

# Iowa Department of Natural Resources

## **Draft** Title V Operating Permit Fact Sheet

This document has been prepared to fulfill the public participation requirements of 40 CFR Part 70 and 567 Iowa Administrative Code (IAC) 22.107(6). 40 CFR Part 70 contains operating permit regulations pursuant to Title V of the Clean Air Act.

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The Iowa Department of Natural Resources (IDNR) finds that:

1. Iowa E.P.S. Products, Inc., located at 5554 NE 16<sup>th</sup> Street, Des Moines, Iowa 50313, has applied to renew their Title V Operating Permit. The designated responsible official of this facility is Mr. Frank Cataldo, General Manager.
2. Iowa E.P.S. Products, Inc. is a Manufacturer of Plastic Foam Products, SIC 3086. This facility consists of 13 significant emission units with potential emissions of:

<b>Pollutant</b>	<b>Abbreviation</b>	<b>Potential Emissions (Tons per Year)</b>
Particulate Matter ( $\leq 2.5 \mu\text{m}$ )	PM <sub>2.5</sub>	37.15
Particulate Matter ( $\leq 10 \mu\text{m}$ )	PM <sub>10</sub>	37.15
Particulate Matter	PM	37.15
Sulfur Dioxide	SO <sub>2</sub>	0.06
Nitrogen Oxides	NO <sub>x</sub>	9.70
Volatile Organic Compounds	VOC	240.54
Carbon Monoxide	CO	8.14
Hazardous Air Pollutants <sup>(1)</sup>	HAP	3.41

<sup>(1)</sup> May include the following: Styrene (CAS 100-42-5) and Vinyl Acetate (CAS 108-05-4).

3. Iowa E.P.S. Products, Inc. submitted a Title V Operating Permit renewal application on January 9, 2015 and any additional information describing the facility on February 21, 2015. Based on the information provided in these documents, IDNR has made an initial determination that the facility meets all the applicable criteria for the issuance of an operating permit specified in 567 IAC 22.107.
4. IDNR has complied with the procedures set forth in 567 IAC 22.107, including those regarding public notice, opportunity for public hearing, and notification of EPA and surrounding state and local air pollution programs.

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IDNR procedures for reaching a final decision on the draft permit:

1. The public comment period for the proposed permit will run from September 26, 2016 through October 26, 2016. The beginning date of this public comment period also serves as the beginning of the U.S. Environmental Protection Agency's (EPA) 45-day review period, provided the EPA does not seek a separate review period. During this time, anyone may submit written comments on the permit. Mail signed comments to Brent Blanchard at the Polk County address shown below.
2. Written requests for a public hearing concerning the permit may also be submitted during the comment period. Any hearing request must state the person's interest in the subject matter, and the nature of the issues proposed to be raised at the hearing. IDNR will hold a public hearing upon finding, on the basis of requests, a significant degree of relevant public interest in a draft permit. Mail hearing requests to Brent Blanchard at the Polk County address shown below.
3. IDNR will keep a record of the issues raised during the public participation process, and will prepare written responses to all comments received. The comments and responses will be compiled into a responsiveness summary document. After the close of the public comment period, IDNR will make a final decision on the renewal application. The responsiveness summary and the final permit will be available to the public upon request.

Mr. Brent Blanchard  
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Air Quality Division  
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Phone: (515) 286-3389  
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IDNR concludes that:

1. IDNR has authority under 455B.133 Code of Iowa to promulgate rules contained in 567 IAC Chapters 20-31, including, but not limited to, rules containing emission limits, providing for compliance schedules, compliance determination methods and issuance of permits.
2. IDNR has the authority to issue operating permits for air contaminant sources and to include conditions in such permits under 455B.134 Code of Iowa.
3. The emission limits included in this permit are authorized by 455B.133 Code of Iowa and 567 IAC Chapters 20-31.
4. IDNR is required to comply with 567 IAC Chapter 22 in conjunction with issuing a Title V Operating Permit.
5. The issuance of this permit does not preclude the IDNR from pursuing enforcement action for any violation.

