Company Name: Spartech, LLC The Jordan Company  
Address: 1401 East Memorial Drive, Muncie, Indiana 47302  
Permit No.: M035-47764-00078  
Reviewer: Kristen Squillace**

Heat Input Capacity MMBtu/hr	HHV mmBtu mmscf	Potential Throughput MMCF/yr
7.4	1020	63.9

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.06	0.24	0.24	0.02	3.20	0.18	2.68

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.  
PM2.5 emission factor is filterable and condensable PM2.5 combined.  
\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.  
MMBtu = 1,000,000 Btu  
MMCF = 1,000,000 Cubic Feet of Gas  
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03  
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu  
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	6.711E-05	3.835E-05	2.40E-03	5.752E-02	1.087E-04

Emission Factor in lb/MMcf	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.598E-05	3.515E-05	4.474E-05	1.214E-05	6.711E-05

Total (ton/yr) 0.060  
Highest Single (ton/yr) 0.058 hexane

Methodology is the same as the page before.

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

**Appendix A: Emission Calculations**  
**VOC and HAP Emissions From the Printer Ink and Printer Cleaners**

**Company Name: Spartech, LLC The Jordan Company**  
**Address: 1401 East Memorial Drive, Muncie, Indiana 47302**  
**Permit No.: M035-47764-00078**  
**Reviewer: Kristen Squillace**

Emissions Unit ID	Maximum Process Rate (parts/hour)	Usage Rate (lb of ink/part)	Weight % VOC in Ink	PTE VOC (lbs/hr)	PTE of VOC (tons/year)
Printer P4	25,200	6.8E-07	0.10%	1.71E-05	7.50E-05
<b>Total</b>				<b>1.71E-05</b>	<b>7.50E-05</b>

Inks are cured with UV light.

**METHODOLOGY**

PTE of VOC (tons/year) = Maximum Process Rate (parts/hour) x Usage Rate (lb of ink/part) x Weight % VOC x 8760 hours/year x 1 ton/2000 lbs

Emission unit	Material	Density (lbs/gal)	Weight % VOC	Weight % Ethyl Acetate	Weight % Methyl Alcohol (HAP)	Weight % Methyl Isobutyl Ketone (HAP)	Maximum Usage (gal/year)	PTE of VOC (tons/year)	PTE of Ethyl Acetate (tons/year)	PTE of Methyl Alcohol (HAP) (tons/year)	PTE of Methyl Isobutyl Ketone (HAP) (tons/year)	Total HAP (ton/yr)
Ink Roll Hand Cleaning	Ethyl Acetate	7.51	100%	100%	0%	0%	220	0.83	0.83	0.00	0.00	0.01
	Denatured Ethyl Alcohol	8.34	100%	0%	3%	2%	50	0.21	0.00	0.007	0.004	

**METHODOLOGY**

PTE of VOC/HAP (tons/year) = Density (lbs/gal) x Weight % VOC/HAP x Maximum Usage (gal/year) x 1 ton/2000 lbs

**Appendix A: Emission Calculations  
One (1) Fire Pump Engine  
Reciprocating Internal Combustion Engines - Diesel Fuel  
Output Rating (<=600 HP)  
Maximum Input Rate (<=4.2 MMBtu/hr)**

**Company Name: Spartech, LLC The Jordan Company  
Address: 1401 East Memorial Drive, Muncie, Indiana 47302  
Permit No.: M035-47764-00078  
Reviewer: Kristen Squillace**

**Emissions calculated based on output rating (hp)**

Output Horsepower Rating (hp)	208.0
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	104,000

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.00205	0.0310	0.0025	0.00668
Potential Emission in tons/yr	0.11	0.11	0.11	0.11	1.61	0.13	0.35

\*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							Total PAH HAPs***
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	
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	3.40E-04	1.49E-04	1.04E-04	1.42E-05	4.30E-04	2.79E-04	3.37E-05	6.12E-05

\*\*\*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).

<b>Potential Emission of Total HAPs (tons/yr)</b>	<b>1.41E-03</b>
<b>Single HAP (tons/yr)</b>	<b>4.30E-04</b>

Formaldehyde

**Methodology**

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.3-1 and 3.3-2.

