



**I Source Information****1. Product Description:**

The source manufactures home laundry appliances, dishwashers, and refrigerators.

**2. Process Description:**

The source receives raw steel sheet, coated steel sheet, tubing, drives, motors, and other assorted paint, chemicals, and hardware from which it manufactures and assembles major home appliances.

**3. Site Determination:**

There are no other facilities that are contiguous or adjacent and under common control.

**4. Emission Unit Summary:**

<b>Emission Unit</b>	<b>Equipment Description</b>
Plantwide	All plantwide standards – NOX, VOC, and TAC
U01	Powder paint system in AP1
U04	E-Coat prime in AP2
U30	Powder paint system in AP2
U40	Rack prime dip system in AP3
U42	PVC fluidized bed system in AP3
U81 and U82	Gas-fired Boilers and Indirect-fired Process Heat Exchangers
U87	Gasoline storage tank and Dispensing
U104 – U107	Metal parts fabrication in AP2
U109	Abrasive blasting (hanger paint stripping process) in AP2
U111	Emergency generators – RICE MACT
U112	Emergency generators – RICE MACT and NSPS CI ICE
U310	Nylon rack fluidized bed coating system in AP3
U311	Adhesive for end caps on dishwasher racks in AP3
U500	Touch-up paint, adhesives, and lubricating the spine fin evaporator bottom mount freezer refrigerator line in AP5
U510	Bottom mount freezer refrigerator line in AP5
U530	Metallic powder paint system in AP2
U540	AP1 Dryer Drawing Compound Application
Solvent Metal Cleaning Equipment	Parts washers

<b>Emission Unit</b>	<b>Equipment Description</b>
Miscellaneous	Miscellaneous coating, chemical, and lubricant use
IA01	IA Indirect-fired combustion sources < 1 MMBtu/hr
IA02	IA Regulation 7.25 Process Equipment
IA03	IA Regulation 7.08 Process Equipment
IA04 (U89)	VOC Storage tanks
IA05	Combustion sources not accounted for in any other emission unit

### 5. Fugitive Sources:

There are numerous fugitive emission sources throughout the facility. All are process emissions or control equipment that vent to the interior space of the building. Fugitive emissions of dust from any part of the plant are subject to Regulation 1.14, Control of Fugitive Particulate Emissions.

### 6. Permit Revisions:

<b>Permit No.</b>	<b>Public Notice Date</b>	<b>Issue Date</b>	<b>Change Type</b>	<b>Description/Scope</b>
155-97-TV	09/07/2009	01/22/2010	Initial	Initial issuance of the permit.
155-97-TV(R1)	NA	01/22/2010	Admin.	Incorporate construction permits # 72-89-C(R1), 73-89-C(R1), 19-91-C (R1), 145-98-C(R1), 201-01-C(R1), 216-93-C(R1), 405-92-C(R1), 334-92-C, 22-91-C(R1), 494-08-C (R1), 129-09-C (R1), and 652-08-C (R1)
155-97-TV (R2)	NA	09/17/2013	Admin.	Incorporate construction permits # 207-09-C(R1), 34677-12-C, 33733-11-C, 33371-11-C, 33029-11-C, 33262-11-C, 33667-11-C, 36340-12-C, 29161-10-C(R3), 33022-11-C, 32675-11-C, 33318-11-C, 33671-11-C, 33373-11-C(R1), and 34823-12-C. Updated TAC language and the Insignificant Activities List. Updated Boiler #6 (U81) description to reflect 1998 boiler modification

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
				<p>Removed U90 as equipment has been removed                      Removed U101, U102, and U103 from emission Unit U100 – 103, as equipment has been removed, and renamed emission unit to U100                      Removed Regulations 7.08 and 7.09 from emission unit U111 as the District has determined these were not applicable regulations for emergency generators                      Removed emission points 176-00 and 73-87 from emission unit U-Miscellaneous as the equipment has been removed</p>
O-0870-17-V	09/23/2017	12/19/2017	Renewal	<p>Permit Renewal.                      Incorporate construction permits 37206-13-C(R1), TV-14-1001-C, TV-14-1012-C, and C-0870-1004-14-V.                      Removed U108, U200, U210, U220, and U230 as equipment has been removed.</p>
O-0870-17-V (R1)	04/14/2018	08/02/2018	Admin.	<p>Correct typographical errors noted throughout the permit.                      Add EP-IA8 and conditions for U530.                      Add insignificant activities from applications 90311 and 90793 to the IA table.                      Add emission points IA02-25 – IA02-31 to the equipment table in emission unit “IA02 – Regulation 7.25 Process Equipment”.                      Updated default control efficiency for C109 from 95% to 98% per current District policy                      Add emission point IA03-20 to emission unit “IA03-Regulation 7.08 Process Equipment”.</p>

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
				<p>Several Items in the Calculation Methodology tables:</p> <ul style="list-style-type: none"> <li>- Correct the natural gas emission factors in the introduction to the tables</li> <li>- Correct the methodologies for emission points EP309, AP3-310a, EP510, 35-04, IA02-12, and IA03-18</li> <li>- Add calculation methodologies for the emission points added in this permit revision, noted above.</li> <li>- Updated the tables in the Comments section of the Plantwide Requirements to incorporate updated cancer risk factors, Rc for U510, based on revised EA Demo submitted by the company.</li> <li>- Added cumene emission limit requirements for U510</li> </ul>
			Sig.	<p>Added Testing Requirements to Emission Units U42 and U310</p>
O-0870-17-V (R2)	08/29/2020	10/13/2020	Admin.	<p><u>08/21/2018 IA activity</u>                      U81&amp;82 - Add 3 Airco NG-fired indirect heat exchangers @ 2.0 MMBtu/hr each and remove AP-4 Boilers #1 and #2                      IA01 – Add 2 direct-fired natural gas combustion systems @ 0.14 MMBtu/hr each</p> <p><u>02/13/2019 IA activity -</u>                      U81&amp;82 - Add Eclipse ImmersoPak IP008 NG-fired indirect heat exchanger @ 2.05 MMBtu/hr on Line 9</p> <p>Removed the following equipment: Boiler #6 (U81&amp;82, EP908); Milacron</p>

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
				<p>Cabinet Line Extruder (U100, EP540); AP1 Tub grinder, 1 of 2 (EU-Miscellaneous, EP32675-11); AP2 Zoneline Mastic Curing Operation (EU-IA02, EP-IA02-14)</p> <p><u>02/20/2019 IA activity</u> - Add Markforged Metal-X 3D printer, Wash-1 debinder, Sinter-1 sintering furnace. (IA02)</p> <p><u>06/11/2019</u> - Incorporate Construction permit C-0870-1023-19-V sheet metal drawing lubricators (U540).</p> <p><u>07/23/2019</u> - Incorporate Operational Flexibility</p> <p><u>09/19/2019 Incorporate Construction permit C-870-19-0023V</u>            Add Belco curing oven with 2 Maxon LE35 burners @ 3.5 MMBtu/hr each (U01, EP100B-1) and one Heraeus sintering oven a natural gas infra-red catalytic heater @ 1.95 MMBtu/hr (U01, EP100D)            Remove electric bake oven (U01, EP100B)</p> <p>02/21/2020 – Add 4 Quality Scan spray booths for dimensional verification (insignificant activities IA-02)</p> <p>Updated TAC general conditions to provide clarity</p> <p>Clarified PSD/NSR avoidance limit for PM/PM<sub>10</sub> in U109            Updated format and standard language throughout permit</p>

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
				Removed Emission Unit U04 - equipment removed from service in 2019

**7. Construction Permit History:**

Permit No.	Effective Date	Description
C-0870-1023-19-V	06/11/2019	Add drawing compound lubricators U540, EP540-1 and 540-2
C-0870-0023-19-V	09/19/2019	Add Belco curing oven with 2 Maxon LE35 burners @ 3.5 MMBtu/hr each (U01, EP100B-1) and one Heraeus sintering oven a natural gas infra-red catalytic heater @ 1.95 MMBtu/hr (U01, EP100D) Remove electric bake oven (U01, EP100B)

**8. Operational Flexibility Approval**

Document Number	Date	Description
3022, 3024, 3029	07/23/2019	Allows GE Appliances to use colored basecoat powders in U530-EP5 Clear Coat Electrostatic Powder Booth.

**9. Application and Related Documents**

Document Number	Date	Description
66737	08/28/2014	TV Renewal Application
66910, 66964	09/10/2014, 09/12/2014	IA Application for two 900 kW emergency engines
67365	09/30/2014	District Response to IA Fire Pump Engine Application
68193	11/25/2014	IA Application for a natural gas burner to heat a rinse tank AP1 Hot Water Rinse Laundry Tubs
68194	11/25/2014	Application for spray booth with filters in AP5, construction permit C-0870-1004-14-V
68195	11/25/2014	IA Application for minor repairs with aerosol paints in AP5
68339	12/08/2014	District Approval of AP1 Hot Water Rinse Laundry Tubs

<b>Document Number</b>	<b>Date</b>	<b>Description</b>
68343 & 69245	12/09/2014 & 02/05/2015	Original and Revised Application for AP1 Emergency Generator Engine EP111a with updated EA Demo
69742	02/26/2015	Application to convert construction permits to operating permits for the following permits: 37206-13-C(R1), TV-14-1001-C, and C-0870-1004-14-V
69935	03/04/2015	IA Application for metallic powder coating pre-wash in AP2
69934	03/05/2015	IA Application for 50 kW diesel emergency backup generator engine in AP24
70083	03/13/2015	IA Application for metallic powder coating quality test operation in AP2
70305	03/25/2015	District Approval Response to Multiple IA request
70963	04/28/2015	IA Application for several injection molding plastics recycling systems
71118	05/12/2015	Company Response to information request for IA equipment
72074	06/12/2015	IA Application for ultrasonic cleaning cabinet
72122	06/18/2015	District Approval Response to IA ultrasonic cleaning cabinet
73083	08/18/2015	Application to convert construction permits to operating permits for the following permits: TV-14-1012-C (includes updated emission point and stack data)
73130	08/20/2015	Revised response to Regulation 5.21 BAC Changes
73185	08/24/2015	2 <sup>nd</sup> Revised response to Regulation 5.21 BAC Changes
73480	08/27/2015	Updated IA List
73340	08/31/2015	District Response to Revised Regulation 5.21 BAC Changes-exceeding EA Goals
73413	09/8/2015	Company's Response to District STAR letter of 8/31/2015
73850	10/12/2015	Application for HEWH Shell Grit Blaster IA determination
74056	10/19/2015	AP2 Metallic STAR Supplement
74057	10/22/2015	AP2 Metallic STAR EA Approval
74058	10/22/2015	Shell Tank Grit Blaster Supplemental Information
74078	10/26/2015	District Approval of Shell Tank Grit Blaster IA determination

<b>Document Number</b>	<b>Date</b>	<b>Description</b>
74390	11/18/2015	Updated IA List
74391	11/19/2015	Additional Information on IA process heaters and Boiler MACT
74486	12/01/2015	Request for Certificate of Conformity Documentation
74526	12/02/2015	Application for Sanding of defective parts
74610	12/11/2015	District Approval of IA for Sanding Operation of defective parts
74682	12/17/2015	Application for 2.05 MMBtu/hr process heater
74712	12/23/2015	District Approval of 2.05 MMBtu/hr process heater as IA equipment
74778 & 74885	01/07/2016 & 01/19/2016	Company pre-draft review of TV renewal permit & Extension Request Approval of review time
75140	02/08/2016	Company comments on pre-draft TV renewal permit
75818 & 75863	02/10/2016 & 03/14/2016	District Request for Certificate of Authority issued by Kentucky Secretary of State & Second Request with Example
76620	04/14/2016	Updated EA Demo
76718	04/25/2016	GE's request for a meeting to discuss company comments and District's response
76831	04/26/2016	Enamel Furnace (HEWH) modification
77176	05/04/2016	Questions regarding change of Name and Ownership
77106	05/09/2016	District Response to HEWH IA equipment approval
77107	05/09/2016	District Response to new coating Loctite 648 STAR EA Demo received 4/14/2016
77177	05/10/2016	Clarification on IA HEWH Furnace heat input
77418	05/19/2016	District Response for IA determination HEWH Furnace
77665	06/07/2016	Application for Ownership and Name Change to Haier US Appliance Solutions, Inc.
77788	06/13/2016	District Response regarding NESHAPs change of ownership needs to be submitted to EPA also
78662 & 78714 & 78770	07/29/2016 & 08/03/2016 & 08/04/2016	Request to keep U108 in TV renewal permit & District Response & Additional Information submitted by Company

<b>Document Number</b>	<b>Date</b>	<b>Description</b>
78906	08/11/2016	Additional Information related to updated IA list
78905	08/15/2016	Additional Information related to updated IA list
80843	08/19/2016	MSDS/SDS for VOC storage tanks
80842	08/24/2016	Updated IA List regarding VOC storage tanks and IA combustion sources
80062	10/13/2016	Updated EA Demo – BAC Changes for MIBK
80402	11/09/2016	Application for 5.3 MMBtu/hr process heater
80403	11/09/2016	Application for 2.05 MMBtu/hr process heater
80439	11/10/2016	District Response agreement to IA determination of 5.3 MMBtu/hr and 2.05 MMBtu/hr process heaters
80455	11/14/2016	Additional Information on the 5.3 MMBtu/hr process heater
80480	11/15/2016	Application for 7.5 MMBtu/hr process heater
80525	11/18/2016	District approval of IA determination for 7.5 MMBtu/hr process heater
80594	11/23/2016	Updated IA List
80861	12/14/2016	Updated IA List
80860	12/15/2016	Updating process heater capacities
80957	12/21/2016	Updated TV Application Pages for U30 process heaters, AP-100A and AP-100B
81095	01/04/2017	Updated IA List for 2.05 MMBtu/hr process heater
81548	01/30/2017	Correspondence related to clarification on NOx RACT Plan
82458	03/08/2017	Response to MIBK BAC Changes from 10/13/2016
82877	03/21/2017	Company request for status update on TV renewal permit
84522, 84544, & 84545	06/02/2017 and 06/05/2017	Notification of Equipment changes – and Revised STAR EA Demo for U510.
84548	06/05/2017	Company request to review pre-public comment period
84705	06/08/2017	Company response to request for Updated Application for name change
84843, 84896, & 85036	06/19/2017, 06/20/2017, & 06/28/2017	Company correspondence regarding injection molding and Regulation 7.25 applicability
85625	08/03/2017	Correspondence regarding central vacuum system
85802	08/09/2017	Application for Central Vacuum System
85803	08/09/2017	Application for Ultrasonic Cleaner

<b>Document Number</b>	<b>Date</b>	<b>Description</b>
85943	08/15/2017	District Agreement that Central Vacuum System and Ultrasonic Cleaner are Insignificant Activities
86014	08/16/2017	Correspondence regarding central vacuum system
87383	09/19/2017	District Response to Injection Molding and Regulation 7.25 Applicability
88308	10/20/2017	Company comments on public comment version of TV permit
89208	11/21/2017	Correspondence regarding status of draft TV permit
88782	11/07/2017	Email record of phone call for clarification of permitting requirements for burner addition.
88993	11/08/2017	Application to add two ~4 MMBtu/hr burners for dryoff ovens.
89111	11/05/2017	Correspondence clarifying requirements for Insignificant Activity addition
89175	11/20/2017	Letter from APCD approving burners as IA.
90186	01/22/2018	Communication regarding stack identification for new burners
90198	01/23/2018	Email to GEA defining requirements for addition of case-by-case (Regulation 1.02 §1.38.1.2) insignificant activities.
90304	01/31/2018	Transmittal of draft permit incorporating new burners for dryoff ovens.
90449	02/06/2018	Email conforming telephone conversation to delay permit revision R1 until additional case-by-case Insignificant Activities can be added.
91216	03/19/2018	Email confirmation of telephone call, confirming cancellation of plans to install burners covered in application 88993
90311	02/01/2018	Application for addition of an isopropyl alcohol (IPA) wiping operation as a case-by-case insignificant activity.
90404	02/02/2018	APCD initial IA determination for IPA wiping operation and determination of 40 CFR 63, subpart NNNN applicability.
90448	02/01/2018	Clarification question for IPA wiping operation.
91683	02/01/2018	Attachment to #90448
91050	02/13/2018	GEA appeal of APCD 40 CFR 63, subpart NNNN applicability determination.
91051	02/27/2018	APCD response to GEA NNNN MACT appeal.
90398	02/05/2018	Email from GEA identifying Calculation Methodology (Appendix D) revisions required.
90716	02/15/2018	APCD response to GEA request for calculation methodology revisions.