Applicant: Iowa E.P.S. Products, Inc.  
EIQ Number: 92-6886  
Facility File Number: 77-01-175

Review Engineer:  
Brent Blanchard

## Application Evaluation

### A. Project Briefing:

This project regards a Part 70 Title V permit application to operate the following significant emission units: two (2) Pre-Expanders, (EU 01a, 01b / EP 01); Bead Storage Area (EU 01c / EP 01); TRI Manufacturing 2nd Pass Expander & Dryer (EU 11 / EP 01); two (2) Korylak/Dingeldein block molders (EU 02 / EP 02, and EU 13 / EP 13); one (1) Clever Brooks Natural Gas Boiler, 10.461 MM BTU/ Hr. (EU 04 / EP 04); Block Storage Area (EU 05 / EP 05); three (3) block cutters, with 42", 48", and 48" diameter belt drive upblast ventilators (EU 07 / EP 07a, 07b, and 07c); three (3) Syro-Matic Shape Molders, Model 105-85 (EU 09 / EP 09); one (1) Regrind Hammermill- Jacobs Machine Works (EU 10 / EP F-03); One Roll Coater Machine- Black Brothers Company, Model 22-D-56 (EU 12 / EP 12f); Kewanee- Classic III Natural Gas Boiler, 12.5 MM BTU/ Hr. (EU 14 / EP 14).

The following emission units are insignificant, per 567 IAC 22.103: Pre-Puff Storage (EU 06) and Heating Furnace (EU 08).

### B. Applicable rules and regulations:

#### 1. Emission limits and conditions:

Polk County Construction Permit Number 1219 Modified limits VOCs to 143.52 TPY, rolled monthly, and no visible emissions, from two (2) Sunhoon Eng. Co. Pre-Expanders, (EU 01a, 01b / EP 01), bead storage area, (EU 01c / EP 01), and TRI Manufacturing 2nd Pass Expander & Dryer (EU 11 / EP 01). The permit limits emissions from storage and processing of polystyrene beads in EU-01a, EU-01b, EU-01c, EU-02, EU-05, EU-11 and EU-13 to 240 TPY of VOC, in order to avoid PSD. The permit limits the facility from processing more than 6,956,500 lbs. of polystyrene beads per rolling 12- month period from these EUs. A Pre-Puff Dryer was added to each Pre-Expander in July 2010, as a result of a site visit, since each Pre-Expander has a Pre-Puff Dryer physically attached. The Pre-Puff Driers do not result in additional emissions; therefore, are not considered separate emission units.

Polk County Construction Permit Number 1222 Modified limits PM<sub>10</sub> to 0.089 lb./ hr., 0.10 gr./dscf, and 0.39 TPY; Opacity to No visible emissions; SO<sub>2</sub> to 0.0059 lb./ hr., 500 ppmv, and 0.026 TPY; NO<sub>x</sub> to 0.99 lb./ hr. and 4.33 TPY; VOCs to 0.054 lb./ hr. and 0.24 TPY; and CO to 0.83 lb./ hr. and 3.63 TPY from one (1) Clever Brooks Natural Gas fired Steam Boiler, 10.461 MM Btu/ hr., (EU 04 / EP 04). PM is limited to 0.6 lb./ MMBTU under 567 IAC 23.3(2)"b"(2) and Polk County Board of Health Rules and Regulations Chapter V, Article VI, Section 5-15(b). SO<sub>2</sub> is limited to 500 ppmv under 567 IAC 23.3(3)"e" and Polk County Board of Health Rules and Regulations: Chapter V, Article IX, Section 5-27. Construction permit 1222 Modified limits the EU to combusting pipeline quality natural gas.

Polk County Construction Permit Number 1223 limits VOCs to 53.76 TPY, rolled monthly, from one (1) Block Storage Area, (EU 05 / EP 05). The permit limits emissions from storage and processing of polystyrene beads in EU-01a, EU-01b, EU-01c, EU-02, EU-05 and EU-11 and EU-13 to 240 TPY of VOC, in order to avoid PSD. The permit limits the facility from processing more than 6,956,500 lbs. of polystyrene beads per rolling 12- month period from these EUs.