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]

**Appendix A: Emission Calculations**  
**Generator1**  
**Reciprocating Internal Combustion Engines - Natural Gas**  
**4-Stroke Lean-Burn (4SLB) Engines**

**Company Name: Spartech, LLC The Jordan Company**  
**Address: 1401 East Memorial Drive, Muncie, Indiana 47302**  
**Permit No.: M035-47764-00078**  
**Reviewer: Kristen Squillace**

Maximum Output Horsepower Rating (hp)	187
Brake Specific Fuel Consumption (BSFC) (Btu/hp-hr)	7000
Maximum Hours Operated per Year (hr/yr)	500
Potential Fuel Usage (MMBtu/yr)	655
High Heat Value (MMBtu/MMscf)	1020
Potential Fuel Usage (MMcf/yr)	0.64

Criteria Pollutants	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor (lb/MMBtu)	7.71E-05	9.99E-03	9.99E-03	5.88E-04	4.08E+00	1.18E-01	3.17E-01
Potential Emissions (tons/yr)	2.52E-05	3.27E-03	3.27E-03	1.92E-04	1.34	0.04	0.10

\*PM emission factor is for filterable PM-10. PM10 emission factor is filterable PM10 + condensable PM.  
PM2.5 emission factor is filterable PM2.5 + condensable PM.

**Hazardous Air Pollutants (HAPs)**

Pollutant	Emission Factor (lb/MMBtu)	Potential Emissions (tons/yr)
Acetaldehyde	8.36E-03	0.003
Acrolein	5.14E-03	0.002
Benzene	4.40E-04	0.000
Biphenyl	2.12E-04	0.000
1,3-Butadiene	2.67E-04	0.000
<b>Formaldehyde</b>	<b>5.28E-02</b>	<b>0.017</b>
Methanol	2.50E-03	0.001
Hexane	1.10E-03	0.000
Toluene	4.08E-04	0.000
2,2,4-Trimethylpentane	2.50E-04	0.000
Xylene	1.84E-04	0.000
<b>Total</b>		<b>0.023</b>
<b>Single HAP</b>		<b>0.017</b>

Formaldehyde

HAP pollutants consist of the eleven highest HAPs included in AP-42 Table 3.2-2.

**Methodology**

Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-2

Potential Fuel Usage (MMBtu/yr) = [Maximum Output Horsepower Rating (hp)] \* [Brake Specific Fuel Consumption (Btu/hp-hr)] \* [Maximum Hours Operated per Year (hr/yr)] / [1000000 Btu/MMBtu]

Potential Emissions (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] \* [Emission Factor (lb/MMBtu)] / [2000 lb/ton]

**Appendix A: Emission Calculations  
Cooling Tower - Fugitive Particulate PTE**

**Company Name: Spartech, LLC The Jordan Company  
Address: 1401 East Memorial Drive, Muncie, Indiana 47302  
Permit No.: M035-47764-00078  
Reviewer: Kristen Squillace**

UNIT ID	Maximum Cooling Tower Water Circulation Rate (gal/hr)	Operating Hours (hours/year)	Maximum Total Dissolved Solids Content (PPM)	Maximum PM / PM10 / PM2.5 PTE (tons/yr)
Cooling Tower	4,800	8,760	700	0.002
			<b>Total</b>	<b>0.002</b>

**METHODOLOGY**

PM/PM10 Emissions (tons/yr) = Recirculating Flow Rate (gal/hr) x E.F. (lb PM-PM10/10,000 gal) x Maximum Total Dissolved Solids (ppm/12000 ppm) x (Operating hours (hrs/yr)) x (1 ton/2000 lbs)

Emission Factor from AP-42, Table 13.4-1, 1/1995 version.

Lb/Drift per 10,000 gallons recirculated = 1.7

Lb PM/PM10 per 10,000 gallons recirculated = 0.019

From AP-42, Table 13.4-1, Footnote c, (1/1995 version), implied content of TDS in circulating water is 12,000 parts per million (ppm).

**Appendix A: Emission Calculations**  
**Fugitive Dust Emissions - Paved Roads**

**Company Name: Spartech, LLC The Jordan Company**  
**Address: 1401 East Memorial Drive, Muncie, Indiana 47302**  
**Permit No.: M035-47764-00078**  
**Reviewer: Kristen Squillace**

**Paved Roads at Industrial Site**

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

Vehicle Information (provided by source)

Type	Maximum number of vehicles per day	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Semi Trailer (entering plant) (one-way trip)	15.0	1.0	15.0	35.0	525.0	528	0.100	1.5	547.5
Semi Trailer (leaving plant) (one-way trip)	15.0	1.0	15.0	5.0	75.0	528	0.100	1.5	547.5
Private Vehicle (entering plant) (one-way trip)	1.0	1.0	1.0	1.0	1.0	528	0.100	0.1	36.5
Private Vehicle (entering plant) (one-way trip)	1.0	1.0	1.0	1.0	1.0	528	0.100	0.1	36.5
<b>Total</b>			<b>32.0</b>	<b>42.0</b>	<b>602.0</b>	<b>2112.0</b>	<b>0.4</b>	<b>3.2</b>	<b>1168.0</b>