<b>Document Number</b>	<b>Date</b>	<b>Description</b>
90765	02/19/2018	Additional correction to calculation methodology for EP309.
90793	02/20/2018	Application for eight additional; case-by-case IA additions.
91872	05/03/2018	GE submission of revised EA Demo for U510
92011	05/15/2018	APCD review of GE revised EA Demo for U510
91924	05/09/2018	U109 Throughput determination – company submission
92684	06/25/2018	APCD proposed emission calculations for U109
92857	07/09-10/2018	Additional emails regarding U109 emission calculations
92305	05/14/2018	Company data regarding Door-in-Door VOC content
92004	05/14/2018	Company comments on draft permit
<i>17397</i> <sup>1</sup>	08/02/2018	APCD Response to GE comments
<i>17394</i>	08/02/2018	APCD transmittal of final documents to US-EPA
<i>17393</i>	08/02/2018	APCD transmittal of final documents to GE Appliances (GEA)
<i>17744</i>	08/21/2018	Application for installation of new natural gas-fired indirect heat exchangers (as IA) and removal of AP-4 boilers #1 and #2
<i>17882</i>	08/22/2018	Approved PTE for new equipment
<i>17745</i>	08/23/2018	Transmittal of APCD approval of new equipment as IA
<i>21029</i>	01/04/2019	GEA inquiry regarding metallic 3D printing equipment
<i>21329</i>	02/20/2019	Application for IA metallic 3D printer and associated equipment installation
<i>21378</i>	02/22/2019	Approved PTE for 3D printer
<i>21379</i>	02/22/2019	Transmittal of APCD approval of 3D printing equipment as IA
<i>21161</i>	02/06/2019	GEA notice of intent to remove Boiler #6 and other equipment.
<i>21239</i>	02/13/2019	Application for IA indirect heat exchanger
<i>21350</i>	02/21/2019	Approved PTE for IA indirect heat exchanger
<i>21326</i>	02/19/2019	APCD approval of IA addition and verification of Boiler #6 and other equipment removal
<i>21864</i>	03/20/2019	Application for drawing compound applicators

<sup>1</sup> All the document numbers prior to this point refer to the document numbers assigned by the eB document manager system. This and all subsequent document numbers refer to those assigned by the OnBase document manager system. These are also noted by italic style numbers

<b>Document Number</b>	<b>Date</b>	<b>Description</b>
21881	03/22/2019	APCD email with questions regarding drawing compound applicators
21925	03/26/2019	GEA response to APCD questions
21988	03/27/2019	APCD followup questions
22009	03/28/2019	Drawing compound MSDS from GEA
21999	03/28/2019	Emails regarding preferred numbering of new drawing compound applicator equipment
22008	03/29/2019	Approved PTE for metal drawing compound
22175	04/09/2019	Transmit draft permit to GEA for pre-public comment review
22177	04/11/2019	Emails regarding BACT update for drawing compound
22318	04/18/2019	GEA submission of updated BACT
22393	04/23/2019	GEA comments on pre-public comment draft permit
22418	04/24/2019	APCD response to GEA comments
22466	04/30/2019	Draft drawing compound applicator permit for public comment
22462	04/30/2019	Draft statement of basis for public comment
22463	04/30/2019	Public notice, as published in <i>Courier Journal</i>
22460	04/30/2019	Public comment transmittal to US-EPA
22459	04/30/2019	Public comment transmittal to GEA
22927	06/11/2019	Transmittal of final permit and associated documents to GEA
22923	06/11/2019	Final permit (C-0870-1023-19-V)
22924	06/11/2019	Final Statement of Basis (C-0870-1023-19-V)
2725	07/02/2019	Application for new natural gas-fired ovens
2965	07/22/2019	PTE for new NG-fired ovens
3027	07/24/2019	Transmittal of pre-public comment draft permit to GEA for review
23118	08/07/2019	GEA comments on pre-public comment draft permit
23119	08/09/2019	APCD response to GEA comments
23292	08/09/2019	GEA application update for NF-fired ovens
23294	08/09/2019	Manufacturer's spec sheet – associate with doc# 23292
23287	08/12/2019	Public notice, as published in <i>Courier Journal</i>
23350	08/13/2019	Public comment transmittal to US-EPA

Document Number	Date	Description
23349	08/13/2019	Public comment transmittal to GEA
117435	09/19/2019	Transmit final documents to GEA (C-0870-0023-19-V)
3022	07/15/2019	Operational Flexibility request
3024	07/16/2019	MSDS relating to operational flexibility request
3029	07/23/2019	APCD transmittal of operational flexibility approval
130774	02/11/2020	Application for 4 Quality Scan Booths as insignificant activity
132243	02/19/2020	Request for additional information <i>re:</i> emission unit placement
132516	02/21/2020	Approval of IA request for quality scan booths.
132593	02/21/2020	Company response to request for emission point IDs for new paint booths
134343	03/09/2020	Reminder of upcoming testing report deadline and clarification of equipment start date.
141965	04/06/2020	APCD questions re: stack ID3s and injection molding press counts
140079	05/08/2020	GE response to Stack ID and Injection molding press information
140078	05/08/2020	Company submission of drawing lubricant usage test results
140392	05/13/2020	APCD transmittal of proposed U540 language and follow up on injection molding presses
141860	05/29/2020	Company response to proposed U540 language and press count
173488	09/29/2020	Company comments on draft/proposed permit
173487	10/01/2020	APCD reply to issues raised in GE cover letter for public comments transmittal

## 10. Emission Summary

Pollutant (ton/yr)	CO	NOx	SO <sub>2</sub>	PM <sub>10</sub>	VOC	Total HAP	Single HAP (styrene)
Actual Emissions 2018	24.0	29.6	0.17	10.0	24.7	2.2	0.08
Major source trigger (based on PTE)	Yes	Yes <sup>1</sup>	No	Yes	Yes <sup>2</sup>	Yes	Yes

Note 1: Limit taken to be non-major for this pollutant

Note 2: Major for Title V, limit taken to be non-major for PSD

**11. Applicable Requirements**

- 40 CFR 60                       SIP                                       40 CFR 63                       PSD
- 40 CFR 61                       District Origin                       Other                                       NSR

**12. Referenced Federal Regulations:**

- 40 CFR 63 Subpart A                      *General Provisions*
- 40 CFR 63 Subpart NNNN                      *National Emission Standards for Hazardous Air Pollutants: Surface Coating of Large Appliances*
- 40 CFR 63 Subpart ZZZZ                      *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*
- 40 CFR 63 Subpart DDDDD                      *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*

**13. Non-Applicable Regulations:**

Regulation	Title	Reason for Non-applicability
6.40	Standard of Performance for Gasoline Transfer to Motor Vehicles (Stage II Vapor Recovery and Control)	Stage II vapor recovery systems have been ordered decommissioned (6.40, section 3)
7.12	Standard of Performance for New Storage Vessels for Volatile Organic Compounds	No VOC liquids with vapor pressure >1.5 psi are stored at this facility

**II Regulatory Analysis**

**1. Acid Rain Requirements:**

GE Appliances is not subject to the Acid Rain Program.

**2. Stratospheric Ozone Protection Requirements:**

Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. GE Appliances does not manufacture, sell, or distribute any of the listed chemicals. The source’s use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.

**3. Prevention of Accidental Releases 112(r):**

GE Appliances does not manufacture, process, use, store, or otherwise handle one or more of the regulated substances listed in 40 CFR Part 68, Subpart F, and District Regulation 5.15, Chemical Accident Prevention Provisions, in a quantity in excess of the corresponding specified threshold amount.

#### 4. 40 CFR Part 64 Applicability Determination:

GE Appliances is not subject to 40 CFR Part 64 - *Compliance Assurance Monitoring*.

#### 5. Basis of Regulation Applicability

##### a. Applicable Regulations

Regulation	Title	Basis
STAR <sup>3</sup>	Various	The STAR regulations establish requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards.
2.05	Prevention of Significant Deterioration of Air Quality	Adopts the Federal PSD regulations as part of the local provisions of the Kentucky SIP
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants	Adopts the Federal NESHAP regulations as part of the local provisions of the Kentucky SIP
6.07	Standards of Performance for Existing Indirect Heat Exchangers	Applies to each indirect heat exchanger with a heat input capacity of more than 1.0 MMBtu/hr and constructed before April 9, 1972
6.09	Standards of Performance for Existing Process Operations	Applies to each process operation constructed before September 1, 1976 unless the specified pollutants are regulated by other Chapter 6 regulations
6.16	Standards of Performance for Existing Large Appliance Surface coating Operations	Applies to each large appliance coating line with a construction permit issued before June 13, 1979
6.18	Standards of Performance for Solvent Metal Cleaning Equipment	Applies to all cold cleaners that use VOC-containing compounds to remove soluble impurities from metal surfaces
6.24	Standard of Performance for Existing Sources Using Organic Materials	Applies to any equipment that uses or applies any organic material that had a construction permit issued before June 13, 1979
6.42	Reasonably Available Control Technology Requirements for Major Volatile Organic Compound- and Nitrogen Oxides-Emitting Facilities	Applies to VOC emissions from VOC-emitting facilities unless those emissions are regulated by other specified regulations
7.02	Adoption of Federal New Source Performance Standards Adoption of Federal New Source Performance Standards	Adopts the Federal NSPS regulations as part of the local provisions of the Kentucky SIP

<b>Regulation</b>	<b>Title</b>	<b>Basis</b>
7.06	Standards of Performance for New Indirect Heat Exchangers	Applies to each indirect heat exchanger with a heat input capacity of more than 1.0 MMBtu/hr and constructed after April 9, 1972
7.08	Standards of Performance for New Process Operations	Applies to each process operation constructed after September 1, 1976 unless the specified pollutants are regulated by other Chapter 7 regulations
7.09	Standards of Performance for New Process Gas Streams	Applies to each facility not elsewhere subject to a standard of performance with respect to hydrogen sulfide, sulfur dioxide, or carbon monoxide and constructed after April 19, 1972
7.15	Standards of Performance for Gasoline Transfer to New Service Station Storage Tanks (Stage One Vapor Recovery)	Applies to the transfer of volatile organic compounds from transport vehicle tanks into storage tanks at new service stations constructed or reconstructed after June 13, 1979.
7.25	Standard of Performance for New Sources Using Volatile Organic Compounds	Applies to each affected facility not elsewhere regulated in Regulation 7 as to emissions of VOCs and which commenced after December 16, 1987.
7.59	Standard of Performance for New Miscellaneous Metal Parts and Products Surface Coating Operations	Applies to each affected facility commenced on or after May 20, 1981.
40 CFR 60 Subpart A	General Provisions	Apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of any standard applicable to that facility.
40 CFR 60 Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	Applies to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (100 million British thermal units per hour) or less, but greater than or equal to 2.9 MW (10 MMBtu/h).
40 CFR 60 Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	Applies to owners or operators of stationary CI ICE that commence construction after July 11, 2005.

<b>Regulation</b>	<b>Title</b>	<b>Basis</b>
40 CFR 60 Subpart SS	Standards of Performance for Industrial Surface Coating: Large Appliances	Applies to each surface coating operation in a large appliance surface coating line that commences construction, modification, or reconstruction after December 24, 1980.
40 CFR 63 Subpart A	General Provisions	Applies to the owner or operator of any stationary source that (i) Emits or has the potential to emit any hazardous air pollutant listed in or pursuant to section 112(b) of the Act; and (ii) Is subject to any standard, limitation, prohibition, or other federally enforceable requirement established pursuant to this part.
40 CFR 63 Subpart NNNN	National Emission Standards for Hazardous Air Pollutants: Surface Coating of Large Appliances	Applies to the owner or operator of a facility that applies coatings to large appliance parts or products, and is a major source, is located at a major source, or is part of a major source of emissions of hazardous air pollutants.
40 CFR 63 Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters	Applies to the owner or operator of an industrial, commercial, or institutional boiler or process heater that is located at, or is part of, a major source of HAP.
40 CFR 63 Subpart ZZZZ	National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	Applies to the owner or operator of a stationary RICE at a major or area source of HAP emissions.

Note 3: STAR comprises the local APCD Toxic Emission regulations 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23.

## **b. Plantwide**

General Electric Appliances (GEA) is a major source for CO, NO<sub>x</sub>, PM<sub>10</sub>, VOC, Total HAPs, and Single HAP (manganese). Regulation 2.16 - *Title V Operating Permits* establishes requirements for major sources. Based on the plantwide PTE evaluation, GEA has accepted limits to not be a PSD major source for NO<sub>x</sub> and VOC.

### **i. Standards**

- (1) NO<sub>x</sub>
  - (a) For PSD avoidance, NO<sub>x</sub> emissions must not exceed 100 tons in any 12-month period.
  - (b) The EPA-approved NO<sub>x</sub> RACT plan must be adhered to.

## (2) TAC

- (a) Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards.
- (b) GEA submitted a TAC Environmental Acceptability Demonstration to the District in December 2006, July 2007, June 2014, and August 2015. Compliance with the STAR EA Goals was demonstrated in the source's EA Demonstrations. Tier 3 SCREEN3 air modeling was performed for emission units that have non-*de minimis* TAC emissions. The District reviewed the EA Demonstrations submitted by the source. The following tables demonstrate that the plantwide risk values presented in the source's EA Demonstration comply with the STAR EA goals required in Regulation 5.21.

Table 1 - Individual Industrial Risk

TAC	TAC Cat.	U510 EP-511 and EP-512		U111 EP U111a		U112 EP DC#1 and EP DC#2	
		R <sub>C</sub>	EAG <sub>C</sub>	R <sub>C</sub>	EAG <sub>C</sub>	R <sub>C</sub>	EAG <sub>C</sub>
Acrylonitrile 107-13-1	1	0.412	< 1	-	-	-	-
Diesel PM	3	-	-	0.995	< 1	0.97	< 1
Ethyl Benzene 100-41-4	4	0.021	< 1	-	-	-	-
Styrene 100-42-5	4	0.055	< 1	-	-	-	-
Cumene 98-82-8	4	0.015	< 1	-	-	-	-

Table 2 - Individual Non-Industrial Risk

TAC	TAC Cat.	U510 EP-511 and EP-512		U111 EP U111a		U112 EP DC#1 and EP DC#2	
		R <sub>C</sub>	EAG <sub>C</sub>	R <sub>C</sub>	EAG	R <sub>C</sub>	EAG <sub>C</sub>
Acrylonitrile 107-13-1	1	0.365	< 1	-	-	-	-
Diesel PM	3	-	-	0.995	< 1	0.97	< 1
Ethyl Benzene 100-41-4	4	0.018	< 1	-	-	-	-
Styrene 100-42-5	4	0.048	< 1	-	-	-	-
Cumene 98-82-8	4	0.018	< 1	-	-	-	-

Table 3 - Plantwide Risk Summary

Plant-wide Summary	Individual Stationary Source, All P/PE		Individual Stationary Source, All New and Modified P/PE	
Industrial Total R <sub>C</sub>	2.468	< 75	2.468	< 38
Non-Industrial Total R <sub>C</sub>	2.414	< 7.5	2.414	< 3.8

(3) VOC

- (a) For PSD avoidance, VOC emissions must not exceed 250 tons in any 12-month period.

**ii. Monitoring and Recordkeeping**

- (1) Regulation 2.16, section 4.1.9.1 and 4.1.9.2 require monitoring and record keeping to assure ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a minimum of 5 years and make the records readily available to the District upon request.

**iii. Reporting**

- (1) Regulation 2.16, section 4.3.5, requires stationary sources for which a Title V is issued shall submit an annual compliance certification by April 15 of the following calendar year. In addition, as required by Regulation 2.16, section 4.1.9.3, the source shall submit compliance reports at least every six months to show compliance with the permit. Compliance reports and compliance certifications shall be signed by a responsible official and shall include a certification statement per Regulation 2.16, section 3.5.11.

**c. Emission Unit U01 – Powder Paint Systems (AP1)**

<b>EP</b>	<b>Description</b>	<b>Applicable Regulations</b>
EP 100A	Two Gema Volstatic powder coating booths with process reclamation system (reclamation system efficiency 90%)	STAR, 7.08, 40 CFR 63, Subpart NNNN
EP 100B-1	Belco bake oven with two direct, natural gas-fired burners rated at 3.5 MMBTU/hour each (7.0 MMBTU/hour total)	STAR, 7.59, 40 CFR 63, subpart NNNN
EP 100D	Heraeus sintering oven with natural-gas infra-red catalytic oven rated at 1.95 MMBTU/hour	

**i. Standards**

- (1) HAP
  - (a) Emission limits and work practice standards are set forth in 40 CFR 63, subpart NNNN
- (2) Opacity
  - (a) An opacity limit of 20% is set forth in Regulation 7.08.
- (3) PM
  - (a) Regulation 7.08 sets an emission limit of 2.34 lb/hr for processes with throughput less than 1000 lb/hr.
- (4) TAC
  - (a) See Plantwide section
- (5) VOC
  - (a) Regulation 7.59 establishes standards for compliant coatings and emission limits for non-compliant coatings
  - (b) See Plantwide section.