Polk County Construction Permit Number 1479 was issued for Block Cutting (EU 07 / EP 07a, 07b, 07c) consisting of: [3- computerized, 2- Tuber, 3- Slab Table, and 4- Down Cutter] electrical E.P.S. Block Cutters, used for recycling of non- conforming E.P.S. Blocks. The 12 units are free vented into their process room, and emissions escape through three power vents: EP 07a (42" diameter belt drive upblast ventilator (5hp) (25,410 scfm), EP 07b (48" diameter belt drive upblast ventilator (5hp) (30,990 scfm), and EP 07c (48" diameter belt drive upblast ventilator (5hp) (30,990 scfm). Polk County Construction Permit Number 1479 limits PM<sub>10</sub> to 2.08 lbs./hr, 9.11 TPY, and 0.1 gr./dscf from EP 07a, 2.58 lbs./hr., 11.3 TPY, and 0.1 gr./dscf from EP 07b, and 2.51 lbs./hr, 10.99 TPY, and 0.1 gr./dscf from EP 07c. EP 07a, 07b, and 07c are also limited to no visible emissions. PM is limited to 0.10 gr./dscf under Polk County Board of Health Rules and Regulations: Chapter V, Article VI, Section 5-14(b).

Polk County Construction Permit Number 1611 was issue for Three (3) Syro-Matic Shape Molders, Model 105-85 (EU 09 / EP 09). Construction Permit 1611 limits VOC emissions to 6.45 lbs./hr. and 28.26 TPY. It limits Styrene (CAS 100425) emissions to 0.093 lbs./hr. and 0.408 TPY. Opacity is limited to No VEs allowed.

Polk County Construction Permit Number 1721 was issued for two (2) Re grind Hammermills- Jacobs Machine Works (EU 10 / EP F-03). Emissions are limited to 1.13 lbs./hr., 4.95 TPY, and 0.10 gr./dscf PM by Polk Construction Permit Number 1721 and Polk County Board of Health Rules and Regulations: Chapter V, Article VI, Section 5-14(b). Opacity is limited to <20% by Polk County Construction Permit 1721 and Polk County Board of Health Rules and Regulations: Chapter V, Article IV, Section 5-9. The permit contains an operating condition which limits the facility to processing no more than 6,956,500 lbs. of polystyrene beads per rolling 12- month period. One of the Hammermills was permanently removed from the facility in August 2012. Due to the emission rate being calculated on the grain loading standard of 0.1 gr and the cfm of the exhaust fan; Construction Permit Number 1721 did not need to be modified.

Polk County Construction Permit Number 1642 was issued for one (1) Kewanee- Classic III Natural Gas Boiler, 12.5 MM BTU/ Hr. (EU 14 / EP 14). Construction Permit Number 1642 limits PM<sub>10</sub> to 0.093 lb./ hr. and 0.408 TPY; Opacity to No visible emissions; SO<sub>2</sub> to 0.007 lb./ hr. and 0.032 TPY; NO<sub>x</sub> to 1.225 lb./ hr. and 5.366 TPY; VOCs to 0.067 lb./ hr. and 0.295 TPY; and CO to 0.067 lb./ hr. and 4.507 TPY; and HAPs (combined) to 0.025 lbs./ hr and 0.110 TPY. PM is limited to 0.6 lb./ MMBTU under 567 IAC 23.3(2)"b"(2) and Polk County Board of Health Rules and Regulations Chapter V, Article VI, Section 5-15(b). SO<sub>2</sub> is limited to 500 ppmv under 567 IAC 23.3(3)"e" and Polk County Board of Health Rules and Regulations: Chapter V, Article IX, Section 5-27.

Polk County Construction Permit Number 2107 was issued for one (1) Roll Coater Machine- Black Brothers Company, Model 22-D-56 (EU 12 / EP 12f). Construction Permit Number 2107 limits VOC emissions to 0.57 lbs./hr. and 2.50 TPY. It limits HAPs (combined) to 0.57 lbs./hr. and 2.50 TPY. The permit contains an operating limit which limits the use of any product in EU 12 to 0.57% VOC or HAP content by weight.