Average Vehicle Weight Per Trip = 

18.8	tons/trip
------	-----------

  
Average Miles Per Trip = 

0.10	miles/trip
------	------------

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

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	18.8	18.8	18.8	tons = average vehicle weight (provided by source)
sL =	9.7	9.7	9.7	g/m <sup>2</sup> = silt loading value for paved roads at iron and steel production facilities - Table 13.2.1-3

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor,  $E_{ext} = E_f * [1 - (p/4N)]$  (Equation 2 from AP-42 13.2.1)

Mitigated Emission Factor,  $E_{ext} = E_f * [1 - (p/4N)]$   
where p = 

125	days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
-----	---

  
N = 

365	days per year
-----	---------------

	PM	PM10	PM2.5	
Unmitigated Emission Factor, $E_f =$	1.735	0.347	0.0852	lb/mile
Mitigated Emission Factor, $E_{ext} =$	1.586	0.317	0.0779	lb/mile

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)
Semi Trailer (entering plant) (one-way trip)	0.47	0.09	0.02	0.43	0.09	0.02
Semi Trailer (leaving plant) (one-way trip)	0.47	0.09	0.02	0.43	0.09	0.02
Private Vehicle (entering plant) (one-way trip)	0.03	0.01	0.00	0.03	0.01	0.00
Private Vehicle (entering plant) (one-way trip)	0.03	0.01	0.00	0.03	0.01	0.00
<b>Total</b>	<b>1.01</b>	<b>0.20</b>	<b>0.05</b>	<b>0.93</b>	<b>0.19</b>	<b>0.05</b>

**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]

**Abbreviations**

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



**Appendix A: Emission Calculations  
Emissions from Parts Cleaners**

**Company Name: Spartech, LLC The Jordan Company  
Address: 1401 East Memorial Drive, Muncie, Indiana 47302  
Permit No.: M035-47764-00078  
Reviewer: Kristen Squillace**

<b>Emission Unit (ID#)</b>	<b>Type of Degreasing</b>	<b>Activity Measure</b>	<b>Uncontrolled Organic Emission Factor</b>	<b>Units</b>
Aqueous Parts Tub1	Cold Cleaner Entire Unit	1 Unit in Operation	0.33	Tons/yr
Aqueous Parts Tub2	Cold Cleaner Entire Unit	1 Unit in Operation	0.33	Tons/yr
<b>Totals</b>			0.66	Tons/yr

Uncontrolled emission factor is from AP-42, Table 4.6-2 - Solvent Loss Emission Factors for Degreasing Operations

**Appendix A: Emission Calculations  
326 IAC 6-3-2, Particulate Emission Limitations**

**Company Name: Spartech, LLC The Jordan Company  
Address: 1401 East Memorial Drive, Muncie, Indiana 47302  
Permit No.: M035-47764-00078  
Reviewer: Kristen Squillace**

Process Description	Process Weight Rate (ton/hr)	Process Weight Rate (P) (lb/hr)	326 IAC 6-3-2 Limit (E) (lb/hr)	Uncontrolled PM Emissions (lb/hr)	Controlled PM Emissions (lb/hr)	Capable of Compliance with 326 IAC 6-3-2
Railcar Unloading (RRUL1)	10.00	20,000	19.18	0.29	0.29	exempt
Railcar Unloading (RRUL2)	5.94	11,883	13.53	0.17	0.17	exempt
Railcar Unloading (RRUL3)	15.00	30,000	25.16	0.44	0.44	
Railcar Unloading (RRUL4)	10.00	20,000	19.18	0.29	0.29	
Silos (A through P)	8.00	16,000	16.51	0.23	0.23	
Twenty-three (23) Pneumatic Conveyor (Integral bin vent filters)	1.25	2,500	4.76	8.34E-04	8.34E-04	exempt
Five (5) Pneumatic Conveyor (bin vent filters Not Integral)	1.25	2,500	4.76	1.81E-04	1.81E-04	
Two (2) Pneumatic Conveyor (bin vent filters Not Integral)	1.25	2,500	4.76	0.07	7.25E-05	exempt
Six (6) Pneumatic Conveyor (bin vent filters Not Integral)	2.50	5,000	7.58	0.07	7.25E-05	exempt
COEX1	2.0685	4,137	6.67	0.48	0.48	<b>Yes</b>
COEX2	1.5185	3,037	5.42	0.19	0.19	<b>Yes</b>
COEX3	1.395	2,790	5.12	0.15	0.15	<b>Yes</b>
COEX4	1.5	3,000	5.38	none	none	-
COEX5	2.3525	4,705	7.27	0.37	0.37	exempt
COEX6	1.75	3,500	5.97	0.00	0.00	<b>Yes</b>
COEX7	0.5	1,000	2.58	0.07	0.07	
COEX8	1.15	2,300	4.50	0.38	0.38	

**Emission Limit Calculation Notes:**

Pursuant to 326 IAC 6-3-1(b), manufacturing processes with potential emissions less than 0.551 lbs/hour are exempt.