**ii. Monitoring and Recordkeeping**

- (1) HAP
  - (a) Record-keeping requirements are set forth in 40 CFR 63, subpart NNNN.
- (2) VOC
  - (a) Regulation 7.59 lists specific records that must be kept to insure compliant coatings are used and emission limits for non-compliant coatings are met.

**iii. Reporting**

(1) HAP

- (a) 40 CFR 63 Subpart NNNN establishes reporting for surface coating of large appliances.

**d. Emission Unit U30 – Powder Paint System (AP2)**

EP	Description	Applicable Regulations
EP 213	Paint Curing Oven #1 for Black, (2) natural gas-fired burners with a 3.5 MMBtu/hr capacity each for a total of 7 MMBtu/hr	STAR, 7.59, 40 CFR 63 Subpart NNNN
EP 214	Paint Curing Oven #2 for Colors, (2) natural gas-fired burners with a 3.5 MMBtu/hr capacity each for a total of 7 MMBtu/hr	
EP 214B	Double tunnel phosphator pretreat washer	STAR, 7.59
EP 214C	Two (2) powder coating operations <sup>2</sup> with process reclamation system	STAR, 7.08, 40 CFR 63 Subpart NNNN

**i. Standards**

(1) HAP

- (a) 40 CFR 63 Subpart NNNN establishes reporting for surface coating of large appliances.

(2) Opacity

- (a) Regulation 7.08 limits the opacity of any emissions from regulated sources to less than 20%.

(3) PM

- (a) Regulation 7.08 sets an emission limit of 2.34 lb/hr for processes with throughput less than 1000 lb/hr.

(4) TAC

- (a) See Plantwide section

(5) VOC

- (a) Regulation 7.59 establishes standards for compliant coatings and emission limits for non-compliant coatings
- (b) See Plantwide section.

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<sup>2</sup> The MSDS/SDS for the powder paints used, at the time of the issuance of this permit, show that they contain no TACs.

**ii. Monitoring and Recordkeeping**

(1) HAP

(a) 40 CFR 63 Subpart NNNN establishes monitoring and record keeping for surface coating of large appliances.

(2) VOC

(a) Regulation 7.59 lists specific records that must be kept to insure compliant coatings are used and emission limits for non-compliant coatings are met.

**iii. Reporting**

(1) HAP

(a) 40 CFR 63 Subpart NNNN establishes reporting for surface coating of large appliances.

**e. Emission Unit U40 – Rack Prime Dip (AP3)**

EP	Description	Applicable Regulations
EP 304	Prime Dip Tank	STAR, 6.16, 40 CFR 63, Subpart NNNN
EP 305	Preheat Eclipse Air Heat Oven <sup>3</sup> 2.6 MMBtu/hr	STAR, 6.16, 7.08, 7.09 40 CFR 63, Subpart NNNN
EP 306	Prime Drip Chamber	STAR, 6.16, 40 CFR 63, Subpart NNNN

**i. Standards**

(1) CO

(a) Regulation 7.09 sets forth requirements to minimize CO emissions.

(2) HAP

(a) 40 CFR 63 Subpart NNNN establishes reporting for surface coating of large appliances.

<sup>3</sup> Emission point EP 305 was previously permitted on construction permit 29161-10-C(R3) effective date June 13, 2012. Revision R1 allowed for the ovens to be moved from Research and Development use to production activities. Revision R2 allowed for a capacity increase of the Post Heat Oven from 1.4 MMBtu/hr capacity to 1.8 MMBtu/hr due to a change in the designed air flow. Revision R3 allows for a capacity increase of the Post Heat Oven from 1.8 MMBtu/hr capacity to 3.5 MMBtu/hr due to a change in the design.

- (3) NO<sub>x</sub>
  - (a) Regulation 7.08 sets NO<sub>x</sub> emission limits for combustion processes.
  - (b) See Plantwide section.
- (4) Opacity
  - (a) Regulation 7.08 limits the opacity of any emissions from regulated sources to less than 20%.
- (5) PM
  - (a) Regulation 7.08 sets an emission limit of 2.34 lb/hr for processes with throughput less than 1000 lb/hr.
- (6) SO<sub>2</sub>
  - (a) Regulation 7.09 sets SO<sub>2</sub> emission limits for combustion processes.
- (7) TAC
  - (a) See Plantwide section
- (8) VOC
  - (a) Regulation 6.16 establishes standards for compliant coatings and emission limits for non-compliant coatings
  - (b) See Plantwide section

**ii. Monitoring and Recordkeeping**

- (1) HAP
  - (a) 40 CFR 63 Subpart NNNN establishes monitoring and record keeping for surface coating of large appliances.
- (2) VOC
  - (a) Regulation 6.16 requires that records pertaining to the volume, method of application, and VOC content of the coating and clean-up materials used shall be maintained.

**iii. Reporting**

- (1) HAP
  - (a) 40 CFR 63 Subpart NNNN establishes reporting for surface coating of large appliances.

**f. Emission Unit U42: PVC Fluidized Bed (AP3)**

<b>EP</b>	<b>Description</b>	<b>Applicable Regulations</b>
EP 309	Fluid Bed	STAR, 6.09
EP 310	Post Heat Eclipse Air Heat Oven <sup>4</sup> 3.5 MMBtu/hr	STAR, 6.16, 7.08, 7.09 40 CFR 63, Subpart NNNN

**i. Standards**

- (1) CO
  - (a) Regulation 7.09 sets forth requirements to minimize CO emissions.
- (2) HAP
  - (a) 40 CFR 63 Subpart NNNN establishes reporting for surface coating of large appliances.
- (3) NO<sub>x</sub>
  - (a) Regulation 7.08 sets NO<sub>x</sub> emission limits for combustion processes.
  - (b) See Plantwide section.
- (4) Opacity
  - (a) Regulation 7.08 limits the opacity of any emissions from regulated sources to less than 20%.
- (5) PM
  - (a) Regulation 7.08 sets an emission limit of 2.34 lb/hr for processes with throughput less than 1000 lb/hr.
- (6) SO<sub>2</sub>
  - (a) Regulation 7.09 sets SO<sub>2</sub> emission limits for combustion processes.
- (7) TAC
  - (a) See Plantwide section

<sup>4</sup> Emission Point EP 310 was previously permitted on construction permit 29161-10-C(R3) effective date June 13, 2012. Revision R1 allowed for the ovens to be moved from Research and Development use to production activities. Revision R2 allowed for a capacity increase of the Post Heat Oven from 1.4 MMBtu/hr capacity to 1.8 MMBtu/hr due to a change in the designed air flow. Revision R3 allows for a capacity increase of the Post Heat Oven from 1.8 MMBtu/hr capacity to 3.5 MMBtu/hr due to a change in the design.

- (8) VOC
  - (a) Regulation 6.16 establishes standards for compliant coatings and emission limits for non-compliant coatings
  - (b) See Plantwide section

**ii. Monitoring and Recordkeeping**

- (1) HAP
  - (a) 40 CFR 63 Subpart NNNN establishes monitoring and record keeping for surface coating of large appliances.
- (2) VOC
  - (a) Regulation 6.16 requires that records pertaining to the volume, method of application, and VOC content of the coating and clean-up materials used shall be maintained.

**iii. Reporting**

- (1) HAP
  - (a) 40 CFR 63 Subpart NNNN establishes reporting for surface coating of large appliances.

**g. Emission Unit U81 and U82: Gas-fired Boilers and Indirect-fired Process Heat Exchangers**

EP	Description	Applicable Regulations
EP 909	Boiler #8 rated at 60.9 MM Btu/hr equipped with low NO <sub>x</sub> burners with landfill gas as backup	STAR, 7.06, 40 CFR 60 Subpart Dc, 40 CFR 63 Subpart DDDDD
325A	Aerco boiler, 2.0 MMBtu/hr, natural gas-fired (insignificant activity)	STAR, 7.06, 40 CFR 63 Subpart DDDDD
326A	Aerco boiler, 2.0 MMBtu/hr, natural gas-fired (insignificant activity)	
327	Aerco boiler, 2.0 MMBtu/hr, natural gas-fired (insignificant activity)	
AP1HA1	Wash System for Stainless Steel Washer and Dryer Baskets that consists of a heated bath that has a natural gas fired burner for heating. The Immersion	

EP	Description	Applicable Regulations
	Heater is an Eclipse ImmersoPak IP-010, 3.2 MMBtu/hr <sup>5</sup> (burner is IA)	
AP1BM1	AERCO 2 MMBtu/hr Natural Gas Fired Hot Water Boiler, model BMK2.0LNGWB (AP-1) (IA)	
AP1BM2	AERCO 2 MMBtu/hr Natural Gas Fired Hot Water Boiler, model BMK2.0LNGWB (AP-1) (IA)	
AP1BM3	AERCO 2 MMBtu/hr Natural Gas Fired Hot Water Boiler, model BMK2.0LNGWB (AP-1) (IA)	
AP2BM1	AERCO 2 MMBtu/hr Natural Gas Fired Hot Water Boiler, model BMK2.0LNGWB (AP-2) (IA)	
AP2BM2	AERCO 2 MMBtu/hr Natural Gas Fired Hot Water Boiler, model BMK2.0LNGWB (AP-2) (IA)	
AP2BM3	AERCO 2 MMBtu/hr Natural Gas Fired Hot Water Boiler, model BMK2.0LNGWB (AP-2) (IA)	
AP3BM1	AERCO 2 MMBtu/hr Natural Gas Fired Hot Water Boiler, model BMK2.0LNGWB (AP-3) (IA)	
AP3BM2	AERCO 2 MMBtu/hr Natural Gas Fired Hot Water Boiler, model BMK2.0LNGWB (AP-3) (IA)	
AP3BM3	AERCO 2 MMBtu/hr Natural Gas Fired Hot Water Boiler, model BMK2.0LNGWB (AP-3) (IA)	
EP-1A	Washer Immersion Heater Stage 1 Maxon 8" Tube-O-Therm rated at 5.3 MMBtu/hr (IA)	
EP-1B	Washer Immersion Heater Stage 2 Maxon 6" Tube-O-Therm rated at 3.0 MMBtu/hr (IA)	
IA01-2	Two Eclipse ImmersoPak IP008 heater rated at 2.05 MMBtu/hr (IA)	
IA01-3	One (1) 7.5 MMBtu/hr Maxon Tube-O-Therm 8" HC for steel parts cleaning in API (IA)	
IA01-16	Eclipse ImmersoPak IP008 heater rated at 2.05 MMBtu/hr (IA) <sup>6</sup>	
IA01-5	1.99 MMBtu/hr Bradford White hot water heater in the Park Athletic Club < 120 gallon tank (IA) <sup>7</sup>	STAR, 7.06

**i. Standards**

(1) HAP

- (a) The federal MACT sets forth certain work-practice and initial-compliance standards for industrial boilers that are located at a major source of HAPs.

(2) NO<sub>x</sub>

- (a) See Plantwide section.

<sup>5</sup> The wash system for stainless steel washer and dryer baskets that consists of a heated bath that has a natural gas fired burner for heating (the Eclipse ImmersoPak IP-010 3.2 MMBtu/hr) was previously permitted on construction permit 36340-12-C.

<sup>6</sup> IA approval dated February 19, 2019, document #21326

<sup>7</sup> This equipment is not subject to 40 CFR 63 Subpart DDDDD. It meets the definition of hot water heater in the regulation.

- (3) Opacity
  - (a) An opacity limit of 20% is set forth in Regulation 7.06.
- (4) PM
  - (a) Regulation 7.06 sets an emission limit of 0.56 lb/MMBtu actual heat input for all boilers with a total heat input capacity of less than 10 MMBtu/hr.
  - (b) Regulation 7.06 sets an emission limit of  $1.919 \times X^{-0.535}$  lb/hr for boilers with a total heat input capacity greater than 10 MMBtu/hr. For EP 909 ( $X=60.9$ ) the PM emission limit is 0.21 lb/MMBtu.
- (5) SO<sub>2</sub>
  - (a) Regulation 7.06 sets SO<sub>2</sub> emission limits for indirect heat exchangers.
- (6) TAC
  - (a) See Plantwide section.

**ii. Monitoring and Recordkeeping**

- (1) HAP
  - (a) The federal MACT specifies records that must be kept and notifications that must be submitted and the required filing deadlines.
- (2) SO<sub>2</sub>
  - (a) The federal NSPS specifies requirements for fuels supplied to the burners.

**iii. Reporting**

- (1) HAP
  - (a) The federal MACT specifies notifications and compliance reports that must be submitted and the required filing deadlines.

**h. Emission Unit U87: Gasoline Storage Tank and Dispensing**

EP	Description	Applicable Regulations
Tank No. 900	Underground Gasoline Storage Tank 6000 gallons (AP26) with gasoline dispensing. <sup>8</sup>	STAR, 7.15

**i. Standards**

- (1) TAC
  - (a) See Plantwide section.
- (2) VOC
  - (a) Regulation 7.15 specifies the required operational controls for gasoline storage tanks with Stage 1 vapor recovery systems.

**i. IA Emission Unit U104 – U107: Metal Parts Fabrication (AP2)**

EP	Description	Applicable Regulations
EP 224	Lubricant for Door Panel Press #25001	STAR, 7.25
EP 225	Lubricant for Door Panel Press #25002	
EP 226	Lubricant for Door Panel Press #25378	
EP 227	Lubricant for Door Panel Press #58737	

**i. Standards**

- (1) TAC
  - (a) See Plantwide section.
- (2) VOC
  - (a) VOC emission limit was established for these emission points in construction permit 185-01-C.
  - (b) See Plantwide section.

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<sup>8</sup> Per STAR Regulation 5.21, Section 2.6 the TAC emissions from motor vehicle fueling or refueling are *de minimis*.

**j. IA Emission Unit U109: Abrasive Blasting (AP2)**

EP	Description	Applicable Regulations
EP 239	Abrasive blasting unit by Blastec using steel shot rated @ 320,000 lbs blast media per hour	STAR, 2.05, 7.08

**i. Standards**

- (1) Opacity
  - (a) Regulation 7.08 limits the opacity of any emissions from regulated sources to less than 20%.
- (2) PM/PM<sub>10</sub>
  - (a) In accordance with Regulation 7.08, Table 1, PM standards for the silos is determined by  $E = 17.31 \times P^{0.16}$ , where P = 160 ton/hr and E = 38.99 lb/hr.
  - (b) PM emissions are limited to less than 25 tons per 12 months and PM<sub>10</sub> emissions to less than 15 tons per 12-months to avoid PSD regulations.
  - (c) Operation of control devices is required to ensure that all of these standards are met.
- (3) TAC
  - (a) See Plantwide section.
  - (b) Controls must operate at all times the unit is in operation to ensure that STAR *de minimis* limits are not exceeded for manganese.

**k. Emission Unit U111: Emergency Generators (RICE MACT)**

EP	Description	Applicable Regulations
EP U111a	AP1 Emergency Diesel-Fired Generator Engine, Cummins KTA50-G9, 1500 DFLE, 2220 bhp <sup>9</sup>	STAR, 40 CFR 63, Subpart ZZZZ
EP AP3 Comms (IA)	AP3 Communications Center Natural Gas Fired Emergency Generator Engine, Cummins GGLA, 198 HP	
EP AP5 (IA)	AP5 Emergency Diesel-Fired Generator Engine, Caterpillar D330, 150 HP	

**i. Standards**

- (1) HAP
  - (a) The Federal MACT regulation specifies operational limits for emergency generators.
- (2) NOx
  - (a) See Plantwide section.
- (3) TAC
  - (a) See Plantwide section.
  - (b) Operation of EP111a is limited to 245 hours in any 12-consecutive-month period, to ensure compliance with STAR *de minimis* limits for Diesel particulate matter.

**ii. Monitoring and Recordkeeping**

- (1) HAP
  - (a) The federal MACT regulation specifies the recordkeeping required for emergency generators.

**iii. Reporting**

- (1) HAP
  - (a) The federal MACT regulation specifies the reporting required for emergency generators.

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<sup>9</sup> Per 40 CFR 60 Subpart IIII Section 60.4200, engine EP U111a does not meet the requirements in this section to be subject to this regulation.