Polk County Construction Permit Number 2500 was issued for (1) Korylak/Dingeldein Model 18-005M2 Block Molder (EU 02 /EP 02). Construction Permit Number 2500 limits VOC emissions to 21.36 TPY, HAPs to 0.31 TPY for EUs 02 and 13 combined and Opacity to < 20%. The permit limits emissions from storage and processing of polystyrene beads in EU-01a, EU-01b, EU-01c, EU-02, EU-05, EU-11 and EU-13 to 240 TPY of VOC, in order to avoid PSD. The permit limits the facility from processing more than 6,956,500 lbs. of polystyrene beads per rolling 12- month period from these EUs.

Polk County Construction Permit Number 2501 was issued for (1) Korylak/Dingeldein Model 18-005M2 Block Molder (EU 13 /EP 13). Construction Permit Number 2501 limits VOC emissions to 21.36 TPY, HAPs to 0.31 TPY for EUs 02 and 13 combined and Opacity to < 20%. The permit limits emissions from storage and processing of polystyrene beads in EU-01a, EU-01b, EU-01c, EU-02, EU-05, EU-11 and EU-13 to 240TPY of VOC, in order to avoid PSD. The permit limits the facility from

processing more than 6,956,500 lbs. of polystyrene beads per rolling 12- month period from these EUs.

2. Opacity for the facility is limited to Less than 20% opacity by Polk County Board of Health Rules and Regulations: Chapter V, Article IV, Section 5-9. Opacity for EP 01, EP 03, EP 04, EP 05, EP07a, EP 07b, and EP 07c, 09, and 14 is limited to no visible emissions by Polk County Construction Permit # 1219 Modified, 1221, 1222 Modified, 1223, 1479, 1611, and 1642. Opacity for EP 2, EP F03, and EP 13 is limited to <20% opacity by Polk County Construction Permit #2500, 1721 and 2501
3. NSPS: One (1) Clever Brooks Natural Gas fired Steam Boiler, 10.461 MM Btu/ hr., (EU 04 / EP 04) is subject to NSPS Subpart Dc. The NSPS requirements are contained in Polk County Construction Permit #1222 MODIFIED.

One (1) Kewanee- Classic III Natural Gas Boiler, 12.5 MM BTU/ Hr. (EU 14 / EP 14) is subject to NSPS Subpart Dc. The NSPS requirements are contained in Polk County Construction Permit #1642.

4. NESHAP: Not applicable at this time. Facility HAP PTE is 3.41 TPY, and is limited indirectly by facility material throughput limits. There appears to be no area source NESHAPs applicable to the facility at this time.  
Per §63.7485 as a minor source of HAPs Subpart DDDDD—*National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters* is not applicable to EPs 4 and 14.

Per §63.11194 EPs 4 and 14 are not in a subcategory listed in §63.11200 and defined in §63.11237 (the facility is operating and intends to continue to operate the boilers in a way to meet the definition of a gaseous boiler); therefore, 40 CFR 63 Subpart JJJJJ—*National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* is not applicable.

5. PSD: Source is currently a VOC minor source (PSD), with a PTE of 240.54 TPY VOC. Individual EP VOC PTE adds up to greater than 240.54 TPY, but facility VOC PTE is 240.54 TPY, however, since the VOC emission factor used is based on plantwide polystyrene bead usage, not individual EU. The facility has a plantwide polystyrene beads usage limit of 6,956,500 lbs./ rolling 12-month period, which equates to a VOC PTE of 240 TPY. Two Natural Gas boilers are not included in this limit, and have a combined PTE of 0.54 TPY VOC. This gives the facility a plantwide PTE of 240.54 TPY VOC.

The following plantwide condition is added to the Title V Permit, in order to clarify PTE and reporting of actual emissions:

VOC Emissions Reporting & Record keeping: In order to demonstrate compliance with the 240 TPY VOC limit, calculate the VOC emissions by multiplying the polystyrene beads processed in the facility in a consecutive twelve (12) month period, on a monthly rolling basis, by the bead VOC content under the current polystyrene bead formula. For annual EIQ purposes, calculate the total polystyrene bead VOC emissions in the previous calendar year by multiplying the polystyrene beads processed in the facility during the previous calendar year by the bead VOC content under the current polystyrene bead formula. Total polystyrene bead VOC emissions will be divided amongst the applicable EUs, as per the facility's estimate of percentage bead usage by unit. Resulting emission estimates will be reported as part of the Annual EIQ to IDNR.