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

Emission limitations for process weight rates up to sixty thousand pounds per hour shall be calculated with the following equation:

$$E \text{ (lb/hr)} = 4.10 P^{0.67}$$

Where: E = Rate of emission in pounds per hour  
P = Process Weight Rate in tons per hour



# 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](http://www.idem.IN.gov)

**Eric J. Holcomb**  
Governor

**Brian C. Rockensuess**  
Commissioner

## SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Jack Collins  
Spartech LLC The Jordan Company  
1401 East Memorial Drive  
Muncie, Indiana 47302

DATE: June 28, 2024

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

SUBJECT: Final Decision  
Registration  
035-47764-00078

This notice is to inform you that a final decision has been issued for the air permit application referenced above.

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. In addition, the Notice of Decision has been sent to the OAQ Permits Branch Interested Parties List and, if applicable, the Consultant/Agent and/or Responsible Official/Authorized Individual.

**The final decision and supporting materials are available electronically;** the original signature page is enclosed for your convenience. The final decision and supporting materials available electronically at:

**IDEM's online searchable database:** <http://www.in.gov/apps/idem/caats/> . Choose Search Option **by Permit Number**, then enter permit 47764

and

**IDEM's Virtual File Cabinet (VFC):** <https://www.in.gov/idem>. Enter VFC in the search box, then search for permit documents using a variety of criteria, such as Program area, date range, permit #, Agency Interest Number, or Source ID.

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, or have difficulty accessing the documents online, 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](mailto:jbrush@idem.IN.gov).

Final Applicant Cover Letter 8/20/20-acces via website



# 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](http://www.idem.IN.gov)

**Eric J. Holcomb**  
Governor

**Brian C. Rockensuess**  
Commissioner

**June 28, 2024**  
**Spartech LLC The Jordan Company**  
**035-47764-00078**

To: Interested Parties

This notice is to inform you that a final decision has been issued for the air permit application referenced above. This notice is for informational purposes only. You are not required to take any action.

You are receiving this notice because you asked to be on IDEM's notification list for this company and/or county; or because your property is nearby the company being permitted; or because you represent a local/regional government entity.

The enclosed Notice of Decision Letter provides additional information about the final permit decision.

The final decision and supporting materials are available electronically at:

IDEM's online searchable database: <http://www.in.gov/apps/idem/caats/> . Choose Search Option by Permit Number, then enter permit 47764

and


IDEM's Virtual File Cabinet (VFC): <https://www.in.gov/idem>. Enter VFC in the search box, then search for permit documents using a variety of criteria, such as Program area, date range, permit #, Agency Interest Number, or Source ID.

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.

**Please Note:** *If you would like to be removed from the Air Permits mailing list, please contact Joanne Smiddie-Brush with the Air Permits Administration Section at 1-800-451-6027, ext. 3-0185 or via e-mail at [JBRUSH@IDEM.IN.GOV](mailto:JBRUSH@IDEM.IN.GOV). If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.*

Enclosure  
Final Interested Parties Cover Letter 10/13/2023

# Mail Code 61-53

IDEM Staff	JJACKSON 6/28/2024 Spartech LLC The Jordan Company 035-47764-00078 (/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:  <b>CERTIFICATE OF MAILING ONLY</b>	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee
											Remarks
1		Jack Collins Spartech LLC The Jordan Company 1401 E Memorial Dr Muncie IN 47302 (Source CAATS) Sent Via UPS Campus Ship									
2		Daniel Gallo Chief Operating Officer (COO) Spartech LLC The Jordan Company 1401 E Memorial Dr Muncie IN 47302 (RO CAATS)									
3		Muncie City Council and Mayors Office 300 N High St Muncie IN 47305 (Local Official)									
4		Delaware County Health Department 125 N Mulberry St Muncie IN 47305 (Health Department)									
5		Delaware County Commissioners 100 W Main St, Ste 309 Muncie IN 47305 (Local Official)									
6		Michael & Deborah Amonett Or Current Residen 1208 W 17th St Muncie IN 47302-3053 (Affected Party)									
7		Mr. David Wilson 2301 S Penn St Muncie IN 47302 (Affected Party)									
8		Scott Underwood The Herald Bulletin 1133 Jackson St Anderson IN 46016 (Affected Party)									
9											
10											
11											
12											
13											
14											
15											

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