**I. Emission Unit U112: Emergency Generators  
(RICE MACT and CI-ICE NSPS)**

EP	Description	Applicable Regulations
EP DC#1	Kohler Diesel-Fired Emergency Generator Engine, 24.54 MMBtu/hr Kohler 2500REOZDB, 3675 HP	STAR, 40 CFR 60 Subpart IIII, 40 CFR 63 Subpart ZZZZ
EP DC#2	Kohler Diesel-Fired Emergency Generator Engine, 24.54 MMBtu/hr Kohler 2500REOZDB, 3675 HP	
AP23a (IA)	Mitsubishi S12A2-Y2PTAW-2 Emergency Generator Engine, 900 kW (1207 HP)	
AP23b (IA)	Mitsubishi S12A2-Y2PTAW-2 Emergency Generator Engine, 900 kW (1207 HP)	
EP IWT (IA)	Backup Emergency Diesel-Fired Generator Engine (IWT Generator) John Deere 4024HF285B, 80 HP	

**i. Standards**

- (1) HAP
  - (a) The federal MACT describes notification requirements for affected engines.
- (2) NOx
  - (a) See Plantwide section.
- (3) TAC
  - (a) See Plantwide section.
  - (b) Operation of EP DC#1 and EP DC#2 is limited to 500 hours of combined operation in any 12-consecutive-month period, to ensure compliance with STAR *de minimis* limits for Diesel particulate matter.
- (4) Unit Operation
  - (a) The federal NSPS describes the requirements for operation of affected emergency engines.

**ii. Monitoring and Recordkeeping**

- (1) Unit Operation
  - (a) The federal NSPS specifies specific monitoring and recordkeeping for emergency engines.

**iii. Reporting**

(1) Unit Operation

- (a) The federal NSPS specifies reporting required for affected emergency engines.

**m. Emission Unit U310: Nylon Rack Fluidized Bed Coating (AP3)**

EP	Description	Applicable Regulations
AP3-310	Nylon Rack Coater Maxon Ovenpak II Preheat Oven 4.5 MMBtu/hr	STAR, 7.09
AP3-310a	Nylon Rack Coater 353 lb/hr KMI Fluidized Bed	STAR, 7.08 40 CFR 63, Subpart NNNN
AP3-310b	Nylon Rack Coater Maxon Ovenpak II Post-heat Oven 1.5 MMBtu/hr	STAR, 7.09, 7.59

**i. Standards**

(1) CO

- (a) Regulation 7.09 specifies requirements for destruction of CO released in process gas streams.

(2) HAP

- (a) The federal MACT for large appliance manufacturing specifies allowable HAP emissions from affected sources.

(3) NO<sub>x</sub>

- (a) See Plantwide section.
- (b) Regulation 7.08 specifies that NO<sub>x</sub> emissions from the AP3-310a shall not exceed 300 ppm by volume.

(4) Opacity

- (a) Regulation 7.08 limits the opacity of any emissions from regulated sources to less than 20%.

(5) PM

- (a) Regulation 7.08 sets an emission limit of 2.34 lb/hr for processes with throughput less than 1000 lb/hr.

(6) SO<sub>2</sub>

- (a) Regulation 7.09 specifies the maximum allowable long- and short-term emissions of SO<sub>2</sub>.

(7) TAC

- (a) See Plantwide section.

- (8) VOC
  - (a) Regulation 7.59 specifies the maximum allowable VOC content of coating materials.
  - (b) See Plantwide section.

**ii. Monitoring and Recordkeeping**

- (1) HAP
  - (a) The federal MACT for large appliance manufacturing specifies HAP reporting requirements.
- (2) VOC
  - (a) Regulation 7.59 specifies the records required to assure compliance with the VOC content-standards.

**iii. Reporting**

- (1) HAP
  - (a) The federal MACT for large appliance manufacturing specifies HAP reporting requirements.

**n. Emission Unit U311: Adhesive for End Caps on Dishwasher Racks (AP3)**

EP	Description	Applicable Regulations
AP3-311	Rack End Cap Adhesive	STAR, 7.25, 40 CFR 63, Subpart NNNN

**i. Standards**

- (1) HAP
  - (a) The federal MACT for large appliance manufacturing specifies allowable HAP emissions from affected sources.
- (2) TAC
  - (a) See Plantwide section.
- (3) VOC
  - (a) See Plantwide section.
  - (b) VOC emissions from Regulation-7.25 sources that do not have an approved BACT analysis must not exceed 5 tons per year, plantwide.

**ii. Monitoring and Recordkeeping**

- (1) HAP
  - (a) The federal MACT for large appliance manufacturing specifies HAP reporting requirements.

**iii. Reporting**

- (1) HAP
  - (a) The federal MACT for large appliance manufacturing specifies HAP reporting requirements.

**o. Emission Unit: U500: Touch-Up Paint, Adhesives and Lubricating the Spine Fin Evaporator Bottom Mount Freezer Refrigerator Line (AP5)**

EP	Description	Applicable Regulations
EP-500a	Touch-Up Paint	STAR, 7.25, 40 CFR 63 Subpart NNNN
EP-500b	Adhesives	
EP-500c	Lubricating the Spine Fin Evaporator	

**i. Standards**

- (1) HAP
  - (a) The federal MACT for large appliance manufacturing specifies allowable HAP emissions from affected sources.
- (2) TAC
  - (a) See Plantwide section.
- (3) VOC
  - (a) Emissions for point EP-500c are limited by conditions established in construction permit 33373-11-C(R1).
  - (b) VOC emissions from Regulation-7.25 sources that do not have an approved BACT analysis (EP-500a and EP-500b) must not exceed 5 tons per year, plantwide.
  - (c) See Plantwide section.

**ii. Monitoring and Recordkeeping**

## (1) HAP

- (a) The federal MACT for large appliance manufacturing specifies HAP monitoring and recordkeeping requirements.

**iii. Reporting**

## (1) HAP

- (a) The federal MACT for large appliance manufacturing specifies HAP reporting requirements.

**p. Emission Unit: U510: Bottom Mount Freezer Refrigerator Line (AP5)**

EP	Description	Applicable Regulations
EP-510	Doerfer Insulating Foam Line (IFL-1)	STAR, 7.25
EP-511	Bottom Mount Freezer Refrigerator Main Extruder Line (3,000 lb/hr)	STAR, 2.12, 7.25
EP-512	Bottom Mount Freezer Refrigerator Small Extruder Line (800 lb/hr)	

**i. Standards**

## (1) TAC

- (a) Cumene emission limits are required to be *de minimis*.
- (b) See Plantwide section.

## (2) VOC

- (a) Certain annual emission limits are established in construction permits 33318-11-C and 33671-11-C.
- (b) See Plantwide section.

**q. Emission Unit: U530: AP2 Metallic Powder Paint (TV-14-1012-C)**

EP	Description	Applicable Regulations
EP-2A	Infrared dry off Oven KMI Catalytic Custom - 2.0 MMBtu/hr	STAR, 40 CFR 63, Subpart NNNN
EP-3	Electrostatic powder paint booth – basecoat: Gema Equiflow with a process cyclone (efficiency 90%)	STAR, 7.08 40 CFR 63, Subpart NNNN
EP-4A	Infrared gel oven for sintering basecoat powder paint	STAR, 7.59 40 CFR 63, Subpart NNNN
EP-4B	Basecoat infrared gel oven KMI Catalytic Custom - 1.6 MMBtu/hr	

EP	Description	Applicable Regulations
EP-5	Electrostatic powder paint booth – clear coat: Gema Diamond with process cartridge filters (efficiency 95%)	STAR, 7.08 40 CFR 63, Subpart NNNN
EP-6A	Infrared gel oven for sintering clearcoat powder paint	STAR, 7.59 40 CFR 63, Subpart NNNN
EP-6B	Clearcoat infrared gel oven KMI Catalytic Custom - 1.6 MMBtu/hr	
EP-7A	Cure oven for curing powder paints KMI Custom	
EP-7B	Natural gas-fired cure oven KMI Custom - 4.5 MMBtu/hr	
EP-IA8	Stainless Steel Dish Door Wipe (Non BACT)	STAR, 7.25

**i. Standards**

- (1) HAP
  - (a) The federal MACT for large appliance manufacturing specifies allowable HAP emissions from affected sources.
- (2) Opacity
  - (a) Regulation 7.08 limits the opacity of any emissions from regulated sources to less than 20%.
- (3) PM
  - (a) Regulation 7.08 sets an emission limit of 2.34 lb/hr for processes with throughput less than 1000 lb/hr.
- (4) TAC
  - (a) Aluminum emission limits are required to be *de minimis*.
  - (b) See Plantwide section.
- (5) VOC
  - (a) Regulation 7.59 specifies the maximum allowable VOC content of coating materials.
  - (b) VOC emissions from Regulation-7.25 sources that do not have an approved BACT analysis (EP-IA8) must not exceed 5 tons per year, plantwide.
  - (c) See Plantwide section.

**ii. Monitoring and Recordkeeping**

(1) HAP

(a) The federal MACT for large appliance manufacturing specifies HAP monitoring and recordkeeping requirements.

(2) VOC

(a) Regulation 7.59 specifies the records required to assure compliance with the VOC content-standards.

**iii. Reporting**

(1) HAP

(a) The federal MACT for large appliance manufacturing specifies HAP reporting requirements.

**r. Emission Unit U540: AP1 Dryer Drawing Compound Application**

EP	Description	Applicable Regulations
540-1	Drawing compound applicators	7.25
540-2	Drawing compound applicators	7.25

**i. Standards**

(1) TAC

(a) See Plantwide section.

(2) VOC

(a) VOC emissions are limited to what was shown in the BACT analysis that was submitted with the construction application.

**s. Emission Unit Solvent Metal Cleaning Equipment**

<b>EP</b>	<b>Description</b>	<b>Applicable Regulations</b>
Solvent Metal-Cleaning Equipment with secondary reservoir (IA)	Thirty cold solvent parts cleaners are equipped with secondary reservoirs	STAR, 6.18
Solvent Metal-Cleaning Equipment without secondary reservoir	Twelve cold solvent parts cleaners are not equipped with secondary reservoirs	

**i. Standards**

- (1) TAC
  - (a) See Plantwide section.
- (2) VOC
  - (a) Regulation 6.18 specifies management practices for operation of cold-solvent parts washers.
  - (b) See Plantwide section.

**ii. Monitoring and Recordkeeping**

- (1) VOC
  - (a) Regulation 6.18 lists specific recordkeeping requirements for solvent metal-cleaning equipment.

**t. Emission Unit Miscellaneous**

<b>EP</b>	<b>Description</b>	<b>Applicable Regulations</b>
32675-11	AP1 Tub Regrinder in AP1 Regrinder rated at 4,000 lb/hr	STAR, 6.09
37206-13	5,500 lb/hr Hosokawa 80/140 CL Grinder and 4,500 lb/hr Hosokawa 60/140 CL Grinder with three process cyclones in AP5	STAR, 7.08
176-93	Miscellaneous chemical use in assembly/packing operations in the manufacture of refrigerators in AP5.	STAR, 7.25
178-93	Miscellaneous chemical use in assembly/packing operations in the manufacture of dishwashers in AP3.	STAR, 7.25
483-92	Miscellaneous chemical use in assembly/packing operations in the manufacture of washers and dryers in AP1.	STAR, 6.24

<b>EP</b>	<b>Description</b>	<b>Applicable Regulations</b>
479-94	Sealant to reseal appliance cartons prior to shipment from AP10.	STAR, 7.25
35-04	Maintenance Paint Booth (Insignificant Activity)	STAR, 7.08, 7.25
583-92	Washer and dryer Paint Touch-up in AP1.	STAR, 7.25
471-94	One Dishwasher rack repair station.	STAR, 7.25
585-91	Drawing compound and lubricant used in hydraulic presses and other fabrication operations in AP1.	STAR, 7.25
U149	Pedestal Touch-up Painting on washers and dryers in AP1.	STAR, 7.25
U150	Touch-up Painting on dishwashers in AP3.	STAR, 7.25
Injecting Molding	137 Plastics compression or injection molding presses located in AP1 - 28 presses, AP3 - 8 presses, AP4 - 94 presses, AP5 - 7 presses	STAR, 7.08, 7.25

**i. Standards**

- (1) Opacity
  - (a) Regulations 6.09 and 7.08 limits the opacity of any emissions from regulated sources to less than 20%.
- (2) PM
  - (a) Regulations 6.09 and 7.08 regulate the emission rate of particulates, based on age of equipment and process rate.
- (3) TAC
  - (a) See Plantwide section.
- (4) VOC
  - (a) Regulations 6.24 and 7.25 regulates the emission rate for VOC, based on age of equipment and process rate.
  - (b) See Plantwide section.

## 6. Insignificant Activities

Equipment <sup>10</sup>	Qty.	PTE (ton/yr)	Regulation Basis
Fuel or lubricating oils storage tanks: VP<10 mmHg Emission Unit IA04 (U89))	<32	<0.1 VOC each	Regulation 1.02, Appendix A
Brazing, soldering, or welding equipment (Emission Unit IA03-1)	>60	1.0 PM combined	Regulation 1.02, Appendix A
Plastics compression or injection molding (Regulation 7.25 BACT process, Emission Unit Miscellaneous)	137	8.59 VOC combined <sup>11</sup>	Regulation 1.02, Section 1.38
Indirect-fired Hot Water heaters located throughout the plant all less than 1.0 MMBtu/hr (Emission Unit IA01-6) <sup>12</sup>	>50	1.0 NOx each	Regulation 1.02, Appendix A
Maintenance Paint Booth (Previously Permit 35-04) (See Emission Unit: Miscellaneous for standards, monitoring, recordkeeping, and reporting requirements)	1	4.9 VOC	Regulation 1.02, Section 1.38
R & D facilities	<25	4.9 PM/VOC each	Regulation 1.02, Appendix A
VOC Pressurized Storage tanks: MDI Bulk Storage Tank 27,000 Gallons Polyol Bulk Storage Tank 27,000 Gallons Cyclopentane Bulk Storage Tank 12,000 Gallons Case Mixer Tank 5,600 Gallons Door Mixer Tank 5,600 Gallons Case Poly Blend Hold Tanks 5,300 Gallons Door Poly Blend Hold Tank 5,300 Gallons	11	0.0 VOC while under pressure	Regulation 1.02, Appendix A

<sup>10</sup> Equipment subject to the plantwide 5 ton per year VOC emission limit in Regulation 7.25 are U311 AP3-311, U500 EP-500(a & b), U149 touch-up painting, U150 touch-up painting, and Insignificant Activities that are noted in the Insignificant Activity Table as Regulation 7.25 non-BACT process.

<sup>11</sup> The injection molding equipment in each building VOC emissions are less than 5 tpy combined.

<sup>12</sup> These are not process heaters and are not subject to 40 CFR 63 Subpart DDDDD, they are less than 1 MMBtu/hr and not subject to Regulation 7.06. They are *de minimis* for STAR as they are natural gas combustion according to Regulation 5.21, section 2.7.