Authority for Requirement: 567 IAC 22.108 (3)

6. NAAQS: Facility is located in an attainment area. Air modeling is not required at this time.
7. Title IV: Not applicable.

8. Stratospheric ozone: the only ozone depleting chemicals (regulated by 40 CFR 82) at the facility are those used for air conditioning. 40 CFR 82, Subpart F, applies to the disposal of appliances containing Class I or Class II substances (i.e. air conditioners).
9. PM-10: Polk County Construction Permit #1222 MODIFIED limits PM<sub>10</sub> to 0.089 lb./ hr. and 0.39 TPY from one (1) Clever Brooks Natural Gas fired Steam Boiler, 10.461 MM Btu/ hr., (EU 04 / EP 04).

Polk County Construction Permit 1479 limits PM<sub>10</sub> to 2.08 lbs./hr, 9.11 TPY, and 0.1 gr./dscf from EP 07a, 2.58 lbs./hr., 11.3 TPY, and 0.1 gr./dscf from EP 07b, and 2.51 lbs./hr, 10.99 TPY, and 0.1 gr./dscf from EP 07c. Block Cutting (EU 07 / EP 07a, 07b, 07c) consists of: [3- computerized, 2- Tuber, 3- Slab Table, and 4- Down Cutter] electrical E.P.S. Block Cutters.

Kewanee- Classic III Natural Gas Boiler, 12.5 MM BTU/ Hr. (EU 14 / EP 14) is permitted by Polk County Construction Permit #1642, which limits PM<sub>10</sub> to 0.093 lb./ hr. and 0.408 TPY

### C. Monitoring consideration:

CAM: CAM is not applicable. The only control equipment at the facility is (CE- F-03), Settling Chamber/ Tyvek Filter (Internal Exhaust), on one (1) Regrind Hammermill- Jacobs Machine Works (EU 10 / EP F-03). The control equipment meets the definition of inherent process equipment, since it is used in the collection of shredded EPS beads from the hammermills, for recycling purposes. The Tyvek filters are not primarily in place for air pollution purposes, but instead for product recovery.

### PM:

Polk County Construction Permit #1222 Modified limits PM<sub>10</sub> to 0.089 lb./ hr., 0.10 gr./dscf, and 0.39 TPY, and PM to 0.6 lb./ MMBTU (uncontrolled minor), from one (1) Clever Brooks Natural Gas fired Steam Boiler, 10.461 MM Btu/ hr., (EU 04 / EP 04). PTE is based on maximum throughput and FIRE emission factors. All PM is expected to be PM<sub>10</sub> or less. There are no requirements under IDNR's Monitoring Guidance Policy. CAM is not required because there is no control equipment.

Block Cutting (EU 07 / EP 07a, 07b, 07c) consists of: [3- computerized, 2- Tuber, 3- Slab Table, and 4- Down Cutter] electrical E.P.S. Block Cutters, used for recycling of non- conforming E.P.S. Blocks. The 12 units are free vented into their process room, and emissions escape through three power vents: EP 07a (42" diameter belt drive upblast ventilator (5hp) (25,410 scfm), EP 07b (48" diameter belt drive upblast ventilator (5hp) (30,990 scfm), and EP 07c (48" diameter belt drive upblast ventilator (5hp) (30,990 scfm). Polk County Construction Permit 1479 limits PM<sub>10</sub> to 2.08 lbs./hr, 9.11 TPY, and 0.1 gr./dscf from EP 07a, 2.58 lbs./hr., 11.3 TPY, and 0.1 gr./dscf from EP 07b, and 2.51 lbs./hr, 10.99 TPY, and 0.1 gr./dscf from EP 07c. All PM is expected to be PM<sub>10</sub> or less. Permit limits for the three emission points are based on maximum throughput and fan capacity calculations. Each EP is an uncontrolled minor. Record keeping required by the construction permit will be sufficient for monitoring purposes. There are no requirements under IDNR's Monitoring Guidance Policy. CAM does not apply, based on PTE.