<b>Equipment <sup>10</sup></b>	<b>Qty.</b>	<b>PTE (ton/yr)</b>	<b>Regulation Basis</b>
Polycat Bulk Storage Tank 3,700 Gallons 2 Additive Tanks 250 Gallons			
VOC storage tanks 250 gallons or less: 8 Day Tanks < 250 gallons Day Tank Storage of MDI 100 gallons Day Tank Storage of Polyol and Blowing Agent 100 gallons	10	<4.9 VOC each	Regulation 1.02, Appendix A
Lubricating Oils or fuels oils storage tanks with a vapor pressure of < 10 mmHg: Compressor Oil Process Tank, 70 gallons Compressor Oil Clean Reservoir Tank, 150 Gallons	2	<4.9 VOC each	Regulation 1.02, Appendix A
Lab venting and exhausting	>25	<4.9 VOC each	Regulation 1.02, Appendix A
Soil or groundwater remediation (Regulation 7.25 non-BACT process, Emission Unit IA02-24)	1	<4.9 VOC	Regulation 1.02, Appendix A
Waste water Treatment plant consisting of two clarifiers, two filter presses, chemicals, and a skimmer (Regulation 7.25 non-BACT process, Emission Unit IA02-22)	1	0.1 VOC	Regulation 1.02, Section 1.38
Pedestal Plastic Regrinder (Emission Unit IA03-2)	1	1.55 PM	Regulation 1.02, Section 1.38
Cleaner and Lubricant Use for new Bottom Mount Assembly Operation (Regulation 7.25 non-BACT process, Emission Unit IA02-1)	1	0.8 VOC	Regulation 1.02, Section 1.38
Brazing, Soldering or Welding on Nylon Wire Rack Line (Emission Unit IA03-5)	1	1.0 PM	Regulation 1.02, Appendix A
Nylon powder transfer/clean-up activities (Emission Unit IA03-6)	1	4.6 PM	Regulation 1.02, Section 1.38
Stainless Dishwasher Steel Tub Assembly (Regulation 7.25 non-BACT process, Emission Unit IA02-5)	1	0.22 VOC	Regulation 1.02, Section 1.38

<b>Equipment <sup>10</sup></b>	<b>Qty.</b>	<b>PTE (ton/yr)</b>	<b>Regulation Basis</b>
Dishwasher Door Mastic Application (Regulation 7.25 non – BACT process, Emission Unit IA02-6)	1	0.45 VOC	Regulation 1.02, Section 1.38
Tub Top and Bottom Mastic Application (Regulation 7.25 non – BACT process, Emission Unit IA02-7)	1	0.71 VOC	Regulation 1.02, Section 1.38
Tub Wrap Mastic Application (Regulation 7.25 non –BACT process, Emission Unit IA02-8)	1	1.41 VOC	Regulation 1.02, Section 1.38
AP1 RTV Silicone Station (Regulation 7.25 non –BACT process, Emission Unit IA02-9)	1	0.22 VOC	Regulation 1.02, Section 1.38
Pad Printing (Regulation 7.25 non – BACT process, Emission Unit IA02-10)	2	<1.0 VOC each	Regulation 1.02, Section 1.38
Small Freezer Door Foaming Operation (Regulation 7.25 non – BACT process, Emission Unit IA02-12)	1	<1.0 VOC	Regulation 1.02, Section 1.38
Pellet Grinder and process cyclone make Granotec G3030 (Emission Unit IA03-7)	1	1.75 PM	Regulation 1.02, Section 1.38
Grinding operation for the AP3 Ash White Tub Re-grinder (Emission Unit IA03-8)	1	1.75 PM	Regulation 1.02, Section 1.38
Small Regrinders in AP4 used to recycle plastic (Emission Unit IA03-9)	<10	≤4.9 PM each	Regulation 1.02, Section 1.38
Small Regrinders in AP5 used to recycle plastic (Emission Unit IA03-10)	1	1.3 PM	Regulation 1.02, Section 1.38
Unloading, Conveyance and Storage of Plastic Pellets in AP1 (Emission Unit IA03-11)	1	<1.0 PM	Regulation 1.02, Section 1.38
Unloading, Conveyance and Storage of Plastic Pellets in AP3 (Emission Unit IA03-12)	1	<1.0 PM	Regulation 1.02, Section 1.38

Equipment <sup>10</sup>	Qty.	PTE (ton/yr)	Regulation Basis
Unloading, Conveyance and Storage of Plastic Pellets in AP4 (Emission Unit IA03-13)	1	<1.5 PM	Regulation 1.02, Section 1.38
Unloading, Conveyance and Storage of Plastic Pellets in AP5 (Emission Unit IA03-14)	1	<1.0 PM	Regulation 1.02, Section 1.38
Aerosol spray adhesive usage in the warehouse for replacing loose labels on boxes prior to shipping (Regulation 7.25 non –BACT process, Emission Unit IA02-13)	1	1.0 VOC	Regulation 1.02, Section 1.38
2.0 MMBtu/hr API Make Up Air Heater, Maxon 2.0 APX Line Burner (Direct fired unit, Emission Unit IA05-1) <sup>13</sup>	1	0.83 NO <sub>x</sub>	Regulation 1.02, Appendix A
IA01-5: 1.99 MMBtu/hr Bradford White hot water heater in the Park Athletic Club < 120 gallon tank (Indirect Fired heat exchanger, Emission Unit U81 and U82)	1	0.83 NO <sub>x</sub>	Regulation 1.02, Appendix A
IA01-3: 7.5 MMBtu/hr Maxon Tube-O-Therm 8” HC (Indirect Fired heat exchanger, Emission Unit U81 and U82)	1	3.27 NO <sub>x</sub>	Regulation 1.02, Appendix A
0.1 MMBtu/hr: Sterling QVEF heater (Indirect Fired Space/comfort heaters) (Emission Unit IA01-7) <sup>14</sup>	3	0.04 NO <sub>x</sub> each	Regulation 1.02, Appendix A
0.2 MMBtu/hr: Sterling QVEF heater (Indirect Fired Space/comfort heaters) (Emission Unit IA01-8)14	7	0.08 NO <sub>x</sub> each	Regulation 1.02, Appendix A
0.25 MMBtu/hr: Sterling QVEF heater (Indirect Fired Space/comfort heaters) (Emission Unit IA01-9)14	15	0.10 NO <sub>x</sub> each	Regulation 1.02, Appendix A

<sup>13</sup> This heater is a direct fired process heater and not subject to 40 CFR 63 Subpart DDDDD. Since it a direct fired process heater it is not subject to Regulation 7.06. They are *de minimis* for STAR as they are natural gas combustion according to Regulation 5.21, section 2.7.

<sup>14</sup> These space/comfort heaters are not process heaters and not subject to 40 CFR 63 Subpart DDDDD. These are indirect fired heat exchangers but are each below 1 MMBtu/hr and not subject to Regulation 7.06. They are *de minimis* for STAR as they are natural gas combustion according to Regulation 5.21, section 2.7.

<b>Equipment <sup>10</sup></b>	<b>Qty.</b>	<b>PTE (ton/yr)</b>	<b>Regulation Basis</b>
0.3 MMBtu/hr: Sterling QVEF heater (Indirect Fired Space/comfort heaters) (Emission Unit IA01-10)14	9	0.13 NOx each	Regulation 1.02, Appendix A
0.4 MMBtu/hr: Sterling QVEF heater (Indirect Fired Space/comfort heaters) (Emission Unit IA01-11)14	11	0.17 NOx each	Regulation 1.02, Appendix A
0.03 MMBtu/hr: Qmark MUH-10-41 (10 kW) (Indirect Fired Space/comfort heaters) (Emission Unit IA01-12) 14	3	0.13 NOx each	Regulation 1.02, Appendix A
0.14 MMBtu/hr: Abrade System Direct-fired natural gas units (Emission unit IA05)	2	0.001 NOx each	Regulation 1.02, Section 1.38
0.757 MMBtu/hr: Cambridge S800 direct fired heat exchangers (Space/comfort heaters, Emission Unit IA05-2) <sup>15</sup>	3	0.33 NOx each	Regulation 1.02, Appendix A
0.400 MMBtu/hr: Cambridge S400 direct fired heat exchangers (Space/comfort heaters, Emission Unit IA05-3)15	2	0.17 NOx each	Regulation 1.02, Appendix A
0.125 MMBtu/hr heater (Indirect Fired Space/comfort heaters) (Emission Unit IA01-13) 14	5	0.05 NOx each	Regulation 1.02, Appendix A
0.3 MMBtu/hr heater (Indirect Fired Space/comfort heaters) (Emission Unit IA01-14)14	13	0.13 NOx each	Regulation 1.02, Appendix A
1.2 MMBtu/hr: Cambridge S1200 direct fired heat exchanger (Space/comfort heaters, Emission Unit IA05-4)15	6	0.52 NOx each	Regulation 1.02, Appendix A
1.499 MMBtu/hr: Cambridge S1600 direct fired heat exchanger (Space/comfort heaters, Emission Unit IA05-5)15	12	0.64 NOx each	Regulation 1.02, Appendix A
2.2 MMBtu/hr: Cambridge S2200 direct fired heat exchanger	3	0.94 NOx each	Regulation 1.02, Appendix A

<sup>15</sup> These are direct fired space/comfort heaters and not process heaters, therefore, they are not subject to 40 CFR 63 Subpart DDDDD. Since they are direct fired heat exchangers they are not subject to Regulation 7.06. They are *de minimis* for STAR as they are natural gas combustion according to Regulation 5.21, section 2.7.

<b>Equipment <sup>10</sup></b>	<b>Qty.</b>	<b>PTE (ton/yr)</b>	<b>Regulation Basis</b>
(Space/comfort heaters, Emission Unit IA05-6)15			
3.107 MMBtu/hr: Cambridge S3200 direct fired heat exchanger (Space/comfort heaters, Emission Unit IA05-7)15	45	1.33 NOx each	Regulation 1.02, Appendix A
5.887 MMBtu/hr: Cambridge M136 direct fired heat exchanger (Space/comfort heaters, Emission Unit IA05-8)15	5	2.53 NOx each	Regulation 1.02, Appendix A
7 MMBtu/hr natural gas dryoff oven (Direct fired Unit, Emission Unit IA05-9)13	1	2.92 NOx	Regulation 1.02, Appendix A
HA Gas Dryer Test Loop (Emission Unit IA05-10)	1	<1.0 NOx	Regulation 1.02, Section 1.38
Cooling towers: (Emission Unit IA03-15) AP-1 Front Tower AP-2 Rear Tower AP-2 Front Tower AP-2 Outlying Tower AP-3 North Tower AP-4 South Tower AP-4 Front Tower AP-4 Plastics Tower AP-5 Plastics Tower AP-5 Front Tower AP-20 Tower AP-32 Tower AP-33 Tower	13	<3.0 PM each	Regulation 1.02, Section 1.38
AP1 Powder Paint Pretreatment Washing Tunnel (Regulation 7.59) (Emission Unit U01 emission point EP-100C)	1	3.6 VOC	Regulation 1.02, Section 1.38
AP2 Metallic PP Pretreatment Washing Tunnel (Regulation 7.25 non –BACT process, Emission Unit IA02-15)	1	3.11 VOC	Regulation 1.02, Section 1.38
MEK Quality Test Metallic Powder Painted Parts (AP2) (Regulation 7.25 non –BACT process, Emission Unit IA02-16)	1	0.04 VOC	Regulation 1.02, Section 1.38

<b>Equipment <sup>10</sup></b>	<b>Qty.</b>	<b>PTE (ton/yr)</b>	<b>Regulation Basis</b>
Ultrasonic Cleaner for Powder Paint Tools (Regulation 7.25 non –BACT process, Emission Unit IA02-17)	3	0.2 VOC each	Regulation 1.02, Section 1.38
HA Drum Fabrication Lubricant (Regulation 7.25 non –BACT process, Emission Unit IA02-19)	1	2.6 VOC	Regulation 1.02, Section 1.38
Swedging/Cutting Lubricant application (Regulation 7.25 non –BACT process, Emission Unit IA02-20)	1	0.13 VOC	Regulation 1.02, Section 1.38
Evaporator De-Fin Lubricant application (Regulation 7.25 non –BACT process, Emission Unit IA02-21)	1	1.2 VOC	Regulation 1.02, Section 1.38
Markforged ‘Metal X’ 3D Printer (IA02-32) (Regulation 7.25 non –BACT process)	1	0.0001 VOC	Regulation 1.02, Section 1.38
Markforged ‘Wash-1’ washer/debinder (IA02-33) (Regulation 7.25 non –BACT process)	1	3.43 VOC	Regulation 1.02, Section 1.38
Markforged ‘Sinter-1’ sintering oven (IA02-34) (Regulation 7.25 non –BACT process)	1	0.03 VOC	Regulation 1.02, Section 1.38
Hot Plate Welding of Plastic Parts (Emission Unit IA03-18)	2	<0.6 PM each unit	Regulation 1.02, Section 1.38
Touch-up Paints and Adhesives not subject to 40 CFR 63, Subpart NNNN (Regulation 7.25 non –BACT process, Emission Unit IA02-18)	10	4.9 VOC combined	Regulation 1.02, Section 1.38
Sanding process to scuff-sand defective painted parts on downdraft table with cartridges (Emission Unit IA03-17)	2	<1.0 PM <sub>10</sub> each	Regulation 1.02, Section 1.38
AERCO 2 MMBtu/hr Natural Gas Fired Hot Water Boiler, model family BMK (AP-1, AP-2, AP-3, and AP-4) (IA) (Emission Unit U81 and U82)	12	0.88 NO <sub>x</sub> each	Regulation 1.02, Appendix A
Washer Immersion Heater Stage 1 Maxon 8” Tube-O-Therm rated at	1	2.41 NO <sub>x</sub>	Regulation 1.02, Appendix A

<b>Equipment <sup>10</sup></b>	<b>Qty.</b>	<b>PTE (ton/yr)</b>	<b>Regulation Basis</b>
5.3 MMBtu/hr (IA) (Emission Unit U81 and U82)			
Washer Immersion Heater Stage 2 Maxon 6" Tube-O-Therm rated at 3.0 MMBtu/hr (IA) (Emission Unit U81 and U82)	1	1.33 NOx	Regulation 1.02, Appendix A
Wash System for Stainless Steel Washer and Dryer Baskets that consists of a heated bath that has a natural gas fired burner for heating. The Immersion Heater is an Eclipse ImmersoPak IP-010, 3.2 MMBtu/hr (burner is IA) (Emission Unit U81 and U82)	1	1.34 NOx	Regulation 1.02, Appendix A
EP AP3 Comms - AP3 Communications Center Natural Gas Fired Emergency Generator Engine: Cummins model GGLA 198 HP (Emission Unit U111)	1	1.535 NOx	Regulation 1.02, Section 1.38
EP AP5 - AP5 Emergency Diesel-Fired Generator Engine: Caterpillar model D330 150 HP (Emission Unit U111)	1	1.163 NOx	Regulation 1.02, Section 1.38
AP23a - Mitsubishi S12A2-Y2PTAW-2 Emergency Generator Engine 900 kW (1207 HP) (Emission U112)	1	4.921 NOx	Regulation 1.02, Section 1.38
AP23b - Mitsubishi S12A2-Y2PTAW-2 Emergency Generator Engine 900 kW (1207 HP) (Emission Unit U112)	1	4.921 NOx	Regulation 1.02, Section 1.38
EP IWT - Backup Emergency Diesel-Fired Generator Engine (IWT Generator): John Deere model 4024HF285B 80 HP (Emission Unit U112)	1	0.620 NOx	Regulation 1.02, Section 1.38
Solvent Metal Cleaning Equipment - cold solvent parts cleaners are equipped with secondary reservoirs (Regulation 6.18) (Emission Unit Solvent Metal Cleaning Equipment)	30	0.1 VOC each	Regulation 1.02, Appendix A
IA01-1 AP3 Nylon Heater rated at 0.9 MMBtu/hr (Emission Unit IA01)	1	0.56 NOx	Regulation 1.02, Appendix A

<b>Equipment <sup>10</sup></b>	<b>Qty.</b>	<b>PTE (ton/yr)</b>	<b>Regulation Basis</b>
IA01-2 Eclipse ImmersoPak IP008 heat rated at 2.05 MMBtu/hr (Emission Unit U81 & U82)	2	0.894 NOx each	Regulation 1.02, Appendix A
IA01-16 Eclipse ImmersoPak IP008 heat rated at 2.05 MMBtu/hr (Emission Unit U81 & U82)	1	0.894 NOx	Regulation 1.02, Appendix A
Custom Pretreat Washer for AP1 Powder Paint System (Emission Unit U01) Subject to Regulation 7.59	1	3.6 VOC	Regulation 1.02, Section 1.38
Four (4) Lubricant for Door Panel Presses for AP2 (Emission Unit U104- U107)	4	<3.0 VOC each	Regulation 1.02, Section 1.38
Central Vacuum System for AP1 (Emission Unit IA03-19)	1	0.3 PM	Regulation 1.02, Section 1.38
Solvent-based Ultrasonic Cleaner AP5 (Regulation 7.25 non –BACT process, Emission Unit IA02-23)	1	1.6 VOC	Regulation 1.02, Section 1.38
Stainless Steel Dish Door Wipe, (Regulation 7.25 non-BACT process, Emission Unit U530)	1	1.72 VOC	Regulation 1.02, section 1.38
Tri-Flow (product series TF210010) lubricant for Die Maintenance (Regulation 7.25 non –BACT process, IA02-25)	1	0.49 VOC	Regulation 1.02, section 1.38
Bumper repair using Loctite Prism 401 adhesive or similar material, Lines 7, 8, and 9 <sup>16</sup> (Regulation 7.25 non –BACT process, IA02-26)	3	0.07 VOC total	Regulation 1.02, section 1.38
AP5 Fresh Food Door-in-Door Foaming (Regulation 7.25 non –BACT process, IA02-27)	1	0.01 VOC	Regulation 1.02, section 1.38
AP1 Laundry Stamping: Aida and CMI Presses, Draw-Clean 660 usage (Regulation 7.25 non –BACT process, IA02-28)	2	2.07 VOC total	Regulation 1.02, section 1.38

<sup>16</sup> General Electric Appliances submitted a PTE justifying designation of this operation as an insignificant activity based on emissions from Loctite Prism 401 adhesive. Other similar adhesives may be substituted for the convenience of GEA if total emissions from this source are not increased.

<b>Equipment <sup>10</sup></b>	<b>Qty.</b>	<b>PTE (ton/yr)</b>	<b>Regulation Basis</b>
AP4 Injection molding – Mold release, cleaner, and preventatives usage (aerosol spray cans) (Regulation 7.25 non –BACT process, IA02-29)	1	0.50 VOC 0.34 HAP	Regulation 1.02, section 1.38
AP10 Contractor Package regluing (Regulation 7.25 non –BACT process, IA02-30)	1	0.03 VOC	Regulation 1.02, section 1.38
AP1, lines 7 and 8 Capacitor lubricant for ergonomics (Regulation 7.25 non –BACT process, IA02-31)	3	0.05 VOC Total	Regulation 1.02, section 1.38
Central Vacuum System for AP2 (Emission Unit IA03-20)	1	0.30 PM <sub>10</sub>	Regulation 1.02, section 1.38
Quality Scan spray booths for dimensional verification (Regulation 7.25 non –BACT process, IA02-35)	4	5.6 VOC (total)	Regulation 1.02, section 1.38

1. Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements pursuant to Regulation 2.16, section 3.5.4.1.4.
2. Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements as required by Regulation 2.16, section 4.1.9.4.
3. The Insignificant Activities Table is correct as of the date the permit was proposed for review by U.S. EPA, Region 4.
4. Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.
5. The owner or operator shall submit an updated list of insignificant activities that occurred during the preceding year pursuant to Regulation 2.16, section 4.3.5.3.6.
6. The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions, or use Potential to Emit (PTE) to be reported on the annual emission inventory.
7. The District has determined pursuant to Regulation 2.16, section 4.1.9.4 that no monitoring, record keeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) Basis of Regulation Applicability for IA units

8. The District does not have adequate information to determine emissions from the following equipment: There are currently no compliance monitoring and recordkeeping requirements, and no reporting requirements, for any of these below equipment items, which are considered “non-regulated equipment” for air permitting purposes:

Equipment	Quantity
Emergency Relief Vents – non- regulated process	>10
Non-Stationary (Mobile) IC Engine –non-regulated process	1
Vent systems for cafeterias	>10
Use of peanut, sunflower, canola, or cottonseed oils	4

**a. Emission Unit IA01: IA Indirect-fired Combustion Sources < 1 MMBtu/hr**

EP	Description	Applicable Regulations
IA01-1	AP3 Nylon Heater rated at 0.9 MMBtu/hr	STAR, 40 CFR 63, Subpart DDDD
IA01-6	(>50) Indirect-fired Hot Water heaters located throughout the plant all less than 1.0 MMBtu/hr	STAR
IA01-7	Three 0.1 MMBtu/hr: Sterling QVEF heater (Indirect Fired Space/comfort heaters)	
IA01-8	Seven 0.2 MMBtu/hr: Sterling QVEF heater (Indirect Fired Space/comfort heaters)	
IA01-9	Fifteen 0.25 MMBtu/hr: Sterling QVEF heater (Indirect Fired Space/comfort heaters)	
IA01-10	Nine 0.3 MMBtu/hr: Sterling QVEF heater (Indirect Fired Space/comfort heaters)	
IA01-11	Eleven 0.4 MMBtu/hr: Sterling QVEF heater (Indirect Fired Space/comfort heaters)	
IA01-12	Three 0.03 MMBtu/hr: Qmark MUH-10-41 (10 kW) (Indirect Fired Space/comfort heaters)	
IA01-13	Five 0.125 MMBtu/hr heater (Indirect Fired Space/comfort heaters)	
IA01-14	Thirteen 0.3 MMBtu/hr heater (Indirect Fired Space/comfort heaters)	

**i. Standards**

(1) HAP

- (a) The federal MACT sets forth certain work-practice and initial-compliance standards for industrial boilers that are located at a major source of HAPs.

- (2) NOx
  - (a) See Plantwide section.
- (3) TAC
  - (a) See Plantwide section.

**ii. Monitoring and Recordkeeping**

- (1) HAP
  - (a) The federal MACT specifies records that must be kept and notifications that must be submitted and the required filing deadlines.

**iii. Reporting**

- (1) HAP
  - (a) The federal MACT specifies notifications and compliance reports that must be submitted and the required filing deadlines.

**b. Emission Unit IA02: IA Regulation 7.25 Process Equipment**

EP	Description	Applicable Regulations
IA02-1	Cleaner and Lubricant Use for new Bottom Mount Assembly Operation (Regulation 7.25 non –BACT process)	STAR, 7.25
IA02-5	Stainless Dishwasher Steel Tub Assembly (Regulation 7.25 non –BACT process)	
IA02-6	Dishwasher Door Mastic Application (Regulation 7.25 non –BACT process)	
IA02-7	Tub Top and Bottom Mastic Application (Regulation 7.25 non –BACT process)	
IA02-8	Tub Wrap Mastic Application (Regulation 7.25 non –BACT process)	
IA02-9	AP1 RTV Silicone Station (Regulation 7.25 non –BACT process)	
IA02-10	Two Pad Printing (Regulation 7.25 non –BACT process)	
IA02-12	Small Freezer Door Foaming Operation (Regulation 7.25 non –BACT process)	
IA02-13	Aerosol spray adhesive usage in the warehouse for replacing loose labels on boxes prior to shipping (Regulation 7.25 non –BACT process)	
IA02-15	AP2 Metallic PP Pretreatment Washing Tunnel (Regulation 7.25 non –BACT process)	
IA02-16	MEK Quality Test Metallic Powder Painted Parts (AP2) (Regulation 7.25 non –BACT process)	

EP	Description	Applicable Regulations
IA02-17	Three Ultrasonic Cleaner for Powder Paint Tools (Regulation 7.25 non –BACT process)	
IA02-18	Ten Touch-up Paints and Adhesives not subject to 40 CFR 63, Subpart NNNN (Regulation 7.25 non –BACT process)	
IA02-19	HA Drum Fabrication Lubricant (Regulation 7.25 non –BACT process)	
IA02-20	Swedging/Cutting Lubricant application (Regulation 7.25 non –BACT process)	
IA02-21	Evaporator De-Fin Lubricant application (Regulation 7.25 non –BACT process)	
IA02-22	Waste water Treatment plant consisting of two clarifiers, two filter presses, chemicals, and a skimmer (IA02) (Regulation 7.25 non-BACT process)	
IA02-23	Solvent-based Ultrasonic Cleaner AP5	
IA02-24	Soil or groundwater remediation System	
IA02-25	Tri-Flow lubricant for Die Maintenance (Regulation 7.25 non –BACT process)	
IA02-26	Bumper repair using Loctite Prism 401 adhesive or similar material, Lines 7, 8, 9 <sup>17</sup> (Regulation 7.25 non –BACT process)	
IA02-27	AP5 Fresh Food Door-in-Door Foaming (Regulation 7.25 non –BACT process)	
IA02-28	AP1 Laundry Stamping: Aida and CMI Presses, Draw-Clean 660 usage (Regulation 7.25 non –BACT process)	
IA02-29	AP4 Injection molding – Mold release, cleaner, and preventatives usage (aerosol spray cans) (Regulation 7.25 non –BACT process)	
IA02-30	AP10 Contractor Package regluing (Regulation 7.25 non –BACT process)	
IA02-31	AP1, lines 7 and 8 Capacitor lubricant for ergonomics (Regulation 7.25 non –BACT process)	
IA02-32	Markforged ‘Metal X’ 3D Printer	
IA02-33	Markforged ‘Wash-1’ washer/debinder	
IA02-34	Markforged ‘Sinter-1’ sintering oven	
IA02-35	Four Quality Scan spray booths for dimensional verification	

<sup>17</sup> General Electric Appliances submitted a PTE justifying designation of this operation as an insignificant activity based on emissions from Loctite Prism 401 adhesive. Other similar adhesives may be substituted for the convenience of GEA if total emissions from this source are not increased.

**i. Standards**

- (1) TAC
  - (a) See Plantwide section.
- (2) VOC
  - (a) VOC emissions from Regulation-7.25 sources that do not have an approved BACT analysis must not exceed 5 tons per year, plantwide.
  - (b) See Plantwide section

**c. Emission Unit IA03: IA Regulation 7.08 Process Equipment**

EP	Description	Applicable Regulations
IA03-1	Sixty Brazing, soldering, or welding equipment (Regulation 7.08)	STAR, 7.08
IA03-2	Pedestal Plastic Re grinder (Regulation 7.08)	
IA03-5	Brazing, Soldering or Welding on Nylon Wire Rack Line (Regulation 7.08)	
IA03-6	Nylon powder transfer/clean-up activities (Regulation 7.08)	
IA03-7	Pellet Grinder and process cyclone make Granutec G3030 (Regulation 7.08)	
IA03-8	Grinding operation for the AP3 Ash White Tub Re-grinder (Regulation 7.08)	
IA03-9	Ten Small Re grinders in AP4 used to recycle plastic (Regulation 7.08)	
IA03-10	Small Re grinders in AP5 used to recycle plastic (Regulation 7.08)	
IA03-11	Unloading, Conveyance and Storage of Plastic Pellets in AP1 (Regulation 7.08)	
IA03-12	Unloading, Conveyance and Storage of Plastic Pellets in AP3 (Regulation 7.08)	
IA03-13	Unloading, Conveyance and Storage of Plastic Pellets in AP4 (Regulation 7.08)	
IA03-14	Unloading, Conveyance and Storage of Plastic Pellets in AP5 (Regulation 7.08)	
IA03-15	Thirteen Cooling towers: (Regulation 7.08) AP-1 Front Tower AP-2 Rear Tower AP-2 Front Tower AP-2 Outlying Tower AP-3 North Tower AP-4 South Tower AP-4 Front Tower AP-4 Plastics Tower	

EP	Description	Applicable Regulations
	AP-5 Plastics Tower AP-5 Front Tower AP-20 Tower AP-32 Tower AP-33 Tower	
IA03-17	Two Sanding process to scuff-sand defective painted parts on downdraft table with cartridges (Regulation 7.08)	
IA03-18	Two Hot Plate Welding of Plastic Parts (Regulation 7.08)	
IA03-19	Central Vacuum System for AP1	
IA03-20	Central Vacuum System for AP2	

**i. Standards**

- (1) Opacity
  - (a) An opacity limit of 20% is set forth in Regulation 7.08.
- (2) PM
  - (a) Regulation 7.08 specifies the maximum PM emission rate for each new process, based on the process rated throughput.
- (3) TAC
  - (a) See Plantwide section.

**d. Emission Unit IA04 (U89): VOC Storage Tanks**

EP	Description	Applicable Regulations
IA Tank 1	Generator Tank; 2500 gallons	STAR
IA Tank 2	Generator Tank; 10,000 gallons	
IA Tank 3	Generator Tank; 10,000 gallons	
IA Tank 4	Generator Tank; 2859 gallons	
IA Tank 5	Generator Tank; 2859 gallons	
IA Tank 6	Underground Storage Tank (UST); 6000 gallons	
IA Tank 7	Seven Hydraulic Oil Storage Tanks: 1 - 6000 gallon, 1 - 2000 gallon (used oil), 2 - 15,000 gallon, 1 - 25,000 gallon (used oil); 2 - 10,000 gallon (1-used oil)	

EP	Description	Applicable Regulations
IA Tank 8	Twelve Compressor Oil Tanks: 3 - 10,000 gallon; 9 - 550 gallon	
IA Tank 9	Three Lubricating Oil Tanks, each 1000 gallons	
IA Tank 10	Three Used Oil Tanks: 1 - 550 gallon, 1 - 1000 gallon, 1 - 2000 gallon	

**i. Standards**

(1) TAC

(a) See Plantwide section.

**e. Emission Unit IA05 (U89): Combustion sources not accounted for in any other emission unit**

EP	Description	Applicable Regulations
IA05-1	2.0 MMBtu/hr AP1 Make Up Air Heater, Maxon 2.0 APX Line Burner (Direct fired unit)	STAR, 2.05
IA05-2	Three 0.757 MMBtu/hr: Cambridge S800 direct fired heat exchangers (Space/comfort heaters)	
IA05-3	Two 0.400 MMBtu/hr: Cambridge S400 direct fired heat exchangers (Space/comfort heaters)	
IA05-4	Six 1.2 MMBtu/hr: Cambridge S1200 direct fired heat exchanger (Space/comfort heaters)	
IA05-5	Twelve 1.499 MMBtu/hr: Cambridge S1600 direct fired heat exchanger (Space/comfort heaters)	
IA05-6	Three 2.2 MMBtu/hr: Cambridge S2200 direct fired heat exchanger (Space/comfort heaters)	
IA05-7	Forty-five 3.107 MMBtu/hr: Cambridge S3200 direct fired heat exchanger (Space/comfort heaters)	
IA05-8	Five 5.887 MMBtu/hr: Cambridge M136 direct fired heat exchanger (Space/comfort heaters)	
IA05-9	One 7 MMBtu/hr natural gas dryoff oven (Direct fired Unit)	
IA05-10	One HA Gas Dryer Test Loop	
IA05-11	Two Abrade Systems Direct-fired natural gas burners at 140,000 Btu/hr each, AP3	

**i. Standards**

- (1) NO<sub>x</sub>
  - (a) See Plantwide section.
- (2) TAC
  - (a) See Plantwide section.

**III Other Requirements**

**1. Temporary Sources:**

The source did not request to operate any temporary facilities.

**2. Short Term Activities:**

The source did not report any short term activities.

**3. Emissions Trading:**

The source is not subject to emission trading.

**4. Alternative Operating Scenarios:**

The source has received approval, on July 23, 2019, for the option to use colored basecoat powders in the U530-EP5 Clear-Coat Electrostatic Powder booth..

**5. Compliance History:**

There are no records of any violations of the terms of the present or prior construction or operating permits.

**6. Calculation Methodology or Other Approved Method:**

**Table 1 - Unit U01: Powder Paint System (AP1)**

Equipment	Emission Point	Emission Calculation														
Powder Coating Booth	EP 100A	PM: $\left( MT, \frac{lb}{hr} \right) (1 - 60\% TE)(1 - 90\% RE)(1 - 70\% FOF)(1 - 70\% FOF)(1 - 90\% FE)$														
Bake Oven	EP 100B1	VOC from powder paint cure: $\left( MT, \frac{lb}{hr} \right) (Material\ VOC\ \% \text{ at cure temperature}) \times 0.90$ HAP from powder paint cure: $\left( MT, \frac{lb}{hr} \right) (Material\ HAP\ \% \text{ at cure temperature}) \times 0.90$ Natural Gas Combustion: Emission (lb/yr) = Million cubic feet × EF Where EF = <table border="1" data-bbox="800 940 1193 1239"> <thead> <tr> <th>Pollutant</th> <th>EF (lb/MMft<sup>3</sup>)</th> </tr> </thead> <tbody> <tr> <td>NO<sub>x</sub></td> <td>50</td> </tr> <tr> <td>CO</td> <td>84</td> </tr> <tr> <td>PM = PM<sub>10</sub></td> <td>0.52</td> </tr> <tr> <td>SO<sub>2</sub></td> <td>0.6</td> </tr> <tr> <td>VOC</td> <td>5.5</td> </tr> <tr> <td>Total HAP</td> <td>1.89</td> </tr> </tbody> </table>	Pollutant	EF (lb/MMft <sup>3</sup> )	NO <sub>x</sub>	50	CO	84	PM = PM <sub>10</sub>	0.52	SO <sub>2</sub>	0.6	VOC	5.5	Total HAP	1.89
Pollutant	EF (lb/MMft <sup>3</sup> )															
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PM = PM <sub>10</sub>	0.52															
SO <sub>2</sub>	0.6															
VOC	5.5															
Total HAP	1.89															
Sintering Oven	EP 100D	VOC from powder paint sintering: $\left( MT, \frac{lb}{hr} \right) (Material\ VOC\ \% \text{ at cure temperature}) \times 0.10$ HAP from powder paint sintering: $\left( MT, \frac{lb}{hr} \right) (Material\ HAP\ \% \text{ at cure temperature}) \times 0.10$														

**Table 2 - Unit U30: Powder Paint System (AP2)**

Equipment	Emission Point	Emission Calculation
Paint Curing Oven #1	EP 213	VOC: $\left( MT, \frac{lb}{hr} \right) (Material\ VOC\ \% \text{ at cure temperature})$
Paint Curing Oven #2	EP 214	HAP: $\left( MT, \frac{lb}{hr} \right) (Material\ HAP\ \% \text{ at cure temperature})$ See AP-42 Chapter 1.4: External Combustion Sources – Natural Gas Combustion
Double tunnel phosphator pretreat washer	EP-214B	VOC: $(MT, lb/hr)(Material\ VOC\ \%)$ HAP: $(MT, lb/hr)(Material\ HAP\ \%)$
Powder Coating Booth	EP 214C	PM: $\left( MT, \frac{lb}{hr} \right) (1 - 60\% TE) (1 - 90\% RE)(1 - 70\% FOF)(1 - 70\% FOF)(1 - 90\% FE)$