Polk County Construction Permit #1721 limits PM to 1.13 lb./ hr., 4.95 TPY, (controlled minor), and 0.10 gr./dscf from 2 Regrind Hammermills- Jacobs Machine Works with Settling Chamber/ Tyvek Filter (Internal Exhaust), (EU 10 / CE- F-03 / EP F-03). PTE is based on maximum throughput and FIRE emission factors. All PM is expected to be PM<sub>10</sub> or less. Uncontrolled PM emissions, using IDNR's Control Efficiency table is 49.5 TPY PM, (uncontrolled significant). Under IDNR's Monitoring Guidance Policy, a Facility O&M Plan is required, and no tests. CAM does not apply, based on PTE.

Polk County Construction Permit #1642 limits PM<sub>10</sub> 0.093 lb./ hr. and 0.408 TPY, (uncontrolled minor), and PM to 0.6 lb./ MMBTU from one (1) Kewanee- Classic III Boiler, 12.5 MM Btu/ hr., (EU 14 / EP 14). PTE is based on maximum throughput and FIRE emission factors. All PM is expected to be PM<sub>10</sub> or less.

There are no requirements under IDNR's Monitoring Guidance Policy. CAM does not apply, based on PTE.

Opacity:

(EU 01a, 01b, 01c, 11 / EP 01), (EU 02 / EP 02), (EU 05 / EP 05), (EU 09 / EP 09), (EU 12 / EP 12f), and (EU 13 / EP 13) are VOC sources only, and no VEs are expected. No monitoring will be required.

Polk County Construction Permit #1222 MODIFIED limits opacity to no visible emissions from one (1) Clever Brooks Natural Gas fired Steam Boiler, 10.461 MM Btu/ hr., (EU 04 / EP 04). Since it is a natural gas combustion source only, no VEs are expected and no monitoring will be required.

Polk County Construction Permit 1479 limits opacity to no visible emissions from Block Cutting (EU 07 / EP 07a, 07b, 07c), consisting of: [3- computerized, 2- Tuber, 3- Slab Table, and 4- Down Cutter] electrical E.P.S. Block Cutters, used for recycling of non- conforming E.P.S. Blocks. The 12 units are free vented into their process room, and emissions escape through three power vents: EP 07a (42" diameter belt drive upblast ventilator (5hp) (25,410 scfm), EP 07b (48" diameter belt drive upblast ventilator (5hp) (30,990 scfm), and EP 07c (48" diameter belt drive upblast ventilator (5hp) (30,990 scfm). The source was required to apply for a Polk County Construction Permit for the Block Cutting Room, (EU 07). The block cutters were observed to vent visible particulate emissions fugitively into the room. Polk County Construction Permit 1479 required that the source install three (3) power vents, in order for the source to meet the 0.1 gr./dscf PM<sub>10</sub> emission standard, but did not require control on the vents. The following Monitoring requirement will ensure compliance with the no visible emissions standard, and if a violation occurs, it will require the source to modify the construction permit and install PM control equipment on the vent EPs:

**Visible Emissions Monitoring:**

Visible Emissions (VE) shall be observed on a daily basis, whenever the Block Cutting Room (EU 07) is operated to ensure none occur during the operation of the unit. If visible emissions are observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight (8) hours from the observation of visible emissions. If corrective action does not return the observation to no visible emissions, the facility must then apply for a modification to Polk County Construction Permit No. 1479, requesting that particulate control equipment be installed on EP 07a, 07b, and 07c. The permit modification shall be due within one (1) month of date by which corrective action does not return the visible emission observation to no visible emissions. If weather conditions prevent the observer from conducting a VE observation, the observer shall note such conditions on the data observation sheet. At least three attempts shall be made to retake VE readings at approximately 2-hour intervals throughout the day. If all observation attempts for a week have been unsuccessful due to weather, a VE observation shall be made during the next operating day where weather permits.

Reporting & Record keeping: Maintain a written record of the observation and any action resulting from the observation. Records required shall be maintained on-site for five (5) years and be made available to representatives of Polk County AQD upon request.

Polk County Construction Permit #1721 limits opacity to <20% from 1 Re grind Hammermill- Jacobs Machine Works with Settling Chamber/ Tyvek Filter (Internal Exhaust), (EU 10 / CE- F-03 / EP F-03). Since EP F-03 is internally vented, and a Facility O&M Plan is required for PM Monitoring, no VEs are expected and no opacity monitoring will be required.