**Table 3 - Unit U40: Rack Prime Dip (AP3)**

Equipment	Emission Point	Emission Calculation
Prime Dip Tank	EP 304	VOC: $(MT, lb/hr)(Material\ VOC\ \%)$ HAP: $(MT, lb/hr)(Material\ HAP\ \%)$
Oven	EP 305	See AP-42 Chapter 1.4: External Combustion Sources – Natural Gas Combustion
Prime Drip Chamber	EP 306	VOC: $(MT, lb/hr)(Material\ VOC\ \%)$ HAP: $(MT, lb/hr)(Material\ HAP\ \%)$

**Table 4 - Unit U42: PVC Fluidized Bed (AP3)**

Equipment	Emission Point	Emission Calculation
Fluid Bed	EP 309	<p style="text-align: center;">PM:</p> $MT \times \left( \frac{0.00047 \text{ lb}_{PM}}{\text{lb}_{media}} \right)$ <p style="text-align: center;">OR</p> <p style="text-align: center;"><math>EF \times t</math></p> <p>EF is the emission factor based on an August 2010 stack test. The value is 0.08 lb/hr through 2020. A new emission rate test must be conducted prior to December 2020 to continue using this methodology.</p> <p><i>t</i> is the time that the fluidized bed operates.</p> <p>If a new stack test is not conducted prior to December 2020, PM emissions from this point must be calculated using:</p> $\left( MT, \frac{\text{lb}}{\text{hr}} \right) (1 - 60\% TE)(1 - 70\% FOF)$ <p style="text-align: center;">VOC:</p> $\left( MT, \frac{\text{lb}}{\text{hr}} \right) (\text{Material VOC } \% \text{ at cure temperature})$ <p style="text-align: center;">HAP:</p> $\left( MT, \frac{\text{lb}}{\text{hr}} \right) (\text{Material HAP } \% \text{ at cure temperature})$
Oven	EP 310	<p style="text-align: center;">See AP-42 Chapter 1.4: External Combustion Sources – Natural Gas Combustion</p>

**Table 5 - Unit U81 and U82: Gas-fired Boilers**

Equipment	Emission Point	Emission Calculation
Boiler #8	EP 909	See AP-42 Chapter 1.4: External Combustion Sources – Natural Gas Combustion
AERCO boiler	325A	
AERCO boiler	326A	
AERCO boiler	327	
Immersion Heater	AP1HA1	
AP-1 AERCO Boiler	AP1BM1	
AP-1 AERCO Boiler	AP1BM2	
AP-1 AERCO Boiler	AP1BM3	
AP-2 AERCO Boiler	AP2BM1	
AP-2 AERCO Boiler	AP2BM2	
AP-2 AERCO Boiler	AP2BM3	
AP-3 AERCO Boiler	AP3BM1	
AP-3 AERCO Boiler	AP3BM2	
AP-3 AERCO Boiler	AP3BM3	
Immersion Heater Stage 1	EP-1A	
Immersion Heater Stage 2	EP-1B	
Two (2) AP-1 SS Tub Immersion Heaters	IA01-2	
ImmersoPak heater	IA01-3	
AP-1 steel part cleaning Maxon Tube oven	IA01-5	
Eclipse ImmersoPak IP008 heater	IA01-16	

**Table 6 - Unit U87: Gasoline Storage Tank and Dispensing**

Equipment	Emission Point	Emission Calculation
Gasoline Storage Tank and Dispensing	Tank No. 900	See AP-42 Chapter 5.2: Petroleum Industry – Transportation and Marketing of Petroleum Liquids

**Table 7 - Unit U104 – U107: Metal Parts Fabrication (AP2)**

Equipment	Emission Point	Emission Calculation
Lubricant for Door Panel Press #25001	EP 224	VOC:  $(MT, gal/hr)(Density, lb/gal)(Material VOC \%)$
Lubricant for Door Panel Press #25002	EP 225	
Lubricant for Door Panel Press #25378	EP 226	
Lubricant for Door Panel Press #58737	EP 227	

**Table 8 - Unit U109: Abrasive Blasting (AP2) (Hanger Paint Stripping Process)**

Equipment	Emission Point	Emission Calculation
Abrasive blasting unit by Blastec using steel shot rated @ 320,000 lbs blast media per hour	EP 239	<p style="text-align: center;">Controlled PM:</p> $PM_{controlled} = EF_c \times (hours)(1 - \eta_1)(1 - \eta_2)(1 - FOF)$ <p>Where</p> $EF_c = \left[ \frac{\text{total waste collected/hours of operation}}{\eta_1} \right] \text{ lb/hr}$ <p> <math>\eta_1 = 98\%</math>  <math>\eta_2 = 90\%</math>  <math>FOF = 70\%</math> </p> <p style="text-align: center;">Uncontrolled PM:</p> $PM_{uncontrolled} = EF_u \times (thruput) \times (hours) \times (1 - \eta_1)(1 - \eta_2)(1 - FOF)$ <p>Where</p> $EF_u = 2.7 \text{ lb}_{PM}/(1000 \text{ lb}_{abrasive})$ $thruput = 320,000 \text{ lb/hr}$ <p style="text-align: center;">HAP</p> <p>Calculated using the same formulae as for PM, except</p> $EF_c = 40 \times (\% \text{ manganese}) \text{ lb/hr}$ <p>and</p> $EF_u = \{ [2.7 \times (\% \text{ manganese})] \text{ lb}_{Mn} / (1000 \text{ lb}_{abrasive}) \}$

**Table 9 - Unit U111: Emergency Generators – RICE MACT**

Equipment	Emission Point	Emission Calculation
AP1 Emergency Engine	EP U111a	<p style="text-align: center;">See AP-42 Chapter 3: Stationary Internal Combustion Sources                      Section 3.2: Natural Gas-fired Reciprocating Engines                      Section 3.3: Gasoline and Diesel Industrial Engines                      Manufacturer data should be used instead of AP-42 when applicable</p>
AP3 Communications Emergency Engine	EP AP3 Comms (IA)	
AP5 Emergency Engine	EP AP5 (IA)	

**Table 10 - Unit U112: Emergency Generators – RICE MACT and NSPS CI ICE**

Equipment	Emission Point	Emission Calculation
Kohler Emergency Engine	EP DC#1	See AP-42 Chapter 3: Stationary Internal Combustion Sources Section 3.2: Natural Gas-fired Reciprocating Engines Section 3.3: Gasoline and Diesel Industrial Engines Manufacturer data should be used instead of AP-42 when applicable
Kohler Emergency Engine	EP DC#2	
Backup Emergency Engine	EP IWT (IA)	
Mitsubishi Emergency Engine	AP23a (IA)	
Mitsubishi Emergency Engine	AP23b (IA)	

**Table 11 - Unit U310: Nylon Rack Fluidized Bed Coating (AP3)**

Equipment	Emission Point	Emission Calculation
Preheat Oven	AP3-310	See AP-42 Chapter 1.4: External Combustion Sources – Natural Gas Combustion
Fluidized Bed	AP3-310a	<p>PM:</p> $MT \times \left( \frac{0.00047 \text{ lb}_{PM}}{\text{lb}_{media}} \right)$ <p>OR</p> $EF \times t$ <p>EF is the emission factor based on an August 2010 stack test. The value is 0.08 lb/hr through 2020. A new emission rate test must be conducted prior to December 2020 to continue using this methodology.</p> <p><i>t</i> is the time that the fluidized bed operates.</p> <p>If a new stack test is not conducted prior to December 2020, PM emissions from this point must be calculated using:</p> $(MT, \text{lb/hr})(1 - 60\% TE)(1 - 70\% FOF)$ <p>VOC:</p> $\left( MT, \frac{\text{lb}}{\text{hr}} \right) (\text{Material VOC \% at cure temperature})$ <p>HAP:</p> $\left( MT, \frac{\text{lb}}{\text{hr}} \right) (\text{Material HAP \% at cure temperature})$
Post-heat Oven	AP3-310b	See AP-42 Chapter 1.4: External Combustion Sources – Natural Gas Combustion

**Table 12 - Unit U311: Adhesive for End Caps on Dishwasher Racks (AP3)**

Equipment	Emission Point	Emission Calculation
Rack End Cap Adhesive	AP3-311	VOC: $(MT, gal/hr)(Density, lb/gal)(Material VOC \%)$ HAP: $(MT, gal/hr)(Density, lb/gal)(Material HAP \%)$

**Table 13 - Table 15 Unit U500: Touch-Up Paint, Adhesives and Lubricating the Spine Fin Evaporator Bottom Mount Freezer Refrigerator Line (AP5)**

Equipment	Emission Point	Emission Calculation
Touch-Up Paint, Adhesives, and Lubricant	EP-500a, EP-500b, & EP-500c	VOC: $(MT, gal/hr)(Density, lb/gal)(Material VOC \%)$ HAP: $(MT, gal/hr)(Density, lb/gal)(Material HAP \%)$

**Table 14 - Unit U510: Bottom Mount Freezer Refrigerator Line (AP5)**

Equipment	Emission Point	Emission Calculation																														
Insulating Foam Line	EP-510	VOC: $\sum_{i=1}^n \frac{MT_i VOC_i EF_i}{2000} tons/year$ <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th><i>i</i></th> <th>Foam Component</th> <th></th> <th>VOC fraction</th> <th>EF (lb<sub>voc</sub>/lb<sub>material</sub>)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Cyclo-pentane</td> <td>Part B</td> <td>0.1212</td> <td>0.014</td> </tr> <tr> <td>2</td> <td>Amine catalyst</td> <td>Part B</td> <td>0.023</td> <td>0.010</td> </tr> <tr> <td>3</td> <td>silicone</td> <td>Part B</td> <td>0.0124</td> <td>0.078</td> </tr> <tr> <td>5</td> <td>MDI (HAP)</td> <td>Part A</td> <td>1</td> <td><math>1.80 \times 10^{-7}</math></td> </tr> <tr> <td>6</td> <td>pMDI (HAP)</td> <td>Part A</td> <td>1</td> <td><math>2.2 \times 10^{-7}</math></td> </tr> </tbody> </table> <p>The VOC fraction for each of the components in Part B is approximate and represents the best estimate of the typical value for each component.</p>	<i>i</i>	Foam Component		VOC fraction	EF (lb <sub>voc</sub> /lb <sub>material</sub> )	1	Cyclo-pentane	Part B	0.1212	0.014	2	Amine catalyst	Part B	0.023	0.010	3	silicone	Part B	0.0124	0.078	5	MDI (HAP)	Part A	1	$1.80 \times 10^{-7}$	6	pMDI (HAP)	Part A	1	$2.2 \times 10^{-7}$
		<i>i</i>	Foam Component		VOC fraction	EF (lb <sub>voc</sub> /lb <sub>material</sub> )																										
1	Cyclo-pentane	Part B	0.1212	0.014																												
2	Amine catalyst	Part B	0.023	0.010																												
3	silicone	Part B	0.0124	0.078																												
5	MDI (HAP)	Part A	1	$1.80 \times 10^{-7}$																												
6	pMDI (HAP)	Part A	1	$2.2 \times 10^{-7}$																												
		HAP/TAC: Calculated in the same way as VOC, using only the HAPs in the emission factor table																														

Equipment	Emission Point	Emission Calculation
Main Extruder Line	EP-511	VOC: ( $MT, lb/hr$ )(Emission Factor 0.000231 ( $lb Voc$ ) /( $lb ABS Extruded$ )) HAP/TAC: $\left( MT, \frac{lb}{hr} \right)$ (Emission Factor 0.0001871 ( $lb HAP$ )/( $lb ABS Extruded$ ))
Small Extruder Line	EP-512	VOC: ( $MT, lb/hr$ )(Emission Factor 0.000231 ( $lb Voc$ )/( $lb ABS Extruded$ )) HAP/TAC: $\left( MT, \frac{lb}{hr} \right)$ (Emission Factor 0.0001871 ( $lb HAP$ )/( $lb ABS Extruded$ ))

**Table 15 - Unit U530: AP2 Metallic Powder Paint (TV-14-1012-C)**

Equipment	Emission Point	Emission Calculation
Dry Off Oven (Infrared)	EP-2A	See AP-42 Chapter 1.4: External Combustion Sources – Natural Gas Combustion
Basecoat Powder Paint Booth	EP-3	PM: $\left( MT, \frac{lb}{hr} \right) (1 - 60\% TE)(1 - 90\% RE)(1 - 70\% FOF)(1 - 70\% FOF)(1 - 90\% FE)$ HAP/TAC: $\left( MT, \frac{lb}{hr} \right) (1 - 60\% TE)(Material HAP \%)(1 - 90\% RE)(1 - 70\% FOF)(1 - 70\% FOF)(1 - 90\% FE)$
Gel Oven (Infrared)	EP-4A	See AP-42 Chapter 1.4: External Combustion Sources – Natural Gas Combustion
Basecoat Gel Oven (Infrared)	EP-4B	
Clear Coat Powder Paint Booth	EP-5	PM: $\left( MT, \frac{lb}{hr} \right) (1 - 50\% TE)(1 - 90\% RE)(1 - 70\% FOF)(1 - 70\% FOF)(1 - 90\% FE)$
Gel Oven (Infrared)	EP-6A	See AP-42 Chapter 1.4: External Combustion Sources – Natural Gas Combustion
Clear Coat Gel Oven (Infrared)	EP-6B	
Cure Oven	EP-7A	VOC: $\left( MT, \frac{lb}{hr} \right) (Material VOC \% at cure temperature)$
Cure Oven	EP-7B	

Equipment	Emission Point	Emission Calculation
Stainless Steel Dishwasher Door Wipe	EP-IA8	VOC: $(\#wipes) \left(\frac{1 \text{ ml}}{\text{wipe}}\right) \left(\frac{6.56 \text{ lb}}{\text{gal}}\right) \left(\frac{0.00026 \text{ gal}}{\text{ml}}\right)$

**Table 16 - Unit 540: Dryer Drum Lubrication**

Equipment	Emission Point	Emission Calculation
Drawing compound applicator	540-1 and 540-2	Drum production rate: $(\text{number of drums per period}) / (\text{hours of operation in period})$ VOC emission rate (lb/hr): $(\text{oil used, gallons}) \times (\text{oil lb/gal}) \times (\text{oil \% VOC}) / (\text{hours of operation})$

**Table 17 - Solvent Metal Cleaning**

Equipment	Emission Point	Emission Calculation
Parts cleaners are equipped with secondary reservoirs	Solvent Metal Cleaning Equipment (Secondary Reservoirs)	VOC:
Parts cleaners are equipped with no secondary reservoirs	Solvent Metal Cleaning Equipment (No Secondary Reservoirs)	$(MT, \text{lb/hr})(\text{Material VOC \%})$

**Table 18 - Miscellaneous**

Equipment	Emission Point	Emission Calculation
AP1 Regrinder	32675-11	PM: $(MT, \text{lb/hr})(0.0491\% \text{ PM})$
Hosokawa Grinder	37206-13	PM: $\left(MT, \frac{\text{lb}}{\text{hr}}\right) (0.0491\% \text{ PM})(1 - 95\% \text{ FE})$
AP5 Misc. Chemical	176-93	VOC:

Equipment	Emission Point	Emission Calculation
AP3 Misc. Chemical	178-93	$(MT, gal/hr)(Density, lb/gal)(Material VOC \%)$
AP1 Misc. Chemical	483-92	
Sealant in AP10	479-94	
Maintenance Paint Booth	35-04	VOC: $(MT, gal/hr)(Density, lb/gal)(Material VOC \%)$ PM: $\left(MT, \frac{lb}{hr}\right) (1 - 65\% TE)$
Paint Touch-up in AP1	583-92	VOC: $(MT, gal/hr)(Density, lb/gal)(Material VOC \%)$
Rack repair station	471-94	
Lubricant in AP1	585-91	
Touch-up Paint in AP1	U149	
Touch-up Paint in AP3	U150	
Plastic compression or injection molding processes	Injection Molding	VOC for polypropylene: $\left(MT, \frac{lb}{month}\right) (Emission Factor(1.04 \times 10^{-4} lb/lb))^{18}$ VOC for all other plastics: $\left(MT, \frac{lb}{month}\right) (Emission Factor(3.07 \times 10^{-5} lb/lb))^{19}$ PM: $\left(MT, \frac{lb}{month}\right) (Emission Factor(3.03 \times 10^{-5} lb/lb))^{20}$

**Table 19 - Unit IA01: Insignificant Activity Indirect-fired Combustion Sources <1 MMBtu/hr**

Equipment	Emission Point	Emission Calculation
AP3 Nylon Heater	IA01-1	See AP-42 Chapter 1.4: External Combustion Sources – Natural Gas Combustion
>50 Indirect-fired Hot Water heaters located throughout the plant all less than 1.0 MMBtu/hr	1A01-6	