Polk County Construction Permit #1642 limits opacity to no visible emissions one (1) Kewanee- Classic III Boiler, 12.5 MM Btu/ hr., (EU 14 / EP 14). Since it is a natural gas combustion source only, no VEs are expected and no monitoring will be required.

VOC:

Polk County Construction Permit #1219 Modified limits VOCs to 143.52 TPY, rolled monthly, (uncontrolled major), from two (2) Sunhoon Eng. Co. Pre-Expanders, (EU 01a, 01b / EP 01), bead storage area, (EU 01c / EP 01), and TRI Manufacturing 2nd Pass Expander & Dryer (EU 11 / EP 01). Compliance with the 12 month rolling limit is assured through raw material throughput limits and recordkeeping. There are no short term limits and therefore no stack testing is required. CAM is not applicable as there is no control equipment.

Polk County Construction Permit #2500 limits VOCs to 21.36 TPY, rolled monthly, (uncontrolled minor), from two (2) Korylak/Dingeldein Model 18-005M2 Block Molders, (EU 02 / EP 02 and EU 13 / EP 13). Compliance with the 12-month rolling limit is assured through raw material throughput limits and recordkeeping. There are no short term limits and therefore no stack testing is required. CAM is not applicable as there is no control equipment.

Polk County Construction Permit #1222 Modified limits VOCs to 0.054 lb./ hr. and 0.24 TPY; (uncontrolled minor), from one (1) Clever Brooks Natural Gas fired Steam Boiler, 10.461 MM Btu/hr., (EU 04 / EP 04). PTE is based on maximum throughput and FIRE emission factors and therefore stack testing is not warranted. Compliance with the 12-month rolling limit is assured through raw material throughput limits and recordkeeping. There are no requirements under IDNR's Monitoring Guidance Policy. CAM is not applicable as there is no control equipment.

Polk County Construction Permit #1223 limits VOCs to 53.76 TPY, rolled monthly, (uncontrolled significant), from one (1) Block Storage Area, (EU 05 / EP 05). Compliance with the 12 month rolling limit is assured through raw material throughput limits and recordkeeping. PTE of this EU is a percentage of the overall plantwide VOC limit. There are no short term limits and therefore no stack testing is required. CAM is not applicable as there is no control equipment.

Polk Construction Permit #1611 limits VOC to 6.45 lbs./hr. and 28.26 TPY, (uncontrolled minor) from three (3) Syro-Matic Shape Molders, Model 105-85 (EU 09 / EP 09). Compliance with the 12-month rolling limit is assured through raw material throughput limits and recordkeeping. PTE of this EU is included with the overall plantwide VOC limit. IDNR Monitoring Policy indicates no stack testing required for this EP. CAM is not applicable as there is no control equipment.

Polk Construction Permit #2107 limits VOC to 0.57 lbs./hr. and 2.50 TPY, (uncontrolled minor). from one (1) Roll Coater Machine- Black Brothers Company, Model 22-D-56 (EU 12 / EP 12f). This is a fugitive emission unit. Compliance with the 12-month rolling limit is assured through raw material throughput limits and recordkeeping. IDNR Monitoring Policy indicates no stack testing required is for this EP. CAM is not applicable as there is no control equipment.

Polk County Construction Permit #2501 limits VOCs to 21.36 TPY, rolled monthly, (uncontrolled minor), from two (2) Korylak/Dingeldein Model 18-005M2 Block Molder, (EU 02 / EP 02 and EU 13 / EP 13). Compliance with the 12-month rolling limit is assured through raw material throughput limits and recordkeeping. There are no short term limits and therefore no stack testing is required. CAM is not applicable as there is no control equipment.

Polk County Construction Permit #1642 limits VOCs to 0.067 lb./ hr. and 0.295 TPY, (uncontrolled minor) from one (1) Kewanee- Classic III Natural Gas Boiler, 12.5 MM BTU/ Hr. (EU 14 / EP 14). PTE is based on maximum throughput and FIRE emission factors and therefore stack testing is not warranted. Compliance with the 12-month rolling limit is assured through raw material throughput limits and recordkeeping. CAM is not applicable as there is no control equipment.

HAPs:

Total HAPs PTE from the facility is 3.41 TPY, (uncontrolled minor). Compliance with the 12-month rolling limits are assured through raw material throughput limits and recordkeeping. IDNR Monitoring Policy indicates no stack testing required for this EP. CAM is not applicable as there is no control equipment.

CO, NO<sub>x</sub>, and SO<sub>2</sub>

Polk County Construction Permit #1222 MODIFIED limits SO<sub>x</sub> to 0.0059 lb./ hr. and 0.026 TPY, (uncontrolled minor); NO<sub>x</sub> to 0.99 lb./ hr. and 4.33 TPY, (uncontrolled minor); and CO to 0.83 lb./ hr. and 3.63 TPY, (uncontrolled minor), from one (1) Clever Brooks Natural Gas fired Steam Boiler, 10.461 MM Btu/ hr., (EU 04 / EP 04). PTE is based on maximum throughput and FIRE emission factors. Compliance with the 12-month rolling limits are assured through raw material throughput limits and recordkeeping. There are no requirements under IDNR's Monitoring Guidance Policy. CAM is not applicable as there is no control equipment.

Polk County Construction Permit #1642, limits SO<sub>2</sub> to 0.007 lb./ hr. and 0.032 TPY, (uncontrolled minor); NO<sub>x</sub> to 1.225 lb./ hr. and 5.366 TPY, (uncontrolled minor); and CO to 0.067 lb./ hr. and 4.507 TPY, (uncontrolled minor) from one (1) Kewanee- Classic III Natural Gas Boiler, 12.5 MM BTU/ Hr. (EU 14 / EP 14). PTE is based on maximum throughput and FIRE emission factors. Compliance with the 12-month rolling limits are assured through raw material throughput limits and recordkeeping. There are no requirements under IDNR's Monitoring Guidance Policy. CAM is not applicable as there is no control equipment.

D. Facility Proposed Limits:

The facility requested the following limit prior to beginning operations. Limits were placed in Polk County Construction Permits: 1219 Modified, 1223, 1721, 2107, 2500, and 2501.

Pollutant: VOC

Emission Rate: 240 TPY

Process throughput: Emissions from storage and processing of polystyrene beads in EU-01a, EU-01b, EU-01c, EU-02, EU-05, EU-09, EU-10, EU-11, EU-12 and EU-13 is limited to 240 TPY VOC, in order to avoid PSD. Facility shall process no more than 6,956,500 lbs. of polystyrene beads per rolling 12- month period from these EUs.

Reporting & Record keeping: Daily records in pounds of polystyrene beads processed in the facility shall be recorded and summarized monthly. Monthly summarized records shall be added together, in order to obtain a consecutive twelve (12) month rolling total. All records and totals shall be recorded and maintained on-site for five (5) years and made available to representatives of Polk County AQD upon request.

Authority for Requirement: Polk County Construction Permits: 1219 Modified, 1223, 1611, 1721, 2107, 2500 and 2501.

E. Responsible Official: Mr. Frank Cataldo, General Manager, is in charge of a principle business function, that of producing and selling E.P.S. Bead products, and making a profit for Iowa E.P.S. Products, Inc. He meets the definition of a Responsible Official found in 567 IAC 22.100.

F. Other Considerations: In October 2012 the facility was issued Polk County Construction Permit Number 2500 for the installation of one (1) Korylak/Dingeldein Block Molder (EU 02 / EP 02). The Block Molder replaced an existing Block Molder (EU 01 / EP 02) permitted under permit number 1220. Permit #2500 contained a condition that permit #1220 was void upon issuance.

In October 2012 the facility was issued Polk County Construction Permit Number 2501 for the installation of one (1) Korylak/Dingeldein Block Molder (EU 13 / EP 13).

In August 2012, the facility removed one (1) Starr Manufacturing Block Molder. A letter was issued by Polk County AQD rescinding Construction Permit Number 1221.

In August 2012, the facility permanently removed one of two Regrind Hammermills-Jacobs Machine Works which was permitted under Polk County Construction Permit Number 1721.

On 10/2/2015 a full compliance evaluation was completed by Polk County AQD. The facility was found to be in compliance with all of the requirements of their current Title V Operating Permit.