<sup>18</sup> Air & Waste Management Association (A&WMA) 1999 paper on *Development of Emission Factors for Polypropylene Processing*

<sup>19</sup> Air & Waste Management Association (A&WMA) 1996 paper on *Development of Emission Factors for Polyethylene Processing*

<sup>20</sup> Air & Waste Management Association (A&WMA) 1999 paper on *Development of Emission Factors for Polypropylene Processing*

Equipment	Emission Point	Emission Calculation
Three 0.1 MMBtu/hr: Sterling QVEF heater (Indirect Fired Space/comfort heaters)	IA01-7	
Seven 0.2 MMBtu/hr: Sterling QVEF heater (Indirect Fired Space/comfort heaters)	IA01-8	
Fifteen 0.25 MMBtu/hr: Sterling QVEF heater (Indirect Fired Space/comfort heaters)	IA01-9	
Nine 0.3 MMBtu/hr: Sterling QVEF heater (Indirect Fired Space/comfort heaters)	IA01-10	
Eleven 0.4 MMBtu/hr: Sterling QVEF heater (Indirect Fired Space/comfort heaters)	IA01-11	
Three 0.03 MMBtu/hr: Qmark MUH-10-41 (10 kW) (Indirect Fired Space/comfort heaters)	IA01-12	
Five 0.125 MMBtu/hr heater (Indirect Fired Space/comfort heaters)	IA01-13	
Thirteen 0.3 MMBtu/hr heater (Indirect Fired Space/comfort heaters)	IA01-14	

**Table 20 - Unit IA02: Insignificant Activity Regulation 7.25 Process Equipment**

Equipment	Emission Point	Emission Calculation
Cleaner and Lubricant Use for Bottom Mount Assembly Operation	IA02-1	<p>VOC:</p> $(MT, gal/hr)(Density, lb/gal)(Material VOC \%)$
Stainless Steel Tub Assembly	IA02-5	
Dishwasher Door Mastic Application	IA02-6	<p>VOC:</p> $(MT, gal/hr)(Density or Weight, lb/gal or lb/unit)(Material VOC \%)$
Tub Top & Bottom Mastic Application	IA02-7	
Tub Wrap Mastic Application	IA02-8	

Equipment	Emission Point	Emission Calculation								
AP1 RTV Silicon Station	IA02-9	<p>VOC:  <math>(MT, gal/hr)(Density, lb/gal)(Material VOC \%)</math></p>								
Two (2) Pad Printing	IA02-10									
Small Freezer Door Foaming Operation	IA02-12	<p>VOC:</p> $\sum_{i=1}^n \frac{MT_i VOC_i EF_i}{2000} tons/year$ <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th><i>i</i></th> <th>Foam Component</th> <th>VOC fraction</th> <th>EF (lbvoc/lbmaterial)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>MDI/pMDI (HAP) Part A</td> <td>1</td> <td><math>3.64 \times 10^{-6}</math></td> </tr> </tbody> </table> <p>HAP/TAC:                      Calculated in the same way as VOC, using only the HAPs in the emission factor table</p>	<i>i</i>	Foam Component	VOC fraction	EF (lbvoc/lbmaterial)	1	MDI/pMDI (HAP) Part A	1	$3.64 \times 10^{-6}$
<i>i</i>	Foam Component	VOC fraction	EF (lbvoc/lbmaterial)							
1	MDI/pMDI (HAP) Part A	1	$3.64 \times 10^{-6}$							
Aerosol spray adhesive usage in warehouse for replacing loose labels on boxes prior to shipping	IA02-13	<p>VOC:  <math>(MT, gal/hr)(Density, lb/gal)(Material VOC \%)</math></p>								
AP2 Metallic PP Pretreatment Washing Tunnel	IA02-15	<p>VOC:  <math>(MT, gal/hr)(Density, lb/gal)(Material VOC \%)</math></p>								
MEK Quality Test Metallic Powder Painted Parts	IA02-16	<p>VOC:  <math>(MT, gal/hr)(Density, lb/gal)(Material VOC \%)</math></p>								
Three (3) Ultrasonic Cleaners for Powder Paint Tools	IA02-17									

Equipment	Emission Point	Emission Calculation
Ten (10) Touch-up Paints and Adhesives not subject to 40 CFR 63 Subpart NNNN	IA02-18	
HA Drum Fabrication Lubricant	IA02-19	
Swedging/Cutting Lubricant Application	IA02-20	
Evaporator De-Fin Lubricant Application	IA02-21	
Waste Water Treatment Plant	IA02-22	Emissions accounted for in the working losses for storage tanks using AP-42 evaporative losses and Raoult's Law for estimation of vapor pressure
Solvent-based Ultrasonic Cleaner for AP5	IA02-23	<p style="text-align: center;">VOC:</p> <p style="text-align: center;"><math>(MT, gal/hr)(Density, lb/gal)(Material VOC \%)</math></p>
Soil or groundwater remediation	IA02-24	<p style="text-align: center;">VOC using the ideal gas law:</p> $\frac{\left[ (Discharge\ Concentration\ (ppm)) \left( Molecular\ Weight\ \left( \frac{g}{mol} \right) \right) \right]}{Molar\ volume\ (24.465)} (flow\ rate)$ <p style="text-align: center;"><math>(\#of\ Operating\ days\ /yr)(conversion\ factor\ (8.99E - 05))</math></p>
Tri-Flow lubricant for die maintenance	IA02-25	<p style="text-align: center;">VOC:</p> <p style="text-align: center;"><math>(MT, gal/yr)(2.40\ lb/gal)(1\ ton/ 2000\ lb)</math></p>
Bumper repair Lines 7, 8, 9	IA02-26	<p style="text-align: center;">VOC:</p> <p style="text-align: center;"><math>(MT, gal/yr)(2\% \text{ VOC})(1\ ton/ 2000\ lb)</math></p> <p>General Electric Appliances submitted a PTE justifying designation of this operation as an insignificant activity based on emissions from Loctite Prism 401 adhesive. Other similar adhesives may be substituted for the convenience of GEA if total emissions from this source are not significantly impacted.</p>

Equipment	Emission Point	Emission Calculation																																																							
AP5 Door-in-door foaming	IA02-27	<p style="text-align: center;">VOC:</p> $\sum_{i=1}^5 \frac{MT_i VOC_i EF_i}{2000} \text{ tons/year}$ <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th><i>i</i></th> <th>Foam Component</th> <th>VOC fraction</th> <th>EF (lb<sub>voc</sub>/lb<sub>material</sub>)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>MDI/pMDI (HAP) Part A</td> <td>1</td> <td><math>3.06 \times 10^{-5}</math></td> </tr> </tbody> </table> <p style="text-align: center;">HAP/TAC: Calculated in the same way as VOC, using only the HAPs in the emission factor table</p>	<i>i</i>	Foam Component	VOC fraction	EF (lb <sub>voc</sub> /lb <sub>material</sub> )	1	MDI/pMDI (HAP) Part A	1	$3.06 \times 10^{-5}$																																															
<i>i</i>	Foam Component	VOC fraction	EF (lb <sub>voc</sub> /lb <sub>material</sub> )																																																						
1	MDI/pMDI (HAP) Part A	1	$3.06 \times 10^{-5}$																																																						
AP1 Laundry Stamping Aida and CMI presses	IA02-28	<p style="text-align: center;">VOC:</p> <p style="text-align: center;">(MT gal/yr)((diluted mix lb/gal)(diluted stock wt%)(stock VOC%)(1 ton/2000gal)</p>																																																							
AP4 Injection molding aerosol cans	IA02-29	<p style="text-align: center;">VOC or HAP:</p> $\sum_{i=1}^n (\#cans)_i (VOC \text{ or } HAP\%)_i$ <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2"></th> <th colspan="7">Weight %</th> </tr> <tr> <th>VOC</th> <th>Trichloro Ethylene</th> <th>Hexane</th> <th>Tetrachloro Ethylene</th> <th>Toluene</th> <th>Xylene</th> <th>Ethyl benzene</th> </tr> </thead> <tbody> <tr> <td>Sprayon 314</td> <td>54</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>L-163</td> <td>100</td> <td>50</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>MC-16</td> <td>100</td> <td></td> <td></td> <td>85</td> <td>10</td> <td></td> <td></td> </tr> <tr> <td>MSP-16</td> <td>100</td> <td>28</td> <td></td> <td></td> <td></td> <td>42</td> <td>10</td> </tr> <tr> <td>44011</td> <td>100</td> <td></td> <td>65</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p style="text-align: center;">This table represents the cleaners in use at the time of application. Other cleaners may be substituted as necessary, with emission calculations performed in a similar manner.</p>		Weight %							VOC	Trichloro Ethylene	Hexane	Tetrachloro Ethylene	Toluene	Xylene	Ethyl benzene	Sprayon 314	54							L-163	100	50						MC-16	100			85	10			MSP-16	100	28				42	10	44011	100		65				
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MC-16	100			85	10																																																				
MSP-16	100	28				42	10																																																		
44011	100		65																																																						
AP10 Contractor Package Regluing	IA02-30	<p style="text-align: center;">VOC:</p> <p style="text-align: center;">(MT, lb/yr)( VOC%)(1 ton/2000 lb)</p> <p>The adhesive used at the time of application had a VOC content of 0.055%. Other adhesives may be substituted as necessary.</p>																																																							

Equipment	Emission Point	Emission Calculation
AP1 Capacitor lubricant, lines 7 and 8	IA02-31	VOC:  (MT, gal/yr)(6.59 lb <sub>VOC</sub> /gal)(1 ton/2000 lb)
Markforged 3D printer	IA02-32	PM: [Resin usage (lb)] × [5×10 <sup>-5</sup> lb <sub>PM</sub> / lb <sub>resin</sub> ] VOC: [Resin usage (lb)] × [4×10 <sup>-5</sup> lb <sub>PM</sub> / lb <sub>resin</sub> ]
Markforged washer/debinde r	IA02-33	VOC: Operating hours × 1.8454 lb/hr × (1-0.992)
Markforged sintering oven	IA02-34	PM: [Material input (lb)] × [0.012 lb <sub>PM</sub> / lb <sub>material</sub> ] VOC: [Material input (lb)] × [0.0163 lb <sub>PM</sub> / lb <sub>material</sub> ]
Four Quality Scan spray booths for dimensional verification	IA02-35	<u>Paint:</u> VOC/HAP = volume used × density × % VOC/HAP PM = volume used × density × % solids × (1-transfer efficiency) [assume TE = 60%] <u>Developer:</u> VOC = volume used × density × % VOC

**Table 21 - Unit IA03: Insignificant Activity Regulation 7.08 Process Equipment**

Equipment	Emission Point	Emission Calculation
Sixty Brazing, soldering, welding equipment	IA03-1	PM:  $\left(MT, \frac{lb}{hr}\right) (\% PM \text{ or Emission Factor})(1 - 70\% FOF)$
Pedestal Plastic Regrinder	IA03-2	
Brazing, soldering, or welding on Nylon Wire Rack Line	IA03-5	
Nylon powder transfer/clean-up activities	IA03-6	
Pellet Grinder and process cyclone make Granutec	IA03-7	PM:  $\left(MT, \frac{lb}{hr}\right) (\% PM \text{ or Emission Factor})(1 - 70\% FOF)(1 - 90\% FE)$
Grinding Operation for AP3 White Tub Regrinder	IA03-8	PM:  $\left(MT, \frac{lb}{hr}\right) (\% PM \text{ or Emission Factor})(1 - 70\% FOF)$
Ten Small Regrinders in AP4 used to recycle plastic	IA03-9	
Small Regrinders in AP5 used to recycle plastic	IA03-10	PM:

Equipment	Emission Point	Emission Calculation
Unloading, Conveyance and Storage of Plastic Pellets in AP1	IA03-11	$\left(MT, \frac{lb}{hr}\right) (\% PM \text{ or Emission Factor})(1 - 70\% FOF)$
Unloading, Conveyance and Storage of Plastic Pellets in AP3	IA03-12	
Unloading, Conveyance and Storage of Plastic Pellets in AP4	IA03-13	
Unloading, Conveyance and Storage of Plastic Pellets in AP5	IA03-14	
Thirteen Cooling Towers	IA03-15	AP-42 Emission Factors Chapter 13.4, Table 13.4-1
Two Sanding Processes to scuff-sand defective painted parts on downdraft table with cartridges	IA03-17	PM: $\left(MT, \frac{lb}{hr}\right) (\% PM \text{ or Emission Factor})(1 - 70\% FOF)(1 - 90\% FE)$
Two Hot Plate Welding of Plastic Parts	IA03-18	PM: $MT \times EF, EF=0.0588 \text{ lb/lb}$  VOC: $MT \times EF, EF=0.0176 \text{ lb/lb}$
One Central Vacuum System for AP1	IA03-19	PM: $\left(MT, \frac{lb}{hr}\right) (\% PM / \% PM_{10})(1 - 90\% FE (\text{cyclone}))(1 - 95\% FE (\text{final Filter}))$
One Central Vacuum System for AP2	IA03-20	PM: $\left(MT, \frac{lb}{hr}\right) (\% PM / \% PM_{10})(1 - 90\% FE (\text{cyclone}))(1 - 95\% FE (\text{final Filter}))$

**Table 22 - Unit IA04 (U89): VOC Storage Tank**

Equipment	Emission Point	Emission Calculation
Generator Tank, 2500 gallons	IA Tank 1	Emissions accounted for in the working losses for storage tanks using AP-42 evaporative losses
Generator Tank, 10,000 gallons	IA Tank 2	
Generator Tank, 10,000 gallons	IA Tank 3	
Generator Tank, 2859 gallons	IA Tank 4	
Generator Tank; 2859 gallons	IA Tank 5	
Underground Storage Tank (UST); 6000 gallons	IA Tank 6	

Equipment	Emission Point	Emission Calculation
Seven Hydraulic Oil Storage Tanks: 1 - 6000 gallon, 1 - 2000 gallon (used oil), 2 - 15,000 gallon, 1 - 25,000 gallon (used oil); 2 - 10,000 gallon (1-used oil)	IA Tank 7	
Twelve Compressor Oil Tanks: 3 - 10,000 gallon; 9 - 550 gallon	IA Tank 8	
Three Lubricating Oil Tanks, each 1000 gallons	IA Tank 9	
Three Used Oil Tanks: 1 - 550 gallon, 1 - 1000 gallon, 1 - 2000 gallon	IA Tank 10	

**Table 23 - Unit IA05: Combustion Source not accounted for in any other emission unit**

Equipment	Emission Point	Emission Calculation
2.0 MMBtu/hr AP1 Make Up Air Heater, Maxon 2.0 APX Line Burner (Direct fired unit)	IA05-1	See AP-42 Chapter 1.4: External Combustion Sources – Natural Gas Combustion
Three 0.757 MMBtu/hr: Cambridge S800 direct fired heat exchangers (Space/comfort heaters)	IA05-2	See AP-42 Chapter 1.4: External Combustion Sources – Natural Gas Combustion
Two 0.400 MMBtu/hr: Cambridge S400 direct fired heat exchangers (Space/comfort heaters)	IA05-3	
Six 1.2 MMBtu/hr: Cambridge S1200 direct fired heat exchanger (Space/comfort heaters)	IA05-4	
Twelve 1.499 MMBtu/hr: Cambridge S1600 direct fired heat exchanger (Space/comfort heaters)	IA05-5	
Three 2.2 MMBtu/hr: Cambridge S2200 direct fired heat exchanger (Space/comfort heaters)	IA05-6	

Equipment	Emission Point	Emission Calculation
Forty-five 3.107 MMBtu/hr: Cambridge S3200 direct fired heat exchanger (Space/comfort heaters)	IA05-7	
Five 5.887 MMBtu/hr: Cambridge M136 direct fired heat exchanger (Space/comfort heaters)	IA05-8	
7 MMBtu/hr natural gas dryoff oven (Direct fired Unit)	IA05-9	
HA Gas Dryer Test Loop	IA05-10	
Two Abrade Systems Direct-fired natural gas burners at 140,000 Btu/hr each, AP3	IA05-11	

**Table 24 - Insignificant Activity Table Equipment not covered in any other emission unit**

Equipment	Quantity	Emission Calculation
R & D facilities	<25	VOC: $(MT, gal/hr)(Density, lb/gal)(Material VOC \%)$
Lab venting and exhausting	>25	VOC: $(MT, gal/hr)(Density, lb/gal)(Material VOC \%)$
VOC Storage Tanks 250 gallons or less	10	Emissions accounted for in the working losses for storage tanks using AP-42 evaporative losses
Lubricating oil storage tanks	2	